StdAir

0.45.0

Generated by Doxygen 1.7.4

Sun Dec 18 2011 19:18:50

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StdAir is a C++ library of classes and functions modeling typical airline IT business objects. For instance, it is used by the C++ Revenue Management Open Library project (http://sourceforge.net/projects/rmol/). StdAir mainly targets simulation purposes. N

StdAir makes an extensive use of existing open-source libraries for increased functionality, speed and accuracy. In particular Boost (*C++ STL Extensions*) library is used.

The StdAir library originates from the department of Operational Research and Innovation at Amadeus, Sophia Antipolis, France. StdAir is released under the terms of the GNU Lesser General Public License (LGPLv2.1) for you to enjoy.

StdAir should work on GNU/Linux, Sun Solaris, Microsoft Windows (with Cygwin, MinGW/MSYS, or Microsoft Visual C++ .NET) and Mac OS X operating systems.

Note

(N) - The StdAir library is **NOT** intended, in any way, to be used by airlines for production systems. If you want to report issue, bug or feature request, or if you just want to give feedback, have a look on the right-hand side of this page for the preferred reporting methods. In any case, please do not contact Amadeus directly for any matter related to StdAir.

2 C++ Utility Class Browsing and Dumping the StdAir BOM Tree

```
 */
// //////////////////////////////////////////////////////////////////////
// Import section
// //////////////////////////////////////////////////////////////////////
// STL
#include <cassert>
#include <ostream>
// StdAir
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/EventQueue.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightDate.hpp>
#include <stdair/bom/LegDate.hpp>
#include <stdair/bom/SegmentDate.hpp>
#include <stdair/bom/LegCabin.hpp>
#include <stdair/bom/SegmentCabin.hpp>
#include <stdair/bom/FareFamily.hpp>
#include <stdair/bom/BookingClass.hpp>
#include <stdair/bom/AirportPair.hpp>
#include <stdair/bom/PosChannel.hpp>
#include <stdair/bom/DatePeriod.hpp>
#include <stdair/bom/TimePeriod.hpp>
#include <stdair/bom/FareFeatures.hpp>
#include <stdair/bom/YieldFeatures.hpp>
#include <stdair/bom/AirlineClassList.hpp>
#include <stdair/bom/Bucket.hpp>
#include <stdair/bom/TravelSolutionTypes.hpp>
#include <stdair/bom/TravelSolutionStruct.hpp>
#include <stdair/bom/BomDisplay.hpp>
#include <stdair/bom/OnDDate.hpp>

namespace stdair {

  struct FlagSaver {
  public:
    FlagSaver (std::ostream& oStream)
      : _oStream (oStream), _streamFlags (oStream.flags()) {
    }

    ~FlagSaver() {
      // Reset formatting flags of the given output stream
      _oStream.flags (_streamFlags);
    }

  private:
    std::ostream& _oStream;
    std::ios::fmtflags _streamFlags;
  };

  // //////////////////////////////////////////////////////////////////////
  std::string BomDisplay::csvDisplay (const EventQueue& iEventQueue) {
    std::ostringstream oStream;

    oStream << std::endl;
    oStream << "================================================================="
            << std::endl;
    oStream << "EventQueue: " << iEventQueue.describeKey() << std::endl;
    oStream << "================================================================="
```

```
          << std::endl;

  return oStream.str();
}

// ////////////////////////////////////////////////////////////////////
void BomDisplay::list (std::ostream& oStream, const BomRoot& iBomRoot,
                       const AirlineCode_T& iAirlineCode,
                       const FlightNumber_T& iFlightNumber) {
  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  // Check whether there are Inventory objects
  if (BomManager::hasList<Inventory> (iBomRoot) == false) {
    return;
  }

  // Browse the inventories
  unsigned short invIdx = 1;
  const InventoryList_T& lInventoryList =
    BomManager::getList<Inventory> (iBomRoot);
  for (InventoryList_T::const_iterator itInv = lInventoryList.begin();
       itInv != lInventoryList.end(); ++itInv, ++invIdx) {
    const Inventory* lInv_ptr = *itInv;
    assert (lInv_ptr != NULL);

    // Retrieve the inventory key (airline code)
    const AirlineCode_T& lAirlineCode = lInv_ptr->getAirlineCode();

    // Display only the requested inventories
    if (iAirlineCode == "all" || iAirlineCode == lAirlineCode) {
      // Get the list of flight-dates for that inventory
      list (oStream, *lInv_ptr, invIdx, iFlightNumber);
    }
  }
}

// ////////////////////////////////////////////////////////////////////
void BomDisplay::list (std::ostream& oStream, const Inventory& iInventory,
                       const unsigned short iInventoryIndex,
                       const FlightNumber_T& iFlightNumber) {
  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  // Check whether there are FlightDate objects
  if (BomManager::hasMap<FlightDate> (iInventory) == false) {
    return;
  }

  //
  const AirlineCode_T& lAirlineCode = iInventory.getAirlineCode();
  oStream << iInventoryIndex << ". " << lAirlineCode << std::endl;

  // Browse the flight-dates
  unsigned short lCurrentFlightNumber = 0;
  unsigned short flightNumberIdx = 0;
  unsigned short departureDateIdx = 1;
  const FlightDateMap_T& lFlightDateList =
    BomManager::getMap<FlightDate> (iInventory);
  for (FlightDateMap_T::const_iterator itFD = lFlightDateList.begin();
       itFD != lFlightDateList.end(); ++itFD, ++departureDateIdx) {
    const FlightDate* lFD_ptr = itFD->second;
```

```
    assert (lFD_ptr != NULL);

    // Retrieve the key of the flight-date
    const FlightNumber_T& lFlightNumber = lFD_ptr->getFlightNumber();
    const Date_T& lFlightDateDate = lFD_ptr->getDepartureDate();

    // Display only the requested flight number
    if (iFlightNumber == 0 || iFlightNumber == lFlightNumber) {
      //
      if (lCurrentFlightNumber != lFlightNumber) {
        lCurrentFlightNumber = lFlightNumber;
        ++flightNumberIdx; departureDateIdx = 1;
        oStream << "  " << iInventoryIndex << "." << flightNumberIdx << ". "
                << lAirlineCode << lFlightNumber << std::endl;
      }

      oStream << "    " << iInventoryIndex << "." << flightNumberIdx
              << "." << departureDateIdx << ". "
              << lAirlineCode << lFlightNumber << " / " << lFlightDateDate
              << std::endl;
    }
  }
}

// ////////////////////////////////////////////////////////////////////
void BomDisplay::listAirportPairDateRange (std::ostream& oStream,
                                           const BomRoot& iBomRoot) {
  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  // Check whether there are AirportPair objects
  if (BomManager::hasList<AirportPair> (iBomRoot) == false) {
    return;
  }

  const AirportPairList_T& lAirportPairList =
    BomManager::getList<AirportPair> (iBomRoot);
  for (AirportPairList_T::const_iterator itAir = lAirportPairList.begin();
       itAir != lAirportPairList.end(); ++itAir ) {
    const AirportPair* lAir_ptr = *itAir;
    assert (lAir_ptr != NULL);

    // Check whether there are date-period objects
    assert (BomManager::hasList<DatePeriod> (*lAir_ptr) == true);

    // Browse the date-period objects
    const DatePeriodList_T& lDatePeriodList =
      BomManager::getList<DatePeriod> (*lAir_ptr);

    for (DatePeriodList_T::const_iterator itDP = lDatePeriodList.begin();
         itDP != lDatePeriodList.end(); ++itDP) {
      const DatePeriod* lDP_ptr = *itDP;
      assert (lDP_ptr != NULL);

      // Display the date-period object
      oStream << lAir_ptr->describeKey()
              <<" / " << lDP_ptr->describeKey() << std::endl;
    }

  }
}
```

```
// //////////////////////////////////////////////////////////////////
void BomDisplay::csvDisplay (std::ostream& oStream,
                             const BomRoot& iBomRoot) {
  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  oStream << std::endl;
  oStream << "================================================================"
          << std::endl;
  oStream << "BomRoot: " << iBomRoot.describeKey() << std::endl;
  oStream << "================================================================"
          << std::endl;

  // Check whether there are Inventory objects
  if (BomManager::hasList<Inventory> (iBomRoot) == false) {
    return;
  }

  // Browse the inventories
  const InventoryList_T& lInventoryList =
    BomManager::getList<Inventory> (iBomRoot);
  for (InventoryList_T::const_iterator itInv = lInventoryList.begin();
       itInv != lInventoryList.end(); ++itInv) {
    const Inventory* lInv_ptr = *itInv;
    assert (lInv_ptr != NULL);

    // Display the inventory
    csvDisplay (oStream, *lInv_ptr);
  }
}

// //////////////////////////////////////////////////////////////////
void BomDisplay::csvDisplay (std::ostream& oStream,
                             const Inventory& iInventory) {
  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  oStream << "++++++++++++++++++++++++++++++++++++++++++++++++" << std::endl;
  oStream << "Inventory: " << iInventory.describeKey() << std::endl;
  oStream << "++++++++++++++++++++++++++++++++++++++++++++++++" << std::endl;

  // Check whether there are FlightDate objects
  if (BomManager::hasList<FlightDate> (iInventory) == false) {
    return;
  }

  // Browse the flight-dates
  const FlightDateList_T& lFlightDateList =
    BomManager::getList<FlightDate> (iInventory);
  for (FlightDateList_T::const_iterator itFD = lFlightDateList.begin();
       itFD != lFlightDateList.end(); ++itFD) {
    const FlightDate* lFD_ptr = *itFD;
    assert (lFD_ptr != NULL);

    // Display the flight-date
    csvDisplay (oStream, *lFD_ptr);
  }

  // Check if the inventory contains a list of partners

  if (BomManager::hasList<Inventory> (iInventory)){
```

```
    // Browse the partner's inventories
    const InventoryList_T& lPartnerInventoryList =
      BomManager::getList<Inventory> (iInventory);

    for (InventoryList_T::const_iterator itInv = lPartnerInventoryList.begin();

         itInv != lPartnerInventoryList.end(); ++itInv) {

      oStream << "-------------------------------------------------" << std::en
    dl;
      oStream << "Partner inventory:" << std::endl;
      oStream << "-------------------------------------------------" << std::en
    dl;
      const Inventory* lInv_ptr = *itInv;
      assert (lInv_ptr != NULL);

      // Display the inventory
      csvDisplay (oStream, *lInv_ptr);
    }
    oStream << "****************************************" << std::endl;
    oStream << std::endl;
  }

  // Check if the inventory contains a list of O&D dates

  if (BomManager::hasList<OnDDate> (iInventory)){

    //Browse the O&Ds
    const OnDDateList_T& lOnDDateList =
      BomManager::getList<OnDDate> (iInventory);

    for (OnDDateList_T::const_iterator itOnD = lOnDDateList.begin();
         itOnD != lOnDDateList.end(); ++itOnD) {
      oStream << "****************************************" << std::endl;
      oStream << "O&D-Date:" << std::endl;
      oStream << "----------" << std::endl;
      oStream << "Airline, Date, Origin-Destination, Segments, " << std::endl;

      const OnDDate* lOnDDate_ptr = *itOnD;
      assert (lOnDDate_ptr != NULL);

      // Display the O&D date
      csvDisplay (oStream, *lOnDDate_ptr);
    }
    oStream << "****************************************" << std::endl;
  }
}

// //////////////////////////////////////////////////////////////////////
void BomDisplay::csvDisplay (std::ostream& oStream,
                             const OnDDate& iOnDDate) {
  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  const AirlineCode_T& lAirlineCode = iOnDDate.getAirlineCode();
  const Date_T& lDate = iOnDDate.getDate();
  const AirportCode_T& lOrigin = iOnDDate.getOrigin();
  const AirportCode_T& lDestination = iOnDDate.getDestination();

  oStream << lAirlineCode <<", " << lDate << ", "<< lOrigin << "-"
          << lDestination << ", " << iOnDDate.describeKey() << ", "
          << std::endl;
```

```
    const StringDemandStructMap_T& lDemandInfoMap =
      iOnDDate.getDemandInfoMap();

    // Check if the map contains information.
    const bool isInfoMapEmpty = lDemandInfoMap.empty();
    if (isInfoMapEmpty) {
      return;
    }
    assert (lDemandInfoMap.empty() ==false);

    oStream << "----------" << std::endl;
    oStream << "Cabin-Class path, Demand mean, Demand std dev, Yield, "
            << std::endl;

    for (StringDemandStructMap_T::const_iterator itDI = lDemandInfoMap.begin();
         itDI != lDemandInfoMap.end(); ++itDI) {

      const std::string& lCabinClassPath = itDI->first;
      const YieldDemandPair_T lYieldDemandPair =
        itDI->second;
      const Yield_T lYield = lYieldDemandPair.first;
      const MeanStdDevPair_T lMeanStdDevPair =
        lYieldDemandPair.second;
      const MeanValue_T lDemandMean = lMeanStdDevPair.first;
      const StdDevValue_T lDemandStdDev = lMeanStdDevPair.second;

      oStream << lCabinClassPath << ", "
              << lDemandMean << ", "
              << lDemandStdDev << ", "
              << lYield << ", "
              << std::endl;
    }

  }

  // ////////////////////////////////////////////////////////////////////
  void BomDisplay::csvDisplay (std::ostream& oStream,
                               const FlightDate& iFlightDate) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
    oStream << "****************************************" << std::endl;
    oStream << "FlightDate: " << lAirlineCode << iFlightDate.describeKey()
            << std::endl;
    oStream << "****************************************" << std::endl;

    //
    csvSegmentDateDisplay (oStream, iFlightDate);
    //
    csvLegDateDisplay (oStream, iFlightDate);

    //
    csvLegCabinDisplay (oStream, iFlightDate);

    //
    csvBucketDisplay (oStream, iFlightDate);

    //
    csvFareFamilyDisplay (oStream, iFlightDate);
```

```
  //
  csvBookingClassDisplay (oStream, iFlightDate);
}

// ////////////////////////////////////////////////////////////////////
void BomDisplay::csvLegDateDisplay (std::ostream& oStream,
                                    const FlightDate& iFlightDate) {
  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  oStream << "****************************************" << std::endl;
  oStream << "Leg-Dates:" << std::endl
          << "----------" << std::endl;
  oStream << "Flight, Leg, BoardDate, BoardTime, "
          << "OffDate, OffTime, Date Offset, Time Offset, Elapsed, "
          << "Distance, Capacity, " << std::endl;

  // Retrieve the key of the flight-date
  const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
  const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
  const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();

  // Check whether there are LegDate objects
  if (BomManager::hasList<LegDate> (iFlightDate) == false) {
    return;
  }

  // Browse the leg-dates
  const LegDateList_T& lLegDateList =
    BomManager::getList<LegDate> (iFlightDate);
  for (LegDateList_T::const_iterator itLD = lLegDateList.begin();
       itLD != lLegDateList.end(); ++itLD) {
    const LegDate* lLD_ptr = *itLD;
    assert (lLD_ptr != NULL);

    oStream << lAirlineCode << lFlightNumber << " "
            << lFlightDateDate << ", ";

    oStream << lLD_ptr->getBoardingPoint() << "-"
            << lLD_ptr->getOffPoint() << ", "
            << lLD_ptr->getBoardingDate() << ", "
            << lLD_ptr->getBoardingTime() << ", "
            << lLD_ptr->getOffDate() << ", "
            << lLD_ptr->getOffTime() << ", "
            << lLD_ptr->getElapsedTime() << ", "
            << lLD_ptr->getDateOffset().days() << ", "
            << lLD_ptr->getTimeOffset() << ", "
            << lLD_ptr->getDistance() << ", "
            << lLD_ptr->getCapacity() << ", " << std::endl;
  }
  oStream << "****************************************" << std::endl;
}

// ////////////////////////////////////////////////////////////////////
void BomDisplay::csvSegmentDateDisplay (std::ostream& oStream,
                                        const FlightDate& iFlightDate) {
  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  oStream << "****************************************" << std::endl;
  oStream << "SegmentDates:" << std::endl
          << "----------" << std::endl;
```

```
oStream << "Flight, Segment, Date"
        << std::endl;

// Retrieve the key of the flight-date
const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();

// Check whether there are SegmentDate objects
if (BomManager::hasList<SegmentDate> (iFlightDate) == false) {
  return;
}

// Browse the segment-dates
const SegmentDateList_T& lSegmentDateList =
  BomManager::getList<SegmentDate> (iFlightDate);
for (SegmentDateList_T::const_iterator itSD = lSegmentDateList.begin();
     itSD != lSegmentDateList.end(); ++itSD) {
  const SegmentDate* lSD_ptr = *itSD;
  assert (lSD_ptr != NULL);

  // Retrieve the key of the segment-date, as well as its dates
  const Date_T& lSegmentDateDate = lSD_ptr->getBoardingDate();
  const AirportCode_T& lBoardPoint = lSD_ptr->getBoardingPoint();
  const AirportCode_T& lOffPoint = lSD_ptr->getOffPoint();
  oStream << lAirlineCode << lFlightNumber << " " << lFlightDateDate << ", "
          << lBoardPoint << "-" << lOffPoint << ", " << lSegmentDateDate << s
  td::endl;

  // Check if the current segment has corresponding marketing segments.
  const bool isMarketingSDListEmpty = BomManager::hasList<SegmentDate>(*lSD_p
  tr);
  if (isMarketingSDListEmpty == false) {
    //
    const SegmentDateList_T& lMarketingSDList = BomManager::getList<SegmentDa
  te>(*lSD_ptr);

    oStream << " *** Marketed by ";
    for (SegmentDateList_T::const_iterator itMarketingSD = lMarketingSDList.b
  egin();
         itMarketingSD != lMarketingSDList.end(); ++itMarketingSD) {
      SegmentDate* lMarketingSD_ptr = *itMarketingSD;
      FlightDate* lMarketingFD_ptr = BomManager::getParentPtr<FlightDate>(*lM
  arketingSD_ptr);
      Inventory* lMarketingInv_ptr = BomManager::getParentPtr<Inventory>(*lMa
  rketingFD_ptr);
      oStream << lMarketingInv_ptr->toString() << lMarketingFD_ptr->toString(
  ) <<" * ";
    }
  }

  // Check if the current segment is operated by another segment date.
  const SegmentDate* lOperatingSD_ptr = lSD_ptr->getOperatingSegmentDate ();
  if (lOperatingSD_ptr != NULL) {

    const FlightDate* lOperatingFD_ptr = BomManager::getParentPtr<FlightDate>
  (*lOperatingSD_ptr);
    const Inventory* lOperatingInv_ptr = BomManager::getParentPtr<Inventory>(
  *lOperatingFD_ptr);
    oStream << " *** Operated by " << lOperatingInv_ptr->toString()
            << lOperatingFD_ptr->toString() << std::endl;
  }
```

```
    oStream << std::endl;
  }
}

// ////////////////////////////////////////////////////////////////////
void BomDisplay::csvLegCabinDisplay (std::ostream& oStream,
                                     const FlightDate& iFlightDate) {
  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  oStream << "****************************************" << std::endl;
  oStream << "LegCabins:" << std::endl
          << "----------" << std::endl;
  oStream << "Flight, Leg, Cabin, "
          << "OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, "
          << "CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice, "
          << std::endl;

  // Retrieve the key of the flight-date
  const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
  const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
  const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();

  // Check whether there are LegDate objects
  if (BomManager::hasList<LegDate> (iFlightDate) == false) {
    return;
  }

  // Browse the leg-dates
  const LegDateList_T& lLegDateList =
    BomManager::getList<LegDate> (iFlightDate);
  for (LegDateList_T::const_iterator itLD = lLegDateList.begin();
       itLD != lLegDateList.end(); ++itLD) {
    const LegDate* lLD_ptr = *itLD;
    assert (lLD_ptr != NULL);

    // Retrieve the key of the leg-date, as well as its off point
    const Date_T& lLegDateDate = lLD_ptr->getBoardingDate();
    const AirportCode_T& lBoardPoint = lLD_ptr->getBoardingPoint();
    const AirportCode_T& lOffPoint = lLD_ptr->getOffPoint();

    // Browse the leg-cabins
    const LegCabinList_T& lLegCabinList =
      BomManager::getList<LegCabin> (*lLD_ptr);
    for (LegCabinList_T::const_iterator itLC = lLegCabinList.begin();
         itLC != lLegCabinList.end(); ++itLC) {
      const LegCabin* lLC_ptr = *itLC;
      assert (lLC_ptr != NULL);

      oStream << lAirlineCode << lFlightNumber << " "
              << lFlightDateDate << ", ";

      oStream << lBoardPoint << "-" << lOffPoint
              << " " << lLegDateDate << ", ";

      oStream << lLC_ptr->getCabinCode() << ", ";

      oStream << lLC_ptr->getOfferedCapacity() << ", "
              << lLC_ptr->getPhysicalCapacity() << ", "
              << lLC_ptr->getRegradeAdjustment() << ", "
              << lLC_ptr->getAuthorizationLevel() << ", "
```

```
              << lLC_ptr->getUPR() << ", "
              << lLC_ptr->getSoldSeat() << ", "
              << lLC_ptr->getStaffNbOfSeats() << ", "
              << lLC_ptr->getWLNbOfSeats() << ", "
              << lLC_ptr->getGroupNbOfSeats() << ", "
              << lLC_ptr->getCommittedSpace() << ", "
              << lLC_ptr->getAvailabilityPool() << ", "
              << lLC_ptr->getAvailability() << ", "
              << lLC_ptr->getNetAvailability() << ", "
              << lLC_ptr->getGrossAvailability() << ", "
              << lLC_ptr->getAvgCancellationPercentage() << ", "
              << lLC_ptr->getETB() << ", "
              << lLC_ptr->getCurrentBidPrice() << ", "
              << std::endl;
    }
  }
  oStream << "****************************************" << std::endl;
}

// //////////////////////////////////////////////////////////////////////
void BomDisplay::csvSegmentCabinDisplay (std::ostream& oStream,
                                         const FlightDate& iFlightDate) {
  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

}

// //////////////////////////////////////////////////////////////////////
void BomDisplay::csvFareFamilyDisplay (std::ostream& oStream,
                                       const FlightDate& iFlightDate) {
  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  oStream << "****************************************" << std::endl;
  oStream << "SegmentCabins:" << std::endl
          << "--------------" << std::endl;
  oStream << "Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, "
          << "CommSpace, AvPool, BP, " << std::endl;

  // Retrieve the key of the flight-date
  const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
  const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
  const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();

  // Check whether there are SegmentDate objects
  if (BomManager::hasList<SegmentDate> (iFlightDate) == false) {
    return;
  }

  // Browse the segment-dates
  const SegmentDateList_T& lSegmentDateList =
    BomManager::getList<SegmentDate> (iFlightDate);
  for (SegmentDateList_T::const_iterator itSD = lSegmentDateList.begin();
       itSD != lSegmentDateList.end(); ++itSD) {
    const SegmentDate* lSD_ptr = *itSD;
    assert (lSD_ptr != NULL);

    // Retrieve the key of the segment-date, as well as its dates
    const Date_T& lSegmentDateDate = lSD_ptr->getBoardingDate();
    const AirportCode_T& lBoardPoint = lSD_ptr->getBoardingPoint();
    const AirportCode_T& lOffPoint = lSD_ptr->getOffPoint();
```

```
    // Browse the segment-cabins
    const SegmentCabinList_T& lSegmentCabinList =
      BomManager::getList<SegmentCabin> (*lSD_ptr);
    for (SegmentCabinList_T::const_iterator itSC = lSegmentCabinList.begin();
         itSC != lSegmentCabinList.end(); ++itSC) {
      const SegmentCabin* lSC_ptr = *itSC;
      assert (lSC_ptr != NULL);

      // Retrieve the key of the segment-cabin
      const CabinCode_T& lCabinCode = lSC_ptr->getCabinCode();

      // Check whether there are fare family objects
      if (BomManager::hasList<FareFamily> (*lSC_ptr) == false) {
        continue;
      }

      // Browse the fare families
      const FareFamilyList_T& lFareFamilyList =
        BomManager::getList<FareFamily> (*lSC_ptr);
      for (FareFamilyList_T::const_iterator itFF = lFareFamilyList.begin();
           itFF != lFareFamilyList.end(); ++itFF) {
        const FareFamily* lFF_ptr = *itFF;
        assert (lFF_ptr != NULL);

        oStream << lAirlineCode << lFlightNumber << " "
                << lFlightDateDate << ", ";

        oStream << lBoardPoint << "-" << lOffPoint << " "
                << lSegmentDateDate << ", ";

        oStream << lCabinCode << ", " << lFF_ptr->getFamilyCode() << ", ";

        oStream << lSC_ptr->getBookingCounter() << ", "
                << lSC_ptr->getMIN() << ", "
                << lSC_ptr->getUPR() << ", "
                << lSC_ptr->getCommittedSpace() << ", "
                << lSC_ptr->getAvailabilityPool() << ", "
                << lSC_ptr->getCurrentBidPrice() << ", "
                << std::endl;
      }
    }
  }
  oStream << "****************************************" << std::endl;
}

// //////////////////////////////////////////////////////////////////////
void BomDisplay::csvBucketDisplay (std::ostream& oStream,
                                   const FlightDate& iFlightDate) {
  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  oStream << "****************************************" << std::endl;
  oStream << "Buckets:" << std::endl
          << "--------" << std::endl;
  oStream << "Flight, Leg, Cabin, Yield, AU/SI, SS, AV, "
          << std::endl;

  // Retrieve the key of the flight-date
  const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
  const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
  const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();
```

```
    // Check whether there are LegDate objects
    if (BomManager::hasList<LegDate> (iFlightDate) == false) {
      return;
    }

    // Browse the leg-dates
    const LegDateList_T& lLegDateList =
      BomManager::getList<LegDate> (iFlightDate);
    for (LegDateList_T::const_iterator itLD = lLegDateList.begin();
         itLD != lLegDateList.end(); ++itLD) {
      const LegDate* lLD_ptr = *itLD;
      assert (lLD_ptr != NULL);

      // Retrieve the key of the leg-date, as well as its off point
      const Date_T& lLegDateDate = lLD_ptr->getBoardingDate();
      const AirportCode_T& lBoardPoint = lLD_ptr->getBoardingPoint();
      const AirportCode_T& lOffPoint = lLD_ptr->getOffPoint();

      // Browse the leg-cabins
      const LegCabinList_T& lLegCabinList =
        BomManager::getList<LegCabin> (*lLD_ptr);
      for (LegCabinList_T::const_iterator itLC = lLegCabinList.begin();
           itLC != lLegCabinList.end(); ++itLC) {
        const LegCabin* lLC_ptr = *itLC;
        assert (lLC_ptr != NULL);

        // Check whether there are bucket objects
        if (BomManager::hasList<Bucket> (*lLC_ptr) == false) {
          continue;
        }

        // Retrieve the key of the leg-cabin
        const CabinCode_T& lCabinCode = lLC_ptr->getCabinCode();

        // Browse the buckets
        const BucketList_T& lBucketList = BomManager::getList<Bucket> (*lLC_ptr);

        for (BucketList_T::const_iterator itBuck = lBucketList.begin();
             itBuck != lBucketList.end(); ++itBuck) {
          const Bucket* lBucket_ptr = *itBuck;
          assert (lBucket_ptr != NULL);

          oStream << lAirlineCode << lFlightNumber << " "
                  << lFlightDateDate << ", ";

          oStream << lBoardPoint << "-" << lOffPoint << " "
                  << lLegDateDate << ", " << lCabinCode << ", ";

          oStream << lBucket_ptr->getYieldRangeUpperValue() << ", "
                  << lBucket_ptr->getSeatIndex() << ", "
                  << lBucket_ptr->getSoldSeats() << ", "
                  << lBucket_ptr->getAvailability() << ", ";
          oStream << std::endl;
        }
      }
    }
    oStream << "****************************************" << std::endl;
  }

  // ////////////////////////////////////////////////////////////////////
  void BomDisplay::csvBookingClassDisplay (std::ostream& oStream,
                                           const BookingClass& iBookingClass,
```

```
                                        const std::string& iLeadingString) {
  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  oStream << iLeadingString << iBookingClass.getClassCode();

  if (iBookingClass.getSubclassCode() == 0) {
    oStream << ", ";
  } else {
    oStream << iBookingClass.getSubclassCode() << ", ";
  }
  oStream << iBookingClass.getAuthorizationLevel() << " ("
          << iBookingClass.getProtection() << "), "
          << iBookingClass.getNegotiatedSpace() << ", "
          << iBookingClass.getNoShowPercentage() << ", "
          << iBookingClass.getCancellationPercentage() << ", "
          << iBookingClass.getNbOfBookings() << ", "
          << iBookingClass.getNbOfGroupBookings() << " ("
          << iBookingClass.getNbOfPendingGroupBookings() << "), "
          << iBookingClass.getNbOfStaffBookings() << ", "
          << iBookingClass.getNbOfWLBookings() << ", "
          << iBookingClass.getETB() << ", "
          << iBookingClass.getNetClassAvailability() << ", "
          << iBookingClass.getNetRevenueAvailability() << ", "
          << iBookingClass.getSegmentAvailability() << ", "
          << std::endl;
}

// ////////////////////////////////////////////////////////////////////
void BomDisplay::csvBookingClassDisplay (std::ostream& oStream,
                                         const FlightDate& iFlightDate) {
  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  // Headers
  oStream << "****************************************" << std::endl;
  oStream << "Subclasses:" << std::endl
          << "-----------" << std::endl;
  oStream << "Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), "
          << "Nego, NS%, OB%, "
          << "Bkgs, GrpBks (pdg), StfBkgs, WLBkgs, ETB, "
          << "ClassAvl, RevAvl, SegAvl, "
          << std::endl;

  // Retrieve the key of the flight-date
  const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
  const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
  const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();

  // Check whether there are SegmentDate objects
  if (BomManager::hasList<SegmentDate> (iFlightDate) == false) {
    return;
  }

  // Browse the segment-dates
  const SegmentDateList_T& lSegmentDateList =
    BomManager::getList<SegmentDate> (iFlightDate);
  for (SegmentDateList_T::const_iterator itSD = lSegmentDateList.begin();
       itSD != lSegmentDateList.end(); ++itSD) {
    const SegmentDate* lSD_ptr = *itSD;
    assert (lSD_ptr != NULL);
```

```
// Retrieve the key of the segment-date, as well as its dates
const Date_T& lSegmentDateDate = lSD_ptr->getBoardingDate();
const AirportCode_T& lBoardPoint = lSD_ptr->getBoardingPoint();
const AirportCode_T& lOffPoint = lSD_ptr->getOffPoint();

// Browse the segment-cabins
const SegmentCabinList_T& lSegmentCabinList =
  BomManager::getList<SegmentCabin> (*lSD_ptr);
for (SegmentCabinList_T::const_iterator itSC = lSegmentCabinList.begin();
     itSC != lSegmentCabinList.end(); ++itSC) {
  const SegmentCabin* lSC_ptr = *itSC;
  assert (lSC_ptr != NULL);

  // Retrieve the key of the segment-cabin
  const CabinCode_T& lCabinCode = lSC_ptr->getCabinCode();

  // Build the leading string to be displayed
  std::ostringstream oSCLeadingStr;
  oSCLeadingStr << lAirlineCode << lFlightNumber << " "
                << lFlightDateDate << ", "
                << lBoardPoint << "-" << lOffPoint << " "
                << lSegmentDateDate << ", "
                << lCabinCode << ", ";

  // Default Fare Family code, when there are no FF
  FamilyCode_T lFamilyCode ("NoFF");

  // Check whether there are FareFamily objects
  if (BomManager::hasList<FareFamily> (*lSC_ptr) == true) {

    // Browse the fare families
    const FareFamilyList_T& lFareFamilyList =
      BomManager::getList<FareFamily> (*lSC_ptr);
    for (FareFamilyList_T::const_iterator itFF = lFareFamilyList.begin();
         itFF != lFareFamilyList.end(); ++itFF) {
      const FareFamily* lFF_ptr = *itFF;
      assert (lFF_ptr != NULL);

      // Retrieve the key of the segment-cabin
      lFamilyCode = lFF_ptr->getFamilyCode();

      // Complete the leading string to be displayed
      std::ostringstream oFFLeadingStr;
      oFFLeadingStr << oSCLeadingStr.str() << lFamilyCode << ", ";

      // Browse the booking-classes
      const BookingClassList_T& lBookingClassList =
        BomManager::getList<BookingClass> (*lFF_ptr);
      for (BookingClassList_T::const_iterator itBC =
             lBookingClassList.begin();
           itBC != lBookingClassList.end(); ++itBC) {
        const BookingClass* lBC_ptr = *itBC;
        assert (lBC_ptr != NULL);

        //
        csvBookingClassDisplay (oStream, *lBC_ptr, oFFLeadingStr.str());
      }
    }

    // Go on to the next segment-cabin
    continue;
  }
```

```
      assert (BomManager::hasList<FareFamily> (*lSC_ptr) == false);

      // The fare family code is a fake one ('NoFF'), and therefore
      // does not vary
      std::ostringstream oFFLeadingStr;
      oFFLeadingStr << oSCLeadingStr.str() << lFamilyCode << ", ";

      // Browse the booking-classes, directly from the segment-cabin object
      const BookingClassList_T& lBookingClassList =
        BomManager::getList<BookingClass> (*lSC_ptr);
      for (BookingClassList_T::const_iterator itBC =
             lBookingClassList.begin();
           itBC != lBookingClassList.end(); ++itBC) {
        const BookingClass* lBC_ptr = *itBC;
        assert (lBC_ptr != NULL);

        //
        csvBookingClassDisplay (oStream, *lBC_ptr, oFFLeadingStr.str());
      }
    }
  }
  oStream << "****************************************" << std::endl;
}

// //////////////////////////////////////////////////////////////////////
void BomDisplay::
csvDisplay (std::ostream& oStream,
            const TravelSolutionList_T& iTravelSolutionList) {

  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  oStream << "Travel solutions:";
  unsigned short idx = 0;
  for (TravelSolutionList_T::const_iterator itTS =
         iTravelSolutionList.begin();
       itTS != iTravelSolutionList.end(); ++itTS, ++idx) {
    const TravelSolutionStruct& lTS = *itTS;

    oStream << std::endl;
    oStream << "    [" << idx << "] " << lTS.display();
  }
}

// //////////////////////////////////////////////////////////////////////
void BomDisplay::
csvDisplay (std::ostream& oStream,
            const DatePeriodList_T& iDatePeriodList) {

  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  // Browse the date-period objects
  for (DatePeriodList_T::const_iterator itDP = iDatePeriodList.begin();
       itDP != iDatePeriodList.end(); ++itDP) {
    const DatePeriod* lDP_ptr = *itDP;
    assert (lDP_ptr != NULL);

    // Display the date-period object
    csvDateDisplay (oStream, *lDP_ptr);
  }
}
```

```
// ////////////////////////////////////////////////////////////////////
void BomDisplay::csvSimFQTAirRACDisplay (std::ostream& oStream,
                                         const BomRoot& iBomRoot) {
  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  oStream << std::endl;
  oStream << "================================================================="
          << std::endl;
  oStream << "BomRoot: " << iBomRoot.describeKey() << std::endl;
  oStream << "================================================================="
          << std::endl;

  // Check whether there are airport-pair objects
  if (BomManager::hasList<AirportPair> (iBomRoot) == false) {
    return;
  }

  // Browse the airport-pair objects
  const AirportPairList_T& lAirportPairList =
    BomManager::getList<AirportPair> (iBomRoot);
  for (AirportPairList_T::const_iterator itAir = lAirportPairList.begin();
       itAir != lAirportPairList.end(); ++itAir ) {
    const AirportPair* lAir_ptr = *itAir;
    assert (lAir_ptr != NULL);

    // Display the airport pair object
    csvAirportPairDisplay (oStream, *lAir_ptr);
  }
}

// ////////////////////////////////////////////////////////////////////
void BomDisplay::csvAirportPairDisplay (std::ostream& oStream,
                                        const AirportPair& iAirportPair) {
  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  oStream << "++++++++++++++++++++++++++++++++++++++++++++++++++" << std::endl;
  oStream << "AirportPair: " << iAirportPair.describeKey() << std::endl;
  oStream << "++++++++++++++++++++++++++++++++++++++++++++++++++" << std::endl;

  // Check whether there are date-period objects
  if (BomManager::hasList<DatePeriod> (iAirportPair) == false) {
    return;
  }

  // Browse the date-period objects
  const DatePeriodList_T& lDatePeriodList =
    BomManager::getList<DatePeriod> (iAirportPair);
  for (DatePeriodList_T::const_iterator itDP = lDatePeriodList.begin();
       itDP != lDatePeriodList.end(); ++itDP) {
    const DatePeriod* lDP_ptr = *itDP;
    assert (lDP_ptr != NULL);

    // Display the date-period object
    csvDateDisplay (oStream, *lDP_ptr);
  }
}

// ////////////////////////////////////////////////////////////////////
void BomDisplay::csvDateDisplay (std::ostream& oStream,
```

```
                                    const DatePeriod& iDatePeriod) {

  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  oStream << "-----------------------------------------" << std::endl;
  oStream << "DatePeriod: " << iDatePeriod.describeKey() << std::endl;
  oStream << "-----------------------------------------" << std::endl;

  // Check whether there are pos-channel objects
  if (BomManager::hasList<PosChannel> (iDatePeriod) == false) {
    return;
  }

  // Browse the pos-channel objects
  const PosChannelList_T& lPosChannelList =
    BomManager::getList<PosChannel> (iDatePeriod);
  for (PosChannelList_T::const_iterator itPC = lPosChannelList.begin();
       itPC != lPosChannelList.end(); ++itPC) {
    const PosChannel* lPC_ptr = *itPC;
    assert (lPC_ptr != NULL);

    // Display the pos-channel object
    csvPosChannelDisplay (oStream, *lPC_ptr);
  }
}

// ////////////////////////////////////////////////////////////////////
void BomDisplay::csvPosChannelDisplay (std::ostream& oStream,
                                       const PosChannel& iPosChannel) {
  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  oStream << "*****************************************" << std::endl;
  oStream << "PosChannel: " << iPosChannel.describeKey() << std::endl;
  oStream << "*****************************************" << std::endl;

  // Check whether there are time-period objects
  if (BomManager::hasList<TimePeriod> (iPosChannel) == false) {
    return;
  }

  // Browse the time-period objects
  const TimePeriodList_T& lTimePeriodList =
    BomManager::getList<TimePeriod> (iPosChannel);
  for (TimePeriodList_T::const_iterator itTP = lTimePeriodList.begin();
       itTP != lTimePeriodList.end(); ++itTP) {
    const TimePeriod* lTP_ptr = *itTP;
    assert (lTP_ptr != NULL);

    // Display the time-period object
    csvTimeDisplay (oStream, *lTP_ptr);
  }
}

// ////////////////////////////////////////////////////////////////////
void BomDisplay::csvTimeDisplay (std::ostream& oStream,
                                 const TimePeriod& iTimePeriod) {

  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);
```

```
  oStream << "----------------------------------------" << std::endl;
  oStream << "TimePeriod: " << iTimePeriod.describeKey() << std::endl;
  oStream << "----------------------------------------" << std::endl;

  // Only one of the fare/yield feature list exists. Each of the following
  // two methods will check for the existence of the list. So, only the
  // existing list will be actually displayed.
  csvFeatureListDisplay<FareFeatures> (oStream, iTimePeriod);
  csvFeatureListDisplay<YieldFeatures> (oStream, iTimePeriod);
}

// //////////////////////////////////////////////////////////////////////
template <typename FEATURE_TYPE>
void BomDisplay::csvFeatureListDisplay (std::ostream& oStream,
                                        const TimePeriod& iTimePeriod) {

  // Check whether there are fare/yield-feature objects
  if (BomManager::hasList<FEATURE_TYPE> (iTimePeriod) == false) {
    return;
  }

  // Browse the fare/yield-feature objects
  typedef typename BomHolder<FEATURE_TYPE>::BomList_T FeaturesList_T;
  const FeaturesList_T& lFeaturesList =
    BomManager::getList<FEATURE_TYPE> (iTimePeriod);
  for (typename FeaturesList_T::const_iterator itFF = lFeaturesList.begin();
       itFF != lFeaturesList.end(); ++itFF) {
    const FEATURE_TYPE* lFF_ptr = *itFF;
    assert (lFF_ptr != NULL);

    // Display the fare-features object
    csvFeaturesDisplay (oStream, *lFF_ptr);
  }
}

// //////////////////////////////////////////////////////////////////////
template <typename FEATURE_TYPE>
void BomDisplay::csvFeaturesDisplay (std::ostream& oStream,
                                     const FEATURE_TYPE& iFeatures) {
  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  oStream << "----------------------------------------" << std::endl;
  oStream << "Fare/yield-Features: " << iFeatures.describeKey() << std::endl;
  oStream << "----------------------------------------" << std::endl;

  // Check whether there are airlineClassList objects
  if (BomManager::hasList<AirlineClassList> (iFeatures) == false) {
    return;
  }

  // Browse the airlineClassList objects
  const AirlineClassListList_T& lAirlineClassListList =
    BomManager::getList<AirlineClassList> (iFeatures);
  for (AirlineClassListList_T::const_iterator itACL =
         lAirlineClassListList.begin();
       itACL != lAirlineClassListList.end(); ++itACL) {
    const AirlineClassList* lACL_ptr = *itACL;
    assert (lACL_ptr != NULL);

    // Display the airlineClassList object
    csvAirlineClassDisplay(oStream, *lACL_ptr);
```

```
    }
  }

  // ////////////////////////////////////////////////////////////////////
  void BomDisplay::
  csvAirlineClassDisplay  (std::ostream& oStream,
                           const AirlineClassList& iAirlineClassList) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    oStream << "-------------------------------------" << std::endl;
    oStream << "AirlineClassList: "
            << iAirlineClassList.describeKey() << std::endl;
    oStream << "-------------------------------------" << std::endl;
  }

}

/*!
```

3 C++ Class Building Sample StdAir BOM Trees

```
 */
// ////////////////////////////////////////////////////////////////////
// Import section
// ////////////////////////////////////////////////////////////////////
// STL
#include <cassert>
#include <sstream>
// StdAir
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/basic/BasConst_DefaultObject.hpp>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/BomRetriever.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightDate.hpp>
#include <stdair/bom/LegDate.hpp>
#include <stdair/bom/LegCabin.hpp>
#include <stdair/bom/SegmentDate.hpp>
#include <stdair/bom/SegmentCabin.hpp>
#include <stdair/bom/FareFamily.hpp>
#include <stdair/bom/BookingClass.hpp>
#include <stdair/bom/AirportPair.hpp>
#include <stdair/bom/PosChannel.hpp>
#include <stdair/bom/DatePeriod.hpp>
#include <stdair/bom/TimePeriod.hpp>
#include <stdair/bom/FareFeatures.hpp>
#include <stdair/bom/YieldFeatures.hpp>
#include <stdair/bom/AirlineClassList.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/TravelSolutionStruct.hpp>
#include <stdair/bom/BookingRequestStruct.hpp>
#include <stdair/factory/FacBomManager.hpp>
#include <stdair/factory/FacBom.hpp>
#include <stdair/command/CmdBomManager.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/bom/OnDDate.hpp>
#include <stdair/bom/SegmentPeriod.hpp>
```

```
#include <stdair/bom/FlightPeriod.hpp>

namespace stdair {

  // ////////////////////////////////////////////////////////////////////
  void CmdBomManager::buildSampleBom (BomRoot& ioBomRoot) {

    // DEBUG
    STDAIR_LOG_DEBUG ("StdAir is building the BOM tree from built-in "
                      << "specifications.");

    // ////// Basic Bom Tree ///////
    // Build the inventory (flight-dates) and the schedule (flight period) parts.

    buildSampleInventorySchedule (ioBomRoot);

    // Build the pricing (fare rules) and revenue accounting (yields) parts.
    buildSamplePricing (ioBomRoot);

    // ////// Partnership Bom Tree ///////
    // Build the inventory (flight-dates) and the schedule (flight period) parts.

    buildPartnershipsSampleInventoryAndRM (ioBomRoot);

    // Build the pricing (fare rules) and revenue accounting (yields) parts.
    buildPartnershipsSamplePricing (ioBomRoot);

    // Build a dummy inventory, needed by RMOL.
    buildCompleteDummyInventory (ioBomRoot);
  }

  // ////////////////////////////////////////////////////////////////////
  void CmdBomManager::buildSampleInventorySchedule (BomRoot& ioBomRoot) {

    // Inventory
    // Step 0.1: Inventory level
    // Create an Inventory for BA
    const InventoryKey lBAKey ("BA");
    Inventory& lBAInv = FacBom<Inventory>::instance().create (lBAKey);
    FacBomManager::addToListAndMap (ioBomRoot, lBAInv);
    FacBomManager::linkWithParent (ioBomRoot, lBAInv);

    // Create an Inventory for AF
    const InventoryKey lAFKey ("AF");
    Inventory& lAFInv = FacBom<Inventory>::instance().create (lAFKey);
    FacBomManager::addToListAndMap (ioBomRoot, lAFInv);
    FacBomManager::linkWithParent (ioBomRoot, lAFInv);

    // BA
    // Step 0.2: Flight-date level
    // Create a FlightDate (BA9/10-JUN-2011) for BA's Inventory
    FlightNumber_T lFlightNumber = 9;
    Date_T lDate (2011, 6, 10);
    FlightDateKey lFlightDateKey (lFlightNumber, lDate);

    FlightDate& lBA9_20110610_FD =
      FacBom<FlightDate>::instance().create (lFlightDateKey);
    FacBomManager::addToListAndMap (lBAInv, lBA9_20110610_FD);
    FacBomManager::linkWithParent (lBAInv, lBA9_20110610_FD);

    // Display the flight-date
    // STDAIR_LOG_DEBUG ("FlightDate: " << lBA9_20110610_FD.toString());
```

```
// Step 0.3: Segment-date level
// Create a first SegmentDate (LHR-SYD) for BA's Inventory
// See http://www.britishairways.com/travel/flightinformation/public/fr_fr?&C
  arrier=BA&FlightNumber=0009&from=LHR&to=SYD&depDate=100611&SellingClass=O
const AirportCode_T lLHR ("LHR");
const AirportCode_T lSYD ("SYD");
const DateOffset_T l1Day (1);
const DateOffset_T l2Days (2);
const Duration_T l2135 (21, 45, 0);
const Duration_T l0610 (6, 10, 0);
const Duration_T l2205 (22, 05, 0);
SegmentDateKey lSegmentDateKey (lLHR, lSYD);

SegmentDate& lLHRSYDSegment =
  FacBom<SegmentDate>::instance().create (lSegmentDateKey);
FacBomManager::addToListAndMap (lBA9_20110610_FD, lLHRSYDSegment);
FacBomManager::linkWithParent (lBA9_20110610_FD, lLHRSYDSegment);

// Fill the SegmentDate content
lLHRSYDSegment.setBoardingDate (lDate);
lLHRSYDSegment.setOffDate (lDate + l2Days);
lLHRSYDSegment.setBoardingTime (l2135);
lLHRSYDSegment.setOffTime (l0610);
lLHRSYDSegment.setElapsedTime (l2135);

// Display the segment-date
// STDAIR_LOG_DEBUG ("SegmentDate: " << lLHRSYDSegment);

// Create a second SegmentDate (LHR-BKK) for BA's Inventory
// See http://www.britishairways.com/travel/flightinformation/public/fr_fr?&C
  arrier=BA&FlightNumber=0009&from=LHR&to=BKK&depDate=100611&SellingClass=O
const AirportCode_T lBKK ("BKK");
const Duration_T l1540 (15, 40, 0);
const Duration_T l1105 (11, 5, 0);
lSegmentDateKey = SegmentDateKey (lLHR, lBKK);

SegmentDate& lLHRBKKSegment =
  FacBom<SegmentDate>::instance().create (lSegmentDateKey);
FacBomManager::addToListAndMap (lBA9_20110610_FD, lLHRBKKSegment);
FacBomManager::linkWithParent (lBA9_20110610_FD, lLHRBKKSegment);

// Fill the SegmentDate content
lLHRBKKSegment.setBoardingDate (lDate);
lLHRBKKSegment.setOffDate (lDate + l1Day);
lLHRBKKSegment.setBoardingTime (l2135);
lLHRBKKSegment.setOffTime (l1540);
lLHRBKKSegment.setElapsedTime (l1105);

// Display the segment-date
// STDAIR_LOG_DEBUG ("SegmentDate: " << lLHRBKKSegment);

// Create a third SegmentDate (BKK-SYD) for BA's Inventory
// See http://www.britishairways.com/travel/flightinformation/public/fr_fr?&C
  arrier=BA&FlightNumber=0009&from=BKK&to=SYD&depDate=110611&SellingClass=O
const Duration_T l1705 (17, 5, 0);
const Duration_T l0905 (9, 5, 0);
lSegmentDateKey = SegmentDateKey (lBKK, lSYD);

SegmentDate& lBKKSYDSegment =
  FacBom<SegmentDate>::instance().create (lSegmentDateKey);
FacBomManager::addToListAndMap (lBA9_20110610_FD, lBKKSYDSegment);
```

```
FacBomManager::linkWithParent (lBA9_20110610_FD, lBKKSYDSegment);

// Fill the SegmentDate content
lBKKSYDSegment.setBoardingDate (lDate + l1Day);
lBKKSYDSegment.setOffDate (lDate + l2Days);
lBKKSYDSegment.setBoardingTime (l1705);
lBKKSYDSegment.setOffTime (l1540);
lBKKSYDSegment.setElapsedTime (l0905);

// Display the segment-date
// STDAIR_LOG_DEBUG ("SegmentDate: " << lBKKSYDSegment);

// Step 0.4: Leg-date level
// Create a first LegDate (LHR) for BA's Inventory
LegDateKey lLegDateKey (lLHR);

LegDate& lLHRLeg = FacBom<LegDate>::instance().create (lLegDateKey);
FacBomManager::addToListAndMap (lBA9_20110610_FD, lLHRLeg);
FacBomManager::linkWithParent (lBA9_20110610_FD, lLHRLeg);

// Fill the LegDate content
lLHRLeg.setOffPoint (lBKK);
lLHRLeg.setBoardingDate (lDate);
lLHRLeg.setOffDate (lDate + l1Day);
lLHRLeg.setBoardingTime (l2135);
lLHRLeg.setOffTime (l1540);
lLHRLeg.setElapsedTime (l1105);

// Display the leg-date
// STDAIR_LOG_DEBUG ("LegDate: " << lLHRLeg.toString());

// Create a second LegDate (BKK)
lLegDateKey = LegDateKey (lBKK);

LegDate& lBKKLeg = FacBom<LegDate>::instance().create (lLegDateKey);
FacBomManager::addToListAndMap (lBA9_20110610_FD, lBKKLeg);
FacBomManager::linkWithParent (lBA9_20110610_FD, lBKKLeg);

// Display the leg-date
// STDAIR_LOG_DEBUG ("LegDate: " << lBKKLeg.toString());

// Fill the LegDate content
lBKKLeg.setOffPoint (lSYD);
lBKKLeg.setBoardingDate (lDate + l1Day);
lBKKLeg.setOffDate (lDate + l2Days);
lBKKLeg.setBoardingTime (l1705);
lBKKLeg.setOffTime (l1540);
lBKKLeg.setElapsedTime (l0905);

// Link the segment-dates with the leg-dates
FacBomManager::addToListAndMap (lLHRLeg, lLHRSYDSegment);
FacBomManager::addToListAndMap (lLHRLeg, lLHRBKKSegment);
FacBomManager::addToListAndMap (lBKKLeg, lLHRSYDSegment);
FacBomManager::addToListAndMap (lBKKLeg, lBKKSYDSegment);
FacBomManager::addToListAndMap (lLHRSYDSegment, lLHRLeg);
FacBomManager::addToListAndMap (lLHRBKKSegment, lLHRLeg);
FacBomManager::addToListAndMap (lLHRSYDSegment, lBKKLeg);
FacBomManager::addToListAndMap (lBKKSYDSegment, lBKKLeg);


// Step 0.5: segment-cabin level
// Create a SegmentCabin (Y) for the Segment LHR-BKK of BA's Inventory
```

```
const CabinCode_T lY ("Y");
SegmentCabinKey lYSegmentCabinKey (lY);

SegmentCabin& lLHRBKKSegmentYCabin =
  FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lLHRBKKSegment, lLHRBKKSegmentYCabin);
FacBomManager::linkWithParent (lLHRBKKSegment, lLHRBKKSegmentYCabin);

// Display the segment-cabin
// STDAIR_LOG_DEBUG ("SegmentCabin: " << lLHRBKKSegmentYCabin.toString());

// Create a SegmentCabin (Y) of the Segment BKK-SYD;
SegmentCabin& lBKKSYDSegmentYCabin =
  FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lBKKSYDSegment, lBKKSYDSegmentYCabin);
FacBomManager::linkWithParent (lBKKSYDSegment, lBKKSYDSegmentYCabin);


// Display the segment-cabin
// STDAIR_LOG_DEBUG ("SegmentCabin: " << lBKKSYDSegmentYCabin.toString());

// Create a SegmentCabin (Y) of the Segment LHR-SYD;
SegmentCabin& lLHRSYDSegmentYCabin =
  FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lLHRSYDSegment, lLHRSYDSegmentYCabin);
FacBomManager::linkWithParent (lLHRSYDSegment, lLHRSYDSegmentYCabin);

// Display the segment-cabin
// STDAIR_LOG_DEBUG ("SegmentCabin: " << lLHRSYDSegmentYCabin.toString());

// Step 0.6: leg-cabin level
// Create a LegCabin (Y) for the Leg LHR-BKK on BA's Inventory
LegCabinKey lYLegCabinKey (lY);

LegCabin& lLHRLegYCabin =
  FacBom<LegCabin>::instance().create (lYLegCabinKey);
FacBomManager::addToListAndMap (lLHRLeg, lLHRLegYCabin);
FacBomManager::linkWithParent (lLHRLeg, lLHRLegYCabin);

// Display the leg-cabin
// STDAIR_LOG_DEBUG ("LegCabin: " << lLHRLegYCabin.toString());

// Create a LegCabin (Y) for the Leg BKK-SYD
LegCabin& lBKKLegYCabin =
  FacBom<LegCabin>::instance().create (lYLegCabinKey);
FacBomManager::addToListAndMap (lBKKLeg, lBKKLegYCabin);
FacBomManager::linkWithParent (lBKKLeg, lBKKLegYCabin);
// Display the leg-cabin
// STDAIR_LOG_DEBUG ("LegCabin: " << lBKKLegYCabin.toString());

FacBomManager::addToListAndMap (lLHRLegYCabin, lLHRSYDSegmentYCabin,
                                lLHRSYDSegmentYCabin.getFullerKey());
FacBomManager::addToListAndMap (lLHRLegYCabin, lLHRBKKSegmentYCabin,
                                lLHRBKKSegmentYCabin.getFullerKey());
FacBomManager::addToListAndMap (lBKKLegYCabin, lLHRSYDSegmentYCabin,
                                lLHRSYDSegmentYCabin.getFullerKey());
FacBomManager::addToListAndMap (lBKKLegYCabin, lBKKSYDSegmentYCabin,
lBKKSYDSegmentYCabin.getFullerKey());

FacBomManager::addToListAndMap (lLHRSYDSegmentYCabin, lLHRLegYCabin,
                                lLHRLegYCabin.getFullerKey());
FacBomManager::addToListAndMap (lLHRBKKSegmentYCabin, lLHRLegYCabin,
```

```
                                lLHRLegYCabin.getFullerKey());
FacBomManager::addToListAndMap (lLHRSYDSegmentYCabin, lBKKLegYCabin,
                                lBKKLegYCabin.getFullerKey());
FacBomManager::addToListAndMap (lBKKSYDSegmentYCabin, lBKKLegYCabin,
                                lBKKLegYCabin.getFullerKey());


// Step 0.7: fare family level
// Create a FareFamily (1) for the Segment LHR-BKK, cabin Y on BA's Inv
const FamilyCode_T l1 ("EcoSaver");
FareFamilyKey l1FareFamilyKey (l1);

FareFamily& lLHRBKKSegmentYCabin1Family =
  FacBom<FareFamily>::instance().create (l1FareFamilyKey);
FacBomManager::addToListAndMap (lLHRBKKSegmentYCabin,
                                lLHRBKKSegmentYCabin1Family);
FacBomManager::linkWithParent (lLHRBKKSegmentYCabin,
                               lLHRBKKSegmentYCabin1Family);

// Display the booking class
// STDAIR_LOG_DEBUG ("FareFamily: "
//                   << lLHRBKKSegmentYCabin1Family.toString());

// Create a FareFamily (1)  for the Segment BKK-SYD, cabin Y on BA's Inv
FareFamily& lBKKSYDSegmentYCabin1Family =
  FacBom<FareFamily>::instance().create (l1FareFamilyKey);
FacBomManager::addToListAndMap (lBKKSYDSegmentYCabin,
                                lBKKSYDSegmentYCabin1Family);
FacBomManager::linkWithParent (lBKKSYDSegmentYCabin,
                               lBKKSYDSegmentYCabin1Family);

// Display the booking class
// STDAIR_LOG_DEBUG ("FareFamily: "
//                   << lLHRBKKSegmentYCabin1Family.toString());

// Create a FareFamily (1)  for the Segment LHR-SYD, cabin Y on BA's Inv
FareFamily& lLHRSYDSegmentYCabin1Family =
  FacBom<FareFamily>::instance().create (l1FareFamilyKey);
FacBomManager::addToListAndMap (lLHRSYDSegmentYCabin,
                                lLHRSYDSegmentYCabin1Family);
FacBomManager::linkWithParent (lLHRSYDSegmentYCabin,
                               lLHRSYDSegmentYCabin1Family);

// Display the booking class
// STDAIR_LOG_DEBUG ("FareFamily: "
//                   << lLHRBKKSegmentYCabin1Family.toString());


// Step 0.8: booking class level
// Create a BookingClass (Q) for the Segment LHR-BKK, cabin Y,
// fare family 1 on BA's Inv
const ClassCode_T lQ ("Q");
BookingClassKey lQBookingClassKey (lQ);

BookingClass& lLHRBKKSegmentYCabin1FamilyQClass =
  FacBom<BookingClass>::instance().create (lQBookingClassKey);
FacBomManager::addToListAndMap (lLHRBKKSegmentYCabin1Family,
                                lLHRBKKSegmentYCabin1FamilyQClass);
FacBomManager::linkWithParent (lLHRBKKSegmentYCabin1Family,
                               lLHRBKKSegmentYCabin1FamilyQClass);

FacBomManager::addToListAndMap (lLHRBKKSegmentYCabin,
```

```
                                lLHRBKKSegmentYCabin1FamilyQClass);
FacBomManager::addToListAndMap (lLHRBKKSegment,
                                lLHRBKKSegmentYCabin1FamilyQClass);

// Display the booking class
// STDAIR_LOG_DEBUG ("BookingClass: "
//                   << lLHRBKKSegmentYCabin1FamilyQClass.toString());

// Create a BookingClass (Q) for the Segment BKK-SYD, cabin Y,
// fare family 1 on BA's Inv
BookingClass& lBKKSYDSegmentYCabin1FamilyQClass =
  FacBom<BookingClass>::instance().create (lQBookingClassKey);
FacBomManager::addToListAndMap (lBKKSYDSegmentYCabin1Family,
                                lBKKSYDSegmentYCabin1FamilyQClass);
FacBomManager::linkWithParent (lBKKSYDSegmentYCabin1Family,
                               lBKKSYDSegmentYCabin1FamilyQClass);

FacBomManager::addToListAndMap (lBKKSYDSegmentYCabin,
                                lBKKSYDSegmentYCabin1FamilyQClass);
FacBomManager::addToListAndMap (lBKKSYDSegment,
                                lBKKSYDSegmentYCabin1FamilyQClass);

// Display the booking class
// STDAIR_LOG_DEBUG ("BookingClass: "
//                   << lLHRBKKSegmentYCabin1FamilyQClass.toString());

// Create a BookingClass (Q) for the Segment LHR-SYD, cabin Y,
// fare family 1 on BA's Inv
BookingClass& lLHRSYDSegmentYCabin1FamilyQClass =
  FacBom<BookingClass>::instance().create (lQBookingClassKey);
FacBomManager::addToListAndMap (lLHRSYDSegmentYCabin1Family,
                                lLHRSYDSegmentYCabin1FamilyQClass);
FacBomManager::linkWithParent (lLHRSYDSegmentYCabin1Family,
                               lLHRSYDSegmentYCabin1FamilyQClass);

FacBomManager::addToListAndMap (lLHRSYDSegmentYCabin,
                                lLHRSYDSegmentYCabin1FamilyQClass);
FacBomManager::addToListAndMap (lLHRSYDSegment,
                                lLHRSYDSegmentYCabin1FamilyQClass);

// Display the booking class
// STDAIR_LOG_DEBUG ("BookingClass: "
//                   << lLHRBKKSegmentYCabin1FamilyQClass.toString());


// ////// AF ///////
// Step 0.2: Flight-date level
// Create a FlightDate (AF084/20-MAR-2011) for AF's Inventory
lFlightNumber = 84;
lDate = Date_T (2011, 3, 20);
lFlightDateKey = FlightDateKey (lFlightNumber, lDate);

FlightDate& lAF084_20110320_FD =
  FacBom<FlightDate>::instance().create (lFlightDateKey);
FacBomManager::addToListAndMap (lAFInv, lAF084_20110320_FD);
FacBomManager::linkWithParent (lAFInv, lAF084_20110320_FD);

// Display the flight-date
// STDAIR_LOG_DEBUG ("FlightDate: " << lAF084_20110320_FD.toString());

// Step 0.3: Segment-date level
// Create a SegmentDate (CDG-SFO) for AF's Inventory
```

```
const AirportCode_T lCDG ("CDG");
const AirportCode_T lSFO ("SFO");
const Duration_T l1040 (10, 40, 0);
const Duration_T l1250 (12, 50, 0);
const Duration_T l1110 (11, 10, 0);
lSegmentDateKey = SegmentDateKey (lCDG, lSFO);

SegmentDate& lCDGSFOSegment =
  FacBom<SegmentDate>::instance().create (lSegmentDateKey);
FacBomManager::addToListAndMap (lAF084_20110320_FD, lCDGSFOSegment);
FacBomManager::linkWithParent (lAF084_20110320_FD, lCDGSFOSegment);

// Display the segment-date
// STDAIR_LOG_DEBUG ("SegmentDate: " << lCDGSFOSegment.toString());

// Fill the SegmentDate content
lCDGSFOSegment.setBoardingDate (lDate);
lCDGSFOSegment.setOffDate (lDate);
lCDGSFOSegment.setBoardingTime (l1040);
lCDGSFOSegment.setOffTime (l1250);
lCDGSFOSegment.setElapsedTime (l1110);

// Step 0.4: Leg-date level
// Create a LegDate (CDG) for AF's Inventory
lLegDateKey = LegDateKey (lCDG);

LegDate& lCDGLeg = FacBom<LegDate>::instance().create (lLegDateKey);
FacBomManager::addToListAndMap (lAF084_20110320_FD, lCDGLeg);
FacBomManager::linkWithParent (lAF084_20110320_FD, lCDGLeg);

// Fill the LegDate content
lCDGLeg.setOffPoint (lSFO);
lCDGLeg.setBoardingDate (lDate);
lCDGLeg.setOffDate (lDate);
lCDGLeg.setBoardingTime (l1040);
lCDGLeg.setOffTime (l1250);
lCDGLeg.setElapsedTime (l1110);

// Display the leg-date
// STDAIR_LOG_DEBUG ("LegDate: " << lCDGLeg.toString());

// Link the segment-dates with the leg-dates
FacBomManager::addToListAndMap (lCDGLeg, lCDGSFOSegment);
FacBomManager::addToListAndMap (lCDGSFOSegment, lCDGLeg);


// Step 0.5: segment-cabin level
// Create a SegmentCabin (Y) for the Segment CDG-SFO of AF's Inventory
SegmentCabin& lCDGSFOSegmentYCabin =
  FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lCDGSFOSegment, lCDGSFOSegmentYCabin);
FacBomManager::linkWithParent (lCDGSFOSegment, lCDGSFOSegmentYCabin);

// Display the segment-cabin
// STDAIR_LOG_DEBUG ("SegmentCabin: " << lCDGSFOSegmentYCabin.toString());

// Step 0.6: leg-cabin level
// Create a LegCabin (Y) for the Leg CDG-SFO on AF's Inventory
LegCabin& lCDGLegYCabin =
  FacBom<LegCabin>::instance().create (lYLegCabinKey);
FacBomManager::addToListAndMap (lCDGLeg, lCDGLegYCabin);
FacBomManager::linkWithParent (lCDGLeg, lCDGLegYCabin);
```

```
// Display the leg-cabin
// STDAIR_LOG_DEBUG ("LegCabin: " << lLHRLegYCabin.toString());

// Link the segment-dates with the leg-dates
FacBomManager::addToListAndMap (lCDGLegYCabin, lCDGSFOSegmentYCabin,
                                lCDGSFOSegmentYCabin.getFullerKey());
FacBomManager::addToListAndMap (lCDGSFOSegmentYCabin, lCDGLegYCabin,
                                lCDGLegYCabin.getFullerKey());


// Step 0.7: fare family level
// Create a fareFamily (1) for the Segment CDG-SFO, cabin Y on AF's Inv
FareFamily& lCDGSFOSegmentYCabin1Family =
  FacBom<FareFamily>::instance().create (l1FareFamilyKey);
FacBomManager::addToListAndMap (lCDGSFOSegmentYCabin,
                                lCDGSFOSegmentYCabin1Family);
FacBomManager::linkWithParent (lCDGSFOSegmentYCabin,
                               lCDGSFOSegmentYCabin1Family);

// Display the fare family
// STDAIR_LOG_DEBUG ("fareFamily: "
//
//                   << lCDGSFOSegmentYCabin1Family.toString());

// Step 0.8: booking class level Create a BookingClass (Q) for the
// Segment CDG-SFO, cabin Y, fare family 1 on AF's Inv
BookingClass& lCDGSFOSegmentYCabin1FamilyQClass =
  FacBom<BookingClass>::instance().create (lQBookingClassKey);
FacBomManager::addToListAndMap (lCDGSFOSegmentYCabin1Family,
                                lCDGSFOSegmentYCabin1FamilyQClass);
FacBomManager::linkWithParent (lCDGSFOSegmentYCabin1Family,
                               lCDGSFOSegmentYCabin1FamilyQClass);

FacBomManager::addToListAndMap (lCDGSFOSegmentYCabin,
                                lCDGSFOSegmentYCabin1FamilyQClass);
FacBomManager::addToListAndMap (lCDGSFOSegment,
                                lCDGSFOSegmentYCabin1FamilyQClass);

// Display the booking class
// STDAIR_LOG_DEBUG ("BookingClass: "
//                   << lCDGSFOSegmentYCabin1FamilyQClass.toString());

/*================================================================================
  =====
  ================================================================================
  =====
  ================================================================================
  =====*/
// Schedule:
// BA:
// Step 1: flight period level
// Create a flight period for BA9:
const DoWStruct lDoWSrtuct ("1111111");
const Date_T lBA9DateRangeStart (2010, boost::gregorian::Jun, 6);
const Date_T lBA9DateRangeEnd (2010, boost::gregorian::Jun, 7);
const DatePeriod_T lBA9DatePeriod (lBA9DateRangeStart, lBA9DateRangeEnd);
const PeriodStruct lBA9PeriodStruct (lBA9DatePeriod, lDoWSrtuct);

lFlightNumber = FlightNumber_T (9);

FlightPeriodKey lBA9FlightPeriodKey (lFlightNumber, lBA9PeriodStruct);
```

```
  FlightPeriod& lBA9FlightPeriod =
    FacBom<FlightPeriod>::instance().create (lBA9FlightPeriodKey);
  FacBomManager::addToListAndMap (lBAInv, lBA9FlightPeriod);
  FacBomManager::linkWithParent (lBAInv, lBA9FlightPeriod);

  // Step 2: segment period level
  // Create a segment period for SIN-BKK:

  SegmentPeriodKey lLHRSYDSegmentPeriodKey (lLHR, lSYD);

  SegmentPeriod& lLHRSYDSegmentPeriod =
    FacBom<SegmentPeriod>::instance().create (lLHRSYDSegmentPeriodKey);
  FacBomManager::addToListAndMap (lBA9FlightPeriod, lLHRSYDSegmentPeriod);
  FacBomManager::linkWithParent (lBA9FlightPeriod, lLHRSYDSegmentPeriod);

  lLHRSYDSegmentPeriod.setBoardingTime (l2135);
  lLHRSYDSegmentPeriod.setOffTime (l1540);
  lLHRSYDSegmentPeriod.setElapsedTime (l1105);
  ClassList_String_T lYM ("YM");
  lLHRSYDSegmentPeriod.addCabinBookingClassList (lY,lYM);

  // AF:
  // Step 1: flight period level
  // Create a flight period for AF84:
  const Date_T lAF84DateRangeStart (2011, boost::gregorian::Mar, 20);
  const Date_T lAF84DateRangeEnd (2011, boost::gregorian::Mar, 21);
  const DatePeriod_T lAF84DatePeriod (lAF84DateRangeStart, lAF84DateRangeEnd);
  const PeriodStruct lAF84PeriodStruct (lAF84DatePeriod, lDoWSrtuct);

  lFlightNumber = FlightNumber_T (84);

  FlightPeriodKey lAF84FlightPeriodKey (lFlightNumber, lAF84PeriodStruct);

  FlightPeriod& lAF84FlightPeriod =
    FacBom<FlightPeriod>::instance().create (lAF84FlightPeriodKey);
  FacBomManager::addToListAndMap (lAFInv, lAF84FlightPeriod);
  FacBomManager::linkWithParent (lAFInv, lAF84FlightPeriod);

  // Step 2: segment period level
  // Create a segment period for SIN-BKK:

  SegmentPeriodKey lCDGSFOSegmentPeriodKey (lCDG, lSFO);

  SegmentPeriod& lCDGSFOSegmentPeriod =
    FacBom<SegmentPeriod>::instance().create (lCDGSFOSegmentPeriodKey);
  FacBomManager::addToListAndMap (lAF84FlightPeriod, lCDGSFOSegmentPeriod);
  FacBomManager::linkWithParent (lAF84FlightPeriod, lCDGSFOSegmentPeriod);

  lCDGSFOSegmentPeriod.setBoardingTime (l1040);
  lCDGSFOSegmentPeriod.setOffTime (l1250);
  lCDGSFOSegmentPeriod.setElapsedTime (l1110);
  lCDGSFOSegmentPeriod.addCabinBookingClassList (lY,lYM);

  /*====================================================================
    =====
    ====================================================================
    =====
    ====================================================================
    =====*/
  // O&D
  // Create an O&D Date (BA;9,2010-Jun-06;LHR,SYD) for BA's Inventory
```

```
  OnDString_T  lBALHRSYDOnDStr = "BA;9,2010-Jun-06;LHR,SYD";
  OnDStringList_T lBAOnDStrList;
  lBAOnDStrList.push_back (lBALHRSYDOnDStr);

  OnDDateKey lBAOnDDateKey (lBAOnDStrList);
  OnDDate& lBA_LHRSYD_OnDDate =
    FacBom<OnDDate>::instance().create (lBAOnDDateKey);
  // Link to the inventory
  FacBomManager::addToListAndMap (lBAInv, lBA_LHRSYD_OnDDate);
  FacBomManager::linkWithParent (lBAInv, lBA_LHRSYD_OnDDate);

  // Add the segment
  FacBomManager::addToListAndMap (lBA_LHRSYD_OnDDate, lLHRSYDSegment);

  // Add total forecast info for cabin Y.
  const MeanStdDevPair_T lMean60StdDev6 (60.0, 6.0);
  const WTP_T lWTP750 = 750.0;
  const WTPDemandPair_T lWTP750Mean60StdDev6 (lWTP750, lMean60StdDev6);
  lBA_LHRSYD_OnDDate.setTotalForecast (lY, lWTP750Mean60StdDev6);

  // Create an O&D Date (AF;84,2011-Mar-21;CDG,SFO) for AF's Inventory
  OnDString_T lAFLHRSYDOnDStr = "AF;9,2011-Mar-20;CDG,SFO";
  OnDStringList_T lAFOnDStrList;
  lAFOnDStrList.push_back (lAFLHRSYDOnDStr);

  OnDDateKey lAFOnDDateKey (lAFOnDStrList);
  OnDDate& lAF_LHRSYD_OnDDate =
    FacBom<OnDDate>::instance().create (lAFOnDDateKey);
  // Link to the inventory
  FacBomManager::addToListAndMap (lAFInv, lAF_LHRSYD_OnDDate);
  FacBomManager::linkWithParent (lAFInv, lAF_LHRSYD_OnDDate);

  // Add the segment
  FacBomManager::addToListAndMap (lAF_LHRSYD_OnDDate, lLHRSYDSegment);

  // Add total forecast info for cabin Y.
  lAF_LHRSYD_OnDDate.setTotalForecast (lY, lWTP750Mean60StdDev6);

}
// ////////////////////////////////////////////////////////////////////
void CmdBomManager::buildCompleteDummyInventory  (BomRoot& ioBomRoot) {

  // Build a dummy inventory, containing a dummy flight-date with a
  // single segment-cabin and a single leg-cabin.
  const CabinCapacity_T lCapacity = DEFAULT_CABIN_CAPACITY;
  buildDummyInventory (ioBomRoot, lCapacity);

  // Retrieve the (sample) segment-cabin.
  SegmentCabin& lDummySegmentCabin =
    BomRetriever::retrieveDummySegmentCabin (ioBomRoot);

  // Retrieve the (sample) leg-cabin.
  LegCabin& lDummyLegCabin =
    BomRetriever::retrieveDummyLegCabin (ioBomRoot);

  // Add some booking classes to the dummy segment-cabin and some
  // virtual ones to the dummy leg-cabin.
  // First booking class yield and demand information.
  Yield_T lYield = 100;
  MeanValue_T lMean = 20;
  StdDevValue_T lStdDev= 9;
  BookingClassKey lBCKey (DEFAULT_CLASS_CODE);
```

```
  BookingClass& lDummyBookingClass =
    FacBom<BookingClass>::instance().create (lBCKey);
  lDummyBookingClass.setYield (lYield);
  lDummyBookingClass.setMean (lMean);
  lDummyBookingClass.setStdDev (lStdDev);
  // Add a booking class to the segment-cabin.
  FacBomManager::addToList (lDummySegmentCabin, lDummyBookingClass);

  VirtualClassStruct lDummyVirtualClass (lDummyBookingClass);
  lDummyVirtualClass.setYield (lYield);
  lDummyVirtualClass.setMean (lMean);
  lDummyVirtualClass.setStdDev (lStdDev);
  // Add the corresponding virtual class to the leg-cabin.
  lDummyLegCabin.addVirtualClass (lDummyVirtualClass);

  // Second booking class yield and demand information.
  lYield = 70;
  lMean = 45;
  lStdDev= 12;
  lDummyBookingClass.setYield (lYield);
  lDummyBookingClass.setMean (lMean);
  lDummyBookingClass.setStdDev (lStdDev);
  // Add a booking class to the segment-cabin.
  FacBomManager::addToList (lDummySegmentCabin, lDummyBookingClass);

  lDummyVirtualClass.setYield (lYield);
  lDummyVirtualClass.setMean (lMean);
  lDummyVirtualClass.setStdDev (lStdDev);
  // Add the corresponding virtual class to the leg-cabin.
  lDummyLegCabin.addVirtualClass (lDummyVirtualClass);

  // Third booking class yield and demand information.
  lYield = 42;
  lMean = 80;
  lStdDev= 16;
  lDummyBookingClass.setYield (lYield);
  lDummyBookingClass.setMean (lMean);
  lDummyBookingClass.setStdDev (lStdDev);
  // Add a booking class to the segment-cabin.
  FacBomManager::addToList (lDummySegmentCabin, lDummyBookingClass);

  lDummyVirtualClass.setYield (lYield);
  lDummyVirtualClass.setMean (lMean);
  lDummyVirtualClass.setStdDev (lStdDev);
  // Add the corresponding virtual class to the leg-cabin.
  lDummyLegCabin.addVirtualClass (lDummyVirtualClass);

}

// ////////////////////////////////////////////////////////////////////
void CmdBomManager::buildDummyInventory (BomRoot& ioBomRoot,
                                         const CabinCapacity_T& iCapacity) {
  // Inventory
  const InventoryKey lInventoryKey (DEFAULT_AIRLINE_CODE);
  Inventory& lInv = FacBom<Inventory>::instance().create (lInventoryKey);
  FacBomManager::addToListAndMap (ioBomRoot, lInv);
  FacBomManager::linkWithParent (ioBomRoot, lInv);

  // Flight-date
  FlightDateKey lFlightDateKey(DEFAULT_FLIGHT_NUMBER, DEFAULT_DEPARTURE_DATE);
  FlightDate& lFlightDate =
```

```
    FacBom<FlightDate>::instance().create (lFlightDateKey);
  FacBomManager::addToListAndMap (lInv, lFlightDate);
  FacBomManager::linkWithParent (lInv, lFlightDate);

  // Leg-date
  LegDateKey lLegDateKey (DEFAULT_ORIGIN);
  LegDate& lLeg = FacBom<LegDate>::instance().create (lLegDateKey);
  FacBomManager::addToListAndMap (lFlightDate, lLeg);
  FacBomManager::linkWithParent (lFlightDate, lLeg);

  // Fill the LegDate content
  lLeg.setOffPoint (DEFAULT_DESTINATION);
  lLeg.setBoardingDate (DEFAULT_DEPARTURE_DATE);
  lLeg.setOffDate (DEFAULT_DEPARTURE_DATE);
  lLeg.setBoardingTime (Duration_T (14, 0, 0));
  lLeg.setOffTime (Duration_T (16, 0, 0));
  lLeg.setElapsedTime (Duration_T (8, 0, 0));

  // Leg-cabin
  LegCabinKey lLegCabinKey (DEFAULT_CABIN_CODE);
  LegCabin& lLegCabin = FacBom<LegCabin>::instance().create (lLegCabinKey);
  FacBomManager::addToListAndMap (lLeg, lLegCabin);
  FacBomManager::linkWithParent (lLeg, lLegCabin);

  lLegCabin.setCapacities (iCapacity);
  lLegCabin.setAvailabilityPool (iCapacity);

  // Segment-date
  SegmentDateKey lSegmentDateKey (DEFAULT_ORIGIN, DEFAULT_DESTINATION);
  SegmentDate& lSegment =
    FacBom<SegmentDate>::instance().create (lSegmentDateKey);
  FacBomManager::addToListAndMap (lFlightDate, lSegment);
  FacBomManager::linkWithParent (lFlightDate, lSegment);

  // Links between the segment-date and the leg-date
  FacBomManager::addToListAndMap (lLeg, lSegment);
  FacBomManager::addToListAndMap (lSegment, lLeg);

  // Fill the SegmentDate content
  lSegment.setBoardingDate (DEFAULT_DEPARTURE_DATE);
  lSegment.setOffDate (DEFAULT_DEPARTURE_DATE);
  lSegment.setBoardingTime (Duration_T (14, 0, 0));
  lSegment.setOffTime (Duration_T (16, 0, 0));
  lSegment.setElapsedTime (Duration_T (8, 0, 0));

  // Segment-cabin
  SegmentCabinKey lSegmentCabinKey (DEFAULT_CABIN_CODE);
  SegmentCabin& lSegmentCabin =
    FacBom<SegmentCabin>::instance().create (lSegmentCabinKey);
  FacBomManager::addToListAndMap (lSegment, lSegmentCabin);
  FacBomManager::linkWithParent (lSegment, lSegmentCabin);

  // Links between the segment-cabin and the leg-cabin
  FacBomManager::addToListAndMap (lLegCabin, lSegmentCabin,
                                  lSegmentCabin.getFullerKey());
  FacBomManager::addToListAndMap (lSegmentCabin, lLegCabin,
                                  lLegCabin.getFullerKey());

  // Create a FareFamily (1) for the Segment LHR-BKK, cabin Y on BA's Inv
  const FamilyCode_T l1 ("EcoSaver");
  FareFamilyKey l1FareFamilyKey (l1);
```

```
  FareFamily& lSegmentYCabin1Family =
    FacBom<FareFamily>::instance().create (l1FareFamilyKey);
  FacBomManager::addToListAndMap (lSegmentCabin, lSegmentYCabin1Family);
  FacBomManager::linkWithParent (lSegmentCabin, lSegmentYCabin1Family);

  // Create a booking-class
  const ClassCode_T lQ ("Q");
  BookingClassKey lQBookingClassKey (lQ);

  BookingClass& lSegmentYCabin1FamilyQClass =
    FacBom<BookingClass>::instance().create (lQBookingClassKey);
  FacBomManager::addToListAndMap (lSegmentYCabin1Family,
                                  lSegmentYCabin1FamilyQClass);
  FacBomManager::linkWithParent (lSegmentYCabin1Family,
                                 lSegmentYCabin1FamilyQClass);

  FacBomManager::addToListAndMap (lSegmentCabin, lSegmentYCabin1FamilyQClass);
  FacBomManager::addToListAndMap (lSegment, lSegmentYCabin1FamilyQClass);

  /*================================================================================
    =====
    ================================================================================
    =====
    ================================================================================
    =====*/
  // Schedule:
  // XX:
  // Step 1: flight period level
  // Create a flight period for XX:
  const DoWStruct lDoWSrtuct ("1111111");
  const Date_T lXXDateRangeStart (DEFAULT_DEPARTURE_DATE);
  const Date_T lXXDateRangeEnd (DEFAULT_DEPARTURE_DATE);
  const DatePeriod_T lXXDatePeriod (lXXDateRangeStart, lXXDateRangeEnd);
  const PeriodStruct lXXPeriodStruct (lXXDatePeriod, lDoWSrtuct);

  FlightPeriodKey lXXFlightPeriodKey (DEFAULT_FLIGHT_NUMBER, lXXPeriodStruct);

  FlightPeriod& lXXFlightPeriod =
    FacBom<FlightPeriod>::instance().create (lXXFlightPeriodKey);
  FacBomManager::addToListAndMap (lInv, lXXFlightPeriod);
  FacBomManager::linkWithParent (lInv, lXXFlightPeriod);

  // Step 2: segment period level
  // Create a segment period

  SegmentPeriodKey lXXSegmentPeriodKey (DEFAULT_ORIGIN, DEFAULT_DESTINATION);

  SegmentPeriod& lXXSegmentPeriod =
    FacBom<SegmentPeriod>::instance().create (lXXSegmentPeriodKey);
  FacBomManager::addToListAndMap (lXXFlightPeriod, lXXSegmentPeriod);
  FacBomManager::linkWithParent (lXXFlightPeriod, lXXSegmentPeriod);

  lXXSegmentPeriod.setBoardingTime (Duration_T (14, 0, 0));
  lXXSegmentPeriod.setOffTime (Duration_T (16, 0, 0));
  lXXSegmentPeriod.setElapsedTime (Duration_T (8, 0, 0));
  const CabinCode_T lY ("Y");
  const ClassList_String_T lYQ ("YQ");
  lXXSegmentPeriod.addCabinBookingClassList (lY,lYQ);


}
```

```
// ////////////////////////////////////////////////////////////////////
void CmdBomManager::buildSamplePricing (BomRoot& ioBomRoot) {

  // Set the airport-pair primary key.
  const AirportPairKey lAirportPairKey (AIRPORT_LHR, AIRPORT_SYD);

  // Create the AirportPairKey object and link it to the BOM tree root.
  AirportPair& lAirportPair =
    FacBom<AirportPair>::instance().create (lAirportPairKey);
  FacBomManager::addToListAndMap (ioBomRoot, lAirportPair);
  FacBomManager::linkWithParent (ioBomRoot, lAirportPair);

  // Set the fare date-period primary key.
  const Date_T lDateRangeStart (2011, boost::gregorian::Jan, 15);
  const Date_T lDateRangeEnd (2011, boost::gregorian::Dec, 31);
  const DatePeriod_T lDateRange (lDateRangeStart, lDateRangeEnd);
  const DatePeriodKey lDatePeriodKey (lDateRange);

  // Create the DatePeriodKey object and link it to the PosChannel object.
  DatePeriod& lDatePeriod =
    FacBom<DatePeriod>::instance().create (lDatePeriodKey);
  FacBomManager::addToListAndMap (lAirportPair, lDatePeriod);
  FacBomManager::linkWithParent (lAirportPair, lDatePeriod);

  // Set the point-of-sale-channel primary key.
  const PosChannelKey lPosChannelKey (POS_LHR, CHANNEL_DN);

  // Create the PositionKey object and link it to the AirportPair object.
  PosChannel& lPosChannel =
    FacBom<PosChannel>::instance().create (lPosChannelKey);
  FacBomManager::addToListAndMap (lDatePeriod, lPosChannel);
  FacBomManager::linkWithParent (lDatePeriod, lPosChannel);

  // Set the fare time-period primary key.
  const Time_T lTimeRangeStart (0, 0, 0);
  const Time_T lTimeRangeEnd (23, 0, 0);
  const TimePeriodKey lTimePeriodKey (lTimeRangeStart, lTimeRangeEnd);

  // Create the TimePeriodKey and link it to the DatePeriod object.
  TimePeriod& lTimePeriod =
    FacBom<TimePeriod>::instance().create (lTimePeriodKey);
  FacBomManager::addToListAndMap (lPosChannel, lTimePeriod);
  FacBomManager::linkWithParent (lPosChannel, lTimePeriod);

  // Pricing -- Generate the FareRule
  const FareFeaturesKey lFareFeaturesKey (TRIP_TYPE_ROUND_TRIP,
                                          NO_ADVANCE_PURCHASE,
                                          SATURDAY_STAY,
                                          CHANGE_FEES,
                                          NON_REFUNDABLE,
                                          NO_STAY_DURATION);

  // Create the FareFeaturesKey and link it to the TimePeriod object.
  FareFeatures& lFareFeatures =
    FacBom<FareFeatures>::instance().create (lFareFeaturesKey);
  FacBomManager::addToListAndMap (lTimePeriod, lFareFeatures);
  FacBomManager::linkWithParent (lTimePeriod, lFareFeatures);

  // Revenue Accounting -- Generate the YieldRule
  const YieldFeaturesKey lYieldFeaturesKey (TRIP_TYPE_ROUND_TRIP,
                                            CABIN_Y);
```

```
  // Create the YieldFeaturesKey and link it to the TimePeriod object.
  YieldFeatures& lYieldFeatures =
    FacBom<YieldFeatures>::instance().create (lYieldFeaturesKey);
  FacBomManager::addToListAndMap (lTimePeriod, lYieldFeatures);
  FacBomManager::linkWithParent (lTimePeriod, lYieldFeatures);

  // Generate Segment Features and link them to their respective
  // fare and yield rules.
  AirlineCodeList_T lAirlineCodeList;
  lAirlineCodeList.push_back (AIRLINE_CODE_BA);
  ClassList_StringList_T lClassCodeList;
  lClassCodeList.push_back (CLASS_CODE_Y);
  const AirlineClassListKey lAirlineClassListKey (lAirlineCodeList,
                                                  lClassCodeList);

  // Create the AirlineClassList
  AirlineClassList& lAirlineClassList =
    FacBom<AirlineClassList>::instance().create (lAirlineClassListKey);
  // Link the AirlineClassList to the FareFeatures object
  lAirlineClassList.setFare (900);
  FacBomManager::addToListAndMap (lFareFeatures, lAirlineClassList);
  FacBomManager::linkWithParent (lFareFeatures, lAirlineClassList);

  // Link the AirlineClassList to the YieldFeatures object
  lAirlineClassList.setYield (900);
  FacBomManager::addToListAndMap (lYieldFeatures, lAirlineClassList);
  // \todo (gsabatier): the following calls overrides the parent for
  //       lAirlineClassList. Check that it is what is actually wanted.
  FacBomManager::linkWithParent (lYieldFeatures, lAirlineClassList);
}

// ////////////////////////////////////////////////////////////////////
void CmdBomManager::
buildSampleTravelSolutionForPricing (TravelSolutionList_T& ioTravelSolutionList
    ) {

  // Clean the list
  ioTravelSolutionList.clear();

  //
  const std::string lBA9_SegmentDateKey ("BA, 9, 2011-06-10, LHR, SYD, 21:45");


  // Add the segment date key to the travel solution
  TravelSolutionStruct lTS;
  lTS.addSegment (lBA9_SegmentDateKey);

  // Add the travel solution to the list
  ioTravelSolutionList.push_back (lTS);
}

// ////////////////////////////////////////////////////////////////////
void CmdBomManager::
buildSampleTravelSolutions (TravelSolutionList_T& ioTravelSolutionList) {

  // Clean the list
  ioTravelSolutionList.clear();

  //
  const std::string lBA9_SegmentDateKey ("BA, 9, 2011-06-10, LHR, SYD, 21:45");
```

```
    // Add the segment date key to the travel solution
    TravelSolutionStruct lTS;
    lTS.addSegment (lBA9_SegmentDateKey);

    // Fare option
    const ClassCode_T lClassPath (CLASS_CODE_Q);
    const Fare_T lFare (900);
    const ChangeFees_T lChangeFee (CHANGE_FEES);
    const NonRefundable_T isNonRefundable (NON_REFUNDABLE);
    const SaturdayStay_T lSaturdayStay (SATURDAY_STAY);
    const FareOptionStruct lFareOption (lClassPath, lFare, lChangeFee,
                                        isNonRefundable, lSaturdayStay);

    // Add (a copy of) the fare option
    lTS.addFareOption (lFareOption);

    // Map of class availabilities: set the availability for the Q
    // booking class (the one corresponding to the fare option) to 8.
    ClassAvailabilityMap_T lClassAvailabilityMap;
    const Availability_T lAvl (8);
    const bool hasInsertBeenSuccessful = lClassAvailabilityMap.
      insert (ClassAvailabilityMap_T::value_type (lClassPath, lAvl)).second;
    assert (hasInsertBeenSuccessful == true);
    // Add the map to the dedicated list held by the travel solution
    lTS.addClassAvailabilityMap (lClassAvailabilityMap);

    // Add the travel solution to the list
    ioTravelSolutionList.push_back (lTS);
  }

  // ////////////////////////////////////////////////////////////////////
  BookingRequestStruct CmdBomManager::buildSampleBookingRequest() {
    // Origin
    const AirportCode_T lOrigin (AIRPORT_LHR);

    // Destination
    const AirportCode_T lDestination (AIRPORT_SYD);

    // Point of Sale (POS)
    const CityCode_T lPOS (POS_LHR);

    // Preferred departure date (10-JUN-2011)
    const Date_T lPreferredDepartureDate (2011, boost::gregorian::Jun, 10);

    // Preferred departure time (08:00)
    const Duration_T lPreferredDepartureTime (8, 0, 0);

    // Date of the request (15-MAY-2011)
    const Date_T lRequestDate (2011, boost::gregorian::May, 15);

    // Time of the request (10:00)
    const Duration_T lRequestTime (10, 0, 0);

    // Date-time of the request (made of the date and time above)
    const DateTime_T lRequestDateTime (lRequestDate, lRequestTime);

    // Preferred cabin (also named class of service sometimes)
    const CabinCode_T lPreferredCabin (CABIN_ECO);

    // Number of persons in the party
    const PartySize_T lPartySize (3);
```

```
  // Channel (direct/indirect, on-line/off-line)
  const ChannelLabel_T lChannel (CHANNEL_DN);

  // Type of the trip (one-way, inbound/outbound of a return trip)
  const TripType_T lTripType (TRIP_TYPE_INBOUND);

  // Duration of the stay (expressed as a number of days)
  const DayDuration_T lStayDuration (DEFAULT_STAY_DURATION);

  // Frequent flyer tier (member, silver, gold, platinum, senator, etc)
  const FrequentFlyer_T lFrequentFlyerType (FREQUENT_FLYER_MEMBER);

  // Maximum willing-to-pay (WTP, expressed in monetary unit, e.g., EUR)
  const WTP_T lWTP (DEFAULT_WTP);

  // Value of time, for the customer (expressed in monetary unit per
  // unit of time, e.g., EUR/hour)
  const PriceValue_T lValueOfTime (DEFAULT_VALUE_OF_TIME);

  // Creation of the booking request structure
  BookingRequestStruct oBookingRequest (lOrigin, lDestination, lPOS,
                                        lPreferredDepartureDate,
                                        lRequestDateTime,
                                        lPreferredCabin,
                                        lPartySize, lChannel,
                                        lTripType, lStayDuration,
                                        lFrequentFlyerType,
                                        lPreferredDepartureTime,
                                        lWTP, lValueOfTime);

  return oBookingRequest;
}

// ////////////////////////////////////////////////////////////////////
BookingRequestStruct CmdBomManager::buildSampleBookingRequestForCRS() {
  // Origin
  const AirportCode_T lOrigin (AIRPORT_SIN);

  // Destination
  const AirportCode_T lDestination (AIRPORT_BKK);

  // Point of Sale (POS)
  const CityCode_T lPOS (POS_SIN);

  // Preferred departure date (30-JAN-2010)
  const Date_T lPreferredDepartureDate (2010, boost::gregorian::Jan, 30);

  // Preferred departure time (10:00)
  const Duration_T lPreferredDepartureTime (10, 0, 0);

  // Date of the request (22-JAN-2010)
  const Date_T lRequestDate (2010, boost::gregorian::Jan, 22);

  // Time of the request (10:00)
  const Duration_T lRequestTime (10, 0, 0);

  // Date-time of the request (made of the date and time above)
  const DateTime_T lRequestDateTime (lRequestDate, lRequestTime);

  // Preferred cabin (also named class of service sometimes)
  const CabinCode_T lPreferredCabin (CABIN_ECO);
```

```
  // Number of persons in the party
  const PartySize_T lPartySize (3);

  // Channel (direct/indirect, on-line/off-line)
  const ChannelLabel_T lChannel (CHANNEL_IN);

  // Type of the trip (one-way, inbound/outbound of a return trip)
  const TripType_T lTripType (TRIP_TYPE_INBOUND);

  // Duration of the stay (expressed as a number of days)
  const DayDuration_T lStayDuration (DEFAULT_STAY_DURATION);

  // Frequent flyer tier (member, silver, gold, platinum, senator, etc)
  const FrequentFlyer_T lFrequentFlyerType (FREQUENT_FLYER_MEMBER);

  // Maximum willing-to-pay (WTP, expressed in monetary unit, e.g., EUR)
  const WTP_T lWTP (DEFAULT_WTP);

  // Value of time, for the customer (expressed in monetary unit per
  // unit of time, e.g., EUR/hour)
  const PriceValue_T lValueOfTime (DEFAULT_VALUE_OF_TIME);

  // Creation of the booking request structure
  BookingRequestStruct oBookingRequest (lOrigin,
                                        lDestination,
                                        lPOS,
                                        lPreferredDepartureDate,
                                        lRequestDateTime,
                                        lPreferredCabin,
                                        lPartySize, lChannel,
                                        lTripType, lStayDuration,
                                        lFrequentFlyerType,
                                        lPreferredDepartureTime,
                                        lWTP, lValueOfTime);

  return oBookingRequest;
}

// ////////////////////////////////////////////////////////////////////
void CmdBomManager::buildPartnershipsSampleInventoryAndRM (BomRoot& ioBomRoot)
    {

  // Step 0.1: Inventory level
  // Create an Inventory for SQ
  const InventoryKey lSQKey ("SQ");
  Inventory& lSQInv = FacBom<Inventory>::instance().create (lSQKey);
  FacBomManager::addToListAndMap (ioBomRoot, lSQInv);
  FacBomManager::linkWithParent (ioBomRoot, lSQInv);

  // Create an Inventory for CX
  const InventoryKey lCXKey ("CX");
  Inventory& lCXInv = FacBom<Inventory>::instance().create (lCXKey);
  FacBomManager::addToListAndMap (ioBomRoot, lCXInv);
  FacBomManager::linkWithParent (ioBomRoot, lCXInv);


  // ////// SQ ///////
  // Step 0.2: Flight-date level
  // Create a FlightDate (SQ11/08-FEB-2010) for SQ's Inventory
  FlightNumber_T lFlightNumber = 11;
  Date_T lDate (2010, 2, 8);
  FlightDateKey lFlightDateKey (lFlightNumber, lDate);
```

```
FlightDate& lSQ11_20100208_FD =
  FacBom<FlightDate>::instance().create (lFlightDateKey);
FacBomManager::addToListAndMap (lSQInv, lSQ11_20100208_FD);
FacBomManager::linkWithParent (lSQInv, lSQ11_20100208_FD);

// Create a (mkt) FlightDate (SQ1200/08-FEB-2010) for SQ's Inventory
FlightNumber_T lMktFlightNumber = 1200;
//lDate = Date_T (2010, 2, 8);
FlightDateKey lMktFlightDateKey (lMktFlightNumber, lDate);

FlightDate& lSQ1200_20100208_FD =
  FacBom<FlightDate>::instance().create (lMktFlightDateKey);
FacBomManager::addToListAndMap (lSQInv, lSQ1200_20100208_FD);
FacBomManager::linkWithParent (lSQInv, lSQ1200_20100208_FD);

// Display the flight-date
// STDAIR_LOG_DEBUG ("FlightDate: " << lBA9_20110610_FD.toString());

// Step 0.3: Segment-date level
// Create a first SegmentDate (SIN-BKK) for SQ's Inventory
const AirportCode_T lSIN ("SIN");
const AirportCode_T lBKK ("BKK");
const DateOffset_T l1Day (1);
const DateOffset_T l2Days (2);
const Duration_T l0820 (8, 20, 0);
const Duration_T l1100 (11, 0, 0);
const Duration_T l0340 (3, 40, 0);
SegmentDateKey lSegmentDateKey (lSIN, lBKK);

SegmentDate& lSINBKKSegment =
  FacBom<SegmentDate>::instance().create (lSegmentDateKey);
FacBomManager::addToListAndMap (lSQ11_20100208_FD, lSINBKKSegment);
FacBomManager::linkWithParent (lSQ11_20100208_FD, lSINBKKSegment);

// Fill the SegmentDate content
lSINBKKSegment.setBoardingDate (lDate);
lSINBKKSegment.setOffDate (lDate);
lSINBKKSegment.setBoardingTime (l0820);
lSINBKKSegment.setOffTime (l1100);
lSINBKKSegment.setElapsedTime (l0340);

// Create a second (mkt) SegmentDate (BKK-HKG) for SQ's Inventory
const AirportCode_T lHKG ("HKG");
const Duration_T l1200 (12, 0, 0);
const Duration_T l1540 (15, 40, 0);
const Duration_T l0240 (2, 40, 0);
SegmentDateKey lMktSegmentDateKey (lBKK, lHKG);

SegmentDate& lMktBKKHKGSegment =
  FacBom<SegmentDate>::instance().create (lMktSegmentDateKey);
FacBomManager::addToListAndMap (lSQ1200_20100208_FD, lMktBKKHKGSegment);
FacBomManager::linkWithParent (lSQ1200_20100208_FD, lMktBKKHKGSegment);

// Fill the (mkt) SegmentDate content
lMktBKKHKGSegment.setBoardingDate (lDate);
lMktBKKHKGSegment.setOffDate (lDate);
lMktBKKHKGSegment.setBoardingTime (l1200);
lMktBKKHKGSegment.setOffTime (l1540);
lMktBKKHKGSegment.setElapsedTime (l0240);

// Step 0.4: Leg-date level
```

```
// Create a first LegDate (SIN) for SQ's Inventory
LegDateKey lLegDateKey (lSIN);

LegDate& lSINLeg = FacBom<LegDate>::instance().create (lLegDateKey);
FacBomManager::addToListAndMap (lSQ11_20100208_FD, lSINLeg);
FacBomManager::linkWithParent (lSQ11_20100208_FD, lSINLeg);

// Fill the LegDate content
lSINLeg.setOffPoint (lBKK);
lSINLeg.setBoardingDate (lDate);
lSINLeg.setOffDate (lDate);
lSINLeg.setBoardingTime (l0820);
lSINLeg.setOffTime (l1100);
lSINLeg.setElapsedTime (l0340);


// Link the segment-dates with the leg-dates
FacBomManager::addToListAndMap (lSINLeg, lSINBKKSegment);
FacBomManager::addToListAndMap (lSINBKKSegment, lSINLeg);

// Step 0.5: segment-cabin level
// Create a SegmentCabin (Y) for the Segment SIN-BKK of SQ's Inventory
const CabinCode_T lY ("Y");
SegmentCabinKey lYSegmentCabinKey (lY);

SegmentCabin& lSINBKKSegmentYCabin =
  FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lSINBKKSegment, lSINBKKSegmentYCabin);
FacBomManager::linkWithParent (lSINBKKSegment, lSINBKKSegmentYCabin);

// Create a SegmentCabin (Y) for the (mkt) Segment BKK-HKG of SQ's Inventory
SegmentCabin& lMktBKKHKGSegmentYCabin =
  FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lMktBKKHKGSegment, lMktBKKHKGSegmentYCabin);
FacBomManager::linkWithParent (lMktBKKHKGSegment, lMktBKKHKGSegmentYCabin);


// Step 0.6: leg-cabin level
// Create a LegCabin (Y) for the Leg SIN-BKK on SQ's Inventory
LegCabinKey lYLegCabinKey (lY);

LegCabin& lSINLegYCabin =
  FacBom<LegCabin>::instance().create (lYLegCabinKey);
FacBomManager::addToListAndMap (lSINLeg, lSINLegYCabin);
FacBomManager::linkWithParent (lSINLeg, lSINLegYCabin);

CabinCapacity_T lCapacity (100);
lSINLegYCabin.setCapacities (lCapacity);
lSINLegYCabin.setAvailabilityPool (lCapacity);

  FacBomManager::addToListAndMap (lSINLegYCabin, lSINBKKSegmentYCabin,
                                  lSINBKKSegmentYCabin.getFullerKey());

  FacBomManager::addToListAndMap (lSINBKKSegmentYCabin, lSINLegYCabin,
                                  lSINLegYCabin.getFullerKey());


// Step 0.7: fare family level
// Create a FareFamily (1) for the Segment SIN-BKK, cabin Y on SQ's Inv
const FamilyCode_T l1 ("EcoSaver");
FareFamilyKey l1FareFamilyKey (l1);
```

```
FareFamily& lSINBKKSegmentYCabin1Family =
  FacBom<FareFamily>::instance().create (l1FareFamilyKey);
FacBomManager::addToListAndMap (lSINBKKSegmentYCabin,
                                lSINBKKSegmentYCabin1Family);
FacBomManager::linkWithParent (lSINBKKSegmentYCabin,
                               lSINBKKSegmentYCabin1Family);

// Create a FareFamily (1) for the (mkt) Segment BKK-HKG, cabin Y on SQ's Inv

FareFamily& lMktBKKHKGSegmentYCabin1Family =
  FacBom<FareFamily>::instance().create (l1FareFamilyKey);
FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabin,
                                lMktBKKHKGSegmentYCabin1Family);
FacBomManager::linkWithParent (lMktBKKHKGSegmentYCabin,
                               lMktBKKHKGSegmentYCabin1Family);

// Step 0.8: booking class level
// Create a BookingClass (Y) for the Segment SIN-BKK, cabin Y,
// fare family 1 on SQ's Inv
BookingClassKey lYBookingClassKey (lY);

BookingClass& lSINBKKSegmentYCabin1FamilyYClass =
  FacBom<BookingClass>::instance().create (lYBookingClassKey);
FacBomManager::addToListAndMap (lSINBKKSegmentYCabin1Family,
                                lSINBKKSegmentYCabin1FamilyYClass);
FacBomManager::linkWithParent (lSINBKKSegmentYCabin1Family,
                               lSINBKKSegmentYCabin1FamilyYClass);

FacBomManager::addToListAndMap (lSINBKKSegmentYCabin,
                                lSINBKKSegmentYCabin1FamilyYClass);
FacBomManager::addToListAndMap (lSINBKKSegment,
                                lSINBKKSegmentYCabin1FamilyYClass);

lSINBKKSegmentYCabin1FamilyYClass.setYield(700);

// Create a BookingClass (Y) for the (mkt) Segment BKK-HKG, cabin Y,
// fare family 1 on SQ's Inv
BookingClass& lMktBKKHKGSegmentYCabin1FamilyYClass =
  FacBom<BookingClass>::instance().create (lYBookingClassKey);
FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabin1Family,
                                lMktBKKHKGSegmentYCabin1FamilyYClass);
FacBomManager::linkWithParent (lMktBKKHKGSegmentYCabin1Family,
                               lMktBKKHKGSegmentYCabin1FamilyYClass);

FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabin,
                                lMktBKKHKGSegmentYCabin1FamilyYClass);
FacBomManager::addToListAndMap (lMktBKKHKGSegment,
                                lMktBKKHKGSegmentYCabin1FamilyYClass);

lMktBKKHKGSegmentYCabin1FamilyYClass.setYield(700);


// Create a BookingClass (M) for the Segment SIN-BKK, cabin Y,
// fare family 1 on SQ's Inv
const ClassCode_T lM ("M");
BookingClassKey lMBookingClassKey (lM);

BookingClass& lSINBKKSegmentYCabin1FamilyMClass =
  FacBom<BookingClass>::instance().create (lMBookingClassKey);
FacBomManager::addToListAndMap (lSINBKKSegmentYCabin1Family,
                                lSINBKKSegmentYCabin1FamilyMClass);
FacBomManager::linkWithParent (lSINBKKSegmentYCabin1Family,
```

```
                                  lSINBKKSegmentYCabin1FamilyMClass);

  FacBomManager::addToListAndMap (lSINBKKSegmentYCabin,
                                  lSINBKKSegmentYCabin1FamilyMClass);
  FacBomManager::addToListAndMap (lSINBKKSegment,
                                  lSINBKKSegmentYCabin1FamilyMClass);

  lSINBKKSegmentYCabin1FamilyMClass.setYield(500);

  // Create a BookingClass (M) for the (mkt) Segment BKK-HKG, cabin Y,
  // fare family 1 on SQ's Inv
  BookingClass& lMktBKKHKGSegmentYCabin1FamilyMClass =
    FacBom<BookingClass>::instance().create (lMBookingClassKey);
  FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabin1Family,
                                  lMktBKKHKGSegmentYCabin1FamilyMClass);
  FacBomManager::linkWithParent (lMktBKKHKGSegmentYCabin1Family,
                                 lMktBKKHKGSegmentYCabin1FamilyMClass);

  FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabin,
                                  lMktBKKHKGSegmentYCabin1FamilyMClass);
  FacBomManager::addToListAndMap (lMktBKKHKGSegment,
                                  lMktBKKHKGSegmentYCabin1FamilyMClass);

  lMktBKKHKGSegmentYCabin1FamilyMClass.setYield(500);

  /* ================================================================================
    ========= */
  // Step 0.9: Partner Inventory
  // Create a partner Inventory CX for SQ
  const InventoryKey lPartnerCXKey ("CX");
  Inventory& lPartnerCXInv = FacBom<Inventory>::instance().create (lPartnerCXKe
    y);
  FacBomManager::addToListAndMap (lSQInv, lPartnerCXInv);
  FacBomManager::linkWithParent (lSQInv, lPartnerCXInv);

  // Step 0.9.2 : Flight-date level
  lFlightNumber = 12;
  lFlightDateKey = FlightDateKey (lFlightNumber, lDate);

  FlightDate& lPartnerCX12_20100208_FD =
    FacBom<FlightDate>::instance().create (lFlightDateKey);
  FacBomManager::addToListAndMap (lPartnerCXInv, lPartnerCX12_20100208_FD);
  FacBomManager::linkWithParent (lPartnerCXInv, lPartnerCX12_20100208_FD);

  lFlightNumber = 1100;
  lMktFlightDateKey = FlightDateKey (lFlightNumber, lDate);

  FlightDate& lPartnerCX1100_20100208_FD =
    FacBom<FlightDate>::instance().create (lMktFlightDateKey);
  FacBomManager::addToListAndMap (lPartnerCXInv, lPartnerCX1100_20100208_FD);
  FacBomManager::linkWithParent (lPartnerCXInv, lPartnerCX1100_20100208_FD);

  // Step 0.9.3: Segment-date level
  lSegmentDateKey = SegmentDateKey (lBKK, lHKG);

  SegmentDate& lPartnerBKKHKGSegment =
    FacBom<SegmentDate>::instance().create (lSegmentDateKey);
  FacBomManager::addToListAndMap (lPartnerCX12_20100208_FD, lPartnerBKKHKGSegme
    nt);
  FacBomManager::linkWithParent (lPartnerCX12_20100208_FD, lPartnerBKKHKGSegmen
    t);
```

```
lPartnerBKKHKGSegment.setBoardingDate (lDate);
lPartnerBKKHKGSegment.setOffDate (lDate);
lPartnerBKKHKGSegment.setBoardingTime (l1200);
lPartnerBKKHKGSegment.setOffTime (l1540);
lPartnerBKKHKGSegment.setElapsedTime (l0240);

lMktSegmentDateKey = SegmentDateKey (lSIN, lBKK);

SegmentDate& lPartnerMktSINBKKSegment =
  FacBom<SegmentDate>::instance().create (lMktSegmentDateKey);
FacBomManager::addToListAndMap (lPartnerCX1100_20100208_FD, lPartnerMktSINBKK
  Segment);
FacBomManager::linkWithParent (lPartnerCX1100_20100208_FD, lPartnerMktSINBKKS
  egment);

lPartnerMktSINBKKSegment.setBoardingDate (lDate);
lPartnerMktSINBKKSegment.setOffDate (lDate);
lPartnerMktSINBKKSegment.setBoardingTime (l0820);
lPartnerMktSINBKKSegment.setOffTime (l1100);
lPartnerMktSINBKKSegment.setElapsedTime (l0340);

// Step 0.9.4: Leg-date level
lLegDateKey = LegDateKey (lBKK);

LegDate& lPartnerBKKLeg = FacBom<LegDate>::instance().create (lLegDateKey);
FacBomManager::addToListAndMap (lPartnerCX12_20100208_FD, lPartnerBKKLeg);
FacBomManager::linkWithParent (lPartnerCX12_20100208_FD, lPartnerBKKLeg);

lPartnerBKKLeg.setOffPoint (lHKG);
lPartnerBKKLeg.setBoardingDate (lDate);
lPartnerBKKLeg.setOffDate (lDate);
lPartnerBKKLeg.setBoardingTime (l1200);
lPartnerBKKLeg.setOffTime (l1540);
lPartnerBKKLeg.setElapsedTime (l0240);

FacBomManager::addToListAndMap (lPartnerBKKLeg, lPartnerBKKHKGSegment);
FacBomManager::addToListAndMap (lPartnerBKKHKGSegment, lPartnerBKKLeg);

// Step 9.0.5: segment-cabin level

SegmentCabin& lPartnerBKKHKGSegmentYCabin =
  FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lPartnerBKKHKGSegment, lPartnerBKKHKGSegmentY
  Cabin);
FacBomManager::linkWithParent (lPartnerBKKHKGSegment, lPartnerBKKHKGSegmentYC
  abin);

SegmentCabin& lPartnerMktSINBKKSegmentYCabin =
  FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lPartnerMktSINBKKSegment, lPartnerMktSINBKKSe
  gmentYCabin);
FacBomManager::linkWithParent (lPartnerMktSINBKKSegment, lPartnerMktSINBKKSeg
  mentYCabin);

// Step 9.0.6: leg-cabin level

LegCabin& lPartnerBKKLegYCabin =
  FacBom<LegCabin>::instance().create (lYLegCabinKey);
FacBomManager::addToListAndMap (lPartnerBKKLeg, lPartnerBKKLegYCabin);
FacBomManager::linkWithParent (lPartnerBKKLeg, lPartnerBKKLegYCabin);

lCapacity = CabinCapacity_T(999);
```

```
lPartnerBKKLegYCabin.setCapacities (lCapacity);
lPartnerBKKLegYCabin.setAvailabilityPool (lCapacity);

FacBomManager::addToListAndMap (lPartnerBKKLegYCabin, lPartnerBKKHKGSegmentYC
  abin,
                                lPartnerBKKHKGSegmentYCabin.getFullerKey());
FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin, lPartnerBKKLegYC
  abin,
                                lPartnerBKKLegYCabin.getFullerKey());

// Step 9.0.7: fare family level

FareFamily& lPartnerBKKHKGSegmentYCabin1Family =
  FacBom<FareFamily>::instance().create (l1FareFamilyKey);
FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin,
                                lPartnerBKKHKGSegmentYCabin1Family);
FacBomManager::linkWithParent (lPartnerBKKHKGSegmentYCabin,
                               lPartnerBKKHKGSegmentYCabin1Family);

FareFamily& lPartnerMktSINBKKSegmentYCabin1Family =
  FacBom<FareFamily>::instance().create (l1FareFamilyKey);
FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabin,
                                lPartnerMktSINBKKSegmentYCabin1Family);
FacBomManager::linkWithParent (lPartnerMktSINBKKSegmentYCabin,
                               lPartnerMktSINBKKSegmentYCabin1Family);

// Step 9.0.8: booking class level

BookingClass& lPartnerBKKHKGSegmentYCabin1FamilyYClass =
  FacBom<BookingClass>::instance().create (lYBookingClassKey);
FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin1Family,
                                lPartnerBKKHKGSegmentYCabin1FamilyYClass);
FacBomManager::linkWithParent (lPartnerBKKHKGSegmentYCabin1Family,
                               lPartnerBKKHKGSegmentYCabin1FamilyYClass);

FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin,
                                lPartnerBKKHKGSegmentYCabin1FamilyYClass);
FacBomManager::addToListAndMap (lPartnerBKKHKGSegment,
                                lPartnerBKKHKGSegmentYCabin1FamilyYClass);

BookingClass& lPartnerMktSINBKKSegmentYCabin1FamilyYClass =
  FacBom<BookingClass>::instance().create (lYBookingClassKey);
FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabin1Family,
                                lPartnerMktSINBKKSegmentYCabin1FamilyYClass);

FacBomManager::linkWithParent (lPartnerMktSINBKKSegmentYCabin1Family,
                               lPartnerMktSINBKKSegmentYCabin1FamilyYClass);

FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabin,
                                lPartnerMktSINBKKSegmentYCabin1FamilyYClass);

FacBomManager::addToListAndMap (lPartnerMktSINBKKSegment,
                                lPartnerMktSINBKKSegmentYCabin1FamilyYClass);


BookingClass& lPartnerBKKHKGSegmentYCabin1FamilyMClass =
  FacBom<BookingClass>::instance().create (lMBookingClassKey);
FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin1Family,
                                lPartnerBKKHKGSegmentYCabin1FamilyMClass);
FacBomManager::linkWithParent (lPartnerBKKHKGSegmentYCabin1Family,
                               lPartnerBKKHKGSegmentYCabin1FamilyMClass);
```

```
FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin,
                                lPartnerBKKHKGSegmentYCabin1FamilyMClass);
FacBomManager::addToListAndMap (lPartnerBKKHKGSegment,
                                lPartnerBKKHKGSegmentYCabin1FamilyMClass);

BookingClass& lPartnerMktSINBKKSegmentYCabin1FamilyMClass =
  FacBom<BookingClass>::instance().create (lMBookingClassKey);
FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabin1Family,
                                lPartnerMktSINBKKSegmentYCabin1FamilyMClass);

FacBomManager::linkWithParent (lPartnerMktSINBKKSegmentYCabin1Family,
                               lPartnerMktSINBKKSegmentYCabin1FamilyMClass);

FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabin,
                                lPartnerMktSINBKKSegmentYCabin1FamilyMClass);

FacBomManager::addToListAndMap (lPartnerMktSINBKKSegment,
                                lPartnerMktSINBKKSegmentYCabin1FamilyMClass);


// Step 9.0.9: link SQ inventory objects to Partner CX inventory objects

FacBomManager::addToList (lSINBKKSegment, lPartnerMktSINBKKSegment);

lMktBKKHKGSegment.linkWithOperating (lPartnerBKKHKGSegment);

/* ================================================================================
  ========= */

// Step 1.0: O&D level
// Create an O&D Date (SQ11/08-FEB-2010/SIN-BKK-SQ1200/08-FEB-2010/BKK-HKG) f
  or SQ's Inventory
OnDString_T lSQSINBKKOnDStr = "SQ;11,2010-Feb-08;SIN,BKK";
OnDString_T lMktSQBKKHKGOnDStr = "SQ;1200,2010-Feb-08;BKK,HKG";
OnDStringList_T lOnDStringList;
lOnDStringList.push_back (lSQSINBKKOnDStr);
lOnDStringList.push_back (lMktSQBKKHKGOnDStr);

OnDDateKey lOnDDateKey (lOnDStringList);
OnDDate& lSQ_SINHKG_OnDDate =
  FacBom<OnDDate>::instance().create (lOnDDateKey);
// Link to the inventory
FacBomManager::addToListAndMap (lSQInv, lSQ_SINHKG_OnDDate);
FacBomManager::linkWithParent (lSQInv, lSQ_SINHKG_OnDDate);

// Add the segments
FacBomManager::addToListAndMap (lSQ_SINHKG_OnDDate, lSINBKKSegment);
FacBomManager::addToListAndMap (lSQ_SINHKG_OnDDate, lMktBKKHKGSegment);

// Add total forecast info for cabin Y.
const MeanStdDevPair_T lMean60StdDev6 (60.0, 6.0);
const WTP_T lWTP750 = 750.0;
const WTPDemandPair_T lWTP750Mean60StdDev6 (lWTP750, lMean60StdDev6);
lSQ_SINHKG_OnDDate.setTotalForecast (lY, lWTP750Mean60StdDev6);

// Add demand info (optional).
// 2 legs here, so 2 CabinClassPair to add in the list.
// Fist leg: cabin Y, class M.
CabinClassPair_T lCC_YM1 (lY,lM);
// Second leg: cabin Y, class M too.
CabinClassPair_T lCC_YM2 (lY,lM);
CabinClassPairList_T lCabinClassPairList;
```

```
lCabinClassPairList.push_back(lCC_YM1);
lCabinClassPairList.push_back(lCC_YM2);
const MeanStdDevPair_T lMean20StdDev2 (20.0, 2.0);
const Yield_T lYield850 = 850.0;
const YieldDemandPair_T lYield850Mean20StdDev2 (lYield850, lMean20StdDev2);
lSQ_SINHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield850Mean20
  StdDev2);

CabinClassPair_T lCC_YY1 (lY,lY);
CabinClassPair_T lCC_YY2 (lY,lY);
lCabinClassPairList.clear();
lCabinClassPairList.push_back(lCC_YY1);
lCabinClassPairList.push_back(lCC_YY2);
const MeanStdDevPair_T lMean10StdDev1 (10.0, 1.0);
const Yield_T lYield1200 = 1200.0;
const YieldDemandPair_T lYield1200Mean10StdDev1 (lYield1200, lMean10StdDev1);

lSQ_SINHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield1200Mean1
  0StdDev1);

// Create an O&D Date (SQ11/08-FEB-2010/SIN-BKK) for SQ's Inventory
lOnDStringList.clear();
lOnDStringList.push_back (lSQSINBKKOnDStr);

lOnDDateKey = OnDDateKey(lOnDStringList);
OnDDate& lSQ_SINBKK_OnDDate =
  FacBom<OnDDate>::instance().create (lOnDDateKey);
// Link to the inventory
FacBomManager::addToListAndMap (lSQInv, lSQ_SINBKK_OnDDate);
FacBomManager::linkWithParent (lSQInv, lSQ_SINBKK_OnDDate);

// Add the segments
FacBomManager::addToListAndMap (lSQ_SINBKK_OnDDate, lSINBKKSegment);

// Add total forecast info for cabin Y.
const WTP_T lWTP400 = 400.0;
const WTPDemandPair_T lWTP400Mean60StdDev6 (lWTP400, lMean60StdDev6);
lSQ_SINBKK_OnDDate.setTotalForecast (lY, lWTP400Mean60StdDev6);

// Add demand info (optional).
lCabinClassPairList.clear();
lCabinClassPairList.push_back(lCC_YM1);
const MeanStdDevPair_T lMean20StdDev1 (20.0, 1.0);
const Yield_T lYield500 = 500.0;
const YieldDemandPair_T lYield500Mean20StdDev1 (lYield500, lMean20StdDev1);
lSQ_SINBKK_OnDDate.setDemandInformation (lCabinClassPairList, lYield500Mean20
  StdDev1);

lCabinClassPairList.clear();
lCabinClassPairList.push_back(lCC_YY1);
const Yield_T lYield700 = 700.0;
const YieldDemandPair_T lYield700Mean20StdDev1 (lYield700, lMean10StdDev1 );
lSQ_SINBKK_OnDDate.setDemandInformation (lCabinClassPairList, lYield700Mean20
  StdDev1);

/*****************************************************************************
  ***
// Create an O&D Date (SQ1200/08-FEB-2010/BKK-HKG) for SQ's Inventory
lFullKeyList.clear();
lFullKeyList.push_back (lMktSQBKKHKGFullKeyStr);

lOnDDateKey = OnDDateKey(lFullKeyList);
```

```
OnDDate& lMktSQ_BKKHKG_OnDDate =
  FacBom<OnDDate>::instance().create (lOnDDateKey);
// Link to the inventory
FacBomManager::addToListAndMap (lSQInv, lMktSQ_BKKHKG_OnDDate);
FacBomManager::linkWithParent (lSQInv, lMktSQ_BKKHKG_OnDDate);

// Add the segments
FacBomManager::addToListAndMap (lMktSQ_BKKHKG_OnDDate, lMktBKKHKGSegment);

// Demand info is not added for purely marketed O&Ds
// Add demand info
// lCabinClassPairList.clear();
// lCabinClassPairList.push_back(lCC_YM2);
// lMktSQ_BKKHKG_OnDDate.setDemandInformation (lCabinClassPairList, 500.0, 20
  .0, 1.0);
*****************************************************************************
  ******/


// ////// CX ///////
// Step 0.2: Flight-date level
// Create a FlightDate (CX12/08-FEB-2010) for CX's Inventory
lFlightNumber = 12;
//lDate = Date_T (2010, 2, 8);
lFlightDateKey = FlightDateKey (lFlightNumber, lDate);

FlightDate& lCX12_20100208_FD =
  FacBom<FlightDate>::instance().create (lFlightDateKey);
FacBomManager::addToListAndMap (lCXInv, lCX12_20100208_FD);
FacBomManager::linkWithParent (lCXInv, lCX12_20100208_FD);

// Create a (mkt) FlightDate (CX1100/08-FEB-2010) for CX's Inventory
lFlightNumber = 1100;
//lDate = Date_T (2010, 2, 8);
lMktFlightDateKey = FlightDateKey (lFlightNumber, lDate);

FlightDate& lCX1100_20100208_FD =
  FacBom<FlightDate>::instance().create (lMktFlightDateKey);
FacBomManager::addToListAndMap (lCXInv, lCX1100_20100208_FD);
FacBomManager::linkWithParent (lCXInv, lCX1100_20100208_FD);

// Display the flight-date
// STDAIR_LOG_DEBUG ("FlightDate: " << lAF084_20110320_FD.toString());

// Step 0.3: Segment-date level
// Create a SegmentDate BKK-HKG for CX's Inventory

lSegmentDateKey = SegmentDateKey (lBKK, lHKG);

SegmentDate& lBKKHKGSegment =
  FacBom<SegmentDate>::instance().create (lSegmentDateKey);
FacBomManager::addToListAndMap (lCX12_20100208_FD, lBKKHKGSegment);
FacBomManager::linkWithParent (lCX12_20100208_FD, lBKKHKGSegment);

// Fill the SegmentDate content
lBKKHKGSegment.setBoardingDate (lDate);
lBKKHKGSegment.setOffDate (lDate);
lBKKHKGSegment.setBoardingTime (l1200);
lBKKHKGSegment.setOffTime (l1540);
lBKKHKGSegment.setElapsedTime (l0240);

// Create a second (mkt) SegmentDate (SIN-BKK) for CX's Inventory
```

```
lMktSegmentDateKey = SegmentDateKey (lSIN, lBKK);

SegmentDate& lMktSINBKKSegment =
  FacBom<SegmentDate>::instance().create (lMktSegmentDateKey);
FacBomManager::addToListAndMap (lCX1100_20100208_FD, lMktSINBKKSegment);
FacBomManager::linkWithParent (lCX1100_20100208_FD, lMktSINBKKSegment);

// Fill the (mkt) SegmentDate content
lMktSINBKKSegment.setBoardingDate (lDate);
lMktSINBKKSegment.setOffDate (lDate);
lMktSINBKKSegment.setBoardingTime (l0820);
lMktSINBKKSegment.setOffTime (l1100);
lMktSINBKKSegment.setElapsedTime (l0340);

// Step 0.4: Leg-date level
// Create a LegDate (BKK) for CX's Inventory
lLegDateKey = LegDateKey (lBKK);

LegDate& lBKKLeg = FacBom<LegDate>::instance().create (lLegDateKey);
FacBomManager::addToListAndMap (lCX12_20100208_FD, lBKKLeg);
FacBomManager::linkWithParent (lCX12_20100208_FD, lBKKLeg);

// Fill the LegDate content
lBKKLeg.setOffPoint (lHKG);
lBKKLeg.setBoardingDate (lDate);
lBKKLeg.setOffDate (lDate);
lBKKLeg.setBoardingTime (l1200);
lBKKLeg.setOffTime (l1540);
lBKKLeg.setElapsedTime (l0240);

// Display the leg-date
// STDAIR_LOG_DEBUG ("LegDate: " << lCDGLeg.toString());

// Link the segment-dates with the leg-dates
FacBomManager::addToListAndMap (lBKKLeg, lBKKHKGSegment);
FacBomManager::addToListAndMap (lBKKHKGSegment, lBKKLeg);

// Step 0.5: segment-cabin level
// Create a SegmentCabin (Y) for the Segment BKK-HKG of CX's Inventory
SegmentCabin& lBKKHKGSegmentYCabin =
  FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lBKKHKGSegment, lBKKHKGSegmentYCabin);
FacBomManager::linkWithParent (lBKKHKGSegment, lBKKHKGSegmentYCabin);

// Create a SegmentCabin (Y) for the (mkt) Segment SIN-BKK of CX's Inventory
SegmentCabin& lMktSINBKKSegmentYCabin =
  FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lMktSINBKKSegment, lMktSINBKKSegmentYCabin);
FacBomManager::linkWithParent (lMktSINBKKSegment, lMktSINBKKSegmentYCabin);

// Step 0.6: leg-cabin level
// Create a LegCabin (Y) for the Leg BKK-HKG on CX's Inventory
LegCabin& lBKKLegYCabin =
  FacBom<LegCabin>::instance().create (lYLegCabinKey);
FacBomManager::addToListAndMap (lBKKLeg, lBKKLegYCabin);
FacBomManager::linkWithParent (lBKKLeg, lBKKLegYCabin);

lCapacity = CabinCapacity_T(100);
lBKKLegYCabin.setCapacities (lCapacity);
lBKKLegYCabin.setAvailabilityPool (lCapacity);

// Link the segment-dates with the leg-dates
```

```
FacBomManager::addToListAndMap (lBKKLegYCabin, lBKKHKGSegmentYCabin,
                                lBKKHKGSegmentYCabin.getFullerKey());
FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin, lBKKLegYCabin,
                                lBKKLegYCabin.getFullerKey());

// Step 0.7: fare family level
// Create a fareFamily (1) for the Segment BKK-HKG, cabin Y on CX's Inv
FareFamily& lBKKHKGSegmentYCabin1Family =
  FacBom<FareFamily>::instance().create (l1FareFamilyKey);
FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin,
                                lBKKHKGSegmentYCabin1Family);
FacBomManager::linkWithParent (lBKKHKGSegmentYCabin,
                               lBKKHKGSegmentYCabin1Family);

// Create a FareFamily (1) for the (mkt) Segment SIN-BKK, cabin Y on CX's Inv

FareFamily& lMktSINBKKSegmentYCabin1Family =
  FacBom<FareFamily>::instance().create (l1FareFamilyKey);
FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabin,
                                lMktSINBKKSegmentYCabin1Family);
FacBomManager::linkWithParent (lMktSINBKKSegmentYCabin,
                               lMktSINBKKSegmentYCabin1Family);


// Step 0.8: booking class level
// Create a BookingClass (Y) for the
// Segment BKK-HKG, cabin Y, fare family 1 on CX's Inv
BookingClass& lBKKHKGSegmentYCabin1FamilyYClass =
  FacBom<BookingClass>::instance().create (lYBookingClassKey);
FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin1Family,
                                lBKKHKGSegmentYCabin1FamilyYClass);
FacBomManager::linkWithParent (lBKKHKGSegmentYCabin1Family,
                               lBKKHKGSegmentYCabin1FamilyYClass);

FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin,
                                lBKKHKGSegmentYCabin1FamilyYClass);
FacBomManager::addToListAndMap (lBKKHKGSegment,
                                lBKKHKGSegmentYCabin1FamilyYClass);

lBKKHKGSegmentYCabin1FamilyYClass.setYield(700);

// Create a BookingClass (Y) for the (mkt) Segment SIN-BKK, cabin Y,
// fare family 1 on CX's Inv
BookingClass& lMktSINBKKSegmentYCabin1FamilyYClass =
  FacBom<BookingClass>::instance().create (lYBookingClassKey);
FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabin1Family,
                                lMktSINBKKSegmentYCabin1FamilyYClass);
FacBomManager::linkWithParent (lMktSINBKKSegmentYCabin1Family,
                               lMktSINBKKSegmentYCabin1FamilyYClass);

FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabin,
                                lMktSINBKKSegmentYCabin1FamilyYClass);
FacBomManager::addToListAndMap (lMktSINBKKSegment,
                                lMktSINBKKSegmentYCabin1FamilyYClass);

lMktSINBKKSegmentYCabin1FamilyYClass.setYield(700);

//Create a BookingClass (M) for the
// Segment BKK-HKG, cabin Y, fare family 1 on CX's Inv
BookingClass& lBKKHKGSegmentYCabin1FamilyMClass =
  FacBom<BookingClass>::instance().create (lMBookingClassKey);
FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin1Family,
```

```
                                    lBKKHKGSegmentYCabin1FamilyMClass);
FacBomManager::linkWithParent (lBKKHKGSegmentYCabin1Family,
                               lBKKHKGSegmentYCabin1FamilyMClass);

FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin,
                                lBKKHKGSegmentYCabin1FamilyMClass);
FacBomManager::addToListAndMap (lBKKHKGSegment,
                                lBKKHKGSegmentYCabin1FamilyMClass);

lBKKHKGSegmentYCabin1FamilyMClass.setYield(500);

// Create a BookingClass (M) for the (mkt) Segment SIN-BKK, cabin Y,
// fare family 1 on CX's Inv
BookingClass& lMktSINBKKSegmentYCabin1FamilyMClass =
  FacBom<BookingClass>::instance().create (lMBookingClassKey);
FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabin1Family,
                                lMktSINBKKSegmentYCabin1FamilyMClass);
FacBomManager::linkWithParent (lMktSINBKKSegmentYCabin1Family,
                               lMktSINBKKSegmentYCabin1FamilyMClass);

FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabin,
                                lMktSINBKKSegmentYCabin1FamilyMClass);
FacBomManager::addToListAndMap (lMktSINBKKSegment,
                                lMktSINBKKSegmentYCabin1FamilyMClass);

lMktSINBKKSegmentYCabin1FamilyMClass.setYield(500);

/* ================================================================================
  ========= */
// Step 0.9: Partner Inventory
// Create a partner Inventory SQ for CX
const InventoryKey lPartnerSQKey ("SQ");
Inventory& lPartnerSQInv = FacBom<Inventory>::instance().create (lPartnerSQKe
  y);
FacBomManager::addToListAndMap (lCXInv, lPartnerSQInv);
FacBomManager::linkWithParent (lCXInv, lPartnerSQInv);

// Step 0.9.2 : Flight-date level
lFlightNumber = 11;
lFlightDateKey = FlightDateKey (lFlightNumber, lDate);

FlightDate& lPartnerSQ11_20100208_FD =
  FacBom<FlightDate>::instance().create (lFlightDateKey);
FacBomManager::addToListAndMap (lPartnerSQInv, lPartnerSQ11_20100208_FD);
FacBomManager::linkWithParent (lPartnerSQInv, lPartnerSQ11_20100208_FD);

lFlightNumber = 1200;
lMktFlightDateKey = FlightDateKey (lFlightNumber, lDate);

FlightDate& lPartnerSQ1200_20100208_FD =
  FacBom<FlightDate>::instance().create (lMktFlightDateKey);
FacBomManager::addToListAndMap (lPartnerSQInv, lPartnerSQ1200_20100208_FD);
FacBomManager::linkWithParent (lPartnerSQInv, lPartnerSQ1200_20100208_FD);

// Step 0.9.3: Segment-date level
lSegmentDateKey = SegmentDateKey (lSIN, lBKK);

SegmentDate& lPartnerSINBKKSegment =
  FacBom<SegmentDate>::instance().create (lSegmentDateKey);
FacBomManager::addToListAndMap (lPartnerSQ11_20100208_FD, lPartnerSINBKKSegme
  nt);
FacBomManager::linkWithParent (lPartnerSQ11_20100208_FD, lPartnerSINBKKSegmen
```

```
  t);

lPartnerSINBKKSegment.setBoardingDate (lDate);
lPartnerSINBKKSegment.setOffDate (lDate);
lPartnerSINBKKSegment.setBoardingTime (l0820);
lPartnerSINBKKSegment.setOffTime (l1100);
lPartnerSINBKKSegment.setElapsedTime (l0340);

lMktSegmentDateKey = SegmentDateKey (lBKK, lHKG);

SegmentDate& lPartnerMktBKKHKGSegment =
  FacBom<SegmentDate>::instance().create (lMktSegmentDateKey);
FacBomManager::addToListAndMap (lPartnerSQ1200_20100208_FD, lPartnerMktBKKHKG
  Segment);
FacBomManager::linkWithParent (lPartnerSQ1200_20100208_FD, lPartnerMktBKKHKGS
  egment);

lPartnerMktBKKHKGSegment.setBoardingDate (lDate);
lPartnerMktBKKHKGSegment.setOffDate (lDate);
lPartnerMktBKKHKGSegment.setBoardingTime (l1200);
lPartnerMktBKKHKGSegment.setOffTime (l1540);
lPartnerMktBKKHKGSegment.setElapsedTime (l0240);

// Step 0.9.4: Leg-date level
lLegDateKey = LegDateKey (lSIN);

LegDate& lPartnerSINLeg = FacBom<LegDate>::instance().create (lLegDateKey);
FacBomManager::addToListAndMap (lPartnerSQ11_20100208_FD, lPartnerSINLeg);
FacBomManager::linkWithParent (lPartnerSQ11_20100208_FD, lPartnerSINLeg);

lPartnerSINLeg.setOffPoint (lBKK);
lPartnerSINLeg.setBoardingDate (lDate);
lPartnerSINLeg.setOffDate (lDate);
lPartnerSINLeg.setBoardingTime (l0820);
lPartnerSINLeg.setOffTime (l1100);
lPartnerSINLeg.setElapsedTime (l0340);

FacBomManager::addToListAndMap (lPartnerSINLeg, lPartnerSINBKKSegment);
FacBomManager::addToListAndMap (lPartnerSINBKKSegment, lPartnerSINLeg);

// Step 9.0.5: segment-cabin level

SegmentCabin& lPartnerSINBKKSegmentYCabin =
  FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lPartnerSINBKKSegment, lPartnerSINBKKSegmentY
  Cabin);
FacBomManager::linkWithParent (lPartnerSINBKKSegment, lPartnerSINBKKSegmentYC
  abin);

SegmentCabin& lPartnerMktBKKHKGSegmentYCabin =
  FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegment, lPartnerMktBKKHKGSe
  gmentYCabin);
FacBomManager::linkWithParent (lPartnerMktBKKHKGSegment, lPartnerMktBKKHKGSeg
  mentYCabin);

// Step 9.0.6: leg-cabin level

LegCabin& lPartnerSINLegYCabin =
  FacBom<LegCabin>::instance().create (lYLegCabinKey);
FacBomManager::addToListAndMap (lPartnerSINLeg, lPartnerSINLegYCabin);
FacBomManager::linkWithParent (lPartnerSINLeg, lPartnerSINLegYCabin);
```

```
lCapacity = CabinCapacity_T(999);
lPartnerSINLegYCabin.setCapacities (lCapacity);
lPartnerSINLegYCabin.setAvailabilityPool (lCapacity);

FacBomManager::addToListAndMap (lPartnerSINLegYCabin, lPartnerSINBKKSegmentYC
  abin,
                                lPartnerSINBKKSegmentYCabin.getFullerKey());
FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin, lPartnerSINLegYC
  abin,
                                lPartnerSINLegYCabin.getFullerKey());

// Step 9.0.7: fare family level

FareFamily& lPartnerSINBKKSegmentYCabin1Family =
  FacBom<FareFamily>::instance().create (l1FareFamilyKey);
FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin,
                                lPartnerSINBKKSegmentYCabin1Family);
FacBomManager::linkWithParent (lPartnerSINBKKSegmentYCabin,
                               lPartnerSINBKKSegmentYCabin1Family);

FareFamily& lPartnerMktBKKHKGSegmentYCabin1Family =
  FacBom<FareFamily>::instance().create (l1FareFamilyKey);
FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabin,
                                lPartnerMktBKKHKGSegmentYCabin1Family);
FacBomManager::linkWithParent (lPartnerMktBKKHKGSegmentYCabin,
                               lPartnerMktBKKHKGSegmentYCabin1Family);


// Step 9.0.8: booking class level

BookingClass& lPartnerSINBKKSegmentYCabin1FamilyYClass =
  FacBom<BookingClass>::instance().create (lYBookingClassKey);
FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin1Family,
                                lPartnerSINBKKSegmentYCabin1FamilyYClass);
FacBomManager::linkWithParent (lPartnerSINBKKSegmentYCabin1Family,
                               lPartnerSINBKKSegmentYCabin1FamilyYClass);

FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin,
                                lPartnerSINBKKSegmentYCabin1FamilyYClass);
FacBomManager::addToListAndMap (lPartnerSINBKKSegment,
                                lPartnerSINBKKSegmentYCabin1FamilyYClass);

BookingClass& lPartnerMktBKKHKGSegmentYCabin1FamilyYClass =
  FacBom<BookingClass>::instance().create (lYBookingClassKey);
FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabin1Family,
                                lPartnerMktBKKHKGSegmentYCabin1FamilyYClass);

FacBomManager::linkWithParent (lPartnerMktBKKHKGSegmentYCabin1Family,
                               lPartnerMktBKKHKGSegmentYCabin1FamilyYClass);

FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabin,
                                lPartnerMktBKKHKGSegmentYCabin1FamilyYClass);

FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegment,
                                lPartnerMktBKKHKGSegmentYCabin1FamilyYClass);


BookingClass& lPartnerSINBKKSegmentYCabin1FamilyMClass =
  FacBom<BookingClass>::instance().create (lMBookingClassKey);
FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin1Family,
                                lPartnerSINBKKSegmentYCabin1FamilyMClass);
```

```
FacBomManager::linkWithParent (lPartnerSINBKKSegmentYCabin1Family,
                               lPartnerSINBKKSegmentYCabin1FamilyMClass);

FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin,
                                lPartnerSINBKKSegmentYCabin1FamilyMClass);
FacBomManager::addToListAndMap (lPartnerSINBKKSegment,
                                lPartnerSINBKKSegmentYCabin1FamilyMClass);

BookingClass& lPartnerMktBKKHKGSegmentYCabin1FamilyMClass =
  FacBom<BookingClass>::instance().create (lMBookingClassKey);
FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabin1Family,
                                lPartnerMktBKKHKGSegmentYCabin1FamilyMClass);

FacBomManager::linkWithParent (lPartnerMktBKKHKGSegmentYCabin1Family,
                               lPartnerMktBKKHKGSegmentYCabin1FamilyMClass);

FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabin,
                                lPartnerMktBKKHKGSegmentYCabin1FamilyMClass);

FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegment,
                                lPartnerMktBKKHKGSegmentYCabin1FamilyMClass);


// Step 9.0.9: link CX inventory objects to Partner SQ inventory objects
FacBomManager::addToList (lBKKHKGSegment, lPartnerMktBKKHKGSegment);

lMktSINBKKSegment.linkWithOperating (lPartnerSINBKKSegment);

/* ========================================================================
  ========= */

// Step 1.0: O&D level
// Create an O&D Date (CX1100/08-FEB-2010/SIN-BKK-CX12/08-FEB-2010/BKK-HKG) f
  or CX's Inventory
OnDString_T lMktCXSINBKKOnDStr = "CX;1100,2010-Feb-08;SIN,BKK";
OnDString_T lCXBKKHKGOnDStr = "CX;12,2010-Feb-08;BKK,HKG";
lOnDStringList.clear();
lOnDStringList.push_back (lMktCXSINBKKOnDStr);
lOnDStringList.push_back (lCXBKKHKGOnDStr);

lOnDDateKey = OnDDateKey(lOnDStringList);
OnDDate& lCX_SINHKG_OnDDate =
  FacBom<OnDDate>::instance().create (lOnDDateKey);
// Link to the inventory
FacBomManager::addToListAndMap (lCXInv, lCX_SINHKG_OnDDate);
FacBomManager::linkWithParent (lCXInv, lCX_SINHKG_OnDDate);

// Add the segments
FacBomManager::addToListAndMap (lCX_SINHKG_OnDDate, lMktSINBKKSegment);
FacBomManager::addToListAndMap (lCX_SINHKG_OnDDate, lBKKHKGSegment);

// Add total forecast info for cabin Y.
lCX_SINHKG_OnDDate.setTotalForecast (lY, lWTP750Mean60StdDev6);

// Add demand info
lCabinClassPairList.clear();
lCabinClassPairList.push_back(lCC_YM1);
lCabinClassPairList.push_back(lCC_YM2);
lCX_SINHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield850Mean20
  StdDev2);

lCabinClassPairList.clear();
```

```
lCabinClassPairList.push_back(lCC_YY1);
lCabinClassPairList.push_back(lCC_YY2);
lCX_SINHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield1200Mean1
  0StdDev1);

/**************************************************************************
  *******
// Create an O&D Date (CX1100/08-FEB-2010/SIN-BKK) for CX's Inventory
lFullKeyList.clear();
lFullKeyList.push_back (lMktCXSINBKKFullKeyStr);

lOnDDateKey = OnDDateKey(lFullKeyList);
OnDDate& lMktCX_SINBKK_OnDDate =
  FacBom<OnDDate>::instance().create (lOnDDateKey);
// Link to the inventory
FacBomManager::addToListAndMap (lCXInv, lMktCX_SINBKK_OnDDate);
FacBomManager::linkWithParent (lCXInv, lMktCX_SINBKK_OnDDate);

// Add the segments
FacBomManager::addToListAndMap (lMktCX_SINBKK_OnDDate, lMktSINBKKSegment);

// Demand info is not added for purely marketed O&Ds
// Add demand info
// lCabinClassPairList.clear();
// lCabinClassPairList.push_back(lCC_YM1);
// lMktCX_SINBKK_OnDDate.setDemandInformation (lCabinClassPairList, 500.0, 20
  .0, 1.0);
**************************************************************************
  ********/

// Create an O&D Date (CX12/08-FEB-2010/BKK-HKG) for CX's Inventory
lOnDStringList.clear();
lOnDStringList.push_back (lCXBKKHKGOnDStr);

lOnDDateKey = OnDDateKey(lOnDStringList);
OnDDate& lCX_BKKHKG_OnDDate =
  FacBom<OnDDate>::instance().create (lOnDDateKey);
// Link to the inventory
FacBomManager::addToListAndMap (lCXInv, lCX_BKKHKG_OnDDate);
FacBomManager::linkWithParent (lCXInv, lCX_BKKHKG_OnDDate);

// Add the segments
FacBomManager::addToListAndMap (lCX_BKKHKG_OnDDate, lBKKHKGSegment);

// Add total forecast info for cabin Y.
lCX_BKKHKG_OnDDate.setTotalForecast (lY, lWTP400Mean60StdDev6);

// Add demand info
lCabinClassPairList.clear();
lCabinClassPairList.push_back(lCC_YM2);
lCX_BKKHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield500Mean20
  StdDev1);

lCabinClassPairList.clear();
lCabinClassPairList.push_back(lCC_YY2);
const YieldDemandPair_T lYield700Mean10StdDev1 (lYield700, lMean10StdDev1 );
lCX_BKKHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield700Mean10
  StdDev1);

/*========================================================================
  =====
  ========================================================================
```

```
  =====
  ================================================================================
  =====*/
// Schedule:
// SQ:
// Step 1: flight period level
// Create a flight period for SQ11:
const DoWStruct lDoWSrtuct ("1111111");
const Date_T lDateRangeStart (2010, boost::gregorian::Feb, 8);
const Date_T lDateRangeEnd (2010, boost::gregorian::Feb, 9);
const DatePeriod_T lDatePeriod (lDateRangeStart, lDateRangeEnd);
const PeriodStruct lPeriodStruct (lDatePeriod,lDoWSrtuct);

lFlightNumber = FlightNumber_T (11);

FlightPeriodKey lFlightPeriodKey (lFlightNumber, lPeriodStruct);

FlightPeriod& lSQ11FlightPeriod =
  FacBom<FlightPeriod>::instance().create (lFlightPeriodKey);
FacBomManager::addToListAndMap (lSQInv, lSQ11FlightPeriod);
FacBomManager::linkWithParent (lSQInv, lSQ11FlightPeriod);

// Step 2: segment period level
// Create a segment period for SIN-BKK:

SegmentPeriodKey lSegmentPeriodKey (lSIN, lBKK);

SegmentPeriod& lSINBKKSegmentPeriod =
  FacBom<SegmentPeriod>::instance().create (lSegmentPeriodKey);
FacBomManager::addToListAndMap (lSQ11FlightPeriod, lSINBKKSegmentPeriod);
FacBomManager::linkWithParent (lSQ11FlightPeriod, lSINBKKSegmentPeriod);

lSINBKKSegmentPeriod.setBoardingTime (l0820);
lSINBKKSegmentPeriod.setOffTime (l1100);
lSINBKKSegmentPeriod.setElapsedTime (l0340);
ClassList_String_T lYM ("YM");
lSINBKKSegmentPeriod.addCabinBookingClassList (lY,lYM);

// CX:
// Step 1: flight period level
// Create a flight period for CX12:
lFlightNumber = FlightNumber_T (12);

lFlightPeriodKey = FlightPeriodKey(lFlightNumber, lPeriodStruct);

FlightPeriod& lCX12FlightPeriod =
  FacBom<FlightPeriod>::instance().create (lFlightPeriodKey);
FacBomManager::addToListAndMap (lCXInv, lCX12FlightPeriod);
FacBomManager::linkWithParent (lCXInv, lCX12FlightPeriod);

// Step 2: segment period level
// Create a segment period for BKK-HKG:

lSegmentPeriodKey = SegmentPeriodKey (lBKK, lHKG);

SegmentPeriod& lBKKHKGSegmentPeriod =
  FacBom<SegmentPeriod>::instance().create (lSegmentPeriodKey);
FacBomManager::addToListAndMap (lCX12FlightPeriod, lBKKHKGSegmentPeriod);
FacBomManager::linkWithParent (lCX12FlightPeriod, lBKKHKGSegmentPeriod);

lBKKHKGSegmentPeriod.setBoardingTime (l1200);
lBKKHKGSegmentPeriod.setOffTime (l1540);
```

```
  lBKKHKGSegmentPeriod.setElapsedTime (l0240);
  lBKKHKGSegmentPeriod.addCabinBookingClassList (lY,lYM);

}

// ////////////////////////////////////////////////////////////////////
void CmdBomManager::buildPartnershipsSamplePricing (BomRoot& ioBomRoot) {


  /*====================================================================
    ========*/
  // First airport pair SIN-BKK.
  // Set the airport-pair primary key.
  AirportPairKey lAirportPairKey ("SIN", "BKK");

  // Create the AirportPairKey object and link it to the ioBomRoot object.
  AirportPair& lSINBKKAirportPair =
    FacBom<AirportPair>::instance().create (lAirportPairKey);
  FacBomManager::addToListAndMap (ioBomRoot, lSINBKKAirportPair);
  FacBomManager::linkWithParent (ioBomRoot, lSINBKKAirportPair);

  // Set the fare date-period primary key.
  const Date_T lDateRangeStart (2010, boost::gregorian::Jan, 15);
  const Date_T lDateRangeEnd (2010, boost::gregorian::Dec, 31);
  const DatePeriod_T lDateRange (lDateRangeStart, lDateRangeEnd);
  const DatePeriodKey lDatePeriodKey (lDateRange);

  // Create the DatePeriodKey object and link it to the PosChannel object.
  DatePeriod& lSINBKKDatePeriod =
    FacBom<DatePeriod>::instance().create (lDatePeriodKey);
  FacBomManager::addToListAndMap (lSINBKKAirportPair, lSINBKKDatePeriod);
  FacBomManager::linkWithParent (lSINBKKAirportPair, lSINBKKDatePeriod);

  // Set the point-of-sale-channel primary key.
  PosChannelKey lPosChannelKey ("SIN","IN");

  // Create the PositionKey object and link it to the AirportPair object.
  PosChannel& lSINPosChannel =
    FacBom<PosChannel>::instance().create (lPosChannelKey);
  FacBomManager::addToListAndMap (lSINBKKDatePeriod, lSINPosChannel);
  FacBomManager::linkWithParent (lSINBKKDatePeriod, lSINPosChannel);

  // Set the fare time-period primary key.
  const Time_T lTimeRangeStart (0, 0, 0);
  const Time_T lTimeRangeEnd (23, 0, 0);
  const TimePeriodKey lFareTimePeriodKey (lTimeRangeStart,
                                          lTimeRangeEnd);

  // Create the TimePeriodKey and link it to the DatePeriod object.
  TimePeriod& lSINBKKFareTimePeriod =
    FacBom<TimePeriod>::instance().create (lFareTimePeriodKey);
  FacBomManager::addToListAndMap (lSINPosChannel, lSINBKKFareTimePeriod);
  FacBomManager::linkWithParent (lSINPosChannel, lSINBKKFareTimePeriod);


  // Generate the FareRule
  const FareFeaturesKey lFareFeaturesKey (TRIP_TYPE_ONE_WAY,
                                          NO_ADVANCE_PURCHASE,
                                          SATURDAY_STAY,
                                          CHANGE_FEES,
                                          NON_REFUNDABLE,
                                          NO_STAY_DURATION);
```

```
// Create the FareFeaturesKey and link it to the TimePeriod object.
FareFeatures& lSINBKKFareFeatures =
  FacBom<FareFeatures>::instance().create (lFareFeaturesKey);
FacBomManager::addToListAndMap (lSINBKKFareTimePeriod, lSINBKKFareFeatures);
FacBomManager::linkWithParent (lSINBKKFareTimePeriod, lSINBKKFareFeatures);


// Generate Segment Features and link them to their FareRule.
AirlineCodeList_T lSQAirlineCodeList;
lSQAirlineCodeList.push_back ("SQ");

ClassList_StringList_T lYClassCodeList;
lYClassCodeList.push_back ("Y");
const AirlineClassListKey lSQAirlineYClassListKey (lSQAirlineCodeList,
                                                   lYClassCodeList);

ClassList_StringList_T lMClassCodeList;
lMClassCodeList.push_back ("M");
const AirlineClassListKey lSQAirlineMClassListKey (lSQAirlineCodeList,
                                                   lMClassCodeList);

// Create the AirlineClassListKey and link it to the FareFeatures object.
AirlineClassList& lSQAirlineYClassList =
  FacBom<AirlineClassList>::instance().create (lSQAirlineYClassListKey);
lSQAirlineYClassList.setFare(700);
FacBomManager::addToListAndMap (lSINBKKFareFeatures, lSQAirlineYClassList);
FacBomManager::linkWithParent (lSINBKKFareFeatures, lSQAirlineYClassList);

AirlineClassList& lSQAirlineMClassList =
  FacBom<AirlineClassList>::instance().create (lSQAirlineMClassListKey);
lSQAirlineMClassList.setFare(500);
FacBomManager::addToListAndMap (lSINBKKFareFeatures, lSQAirlineMClassList);
FacBomManager::linkWithParent (lSINBKKFareFeatures, lSQAirlineMClassList);

/*================================================================================
  ========*/
// Second airport pair BKK-HKG.
// Set the airport-pair primary key.
lAirportPairKey = AirportPairKey ("BKK", "HKG");

// Create the AirportPairKey object and link it to the ioBomRoot object.
AirportPair& lBKKHKGAirportPair =
  FacBom<AirportPair>::instance().create (lAirportPairKey);
FacBomManager::addToListAndMap (ioBomRoot, lBKKHKGAirportPair);
FacBomManager::linkWithParent (ioBomRoot, lBKKHKGAirportPair);

// Set the fare date-period primary key.
// Use the same as previously.

// Create the DatePeriodKey object and link it to the PosChannel object.
DatePeriod& lBKKHKGDatePeriod =
  FacBom<DatePeriod>::instance().create (lDatePeriodKey);
FacBomManager::addToListAndMap (lBKKHKGAirportPair, lBKKHKGDatePeriod);
FacBomManager::linkWithParent (lBKKHKGAirportPair, lBKKHKGDatePeriod);

// Set the point-of-sale-channel primary key.
lPosChannelKey  = PosChannelKey("BKK","IN");

// Create the PositionKey object and link it to the AirportPair object.
PosChannel& lBKKPosChannel =
  FacBom<PosChannel>::instance().create (lPosChannelKey);
```

```
FacBomManager::addToListAndMap (lBKKHKGDatePeriod, lBKKPosChannel);
FacBomManager::linkWithParent (lBKKHKGDatePeriod, lBKKPosChannel);

// Set the fare time-period primary key.
// Use the same as previously.

// Create the TimePeriodKey and link it to the DatePeriod object.
TimePeriod& lBKKHKGFareTimePeriod =
  FacBom<TimePeriod>::instance().create (lFareTimePeriodKey);
FacBomManager::addToListAndMap (lBKKPosChannel, lBKKHKGFareTimePeriod);
FacBomManager::linkWithParent (lBKKPosChannel, lBKKHKGFareTimePeriod);


// Generate the FareRule
// Use the same key as previously.

// Create the FareFeaturesKey and link it to the TimePeriod object.
FareFeatures& lBKKHKGFareFeatures =
  FacBom<FareFeatures>::instance().create (lFareFeaturesKey);
FacBomManager::addToListAndMap (lBKKHKGFareTimePeriod, lBKKHKGFareFeatures);
FacBomManager::linkWithParent (lBKKHKGFareTimePeriod, lBKKHKGFareFeatures);


// Generate Segment Features and link them to their FareRule.
AirlineCodeList_T lCXAirlineCodeList;
lCXAirlineCodeList.push_back ("CX");

const AirlineClassListKey lCXAirlineYClassListKey (lCXAirlineCodeList,
                                                   lYClassCodeList);

const AirlineClassListKey lCXAirlineMClassListKey (lCXAirlineCodeList,
                                                   lMClassCodeList);

// Create the AirlineClassListKey and link it to the FareFeatures object.
AirlineClassList& lCXAirlineYClassList =
  FacBom<AirlineClassList>::instance().create (lCXAirlineYClassListKey);
lCXAirlineYClassList.setFare(700);
FacBomManager::addToListAndMap (lBKKHKGFareFeatures, lCXAirlineYClassList);
FacBomManager::linkWithParent (lBKKHKGFareFeatures, lCXAirlineYClassList);

AirlineClassList& lCXAirlineMClassList =
  FacBom<AirlineClassList>::instance().create (lCXAirlineMClassListKey);
lCXAirlineMClassList.setFare(500);
FacBomManager::addToListAndMap (lBKKHKGFareFeatures, lCXAirlineMClassList);
FacBomManager::linkWithParent (lBKKHKGFareFeatures, lCXAirlineMClassList);

/*================================================================================
  ========*/
// Third airport pair SIN-HKG.
// Set the airport-pair primary key.
lAirportPairKey = AirportPairKey ("SIN", "HKG");

// Create the AirportPairKey object and link it to the ioBomRoot object.
AirportPair& lSINHKGAirportPair =
  FacBom<AirportPair>::instance().create (lAirportPairKey);
FacBomManager::addToListAndMap (ioBomRoot, lSINHKGAirportPair);
FacBomManager::linkWithParent (ioBomRoot, lSINHKGAirportPair);

// Set the fare date-period primary key.
// Use the same as previously.

// Create the DatePeriodKey object and link it to the PosChannel object.
```

```
DatePeriod& lSINHKGDatePeriod =
  FacBom<DatePeriod>::instance().create (lDatePeriodKey);
FacBomManager::addToListAndMap (lSINHKGAirportPair, lSINHKGDatePeriod);
FacBomManager::linkWithParent (lSINHKGAirportPair, lSINHKGDatePeriod);

// Set the point-of-sale-channel primary key.
lPosChannelKey = PosChannelKey("SIN","IN");

// Create the PositionKey object and link it to the AirportPair object.
PosChannel& lOnDSINPosChannel =
  FacBom<PosChannel>::instance().create (lPosChannelKey);
FacBomManager::addToListAndMap (lSINHKGDatePeriod, lOnDSINPosChannel);
FacBomManager::linkWithParent (lSINHKGDatePeriod, lOnDSINPosChannel);

// Set the fare time-period primary key.
// Use the same as previously.

// Create the TimePeriodKey and link it to the DatePeriod object.
TimePeriod& lSINHKGFareTimePeriod =
  FacBom<TimePeriod>::instance().create (lFareTimePeriodKey);
FacBomManager::addToListAndMap (lOnDSINPosChannel, lSINHKGFareTimePeriod);
FacBomManager::linkWithParent (lOnDSINPosChannel, lSINHKGFareTimePeriod);


// Generate the FareRule
// Use the same key as previously.

// Create the FareFeaturesKey and link it to the TimePeriod object.
FareFeatures& lSINHKGFareFeatures =
  FacBom<FareFeatures>::instance().create (lFareFeaturesKey);
FacBomManager::addToListAndMap (lSINHKGFareTimePeriod, lSINHKGFareFeatures);
FacBomManager::linkWithParent (lSINHKGFareTimePeriod, lSINHKGFareFeatures);


// Generate Segment Features and link them to their FareRule.
AirlineCodeList_T lSQ_CXAirlineCodeList;
lSQ_CXAirlineCodeList.push_back ("SQ");
lSQ_CXAirlineCodeList.push_back ("CX");

ClassList_StringList_T lY_YClassCodeList;
lY_YClassCodeList.push_back ("Y");
lY_YClassCodeList.push_back ("Y");
const AirlineClassListKey lSQ_CXAirlineYClassListKey (lSQ_CXAirlineCodeList,
                                                      lY_YClassCodeList);

ClassList_StringList_T lM_MClassCodeList;
lM_MClassCodeList.push_back ("M");
lM_MClassCodeList.push_back ("M");
const AirlineClassListKey lSQ_CXAirlineMClassListKey (lSQ_CXAirlineCodeList,
                                                      lM_MClassCodeList);

// Create the AirlineClassListKey and link it to the FareFeatures object.
AirlineClassList& lSQ_CXAirlineYClassList =
  FacBom<AirlineClassList>::instance().create (lSQ_CXAirlineYClassListKey);
lSQ_CXAirlineYClassList.setFare(1200);
FacBomManager::addToListAndMap (lSINHKGFareFeatures, lSQ_CXAirlineYClassList)
  ;
FacBomManager::linkWithParent (lSINHKGFareFeatures, lSQ_CXAirlineYClassList);


AirlineClassList& lSQ_CXAirlineMClassList =
  FacBom<AirlineClassList>::instance().create (lSQ_CXAirlineMClassListKey);
```

```
lSQ_CXAirlineMClassList.setFare(850);
FacBomManager::addToListAndMap (lSINHKGFareFeatures, lSQ_CXAirlineMClassList)
  ;
FacBomManager::linkWithParent (lSINHKGFareFeatures, lSQ_CXAirlineMClassList);



/*============================================================================
  ========*/

// Use the same airport pair, and date period for adding SQ SIN-BKK yields.

// Set the point-of-sale-channel primary key.
lPosChannelKey = PosChannelKey(DEFAULT_POS, DEFAULT_CHANNEL);

// Create the PositionKey object and link it to the AirportPair object.
PosChannel& lRAC_SINBKKPosChannel =
  FacBom<PosChannel>::instance().create (lPosChannelKey);
FacBomManager::addToListAndMap (lSINBKKDatePeriod, lRAC_SINBKKPosChannel);
FacBomManager::linkWithParent (lSINBKKDatePeriod, lRAC_SINBKKPosChannel);

// Set the yield time-period primary key.
const TimePeriodKey lYieldTimePeriodKey (lTimeRangeStart,
                                         lTimeRangeEnd);

// Create the TimePeriodKey and link it to the DatePeriod object.
TimePeriod& lSINBKKYieldTimePeriod =
  FacBom<TimePeriod>::instance().create (lYieldTimePeriodKey);
FacBomManager::addToListAndMap (lRAC_SINBKKPosChannel, lSINBKKYieldTimePeriod
  );
FacBomManager::linkWithParent (lRAC_SINBKKPosChannel, lSINBKKYieldTimePeriod)
  ;

// Generate the YieldRule
const YieldFeaturesKey lYieldFeaturesKey (TRIP_TYPE_ONE_WAY,
                                          CABIN_Y);

// Create the YieldFeaturesKey and link it to the TimePeriod object.
YieldFeatures& lSINBKKYieldFeatures =
  FacBom<YieldFeatures>::instance().create (lYieldFeaturesKey);
FacBomManager::addToListAndMap (lSINBKKYieldTimePeriod, lSINBKKYieldFeatures)
  ;
FacBomManager::linkWithParent (lSINBKKYieldTimePeriod, lSINBKKYieldFeatures);


// Generate Segment Features and link them to their YieldRule.
// Use the same key as previously.

// Create the AirlineClassListKey and link it to the YieldFeatures object.
AirlineClassList& lRAC_SQAirlineYClassList =
  FacBom<AirlineClassList>::instance().create (lSQAirlineYClassListKey);
lRAC_SQAirlineYClassList.setYield(700);
FacBomManager::addToListAndMap (lSINBKKYieldFeatures, lRAC_SQAirlineYClassLis
  t);
FacBomManager::linkWithParent (lSINBKKYieldFeatures, lRAC_SQAirlineYClassList
  );

AirlineClassList& lRAC_SQAirlineMClassList =
  FacBom<AirlineClassList>::instance().create (lSQAirlineMClassListKey);
lRAC_SQAirlineMClassList.setYield(500);
FacBomManager::addToListAndMap (lSINBKKYieldFeatures, lRAC_SQAirlineMClassLis
```

```
  t);
FacBomManager::linkWithParent (lSINBKKYieldFeatures, lRAC_SQAirlineMClassList
  );

/*====================================================================
  ========*/

// Use the same airport pair, and date period for adding CX BKK-HKG yields.

// Set the point-of-sale-channel primary key.
// Use the same as previously.

// Create the PositionKey object and link it to the AirportPair object.
PosChannel& lRAC_BKKHKGPosChannel =
  FacBom<PosChannel>::instance().create (lPosChannelKey);
FacBomManager::addToListAndMap (lBKKHKGDatePeriod, lRAC_BKKHKGPosChannel);
FacBomManager::linkWithParent (lBKKHKGDatePeriod, lRAC_BKKHKGPosChannel);

// Set the yield time-period primary key.
// Use the same as previously.

// Create the TimePeriodKey and link it to the DatePeriod object.
TimePeriod& lBKKHKGYieldTimePeriod =
  FacBom<TimePeriod>::instance().create (lYieldTimePeriodKey);
FacBomManager::addToListAndMap (lRAC_BKKHKGPosChannel, lBKKHKGYieldTimePeriod
  );
FacBomManager::linkWithParent (lRAC_BKKHKGPosChannel, lBKKHKGYieldTimePeriod)
  ;

// Generate the YieldRule
// Use the same key as previously.

// Create the YieldFeaturesKey and link it to the TimePeriod object.
YieldFeatures& lBKKHKGYieldFeatures =
  FacBom<YieldFeatures>::instance().create (lYieldFeaturesKey);
FacBomManager::addToListAndMap (lBKKHKGYieldTimePeriod, lBKKHKGYieldFeatures)
  ;
FacBomManager::linkWithParent (lBKKHKGYieldTimePeriod, lBKKHKGYieldFeatures);


// Generate Segment Features and link them to their YieldRule.
// Use the same key as previously.

// Create the AirlineClassListKey and link it to the YieldFeatures object.
AirlineClassList& lRAC_CXAirlineYClassList =
  FacBom<AirlineClassList>::instance().create (lCXAirlineYClassListKey);
lRAC_CXAirlineYClassList.setYield(700);
FacBomManager::addToListAndMap (lBKKHKGYieldFeatures, lRAC_CXAirlineYClassLis
  t);
FacBomManager::linkWithParent (lBKKHKGYieldFeatures, lRAC_CXAirlineYClassList
  );

AirlineClassList& lRAC_CXAirlineMClassList =
  FacBom<AirlineClassList>::instance().create (lCXAirlineMClassListKey);
lRAC_CXAirlineMClassList.setYield(500);
FacBomManager::addToListAndMap (lBKKHKGYieldFeatures, lRAC_CXAirlineMClassLis
  t);
FacBomManager::linkWithParent (lBKKHKGYieldFeatures, lRAC_CXAirlineMClassList
  );

/*====================================================================
  ========*/
```

```
    // Use the same airport pair, and date period for SQ-CX SIN-HKG

    // Set the point-of-sale-channel primary key.
    // Use the same as previously.

    // Create the PositionKey object and link it to the AirportPair object.
    PosChannel& lRAC_SINHKGChannel =
      FacBom<PosChannel>::instance().create (lPosChannelKey);
    FacBomManager::addToListAndMap (lSINHKGDatePeriod, lRAC_SINHKGChannel);
    FacBomManager::linkWithParent (lSINHKGDatePeriod, lRAC_SINHKGChannel);

    // Set the yield time-period primary key.
    // Use the same as previously.

    // Create the TimePeriodKey and link it to the DatePeriod object.
    TimePeriod& lSINHKGYieldTimePeriod =
      FacBom<TimePeriod>::instance().create (lYieldTimePeriodKey);
    FacBomManager::addToListAndMap (lRAC_SINHKGChannel, lSINHKGYieldTimePeriod);
    FacBomManager::linkWithParent (lRAC_SINHKGChannel, lSINHKGYieldTimePeriod);


    // Generate the YieldRule
    // Use the same key as previously.

    // Create the YieldFeaturesKey and link it to the TimePeriod object.
    YieldFeatures& lSINHKGYieldFeatures =
      FacBom<YieldFeatures>::instance().create (lYieldFeaturesKey);
    FacBomManager::addToListAndMap (lSINHKGYieldTimePeriod, lSINHKGYieldFeatures)
      ;
    FacBomManager::linkWithParent (lSINHKGYieldTimePeriod, lSINHKGYieldFeatures);


    // Generate Segment Features and link them to their YieldRule.
    // Use the same key as previously

    // Create the AirlineClassListKey and link it to the YieldFeatures object.
    AirlineClassList& lRAC_SQ_CXAirlineYClassList =
      FacBom<AirlineClassList>::instance().create (lSQ_CXAirlineYClassListKey);
    lRAC_SQ_CXAirlineYClassList.setYield(1200);
    FacBomManager::addToListAndMap (lSINHKGYieldFeatures, lRAC_SQ_CXAirlineYClass
      List);
    FacBomManager::linkWithParent (lSINHKGYieldFeatures, lRAC_SQ_CXAirlineYClassL
      ist);

    AirlineClassList& lRAC_SQ_CXAirlineMClassList =
      FacBom<AirlineClassList>::instance().create (lSQ_CXAirlineMClassListKey);
    lRAC_SQ_CXAirlineMClassList.setYield(850);
    FacBomManager::addToListAndMap (lSINHKGYieldFeatures, lRAC_SQ_CXAirlineMClass
      List);
    FacBomManager::linkWithParent (lSINHKGYieldFeatures, lRAC_SQ_CXAirlineMClassL
      ist);

  }

}

/*!
```

4 C++ Class Storing the StdAir Context

```
 */
// //////////////////////////////////////////////////////////////////////
// Import section
// //////////////////////////////////////////////////////////////////////
// STL
#include <cassert>
#include <sstream>
// StdAir
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/EventQueue.hpp>
#include <stdair/factory/FacBom.hpp>
#include <stdair/service/STDAIR_ServiceContext.hpp>

namespace stdair {

  // //////////////////////////////////////////////////////////////////////
  STDAIR_ServiceContext::STDAIR_ServiceContext()
    : _bomRoot (NULL), _eventQueue (NULL),
      _initType (ServiceInitialisationType::NOT_YET_INITIALISED) {
    // Build the BomRoot object
    init();
  }

  // //////////////////////////////////////////////////////////////////////
  STDAIR_ServiceContext::
  STDAIR_ServiceContext (const STDAIR_ServiceContext& iServiceContext)
    : _bomRoot (iServiceContext._bomRoot),
      _eventQueue (iServiceContext._eventQueue),
      _initType (ServiceInitialisationType::NOT_YET_INITIALISED) {
    assert (false);
  }

  // //////////////////////////////////////////////////////////////////////
  STDAIR_ServiceContext::~STDAIR_ServiceContext() {
  }

  // //////////////////////////////////////////////////////////////////////
  void STDAIR_ServiceContext::init() {
    //
    initBomRoot();

    //
    initEventQueue();
  }

  // //////////////////////////////////////////////////////////////////////
  void STDAIR_ServiceContext::initBomRoot() {
    _bomRoot = &FacBom<BomRoot>::instance().create();
  }

  // //////////////////////////////////////////////////////////////////////
  void STDAIR_ServiceContext::initEventQueue() {

    // The event queue key is just a string. For now, it is not used.
    const EventQueueKey lKey ("EQ01");

    // Create an EventQueue object instance
    EventQueue& lEventQueue = FacBom<EventQueue>::instance().create (lKey);
```

```
    // Store the event queue object
    _eventQueue = &lEventQueue;
  }

  // ////////////////////////////////////////////////////////////////////
  const std::string STDAIR_ServiceContext::shortDisplay() const {
    std::ostringstream oStr;
    oStr << "STDAIR_ServiceContext -- " << _initType
         << " -- DB: " << _dbParams;
    if (_eventQueue != NULL) {
      oStr << " -- Queue: " << _eventQueue->toString();
    }
    return oStr.str();
  }

  // ////////////////////////////////////////////////////////////////////
  const std::string STDAIR_ServiceContext::display() const {
    std::ostringstream oStr;
    oStr << shortDisplay();
    return oStr.str();
  }

  // ////////////////////////////////////////////////////////////////////
  const std::string STDAIR_ServiceContext::describe() const {
    return shortDisplay();
  }

  // ////////////////////////////////////////////////////////////////////
  BomRoot& STDAIR_ServiceContext::getBomRoot() const {
    assert (_bomRoot != NULL);
    return *_bomRoot;
  }

  // ////////////////////////////////////////////////////////////////////
  EventQueue& STDAIR_ServiceContext::getEventQueue() const {
    assert (_eventQueue != NULL);
    return *_eventQueue;
  }

}

/*!
```

5 People

5.1 Project Admins (and Developers)

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5.3 Contributors

- Emmanuel Bastien <ebastien@users.sourceforge.net> (N)

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- Debian: Emmanuel Bastien <ebastien@users.sourceforge.net> (N)

Note

(N) - Amadeus employees.

6 Coding Rules

In the following sections we describe the naming conventions which are used for files, classes, structures, local variables, and global variables.

6.1 Default Naming Rules for Variables

Variables names follow Java naming conventions. Examples:

- `lNumberOfPassengers`
- `lSeatAvailability`

6.2 Default Naming Rules for Functions

Function names follow Java naming conventions. Example:

- `int myFunctionName (const int& a, int b)`

6.3 Default Naming Rules for Classes and Structures

Each new word in a class or structure name should always start with a capital letter and the words should be separated with an under-score. Abbreviations are written with capital letters. Examples:

- `MyClassName`
- `MyStructName`

6.4 Default Naming Rules for Files

Files are named after the C++ class names.

Source files are named using `.cpp` suffix, whereas header files end with `.hpp` extension. Examples:

- `FlightDate.hpp`
- `SegmentDate.cpp`

6.5 Default Functionality of Classes

All classes that are configured by input parameters should include:

- default empty constructor
- one or more additional constructor(s) that takes input parameters and initializes the class instance
- setup function, preferably named `'setup'` or `'set_parameters'`

Explicit destructor functions are not required, unless they are needed. It shall not be possible to use any of the other member functions unless the class has been properly initiated with the input parameters.

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7.1.1 Version 2.1, February 1999

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d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

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Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include

the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

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b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

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7.3.2 END OF TERMS AND CONDITIONS

7.4 How to Apply These Terms to Your New Programs

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
    <one line to give the library's name and a brief idea of what it does.>
    Copyright (C) <year>  <name of author>

    This library is free software; you can redistribute it and/or
    modify it under the terms of the GNU Lesser General Public
    License as published by the Free Software Foundation; either
    version 2.1 of the License, or (at your option) any later version.

    This library is distributed in the hope that it will be useful,
    but WITHOUT ANY WARRANTY; without even the implied warranty of
    MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the GNU
    Lesser General Public License for more details.

    You should have received a copy of the GNU Lesser General Public
    License along with this library; if not, write to the Free Software
    Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA  02110-1301  USA
```

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

```
  Yoyodyne, Inc., hereby disclaims all copyright interest in the
  library 'Frob' (a library for tweaking knobs) written by James Random Hacker.

  <signature of Ty Coon>, 1 April 1990
  Ty Coon, President of Vice
```

That's all there is to it!

Source

8 Documentation Rules

8.1 General Rules

All classes in StdAir should be properly documented with Doxygen comments in include (`.hpp`) files. Source (`.cpp`) files should be documented according to a normal standard for well documented C++ code.

An example of how the interface of a class shall be documented in StdAir is shown here:

```
/*!
 * \brief Brief description of MyClass here
 *
 * Detailed description of MyClass here. With example code if needed.
 */
class MyClass {
```

```
public:
  //! Default constructor
  MyClass(void) { setup_done = false; }

  /*!
   * \brief Constructor that initializes the class with parameters
   *
   * Detailed description of the constructor here if needed
   *
   * \param[in] param1 Description of \a param1 here
   * \param[in] param2 Description of \a param2 here
   */
  MyClass(TYPE1 param1, TYPE2 param2) { setup(param1, param2); }

  /*!
   * \brief Setup function for MyClass
   *
   * Detailed description of the setup function here if needed
   *
   * \param[in] param1 Description of \a param1 here
   * \param[in] param2 Description of \a param2 here
   */
  void setup(TYPE1 param1, TYPE2 param2);

  /*!
   * \brief Brief description of memberFunction1
   *
   * Detailed description of memberFunction1 here if needed
   *
   * \param[in]     param1 Description of \a param1 here
   * \param[in]     param2 Description of \a param2 here
   * \param[in,out] param3 Description of \a param3 here
   * \return Description of the return value here
   */
  TYPE4 memberFunction1(TYPE1 param1, TYPE2 param2, TYPE3 &param3);

private:

  bool _setupDone;         /*!< Variable that checks if the class is properly
                                initialized with parameters */
  TYPE1 _privateVariable1; //!< Short description of _privateVariable1 here
  TYPE2 _privateVariable2; //!< Short description of _privateVariable2 here
};
```

8.2 File Header

All files should start with the following header, which include Doxygen's `\file`, `\brief` and `\author` tags, `$Date$` and `$Revisions$` CVS tags, and a common copyright note:

```
/*!
 * \file
 * \brief Brief description of the file here
 * \author Names of the authors who contributed to this code
 * \date Date
 *
 * Detailed description of the file here if needed.
 *
 * ----------------------------------------------------------------------------
```

```
 *
 * StdAir - C++ Standard Airline IT Object Library
 *
 * Copyright (C) 2009-2010  (\see authors file for a list of contributors)
 *
 * \see copyright file for license information
 *
 * ------------------------------------------------------------------------
 */
```

8.3 Grouping Various Parts

All functions must be added to a Doxygen group in order to appear in the documentation. The following code example defines the group `'my_group'`:

```
/*!
 * \defgroup my_group Brief description of the group here
 *
 * Detailed description of the group here
*/
```

The following example shows how to document the function `myFunction` and how to add it to the group `my_group`:

```
/*!
 * \brief Brief description of myFunction here
 * \ingroup my_group
 *
 * Detailed description of myFunction here
 *
 * \param[in] param1 Description of \a param1 here
 * \param[in] param2 Description of \a param2 here
 * \return Description of the return value here
 */
TYPE3 myFunction(TYPE1 param1, TYPE2 &param2);
```

9 Main features

A short list of the main features of StdAir is given below sorted in different categories. Many more features and functions exist and for these we refer to the reference documentation.

9.1 Standard Airline IT Business Object Model (BOM)

- (Airline) Network-related classes:
  - Network, ReachableUniverse
- (Air) Travel-related classes:
  - TravelSolution, OriginDestination,

- (Airline) Inventory-related classes:
  - Inventory, FlightDate, SegmentDate, SegmentCabin, BookingClass, LegDate, LegCabin, Bucket
- (Airline) Schedule-related classes:
  - FlightPeriod, SegmentPeriod, LegPeriod
- (Simulated) Passenger-related demand classes:
  - DemandStream, BookingRequest
- (Air) Price-related classes:
  - YieldStore

9.2 Architecture of the StdAir library

- Separate structure and content classes
- `Boost.Fusion`

10 Make a Difference

Do not ask what StdAir can do for you. Ask what you can do for StdAir.

You can help us to develop the StdAir library. There are always a lot of things you can do:

- Start using StdAir
- Tell your friends about StdAir and help them to get started using it
- If you find a bug, report it to us (on the `dedicated Sourceforge's Trac Web site`). Without your help we can never hope to produce a bug free code.
- Help us to improve the documentation by providing information about documentation bugs
- Answer support requests in the StdAir `discussion forums` on SourceForge. If you know the answer to a question, help others to overcome their StdAir problems.
- Help us to improve our algorithms. If you know of a better way (e.g., that is faster or requires less memory) to implement some of our algorithms, then let us know.
- Help to port StdAir to new platforms. If you manage to compile StdAir on a new platform, then tell how you did it.
- Send your code. If you have a good StdAir compatible code, which you can release under the LGPL, and you think it should be included in StdAir, then send it to the communauty.

- Become an StdAir developer. Send us (see the People page) an e-mail and tell what you can do for StdAir.

11 Make a new release

11.1 Introduction

This document describes briefly the recommended procedure of releasing a new version of StdAir using a Linux development machine and the SourceForge project site.

The following steps are required to make a release of the distribution package.

11.2 Initialisation

Clone locally the full Git project:

```
cd ~
mkdir -p dev/sim
cd ~/dev/sim
git clone git://stdair.git.sourceforge.net/gitroot/stdair/stdair stdairgit
cd stdairgit
git checkout trunk
```

11.3 Branch creation

Create the branch, on your local clone, corresponding to the new release (say, 0.5.0):

```
cd ~/dev/sim/stdairgit
git checkout trunk
git checkout -b 0.5.0
```

Update the version in the various build system files, replacing 99.99.99 by the correct version number:

```
vi CMakeLists.txt
vi autogen.sh
```

Update the version and add a change-log in the ChangeLog and in the RPM specification files:

```
vi ChangeLog
vi stdair.spec
```

11.4 Commit and publish the release branch

Commit the new release:

```
cd ~/dev/sim/stdairgit
git add -A
git commit -m "[Release 0.5.0] Release of version 0.5.0."
git push
```

11.5 Update the change-log in the trunk as well

Update the change-log in the ChangeLog and RPM specification files:

```
cd ~/dev/sim/stdairgit
git checkout trunk
vi ChangeLog
vi stdair.spec
```

Commit the change-logs and publish the trunk (main development branch):

```
git commit -m "[Doc] Integrated the change-log of the release 0.5.0."
git push
```

11.6 Create distribution packages

Create the distribution packages using the following command:

```
cd ~/dev/sim/stdairgit
git checkout 0.5.0
rm -rf build && mkdir -p build
cd build
cmake -DCMAKE_INSTALL_PREFIX=/home/user/dev/deliveries/stdair-0.5.0 \
 -DCMAKE_BUILD_TYPE:STRING=Debug -DINSTALL_DOC:BOOL=ON ..
make check && make dist
```

This will configure, compile and check the package. The output packages will be named, for instance, `stdair-0.5.0.tar.gz` and `stdair-0.5.0.tar.bz2`.

11.7 Generation the RPM packages

Optionally, generate the RPM package (for instance, for Fedora/RedHat):

```
cd ~/dev/sim/stdairgit
git checkout 0.5.0
rm -rf build && mkdir -p build
cd build
cmake -DCMAKE_INSTALL_PREFIX=/home/user/dev/deliveries/stdair-99.99.99 \
 -DCMAKE_BUILD_TYPE:STRING=Debug -DINSTALL_DOC:BOOL=ON ..
make dist
```

To perform this step, rpm-build, rpmlint and rpmdevtools have to be available on the system.

```
cp stdair.spec ~/dev/packages/SPECS \
  && cp stdair-0.5.0.tar.bz2 ~/dev/packages/SOURCES
cd ~/dev/packages/SPECS
rpmbuild -ba stdair.spec
rpmlint -i ../SPECS/stdair.spec ../SRPMS/stdair-0.5.0-1.fc15.src.rpm \
  ../RPMS/noarch/stdair-* ../RPMS/i686/stdair-*
```

11.8 Update distributed change log

Update the NEWS and ChangeLog files with appropriate information, including what has changed since the previous release. Then commit and push the changes into the StdAir's Git repository.

11.9 Create the binary package, including the documentation

Create the binary package, which includes HTML and PDF documentation, using the following command:

```
make package
```

The output binary package will be named, for instance, stdair-0.5.0-Linux.tar.bz2. That package contains both the HTML and PDF documentation. The binary package contains also the executables and shared libraries, as well as C++ header files, but all of those do not interest us for now.

11.10 Upload the files to SourceForge

Upload the distribution and documentation packages to the SourceForge server. Check SourceForge help page on uploading software.

11.11 Upload the documentation to SourceForge

In order to update the Web site files, either:

- synchronise them with rsync and SSH:

  ```
  cd ~/dev/sim/stdairgit
  git checkout 0.5.0
  rsync -aiv doc/html/ doc/latex/refman.pdf joe,stdair@web.sourceforge.net:htdocs/
  ```

  where -aiv options mean:

  - -a: archive/mirror mode; equals -rlptgoD (no -H, -A, -X)
  - -v: increase verbosity
  - -i: output a change-summary for all updates
  - Note the trailing slashes (/) at the end of both the source and target directories. It means that the content of the source directory (doc/html), rather than the directory itself, has to be copied into the content of the target directory.

- or use the SourceForge Shell service.

11.12 Make a new post

- submit a new entry in the SourceForge project-related news feed
- make a new post on the SourceForge hosted WordPress blog
- and update, if necessary, Trac tickets.

11.13 Send an email on the announcement mailing-list

Finally, you should send an announcement to stdair-announce@lists.sourceforge.net (see https://lists.sourceforge.net/lists/listinfo/stdair-announce for the archives)

12 Installation

12.1 Table of Contents

12.2 Fedora/RedHat Linux distributions

Note that on Fedora/RedHat Linux distributions, RPM packages are available and can be installed with your usual package manager. For instance:

```
yum -y install stdair-devel stdair-doc
```

RPM packages can also be available on the SourceForge download site.

12.3 StdAir Requirements

StdAir should compile without errors or warnings on most GNU/Linux systems, on UNIX systems like Solaris SunOS, and on POSIX based environments for Microsoft Windows like Cygwin or MinGW with MSYS. It can be also built on Microsoft Windows NT/2000/XP/Vista/7 using Microsoft's Visual C++ .NET, but our support for this compiler is limited. For GNU/Linux, SunOS, Cygwin and MinGW we assume that you have at least the following GNU software installed on your computer:

- GNU Autotools:
  - autoconf,
  - automake,
  - libtool,
  - make, version 3.72.1 or later (check version with 'make --version')
- GCC - GNU C++ Compiler (g++), version 4.3.x or later (check version with 'gcc --version')
- Boost - C++ STL extensions, version 1.35 or later (check version with 'grep "define BOOST_LIB_VERSION" /usr/include/boost/version.hpp')
- MySQL - Database client libraries, version 5.0 or later (check version with 'mysql --version')
- SOCI - C++ database client library wrapper, version 3.0.0 or later (check version with 'soci-config --version')

Optionally, you might need a few additional programs: Doxygen, LaTeX, Dvips and Ghostscript, to generate the HTML and PDF documentation.

We strongly recommend that you use recent stable releases of the GCC, if possible. We do not actively work on supporting older versions of the GCC, and they may therefore (without prior notice) become unsupported in future releases of StdAir.

12.4 Basic Installation

Briefly, the shell commands './cmake .. && make install' should configure, build and install this package. The following more-detailed instructions are generic; see the 'README' file for instructions specific to this package. Some packages provide this 'INSTALL' file but do not implement all of the features documented below. The lack of an optional feature in a given package is not necessarily a bug. More recommendations for GNU packages can be found in the info page corresponding to "Makefile Conventions: (standards)Makefile Conventions".

The 'cmake' shell script attempts to guess correct values for various system-dependent variables used during compilation. It uses those values to create a 'Makefile' in each directory of the package. It may also create one or more '.h' files containing system-dependent definitions. Finally, it creates a 'CMakeCache.txt' cache file that you can refer to in the future to recreate the current configuration, and files 'CMakeFiles' containing compiler output (useful mainly for debugging 'cmake').

It can also use an optional file (typically called 'config.cache' and enabled with '--cache-file=config.cache' or simply '-C') that saves the results of its tests to speed up reconfiguring. Caching is disabled by default to prevent problems with accidental use of stale cache files.

If you need to do unusual things to compile the package, please try to figure out how 'configure' could check whether to do them, and mail diffs or instructions to the address given in the 'README' so they can be considered for the next release. If you are using the cache, and at some point 'config.cache' contains results you don't want to keep, you may remove or edit it.

The file 'CMakeLists.txt' is used to create the 'Makefile' files.

The simplest way to compile this package is:

1. 'cd' to the directory containing the package's source code and type './cmake .. ' to configure the package for your system. Running 'cmake' is generally fast. While running, it prints some messages telling which features it is checking for.
2. Type 'make' to compile the package.
3. Optionally, type 'make check'to run any self-tests that come with the package, generally using the just-built uninstalled binaries.
4. Type 'make install' to install the programs and any data files and documentation. When installing into a prefix owned by root, it is recommended that the package be configured and built as a regular user, and only the 'make install' phase executed with root privileges.
5. You can remove the program binaries and object files from the source code directory by typing 'make clean'. To also remove the files that 'configure' created (so you can compile the package for a different kind of computer), type 'make distclean'. There is also a 'make maintainer-clean' target, but that is intended mainly for the package's developers. If you use it, you may have to get all sorts of other programs in order to regenerate files that came with the distribution.
6. Often, you can also type 'make uninstall' to remove the installed files again. In practice, not all packages have tested that uninstallation works correctly, even though it is required by the GNU Coding Standards.

12.5 Compilers and Options

Some systems require unusual options for compilation or linking that the 'cmake' script does not know about. Run './cmake --help' for details on some of the pertinent environment variables.

You can give 'cmake' initial values for configuration parameters
by setting variables in the command line or in the environment.
Here is an example:

```
./cmake CC=c99 CFLAGS=-g LIBS=-lposix
```

See also

Defining Variables for more details.

12.6 Compiling For Multiple Architectures

You can compile the package for more than one kind of computer
at the same time, by placing the object files for each architecture
in their own directory. To do this, you can use GNU 'make'.
'cd' to the directory where you want the object files and executables
to go and run the 'configure' script. 'configure' automatically
checks for the source code in the directory that 'configure'
is in and in '..'. This is known as a "VPATH" build.

With a non-GNU 'make', it is safer to compile the package for
one architecture at a time in the source code directory. After
you have installed the package for one architecture, use 'make
distclean' before reconfiguring for another architecture.

On MacOS X 10.5 and later systems, you can create libraries
and executables that work on multiple system types--known as
"fat" or "universal" binaries--by specifying multiple '-arch'
options to the compiler but only a single '-arch' option to
the preprocessor. Like this:

```
./configure CC="gcc -arch i386 -arch x86_64 -arch ppc -arch ppc64" \
            CXX="g++ -arch i386 -arch x86_64 -arch ppc -arch ppc64" \
            CPP="gcc -E" CXXCPP="g++ -E"
```

This is not guaranteed to produce working output in all cases,
you may have to build one architecture at a time and combine
the results using the 'lipo' tool if you have problems.

12.7 Installation Names

By default, 'make install' installs the package's commands
under '/usr/local/bin', include files under '/usr/local/include',
etc. You can specify an installation prefix other than '/usr/local'
by giving 'configure' the option '--prefix=PREFIX', where PREFIX
must be an absolute file name.

You can specify separate installation prefixes for architecture-specific
files and architecture-independent files. If you pass the
option '--exec-prefix=PREFIX' to 'configure', the package uses

PREFIX as the prefix for installing programs and libraries.
Documentation and other data files still use the regular prefix.

In addition, if you use an unusual directory layout you can
give options like '--bindir=DIR' to specify different values
for particular kinds of files. Run 'configure --help' for
a list of the directories you can set and what kinds of files
go in them. In general, the default for these options is expressed
in terms of '${prefix}', so that specifying just '--prefix'
will affect all of the other directory specifications that
were not explicitly provided.

The most portable way to affect installation locations is to
pass the correct locations to 'configure'; however, many packages
provide one or both of the following shortcuts of passing variable
assignments to the 'make install' command line to change installation
locations without having to reconfigure or recompile.

The first method involves providing an override variable for
each affected directory. For example, 'make install prefix=/alternate/director
will choose an alternate location for all directory configuration
variables that were expressed in terms of '${prefix}'. Any
directories that were specified during 'configure', but not
in terms of '${prefix}', must each be overridden at install
time for the entire installation to be relocated. The approach
of makefile variable overrides for each directory variable
is required by the GNU Coding Standards, and ideally causes
no recompilation. However, some platforms have known limitations
with the semantics of shared libraries that end up requiring
recompilation when using this method, particularly noticeable
in packages that use GNU Libtool.

The second method involves providing the 'DESTDIR' variable.
For example, 'make install DESTDIR=/alternate/directory' will
prepend '/alternate/directory' before all installation names.
The approach of 'DESTDIR' overrides is not required by the
GNU Coding Standards, and does not work on platforms that have
drive letters. On the other hand, it does better at avoiding
recompilation issues, and works well even when some directory
options were not specified in terms of '${prefix}' at 'configure'
time.

12.8 Optional Features

If the package supports it, you can cause programs to be installed
with an extra prefix or suffix on their names by giving 'cmake'
the option '--program-prefix=PREFIX' or '--program-suffix=SUFFIX'.

Some packages pay attention to '--enable-FEATURE' options to
'configure', where FEATURE indicates an optional part of the
package. They may also pay attention to '--with-PACKAGE' options,

where PACKAGE is something like ‘gnu-as’ or ‘x’ (for the X Window System). The ‘README’ should mention any ‘--enable-’ and ‘--with-’ options that the package recognizes.

For packages that use the X Window System, ‘configure’ can usually find the X include and library files automatically, but if it doesn’t, you can use the ‘configure’ options ‘--x-includes=DIR’ and ‘--x-libraries=DIR’ to specify their locations.

Some packages offer the ability to configure how verbose the execution of ‘make’ will be. For these packages, running ‘./configure --enable-silent-rules’ sets the default to minimal output, which can be overridden with ‘make V=1’; while running ‘./configure --disable-silent-rules’ sets the default to verbose, which can be overridden with ‘make V=0’.

12.9 Particular systems

On HP-UX, the default C compiler is not ANSI C compatible. If GNU CC is not installed, it is recommended to use the following options in order to use an ANSI C compiler:

```
./configure CC="cc -Ae -D_XOPEN_SOURCE=500"
```

and if that doesn’t work, install pre-built binaries of GCC for HP-UX.

On OSF/1 a.k.a. Tru64, some versions of the default C compiler cannot parse its ‘<wchar.h>’ header file. The option ‘-nodtk’ can be used as a workaround. If GNU CC is not installed, it is therefore recommended to try

```
./configure CC="cc"
```

and if that doesn’t work, try

```
./configure CC="cc -nodtk"
```

On Solaris, don’t put ‘/usr/ucb’ early in your ‘PATH’. This directory contains several dysfunctional programs; working variants of these programs are available in ‘/usr/bin’. So, if you need ‘/usr/ucb’ in your ‘PATH’, put it _after_ ‘/usr/bin’.

On Haiku, software installed for all users goes in ‘/boot/common’, not ‘/usr/local’. It is recommended to use the following options:

```
./cmake -DCMAKE_INSTALL_PREFIX=/boot/common
```

12.10 Specifying the System Type

There may be some features 'configure' cannot figure out automatically,
but needs to determine by the type of machine the package will
run on. Usually, assuming the package is built to be run on
the _same_ architectures, 'configure' can figure that out,
but if it prints a message saying it cannot guess the machine
type, give it the '--build=TYPE' option. TYPE can either be
a short name for the system type, such as 'sun4', or a canonical
name which has the form CPU-COMPANY-SYSTEM

where SYSTEM can have one of these forms:

- OS
- KERNEL-OS

See the file 'config.sub' for the possible values of each field.
If 'config.sub' isn't included in this package, then this package
doesn't need to know the machine type.

If you are _building_ compiler tools for cross-compiling, you
should use the option '--target=TYPE' to select the type of
system they will produce code for.

If you want to _use_ a cross compiler, that generates code
for a platform different from the build platform, you should
specify the "host" platform (i.e., that on which the generated
programs will eventually be run) with '--host=TYPE'.

12.11 Sharing Defaults

If you want to set default values for 'configure' scripts to
share, you can create a site shell script called 'config.site'
that gives default values for variables like 'CC', 'cache_-
file', and 'prefix'. 'configure' looks for 'PREFIX/share/config.site'
if it exists, then 'PREFIX/etc/config.site' if it exists. Or,
you can set the 'CONFIG_SITE' environment variable to the location
of the site script. A warning: not all 'configure' scripts
look for a site script.

12.12 Defining Variables

Variables not defined in a site shell script can be set in
the environment passed to 'configure'. However, some packages
may run configure again during the build, and the customized
values of these variables may be lost. In order to avoid this
problem, you should set them in the 'configure' command line,
using 'VAR=value'. For example:

```
./configure CC=/usr/local2/bin/gcc
```

causes the specified 'gcc' to be used as the C compiler (unless it is overridden in the site shell script).

Unfortunately, this technique does not work for 'CONFIG_SHELL' due to an Autoconf bug. Until the bug is fixed you can use this workaround:

```
CONFIG_SHELL=/bin/bash /bin/bash ./configure CONFIG_SHELL=/bin/bash
```

12.13 'cmake' Invocation

'cmake' recognizes the following options to control how it operates.

- '--help', '-h' print a summary of all of the options to 'configure', and exit.
- '--help=short', '--help=recursive' print a summary of the options unique to this package's 'configure', and exit. The 'short' variant lists options used only in the top level, while the 'recursive' variant lists options also present in any nested packages.
- '--version', '-V' print the version of Autoconf used to generate the 'configure' script, and exit.
- '--cache-file=FILE' enable the cache: use and save the results of the tests in FILE, traditionally 'config.cache'. FILE defaults to '/dev/null' to disable caching.
- '--config-cache', '-C' alias for '--cache-file=config.cache'.
- '--quiet', '--silent', '-q' do not print messages saying which checks are being made. To suppress all normal output, redirect it to '/dev/null' (any error messages will still be shown).
- '--srcdir=DIR' look for the package's source code in directory DIR. Usually 'configure' can determine that directory automatically.
- '--prefix=DIR' use DIR as the installation prefix.

  See also

  Installation Names for more details, including other options available for fine-tuning the installation locations.

- '--no-create', '-n' run the configure checks, but stop before creating any output files.

'cmake' also accepts some other, not widely useful, options. Run 'cmake --help' for more details.

The 'cmake' script produces an ouput like this:

```
cmake -DCMAKE_INSTALL_PREFIX=/home/user/dev/deliveries/stdair-0.50.0 \
 -DLIB_SUFFIX=64 -DCMAKE_BUILD_TYPE:STRING=Debug -DINSTALL_DOC:BOOL=ON ..
-- The C compiler identification is GNU
-- The CXX compiler identification is GNU
-- Check for working C compiler: /usr/lib64/ccache/gcc
-- Check for working C compiler: /usr/lib64/ccache/gcc -- works
-- Detecting C compiler ABI info
-- Detecting C compiler ABI info - done
-- Check for working CXX compiler: /usr/lib64/ccache/c++
-- Check for working CXX compiler: /usr/lib64/ccache/c++ -- works
-- Detecting CXX compiler ABI info
-- Detecting CXX compiler ABI info - done
-- Requires Git without specifying any version
-- Current Git revision name: e8beb4d11ff9b1af6b3f3e9ff1e92250aee0291a trunk
-- Requires PythonLibs-2.7
-- Found PythonLibs: /usr/lib64/libpython2.7.so (Required is at least version "2.7")
-- Found PythonLibs 2.7
-- Requires Boost-1.41
-- Boost version: 1.46.0
-- Found the following Boost libraries:
--   program_options
--   date_time
--   iostreams
--   serialization
--   filesystem
--   unit_test_framework
--   python
-- Found Boost version: 1.46.0
-- Found BoostWrapper: /usr/include (Required is at least version "1.41")
-- Requires ZeroMQ-2.0
-- Found ZeroMQ: /usr/lib64/libzmq.so (Required is at least version "2.0")
-- Found ZeroMQ version: 2.1
-- Requires MySQL-5.1
-- Using mysql-config: /usr/bin/mysql_config
-- Found MySQL: /usr/lib64/mysql/libmysqlclient.so (Required is at least version "5.1")
-- Found MySQL version: 5.5.14
-- Requires SOCI-3.0
-- Using soci-config: /usr/bin/soci-config
-- SOCI headers are buried
-- Found SOCI: /usr/lib64/libsoci_core.so (Required is at least version "3.0")
-- Found SOCIMySQL: /usr/lib64/libsoci_mysql.so (Required is at least version "3.0")
-- Found SOCI with MySQL back-end support version: 3.0.0
-- Requires Doxygen-1.7
-- Found Doxygen: /usr/bin/doxygen
-- Found DoxygenWrapper: /usr/bin/doxygen (Required is at least version "1.7")
-- Found Doxygen version: 1.7.4
-- Had to set the linker language for 'stdairlib' to CXX
-- Had to set the linker language for 'stdairuicllib' to CXX
-- Test 'StdAirTest' to be built with 'MPBomRoot.cpp;MPInventory.cpp;StandardAirlineITTestSuite.cpp
--
-- ============================================================
-- ----------------------------------
-- ---     Project Information    ---
-- ----------------------------------
-- PROJECT_NAME ................... : stdair
-- PACKAGE_PRETTY_NAME ............ : StdAir
-- PACKAGE ........................ : stdair
-- PACKAGE_NAME ................... : STDAIR
-- PACKAGE_VERSION ................ : 0.50.0
-- GENERIC_LIB_VERSION ............ : 0.50.0
-- GENERIC_LIB_SOVERSION .......... : 99.99
--
```

```
-- ----------------------------------
-- ---     Build Configuration    ---
-- ----------------------------------
-- Modules to build ..... : stdair
-- Libraries to build/install ..... : stdairlib;stdairuicllib
-- Binaries to build/install ..... : stdair
-- Modules to test ..... : stdair
-- Binaries to test ..... : StdAirTesttst
--
-- * Module ..... : stdair
--   + Layers to build ..... : .;basic;bom;factory;dbadaptor;command;service
--   + Dependencies on other layers :
--   + Libraries to build/install . : stdairlib;stdairuicllib
--   + Executables to build/install : stdair
--   + Tests to perform ..... : StdAirTesttst
--
-- BUILD_SHARED_LIBS ..... : ON
-- CMAKE_BUILD_TYPE ..... : Debug
--  * CMAKE_C_FLAGS ..... :
--  * CMAKE_CXX_FLAGS ..... : -O2 -g -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -fsta
--  * BUILD_FLAGS ..... :
--  * COMPILE_FLAGS ..... :
-- CMAKE_MODULE_PATH ..... : /home/user/dev/sim/stdair/stdairgithub/config/
-- CMAKE_INSTALL_PREFIX ..... : /home/user/dev/deliveries/stdair-0.50.0
--
-- * Doxygen:
--   - DOXYGEN_VERSION ..... : 1.7.4
--   - DOXYGEN_EXECUTABLE ..... : /usr/bin/doxygen
--   - DOXYGEN_DOT_EXECUTABLE ..... : /usr/bin/dot
--   - DOXYGEN_DOT_PATH ..... : /usr/bin
--
-- ----------------------------------
-- --- Installation Configuration ---
-- ----------------------------------
-- INSTALL_LIB_DIR ..... : /home/user/dev/deliveries/stdair-0.50.0/lib64
-- INSTALL_BIN_DIR ..... : /home/user/dev/deliveries/stdair-0.50.0/bin
-- INSTALL_INCLUDE_DIR ..... : /home/user/dev/deliveries/stdair-0.50.0/include
-- INSTALL_DATA_DIR ..... : /home/user/dev/deliveries/stdair-0.50.0/share
-- INSTALL_SAMPLE_DIR ..... : /home/user/dev/deliveries/stdair-0.50.0/share/stdair/samples
-- INSTALL_DOC ..... : ON
--
-- ----------------------------------
-- ---   Packaging Configuration  ---
-- ----------------------------------
-- CPACK_PACKAGE_CONTACT ..... : Denis Arnaud <denis_arnaud - at - users dot sourceforge dot n
-- CPACK_PACKAGE_VENDOR ..... : Denis Arnaud
-- CPACK_PACKAGE_VERSION ..... : 0.50.0
-- CPACK_PACKAGE_DESCRIPTION_FILE . : /home/user/dev/sim/stdair/stdairgithub/README
-- CPACK_RESOURCE_FILE_LICENSE .... : /home/user/dev/sim/stdair/stdairgithub/COPYING
-- CPACK_GENERATOR ..... : TBZ2
-- CPACK_DEBIAN_PACKAGE_DEPENDS ... :
-- CPACK_SOURCE_GENERATOR ..... : TBZ2;TGZ
-- CPACK_SOURCE_PACKAGE_FILE_NAME . : stdair-0.50.0
--
-- ----------------------------------
-- ---     External libraries    ---
-- ----------------------------------
--
-- * Python:
--   - PYTHONLIBS_VERSION ..... : 2.7
--   - PYTHON_LIBRARIES ..... : /usr/lib64/libpython2.7.so
--   - PYTHON_INCLUDE_PATH ..... : /usr/include/python2.7
```

```
--   - PYTHON_INCLUDE_DIRS ........ : /usr/include/python2.7
--   - PYTHON_DEBUG_LIBRARIES ..... :
--   - Python_ADDITIONAL_VERSIONS . :
--
-- * ZeroMQ:
--   - ZeroMQ_VERSION ............. : 2.1
--   - ZeroMQ_LIBRARIES ........... : /usr/lib64/libzmq.so
--   - ZeroMQ_INCLUDE_DIR ......... : /usr/include
--
-- * Boost:
--   - Boost_VERSION .............. : 104600
--   - Boost_LIB_VERSION .......... : 1_46
--   - Boost_HUMAN_VERSION ........ : 1.46.0
--   - Boost_INCLUDE_DIRS ......... : /usr/include
--   - Boost required components .. : program_options;date_time;iostreams;serialization;filesystem;
--   - Boost required libraries ... : optimized;/usr/lib64/libboost_iostreams-mt.so;debug;/usr/lib6
--
-- * MySQL:
--   - MYSQL_VERSION .............. : 5.5.14
--   - MYSQL_INCLUDE_DIR .......... : /usr/include/mysql
--   - MYSQL_LIBRARIES ............ : /usr/lib64/mysql/libmysqlclient.so
--
-- * SOCI:
--   - SOCI_VERSION ............... : 3.0.0
--   - SOCI_INCLUDE_DIR ........... : /usr/include/soci
--   - SOCIMYSQL_INCLUDE_DIR ...... : /usr/include/soci
--   - SOCI_LIBRARIES ............. : /usr/lib64/libsoci_core.so
--   - SOCIMYSQL_LIBRARIES ........ : /usr/lib64/libsoci_mysql.so
--
-- Change a value with: cmake -D<Variable>=<Value>
-- ================================================================
--
-- Configuring done
-- Generating done
-- Build files have been written to: /home/user/dev/sim/stdair/stdairgithub/build
```

It is recommended that you check if your library has been compiled and linked properly and works as expected. To do so, you should execute the testing process 'make check'. As a result, you should obtain a similar report:

```
[  0%] Built target hdr_cfg_stdair
[ 97%] Built target stdairlib
[100%] Built target StdAirTesttst
Scanning dependencies of target check_stdairtst
Test project /home/user/dev/sim/stdair/stdairgithub/build/test/stdair
    Start 1: StdAirTesttst
1/1 Test #1: StdAirTesttst ....................   Passed    0.02 sec

100% tests passed, 0 tests failed out of 1

Total Test time (real) =   0.27 sec
[100%] Built target check_stdairtst
Scanning dependencies of target check
[100%] Built target check
```

Check if all the executed tests PASSED. If not, please contact us by filling a bug-report.

Finally, you should install the compiled and linked library, include files and (optionally) HTML and PDF documentation by typing:

```
make install
```

Depending on the PREFIX settings during configuration, you might need the root (administrator) access to perform this step.

Eventually, you might invoke the following command

```
make clean
```

to remove all files created during compilation process, or even

```
cd ~/dev/sim/stdairgit
rm -rf build && mkdir build
cd build
```

to remove everything.

13 Linking with StdAir

13.1 Table of Contents

13.2 Introduction

There are two convenient methods of linking your programs with the StdAir library. The first one employs the 'pkg-config' command (see http://pkgconfig.freedesktop.org/), whereas the second one uses 'stdair-config' script. These methods are shortly described below.

13.3 Using the pkg-config command

'pkg-config' is a helper tool used when compiling applications and libraries. It helps you insert the correct compiler and linker options. The syntax of the 'pkg-config' is as follows:

```
pkg-config <options> <library_name>
```

For instance, assuming that you need to compile an StdAir based program 'my_prog.cpp', you should use the following command:

```
g++ `pkg-config --cflags stdair` -o my_prog my_prog.cpp \
 `pkg-config --libs stdair`
```

For more information see the 'pkg-config' man pages.

13.4 Using the stdair-config script

StdAir provides a shell script called 'stdair-config', which is installed by default in '$prefix/bin' ('/usr/local/bin') directory. It can be used to simplify compilation and linking of StdAir based programs. The usage of this script is quite similar to the usage of the 'pkg-config' command.

Assuming that you need to compile the program 'my_prog.cpp' you can now do that with the following command:

```
g++ `stdair-config --cflags` -o my_prog my_prog.cpp `stdair-config --libs`
```

A list of 'stdair-config' options can be obtained by typing:

```
stdair-config --help
```

If the 'stdair-config' command is not found by your shell, you should add its location '$prefix/bin' to the PATH environment variable, e.g.:

```
export PATH=/usr/local/bin:$PATH
```

13.5 M4 macro for the GNU Autotools

A M4 macro file is delivered with StdAir, namely 'stdair.m4', which can be found in, e.g., '/usr/share/aclocal'. When used by a 'configure' script, thanks to he 'AM_PATH_STDAIR' macro (specified in the M4 macro file), the following Makefile variables are then defined:

- 'STDAIR_VERSION' (e.g., defined to 0.2.0)
- 'STDAIR_CFLAGS' (e.g., defined to '-I${prefix}/include')
- 'STDAIR_LIBS' (e.g., defined to '-L${prefix}/lib -lstdair')

13.6 Using StdAir with dynamic linking

When using static linking some of the library routines in StdAir are copied into your executable program. This can lead to unnecessary large executables. To avoid having too large executable files you may use dynamic linking instead. Dynamic linking means that the actual linking is performed when the program is executed. This requires that the system is able to locate the shared StdAir library file during your program execution. If you install the StdAir library using a non-standard prefix, the `'LD_LIBRARY_PATH'` environment variable might be used to inform the linker of the dynamic library location, e.g.:

```
export LD_LIBRARY_PATH=<StdAir installation prefix>/lib:$LD_LIBRARY_PATH
```

14 Test Rules

This section describes how the functionality of the StdAir library should be verified. In the `'test/stdair'` subdirectory, test source files are provided. All functionality should be tested using these test source files.

14.1 The Test Source Files

Each new StdAir module/class should be accompanied with a test source file. The test source file is an implementation in C++ that tests the functionality of a function/class or a group of functions/classes called test suites. The test source file should test relevant parameter settings and input/output relations to guarantee correct functionality of the corresponding classes/functions. The test source files should be maintained using version control and updated whenever new functionality is added to the StdAir library.

The test source file should print relevant data to a standard output that can be used to verify the functionality. All relevant parameter settings should be tested.

The test source file should be placed in the `'test/stdair'` subdirectory and should have a name ending with `'TestSuite.cpp'`.

14.2 The Reference File

Consider a test source file named `'YieldTestSuite.cpp'`. A reference file named `'YieldTestSuite.ref'` should accompany the test source file. The reference file contains a reference printout of the standard output generated when running the test program. The reference file should be maintained using version control and updated according to the test source file.

14.3 Testing StdAir Library

One can compile and execute all test programs from the `'test/stdair'` sub-directory by typing:

```
% make check
```

after successful compilation of the StdAir library.

15 Users Guide

15.1 Table of Contents

15.2 Introduction

The `StdAir` library contains classes for airline business management. This document does not cover all the aspects of the `StdAir` library. It does however explain the most important things you need to know in order to start using `StdAir`.

15.3 Get Started

15.3.1 Get the StdAir library

15.3.2 Build the StdAir project

To run the configuration script the first time, go to the top directory (where the StdAir package has been un-packed), and issue either of the following two commands, depending on whether the StdAir project has been checked out from the Subversion repository or downloaded as a tar-ball package from the Sourceforge Web site:

- `./autogen.sh`
- `./configure`

15.3.3 Build and Run the Tests

15.3.4 Install the StdAir Project (Binaries, Documentation)

15.4 Exploring the Predefined BOM Tree

`StdAir` predefines a BOM (Business Object Model) tree specific to the airline IT arena.

15.4.1 Airline Distribution BOM Tree

- `stdair::TravelSolutionStruct`

15.4.2 Airline Network BOM Tree

- `stdair::FlightPeriod`

15.4.3 Airline Inventory BOM Tree

- `stdair::Inventory`
- `stdair::FlightDate`

15.4.3.1 Airline Inventory Marketing BOM Tree

- `stdair::SegmentDate`
- `stdair::SegmentCabin`
- `stdair::FareFamily`
- `stdair::BookingClass`

15.4.3.2 Airline Inventory Operating BOM Tree

- `stdair::LegDate`
- `stdair::LegCabin`
- `stdair::Bucket`

15.5 Extending the BOM Tree

16 Supported Systems

16.1 Table of Contents

16.2 Introduction

This page is intended to provide a list of StdAir supported systems, i.e. the systems on which configuration, installation and testing process of the StdAir library has been sucessful. Results are grouped based on minor release number. Therefore, only the latest tests for bug-fix releases are included. Besides, the information on this page is divided into sections dependent on the operating system.

Where necessary, some extra information is given for each tested configuration, e.g. external libraries installed, configuration commands used, etc.

If you manage to compile, install and test the StdAir library on a system not mentioned below, please let us know, so we could update this database.

16.3 StdAir 3.10.x

16.3.1 Linux Systems

16.3.1.1 Fedora Core 4 with ATLAS

- **Platform**: Intel Pentium 4

- **Operating System**: Fedora Core 4 (x86)
- **Compiler**: g++ (GCC) 4.0.2 20051125
- **StdAir release**: 3.10.0
- **External Libraries**: From FC4 distribution:
  - `fftw3.i386-3.0.1-3`
  - `fftw3-devel.i386-3.0.1-3`
  - `atlas-sse2.i386-3.6.0-8.fc4`
  - `atlas-sse2-devel.i386-3.6.0-8.fc4`
  - `blas.i386-3.0-35.fc4`
  - `lapack.i386-3.0-35.fc4`
- **Tests Status**: All tests PASSED
- **Comments**: StdAir configured with:

```
% CXXFLAGS="-O3 -pipe -march=pentium4" ./configure
```

- **Date**: March 7, 2006
- **Tester**: Tony Ottosson

16.3.1.2 Gentoo Linux with ACML

- **Platform**: AMD Sempron 3000+
- **Operating System**: Gentoo Linux 2006.0 (x86 arch)
- **Compiler(s)**: g++ (GCC) 3.4.5
- **StdAir release**: 3.10.1
- **External Libraries**: Compiled and installed from portage tree:
  - `sci-libs/acml-3.0.0`
- **Tests Status**: All tests PASSED
- **Comments**: BLAS and LAPACK libs set by using the following system commands:

```
% eselect blas set ACML
% eselect lapack set ACML
```

  StdAir configured with:

```
% export CPPFLAGS="-I/usr/include/acml"
% ./configure --with-blas="-lblas"
```

- **Date**: March 31, 2006
- **Tester**: Adam Piatyszek (ediap)

16.3.1.3 Gentoo Linux with ATLAS

- **Platform**: Intel Pentium M Centrino
- **Operating System**: Gentoo Linux 2006.0 (x86)
- **Compiler**: g++ (GCC) 3.4.5
- **StdAir release**: 3.10.1
- **External Libraries**: Compiled and installed from portage tree:
  - `sci-libs/fftw-3.1`
  - `sci-libs/blas-atlas-3.6.0-r1`
  - `sci-libs/lapack-atlas-3.6.0`
- **Tests Status**: All tests PASSED
- **Comments**: BLAS and LAPACK libs set by using the following system commands:

```
% eselect blas set ATLAS
% eselect lapack set ATLAS
```

  StdAir configured with:

```
% ./configure --with-blas="-lblas"
```

- **Date**: March 31, 2006
- **Tester**: Adam Piatyszek (ediap)

16.3.1.4 Gentoo Linux with MKL

- **Platform**: Intel Pentium M Centrino
- **Operating System**: Gentoo Linux 2006.0 (x86 arch)
- **Compiler**: g++ (GCC) 3.4.5
- **StdAir release**: 3.10.0
- **External Libraries**: Intel Math Kernel Library (MKL) 8.0.1 installed manually in the following directory: `/opt/intel/mkl/8.0.1`
- **Tests Status**: All tests PASSED
- **Comments**: StdAir configured using the following commands:

```
% export LDFLAGS="-L/opt/intel/mkl/8.0.1/lib/32"
% export CPPFLAGS="-I/opt/intel/mkl/8.0.1/include"
% ./configure
```

- **Date**: February 28, 2006
- **Tester**: Adam Piatyszek (ediap)

16.3.1.5 Gentoo Linux with NetLib's BLAS and LAPACK

- **Platform**: Intel Pentium M Centrino
- **Operating System**: Gentoo Linux 2006.0 (x86)
- **Compiler**: g++ (GCC) 3.4.5
- **StdAir release**: 3.10.1
- **External Libraries**: Compiled and installed from portage tree:
  - `sci-libs/fftw-3.1`
  - `sci-libs/blas-reference-19940131-r2`
  - `sci-libs/cblas-reference-20030223`
  - `sci-libs/lapack-reference-3.0-r2`
- **Tests Status**: All tests PASSED
- **Comments**: BLAS and LAPACK libs set by using the following system commands:

  ```
  % blas-config reference
  % lapack-config reference
  ```

  StdAir configured with:

  ```
  % ./configure --with-blas="-lblas"
  ```

- **Date**: March 31, 2006
- **Tester**: Adam Piatyszek (ediap)

16.3.1.6 Red Hat Enterprise Linux with StdAir External

- **Platform**: Intel Pentium 4
- **Operating System**: Red Hat Enterprise Linux AS release 4 (Nahant Update 2)
- **Compiler**: g++ (GCC) 3.4.4 20050721 (Red Hat 3.4.4-2)
- **StdAir release**: 3.10.0
- **External Libraries**: BLAS, CBLAS, LAPACK and FFTW libraries from StdAir External 2.1.1 package
- **Tests Status**: All tests PASSED
- **Date**: March 7, 2006
- **Tester**: Erik G. Larsson

16.3.1.7 SUSE Linux 10.0 with NetLib's BLAS and LAPACK

- **Platform**: Intel Pentium 4 CPU 3.20GHz (64-bit)
- **Operating System**: SUSE Linux 10.0 (x86_64)
- **Compiler(s)**: g++ (GCC) 4.0.2
- **StdAir release**: 3.10.0
- **External Libraries**: BLAS, LAPACK and FFTW libraries installed from OpenSuse 10.0 RPM repository:
  - `blas-3.0-926`
  - `lapack-3.0-926`
  - `fftw3-3.0.1-114`
  - `fftw3-threads-3.0.1-114`
  - `fftw3-devel-3.0.1-114`
- **Tests Status**: All tests PASSED
- **Comments**: StdAir configured with:

```
% export CXXFLAGS="-m64 -march=nocona -O3 -pipe"
% ./configure --with-lapack="/usr/lib64/liblapack.so.3"
```

- **Date**: March 1, 2006
- **Tester**: Adam Piatyszek (ediap)

16.3.1.8 SUSE Linux 10.0 with MKL

- **Platform**: Intel Pentium 4 CPU 3.20GHz (64-bit)
- **Operating System**: SUSE Linux 10.0 (x86_64)
- **Compiler(s)**: g++ (GCC) 4.0.2
- **StdAir release**: 3.10.0
- **External Libraries**: Intel Math Kernel Library (MKL) 8.0.1 installed manually in the following directory: `/opt/intel/mkl/8.0.1`
- **Tests Status**: All tests PASSED
- **Comments**: StdAir configured with:

```
% export CXXFLAGS="-m64 -march=nocona -O3 -pipe"
% export LDFLAGS="-L/opt/intel/mkl/8.0.1/lib/em64t"
% export CPPFLAGS="-I/opt/intel/mkl/8.0.1/include"
% ./configure
```

- **Date**: March 1, 2006
- **Tester**: Adam Piatyszek (ediap)

16.3.2 Windows Systems

16.3.2.1 Microsoft Windows XP with Cygwin

- **Platform**: AMD Sempron 3000+
- **Operating System**: Microsoft Windows XP SP2, Cygwin 1.5.19-4
- **Compiler(s)**: g++ (GCC) 3.4.4 (cygming special)
- **StdAir release**: 3.10.1
- **External Libraries**: Installed from Cygwin's repository:
  - `fftw-3.0.1-2`
  - `fftw-dev-3.0.1-1`
  - `lapack-3.0-4`
- **Tests Status**: All tests PASSED
- **Comments**: Only static library can be built. StdAir configured with:

```
% ./configure
```

- **Date**: March 31, 2006
- **Tester**: Adam Piatyszek (ediap)

16.3.2.2 Microsoft Windows XP with Cygwin and ATLAS

- **Platform**: AMD Sempron 3000+
- **Operating System**: Microsoft Windows XP SP2, Cygwin 1.5.19-4
- **Compiler(s)**: g++ (GCC) 3.4.4 (cygming special)
- **StdAir release**: 3.10.1
- **External Libraries**: Installed from Cygwin's repository:
  - `fftw-3.0.1-2`
  - `fftw-dev-3.0.1-1`

  ATLAS BLAS and LAPACK libraries from StdAir External 2.1.1 package configured using:

```
% ./configure --enable-atlas --disable-fftw
```

- **Tests Status**: All tests PASSED
- **Comments**: Only static library can be built. StdAir configured with:

```
% export LDFLAGS="-L/usr/local/lib"
% ./configure
```

- **Date**: March 31, 2006
- **Tester**: Adam Piatyszek (ediap)

16.3.2.3 Microsoft Windows XP with Cygwin and ACML

- **Platform**: AMD Sempron 3000+
- **Operating System**: Microsoft Windows XP SP2, Cygwin 1.5.19-4
- **Compiler(s)**: g++ (GCC) 3.4.4 (cygming special)
- **StdAir release**: 3.10.2
- **External Libraries**: ACML version 3.1.0 (`acml3.1.0-32-win32-g77.exe`) installed into a default directory, i.e. `"c:\Program Files\AMD\acml3.1.0"`
- **Tests Status**: All tests PASSED
- **Comments**: Only static library can be built. StdAir configured with:

```
% export LDFLAGS="-L/cygdrive/c/Progra~1/AMD/acml3.1.0/gnu32/lib"
% export CPPFLAGS="-I/cygdrive/c/Progra~1/AMD/acml3.1.0/gnu32/include"
% ./configure --enable-debug
```

- **Date**: May 15, 2006
- **Tester**: Adam Piatyszek (ediap)

16.3.2.4 Microsoft Windows XP with MinGW, MSYS and ACML

- **Platform**: AMD Sempron 3000+
- **Operating System**: Microsoft Windows XP SP2, MinGW 5.0.2, MSYS 1.0.10
- **Compiler(s)**: g++ (GCC) 3.4.4 (mingw special)
- **StdAir release**: 3.10.2
- **External Libraries**: ACML version 3.1.0 (`acml3.1.0-32-win32-g77.exe`) installed into a default directory, i.e. `"c:\Program Files\AMD\acml3.1.0"`
- **Tests Status**: All tests PASSED
- **Comments**: Only static library can be built. StdAir configured with:

```
% export LDFLAGS="-L/c/Progra~1/AMD/acml3.1.0/gnu32/lib"
% export CPPFLAGS="-I/c/Progra~1/AMD/acml3.1.0/gnu32/include"
% ./configure --enable-debug
```

- **Date**: May 15, 2006
- **Tester**: Adam Piatyszek (ediap)

16.3.2.5 Microsoft Windows XP with MinGW, MSYS and StdAir External

- **Platform**: AMD Sempron 3000+
- **Operating System**: Microsoft Windows XP SP2, MinGW 5.0.2, MSYS 1.0.10
- **Compiler(s)**: g++ (GCC) 3.4.4 (mingw special)
- **StdAir release**: 3.10.5
- **External Libraries**: BLAS, CBLAS, LAPACK and FFTW libraries from StdAir External 2.2.0 package
- **Tests Status**: All tests PASSED
- **Comments**: Only static library can be built. StdAir configured with:

```
% export LDFLAGS="-L/usr/local/lib"
% export CPPFLAGS="-I/usr/local/include"
% export CXXFLAGS="-Wall -O3 -march=athlon-tbird -pipe"
% ./configure --disable-html-doc
```

- **Date**: August 11, 2006
- **Tester**: Adam Piatyszek (ediap)

16.3.2.6 Microsoft Windows XP with MS Visual C++ and Intel MKL

- **Platform**: AMD Sempron 3000+
- **Operating System**: Microsoft Windows XP SP2
- **Compiler(s)**: Microsoft Visual C++ 2005 .NET
- **StdAir release**: 3.10.5
- **External Libraries**: Intel Math Kernel Library (MKL) 8.1 installed manually in the following directory: "`C:\Program Files\Intel\MKL\8.1`"
- **Tests Status**: Not fully tested. Some StdAir based programs compiled and run with success.
- **Comments**: Only static library can be built. StdAir built by opening the "`win32\stdair.vcproj`" project file in MSVC++ and executing "`Build -> Build Solution`" command from menu.
- **Date**: August 11, 2006
- **Tester**: Adam Piatyszek (ediap)

16.3.3 Unix Systems

16.3.3.1 SunOS 5.9 with StdAir External

- **Platform**: SUNW, Sun-Blade-100 (SPARC)
- **Operating System**: SunOS 5.9 Generic_112233-10
- **Compiler(s)**: g++ (GCC) 3.4.5
- **StdAir release**: 3.10.2
- **External Libraries**: BLAS, CBLAS, LAPACK and FFTW libraries from StdAir External 2.1.1 package. The following configuration command has been used:

```
% export CFLAGS="-mcpu=ultrasparc -O2 -pipe -funroll-all-loops"
% ./configure
```

- **Tests Status**: All tests PASSED
- **Comments**: StdAir configured with:

```
% export LDFLAGS="-L/usr/local/lib"
% export CPPFLAGS="-I/usr/local/include"
% export CXXFLAGS="-mcpu=ultrasparc -O2 -pipe"
% ./configure --enable-debug
```

- **Date**: May 15, 2006
- **Tester**: Adam Piatyszek (ediap)

17 StdAir Supported Systems (Previous Releases)

17.1 StdAir 3.9.1

17.2 StdAir 3.9.0

17.3 StdAir 3.8.1

18 Tutorials

18.1 Table of Contents

18.2 Introduction

This page contains some tutorial examples that will help you getting started using StdAir. Most examples show how to construct some simple business objects, i.e., instances of the so-named Business Object Model (BOM).

18.2.1 Preparing the StdAir Project for Development

The source code for these examples can be found in the `batches` and `test/stdair` directories. They are compiled along with the rest of the `StdAir` project. See the User Guide (Users Guide) for more details on how to build the `StdAir` project.

18.3 Build a Predefined BOM Tree

A few steps:

- Instanciate the BOM Root Object
- Instanciate the (Airline) Inventory Object
- Link the Inventory Object with the BOM Root

18.3.1 Instanciate the BOM Root Object

First, a BOM root object (i.e., a root for all the classes in the project) is instantiated by the `stdair::STDAIR_ServiceContext` context object, when the `stdair::STDAIR_Service` is itself instantiated. The corresponding `StdAir` type (class) is `stdair::BomRoot`.

In the following sample, that object is named `ioBomRoot`, and is given as input/output parameter of the `stdair::CmdBomManager::buildSampleBom()` method:

```
void CmdBomManager::buildSampleBom (BomRoot& ioBomRoot) {
```

18.3.2 Instanciate the (Airline) Inventory Object

An airline inventory object can then be instantiated. Let us give it the "BA" airline code (corresponding to `British Airways`) as the object key. That is, an object (let us name it `lBAKey`) of type (class) `stdair::InventoryKey` has first to be instantiated.

```
const InventoryKey lBAKey ("BA");
```

Thanks to that key, an airline inventory object, i.e. of type (class) `stdair::Inventory`, can be instantiated. Let us name that airline inventory object `lBAInv`.

```
Inventory& lBAInv = FacBom<Inventory>::instance().create (lBAKey);
```

18.3.3 Link the Inventory Object with the BOM Root

Then, both objects have to be linked: the airline inventory object (`stdair::Inventory`) has to be linked with the root of the BOM tree (`stdair::BomRoot`). That operation is as simple as using the `stdair::FacBomManager::addToListAndMap()` method:

```
FacBomManager::addToListAndMap (ioBomRoot, lBAInv);
FacBomManager::linkWithParent (ioBomRoot, lBAInv);
```

18.3.4 Build Another Airline Inventory

Another airline inventory object, corresponding to the Air France (`Air France`) company, is instantiated the same way:

```
const InventoryKey lAFKey ("AF");
Inventory& lAFInv = FacBom<Inventory>::instance().create (lAFKey);
FacBomManager::addToListAndMap (ioBomRoot, lAFInv);
FacBomManager::linkWithParent (ioBomRoot, lAFInv);
```

See the corresponding full program (C++ Class Building Sample StdAir BOM Trees) for more details.

18.3.5 Dump The BOM Tree Content

From the `BomRoot` (of type `stdair::BomRoot`) object instance, the list of airline inventories (of type `stdair::Inventory`) can then be retrieved...

```
const InventoryList_T& lInventoryList =
  BomManager::getList<Inventory> (iBomRoot);
```

... and browsed:

```
    for (InventoryList_T::const_iterator itInv = lInventoryList.begin();
         itInv != lInventoryList.end(); ++itInv, ++invIdx) {
      const Inventory* lInv_ptr = *itInv;
      assert (lInv_ptr != NULL);

      // Retrieve the inventory key (airline code)
      const AirlineCode_T& lAirlineCode = lInv_ptr->getAirlineCode();

      // Display only the requested inventories
      if (iAirlineCode == "all" || iAirlineCode == lAirlineCode) {
        // Get the list of flight-dates for that inventory
        list (oStream, *lInv_ptr, invIdx, iFlightNumber);
      }
    }
  }

  // //////////////////////////////////////////////////////////////////
  void BomDisplay::list (std::ostream& oStream, const Inventory& iInventory,
                         const unsigned short iInventoryIndex,
                         const FlightNumber_T& iFlightNumber) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    // Check whether there are FlightDate objects
    if (BomManager::hasMap<FlightDate> (iInventory) == false) {
      return;
    }

    //
    const AirlineCode_T& lAirlineCode = iInventory.getAirlineCode();
    oStream << iInventoryIndex << ". " << lAirlineCode << std::endl;

    // Browse the flight-dates
    unsigned short lCurrentFlightNumber = 0;
    unsigned short flightNumberIdx = 0;
    unsigned short departureDateIdx = 1;
    const FlightDateMap_T& lFlightDateList =
      BomManager::getMap<FlightDate> (iInventory);
    for (FlightDateMap_T::const_iterator itFD = lFlightDateList.begin();
         itFD != lFlightDateList.end(); ++itFD, ++departureDateIdx) {
      const FlightDate* lFD_ptr = itFD->second;
      assert (lFD_ptr != NULL);

      // Retrieve the key of the flight-date
      const FlightNumber_T& lFlightNumber = lFD_ptr->getFlightNumber();
      const Date_T& lFlightDateDate = lFD_ptr->getDepartureDate();

      // Display only the requested flight number
      if (iFlightNumber == 0 || iFlightNumber == lFlightNumber) {
        //
        if (lCurrentFlightNumber != lFlightNumber) {
          lCurrentFlightNumber = lFlightNumber;
          ++flightNumberIdx; departureDateIdx = 1;
          oStream << "  " << iInventoryIndex << "." << flightNumberIdx << ". "
                  << lAirlineCode << lFlightNumber << std::endl;
        }

        oStream << "    " << iInventoryIndex << "." << flightNumberIdx
                << "." << departureDateIdx << ". "
                << lAirlineCode << lFlightNumber << " / " << lFlightDateDate
```

```
              << std::endl;
    }
  }
}

// ////////////////////////////////////////////////////////////////////
void BomDisplay::listAirportPairDateRange (std::ostream& oStream,
                                           const BomRoot& iBomRoot) {
  // Save the formatting flags for the given STL output stream
  FlagSaver flagSaver (oStream);

  // Check whether there are AirportPair objects
  if (BomManager::hasList<AirportPair> (iBomRoot) == false) {
    return;
  }

  const AirportPairList_T& lAirportPairList =
    BomManager::getList<AirportPair> (iBomRoot);
  for (AirportPairList_T::const_iterator itAir = lAirportPairList.begin();
       itAir != lAirportPairList.end(); ++itAir ) {
    const AirportPair* lAir_ptr = *itAir;
    assert (lAir_ptr != NULL);

    // Check whether there are date-period objects
    assert (BomManager::hasList<DatePeriod> (*lAir_ptr) == true);

    // Browse the date-period objects
    const DatePeriodList_T& lDatePeriodList =
      BomManager::getList<DatePeriod> (*lAir_ptr);

    for (DatePeriodList_T::const_iterator itDP = lDatePeriodList.begin();
         itDP != lDatePeriodList.end(); ++itDP) {
      const DatePeriod* lDP_ptr = *itDP;
      assert (lDP_ptr != NULL);

      // Display the date-period object
      oStream << lAir_ptr->describeKey()
              <<" / " << lDP_ptr->describeKey() << std::endl;
    }

  }
}

// ////////////////////////////////////////////////////////////////////
void BomDisplay::csvDisplay (std::ostream& oStream,
```

See the corresponding full program (C++ Utility Class Browsing and Dumping the StdAir BOM Tree) for more details.

18.3.6 Result of the Tutorial Program

When the `stdair.cpp` program is run (with the `-b` option), the output should look like:

```
[D]../../batches/stdair.cpp:243: Welcome to stdair
[D]../../../stdair/command/CmdBomManager.cpp:41: StdAir will build the BOM tree f
      rom built-in specifications.
[D]../../batches/stdair.cpp:286:
```

```
============================================================
BomRoot:  -- ROOT --
============================================================
++++++++++++++++++++++++++++++++++++++++++++++++
Inventory: BA
++++++++++++++++++++++++++++++++++++++++++++++++
****************************************
FlightDate: BA9, 2011-Jun-10
****************************************
****************************************
Leg-Dates:
----------
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
      apsed, Distance, Capacity,
BA9 2011-Jun-10, LHR-BKK, 2011-Jun-10, 21:45:00, 2011-Jun-11, 15:40:00, 11:05:00,
       1, 06:50:00, 9900, 0,
BA9 2011-Jun-10, BKK-SYD, 2011-Jun-11, 17:05:00, 2011-Jun-12, 15:40:00, 09:05:00,
       1, 13:30:00, 8100, 0,
****************************************
****************************************
LegCabins:
----------
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
      Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
BA9 2011-Jun-10, LHR-BKK 2011-Jun-10, Y, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 9, 9, 0, 0
      , 3.52965e-319, 0, 0,
BA9 2011-Jun-10, BKK-SYD 2011-Jun-11, Y, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 9, 9, 0, 0
      , 0, 0, 0,
****************************************
****************************************
Buckets:
--------
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
****************************************
****************************************
SegmentCabins:
--------------
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
BA9 2011-Jun-10, LHR-SYD 2011-Jun-10, Y, EcoSaver, 0, 0, 0, 0, 9, 0,
BA9 2011-Jun-10, LHR-BKK 2011-Jun-10, Y, EcoSaver, 0, 0, 0, 0, 9, 0,
BA9 2011-Jun-10, BKK-SYD 2011-Jun-11, Y, EcoSaver, 0, 0, 0, 0, 9, 0,
****************************************
****************************************
Subclasses:
-----------
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs, GrpBks
       (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
BA9 2011-Jun-10, LHR-SYD 2011-Jun-10, Y, EcoSaver, Q, 0 (0), 0, 0, 0, 0, 0 (0), 0
      , 0, 0, 0, 0, 0,
++++++++++++++++++++++++++++++++++++++++++++++++
Inventory: AF
++++++++++++++++++++++++++++++++++++++++++++++++
****************************************
FlightDate: AF84, 2011-Mar-20
****************************************
****************************************
Leg-Dates:
----------
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
      apsed, Distance, Capacity,
AF84 2011-Mar-20, CDG-SFO, 2011-Mar-20, 10:40:00, 2011-Mar-20, 12:50:00, 11:10:00
      , 0, -09:00:00, 9900, 0,
```

```
****************************************
****************************************
LegCabins:
----------
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
      Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
AF84 2011-Mar-20, CDG-SFO 2011-Mar-20, Y, 0, 0, 0, 0, 0, 0, 0, 0, 0, 9, 9, 0,
      0, 0, 0, 0,
****************************************
****************************************
Buckets:
--------
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
****************************************
****************************************
SegmentCabins:
--------------
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
AF84 2011-Mar-20, CDG-SFO 2011-Mar-20, Y, EcoSaver, 0, 0, 0, 0, 9, 0,
****************************************
****************************************
Subclasses:
-----------
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs, GrpBks
       (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
AF84 2011-Mar-20, CDG-SFO 2011-Mar-20, Y, EcoSaver, Q, 0 (0), 0, 0, 0, 0, 0 (0),
      0, 0, 0, 0, 0, 0,
```

See the corresponding full program (Command-Line Utility to Demonstrate Typical StdAir Usage) for more details.

18.4 Extend the Pre-Defined BOM Tree

Now that we master how to instantiate the pre-defined StdAir classes, let us see how to extend that BOM.

18.4.1 Extend an Airline Inventory Object

For instance, let us assume that some (IT) provider (e.g., you) would like to have a specific implementation of the `Inventory` object. The corresponding class has just to extend the `stdair::Inventory` class:

```
namespace myprovider {
  class Inventory : public stdair::Inventory {
```

The STL containers have to be defined accordingly too:

```
  typedef std::list<Inventory*> InventoryList_T;
```

See the full class definition (Specific Implementation of an Airline Inventory) and implementation (Specific Implementation of an Airline Inventory) for more details.

18.4.2 Build the Specific BOM Objects

The BOM root object (`stdair::BomRoot`) is instantiated the classical way:

```
stdair::BomRoot& lBomRoot = stdairService.getBomRoot();
```

Then, the specific implementation of the airline inventory object (`myprovider::Inventory`) can be instantiated the same way as a standard Inventory (`stdair::Inventory`) would be:

```
const stdair::InventoryKey lBAKey (lBAAirlineCode);
myprovider::Inventory& lBAInv =
  stdair::FacBom<myprovider::Inventory>::instance().create (lBAKey);
```

Then, the specific implementation of the airline inventory object (`myprovider::Inventory`) is linked to the root of the BOM tree (`stdair::BomRoot`) the same way as the standard Inventory (`stdair::Inventory`) would be:

```
stdair::FacBomManager::addToList (lBomRoot, lBAInv);
```

Another specific airline inventory object is instantiated the same way:

```
const stdair::InventoryKey lAFKey (lAFAirlineCode);
myprovider::Inventory& lAFInv =
  stdair::FacBom<myprovider::Inventory>::instance().create (lAFKey);
stdair::FacBomManager::addToList (lBomRoot, lAFInv);
```

From the `BomRoot` (of type `stdair::BomRoot`) object instance, the list of specific airline inventories (of type `stdair::Inventory`) can then be retrieved...

```
const myprovider::InventoryList_T& lInventoryList =
    stdair::BomManager::getList<myprovider::Inventory> (lBomRoot);
```

... and browsed:

```
for (myprovider::InventoryList_T::const_iterator itInv =
       lInventoryList.begin(); itInv != lInventoryList.end();
     ++itInv, ++idx) {
  const myprovider::Inventory* lInv_ptr = *itInv;
  BOOST_REQUIRE (lInv_ptr != NULL);

  BOOST_CHECK_EQUAL (lInventoryKeyArray[idx], lInv_ptr->describeKey());
  BOOST_CHECK_MESSAGE (lInventoryKeyArray[idx] == lInv_ptr->describeKey(),
                       "They inventory key, '" << lInventoryKeyArray[idx]
                       << "', does not match that of the Inventory object: '"
                       << lInv_ptr->describeKey() << "'");
}
```

18.4.3 Result of the Tutorial Program

When this program is run, the output should look like:

```
Inventory: BA
Inventory: AF
```

See the corresponding full program (Command-Line Test to Demonstrate How To Extend StdAir BOM) for more details.

19 Command-Line Utility to Demonstrate Typical StdAir Usage

```
 */
// STL
#include <cassert>
#include <iostream>
#include <sstream>
#include <fstream>
#include <string>
// Boost (Extended STL)
#include <boost/date_time/posix_time/posix_time.hpp>
#include <boost/date_time/gregorian/gregorian.hpp>
#include <boost/program_options.hpp>
#include <boost/tokenizer.hpp>
#include <boost/lexical_cast.hpp>
// StdAir
#include <stdair/stdair_types.hpp>
#include <stdair/bom/BomArchive.hpp>
#include <stdair/bom/BookingRequestStruct.hpp>
#include <stdair/bom/TravelSolutionStruct.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/STDAIR_Service.hpp>
#include <stdair/config/stdair-paths.hpp>

// //////// Constants //////
const std::string K_STDAIR_DEFAULT_LOG_FILENAME ("stdair.log");

const std::string K_STDAIR_DEFAULT_INPUT_FILENAME (STDAIR_SAMPLE_DIR
                                                   "/schedule01.csv");

const bool K_STDAIR_DEFAULT_BUILT_IN_INPUT = false;

const bool K_STDAIR_DEFAULT_BUILT_FOR_RMOL = false;

const bool K_STDAIR_DEFAULT_BUILT_FOR_CRS = false;

const int K_STDAIR_EARLY_RETURN_STATUS = 99;

// ///////// Parsing of Options & Configuration /////////
// A helper function to simplify the main part.
template<class T> std::ostream& operator<< (std::ostream& os,
                                            const std::vector<T>& v) {
  std::copy (v.begin(), v.end(), std::ostream_iterator<T> (std::cout, " "));
  return os;
}

int readConfiguration (int argc, char* argv[], bool& ioIsBuiltin,
```

```
                    bool& ioIsForRMOL, bool& ioIsForCRS,
                    stdair::Filename_T& ioInputFilename,
                    std::string& ioLogFilename) {
  // Default for the built-in input
  ioIsBuiltin = K_STDAIR_DEFAULT_BUILT_IN_INPUT;

  // Default for the RMOL input
  ioIsForRMOL = K_STDAIR_DEFAULT_BUILT_FOR_RMOL;

  // Default for the CRS input
  ioIsForCRS = K_STDAIR_DEFAULT_BUILT_FOR_CRS;

  // Declare a group of options that will be allowed only on command line
  boost::program_options::options_description generic ("Generic options");
  generic.add_options()
    ("prefix", "print installation prefix")
    ("version,v", "print version string")
    ("help,h", "produce help message");

  // Declare a group of options that will be allowed both on command
  // line and in config file

  boost::program_options::options_description config ("Configuration");
  config.add_options()
    ("builtin,b",
     "The sample BOM tree can be either built-in or parsed from an input file. Th
      at latter must then be given with the -i/--input option")
    ("rmol,r",
     "Build a sample BOM tree for RMOL (i.e., a dummy flight-date with a single l
      eg-cabin)")
    ("crs,c",
     "Build a sample BOM tree for CRS")
    ("input,i",
     boost::program_options::value< std::string >(&ioInputFilename)->default_valu
      e(K_STDAIR_DEFAULT_INPUT_FILENAME),
     "(CVS) input file for the demand distributions")
    ("log,l",
     boost::program_options::value< std::string >(&ioLogFilename)->default_value(
      K_STDAIR_DEFAULT_LOG_FILENAME),
     "Filename for the logs")
    ;

  // Hidden options, will be allowed both on command line and
  // in config file, but will not be shown to the user.
  boost::program_options::options_description hidden ("Hidden options");
  hidden.add_options()
    ("copyright",
     boost::program_options::value< std::vector<std::string> >(),
     "Show the copyright (license)");

  boost::program_options::options_description cmdline_options;
  cmdline_options.add(generic).add(config).add(hidden);

  boost::program_options::options_description config_file_options;
  config_file_options.add(config).add(hidden);
  boost::program_options::options_description visible ("Allowed options");
  visible.add(generic).add(config);

  boost::program_options::positional_options_description p;
  p.add ("copyright", -1);

  boost::program_options::variables_map vm;
```

```
  boost::program_options::
    store (boost::program_options::command_line_parser (argc, argv).
           options (cmdline_options).positional(p).run(), vm);

  std::ifstream ifs ("stdair.cfg");
  boost::program_options::store (parse_config_file (ifs, config_file_options),
                                 vm);
  boost::program_options::notify (vm);

  if (vm.count ("help")) {
    std::cout << visible << std::endl;
    return K_STDAIR_EARLY_RETURN_STATUS;
  }

  if (vm.count ("version")) {
    std::cout << PACKAGE_NAME << ", version " << PACKAGE_VERSION << std::endl;
    return K_STDAIR_EARLY_RETURN_STATUS;
  }

  if (vm.count ("prefix")) {
    std::cout << "Installation prefix: " << PREFIXDIR << std::endl;
    return K_STDAIR_EARLY_RETURN_STATUS;
  }

  if (vm.count ("builtin")) {
    ioIsBuiltin = true;
  }

  if (vm.count ("rmol")) {
    ioIsForRMOL = true;

    // The RMOL sample tree takes precedence over the default built-in BOM tree
    ioIsBuiltin = false;
  }

  if (vm.count ("crs")) {
    ioIsForCRS = true;

    // The RMOL sample tree takes precedence over the default built-in BOM tree
    ioIsBuiltin = false;
  }

  const std::string isBuiltinStr = (ioIsBuiltin == true)?"yes":"no";
  std::cout << "The BOM should be built-in? " << isBuiltinStr << std::endl;

  const std::string isForRMOLStr = (ioIsForRMOL == true)?"yes":"no";
  std::cout << "The BOM should be built-in for RMOL? " << isForRMOLStr
            << std::endl;

  const std::string isForCRSStr = (ioIsForCRS == true)?"yes":"no";
  std::cout << "The BOM should be built-in for CRS? " << isForCRSStr
            << std::endl;

  if (ioIsBuiltin == false && ioIsForRMOL == false && ioIsForCRS == false) {
    if (vm.count ("input")) {
      ioInputFilename = vm["input"].as< std::string >();
      std::cout << "Input filename is: " << ioInputFilename << std::endl;

    } else {
      std::cerr << "Either one among the -b/--builtin, -r/--rmol, -c/--crs "
                << "or -i/--input options must be specified" << std::endl;
    }
```

```
  }

  if (vm.count ("log")) {
    ioLogFilename = vm["log"].as< std::string >();
    std::cout << "Log filename is: " << ioLogFilename << std::endl;
  }

  return 0;
}


// ////////////////// M A I N ////////////////////
int main (int argc, char* argv[]) {

  // State whether the BOM tree should be built-in or parsed from an
  // input file
  bool isBuiltin;

  // State whether a sample BOM tree should be built for RMOL.
  bool isForRMOL;

  // State whether a sample BOM tree should be built for the CRS.
  bool isForCRS;

  // Input file name
  stdair::Filename_T lInputFilename;

  // Output log File
  std::string lLogFilename;

  // Call the command-line option parser
  const int lOptionParserStatus =
    readConfiguration (argc, argv, isBuiltin, isForRMOL, isForCRS,
                       lInputFilename, lLogFilename);

  if (lOptionParserStatus == K_STDAIR_EARLY_RETURN_STATUS) {
    return 0;
  }

  // Set the log parameters
  std::ofstream logOutputFile;
  // Open and clean the log outputfile
  logOutputFile.open (lLogFilename.c_str());
  logOutputFile.clear();

  const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
  stdair::STDAIR_Service stdairService (lLogParams);

  // DEBUG
  STDAIR_LOG_DEBUG ("Welcome to stdair");

  // Check wether or not a (CSV) input file should be read
  if (isBuiltin == true || isForRMOL == true || isForCRS == true) {

    if (isForRMOL == true) {
      // Build the sample BOM tree for RMOL
      stdairService.buildDummyInventory (300);

    } else if (isForCRS == true) {
      //
      stdair::TravelSolutionList_T lTravelSolutionList;
      stdairService.buildSampleTravelSolutions (lTravelSolutionList);
```

```
      // Build the sample BOM tree for CRS
      const stdair::BookingRequestStruct& lBookingRequest =
        stdairService.buildSampleBookingRequest();

      // DEBUG: Display the travel solution and booking request
      STDAIR_LOG_DEBUG ("Booking request: " << lBookingRequest.display());

      const std::string& lCSVDump =
        stdairService.csvDisplay (lTravelSolutionList);
      STDAIR_LOG_DEBUG (lCSVDump);

    } else {
      assert (isBuiltin == true);

      // Build a sample BOM tree
      stdairService.buildSampleBom();
    }

  } else {
    // Read the input file
    //stdairService.readFromInputFile (lInputFilename);

    // DEBUG
    STDAIR_LOG_DEBUG ("StdAir will parse " << lInputFilename
                      << " and build the corresponding BOM tree.");
  }

  // DEBUG: Display the whole BOM tree
  const std::string& lCSVDump = stdairService.csvDisplay();
  STDAIR_LOG_DEBUG (lCSVDump);

  // Close the Log outputFile
  logOutputFile.close();

  /*
    Note: as that program is not intended to be run on a server in
    production, it is better not to catch the exceptions. When it
    happens (that an exception is thrownded), that way we get the
    call stack.
  */

  return 0;
}

/*!
```

20 Specific Implementation of a BOM Root

```
 */
// ////////////////////////////////////////////////////////////////////
// Import section
// ////////////////////////////////////////////////////////////////////
// STL
#include <cassert>
// StdAir Test
#include <test/stdair/MPBomRoot.hpp>

namespace myprovider {
```

```
  // ////////////////////////////////////////////////////////////////////
  BomRoot::BomRoot (const Key_T& iKey) : stdair::BomRoot (iKey) {
  }

  // ////////////////////////////////////////////////////////////////////
  BomRoot::~BomRoot () {
  }

}
/*!
```

21 Specific Implementation of a BOM Root

```
 */

// ////////////////////////////////////////////////////////////////////
// Import section
// ////////////////////////////////////////////////////////////////////
// STL
#include <string>
// StdAir
#include <stdair/bom/BomRoot.hpp>

namespace myprovider {

  class BomRoot : public stdair::BomRoot {
  public:
    // ////////// Display support methods /////////
    std::string toString() const { return describeKey(); }

    const std::string describeKey() const { return std::string (""); }

  public:
    BomRoot (const Key_T&);
    ~BomRoot();
    BomRoot ();
    BomRoot (const BomRoot&);
  };

}
/*!
```

22 Specific Implementation of an Airline Inventory

```
 */
// ////////////////////////////////////////////////////////////////////
// Import section
// ////////////////////////////////////////////////////////////////////
// STL
#include <cassert>
// StdAir
#include <stdair/stdair_inventory_types.hpp>
// StdAir Test
#include <test/stdair/MPInventory.hpp>

namespace myprovider {
```

```
  // ////////////////////////////////////////////////////////////////////
  Inventory::Inventory (const Key_T& iKey) : stdair::Inventory (iKey) {
  }

  // ////////////////////////////////////////////////////////////////////
  Inventory::~Inventory () {
  }

  // ////////////////////////////////////////////////////////////////////
  std::string Inventory::toString() const {
    std::ostringstream oStr;
    oStr << _key.toString();
    return oStr.str();
  }

  // ////////////////////////////////////////////////////////////////////
  const std::string Inventory::describeKey() const {
    return _key.toString();
  }

}
/*!
```

23 Specific Implementation of an Airline Inventory

```
 */

// ////////////////////////////////////////////////////////////////////
// Import section
// ////////////////////////////////////////////////////////////////////
// STL
#include <list>
// StdAir
#include <stdair/bom/Inventory.hpp>

namespace myprovider {

  class Inventory : public stdair::Inventory {
  public:
    // ////////// Display support methods /////////
    std::string toString() const;

    const std::string describeKey() const;

  public:
    Inventory (const Key_T&);
    ~Inventory();
    Inventory ();
    Inventory (const Inventory&);
  };

  // ////////// Type definitions /////////
  typedef std::list<Inventory*> InventoryList_T;

}
/*!
```

24 Command-Line Test to Demonstrate How To Extend StdAir BOM

```
 */
// ////////////////////////////////////////////////////////////////////
// Import section
// ////////////////////////////////////////////////////////////////////
// STL
#include <sstream>
#include <fstream>
#include <string>
// Boost MPL
#include <boost/mpl/push_back.hpp>
#include <boost/mpl/vector.hpp>
#include <boost/mpl/at.hpp>
#include <boost/mpl/assert.hpp>
#include <boost/type_traits/is_same.hpp>
// Boost Unit Test Framework (UTF)
#define BOOST_TEST_DYN_LINK
#define BOOST_TEST_MAIN
#define BOOST_TEST_MODULE StdAirTest
#if BOOST_VERSION >= 103900
#include <boost/test/unit_test.hpp>
#else  // BOOST_VERSION >= 103900
#include <boost/test/test_tools.hpp>
#include <boost/test/results_reporter.hpp>
#include <boost/test/unit_test_suite.hpp>
#include <boost/test/output_test_stream.hpp>
#include <boost/test/unit_test_log.hpp>
#include <boost/test/framework.hpp>
#include <boost/test/detail/unit_test_parameters.hpp>
#endif // BOOST_VERSION >= 103900
// Boost Serialisation
#include <boost/archive/text_oarchive.hpp>
#include <boost/archive/text_iarchive.hpp>
// StdAir
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/STDAIR_Service.hpp>
#include <stdair/basic/float_utils.hpp>
#include <stdair/bom/BomDisplay.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/factory/FacBom.hpp>
#include <stdair/factory/FacBomManager.hpp>
// StdAir Test Suite
#include <test/stdair/StdairTestLib.hpp>
#include <test/stdair/MPInventory.hpp>

namespace boost_utf = boost::unit_test;

#if BOOST_VERSION >= 103900

// (Boost) Unit Test XML Report
std::ofstream utfReportStream ("StandardAirlineITTestSuite_utfresults.xml");

struct UnitTestConfig {
  UnitTestConfig() {
    boost_utf::unit_test_log.set_stream (utfReportStream);
    boost_utf::unit_test_log.set_format (boost_utf::XML);
    boost_utf::unit_test_log.set_threshold_level (boost_utf::log_test_units);
    // boost_utf::unit_test_log.set_threshold_level (boost_utf::log_successful_te
      sts);
```

```
  }

  ~UnitTestConfig() {
  }
};


// ///////////////// Main: Unit Test Suite //////////////

// Set the UTF configuration (re-direct the output to a specific file)
BOOST_GLOBAL_FIXTURE (UnitTestConfig);

// Start the test suite
BOOST_AUTO_TEST_SUITE (master_test_suite)


BOOST_AUTO_TEST_CASE (float_comparison_test) {
  float a = 0.2f;
  a = 5*a;
  const float b = 1.0f;

  // Test the Boost way
  BOOST_CHECK_MESSAGE (a == b, "The two floats (" << a << " and " << b
                       << ") should be equal, but are not");
  BOOST_CHECK_CLOSE (a, b, 0.0001);

  // Test the Google way
  const FloatingPoint<float> lhs (a), rhs (b);
  BOOST_CHECK_MESSAGE (lhs.AlmostEquals (rhs),
                       "The two floats (" << a << " and " << b
                       << ") should be equal, but are not");
}

BOOST_AUTO_TEST_CASE (mpl_structure_test) {
  const stdair::ClassCode_T lBookingClassCodeA ("A");
  const stdair_test::BookingClass lA (lBookingClassCodeA);
  const stdair_test::Cabin lCabin (lA);

  BOOST_CHECK_EQUAL (lCabin.toString(), lBookingClassCodeA);
  BOOST_CHECK_MESSAGE (lCabin.toString() == lBookingClassCodeA,
                       "The cabin key, '" << lCabin.toString()
                       << "' is not equal to '" << lBookingClassCodeA << "'");

  // MPL
  typedef boost::mpl::vector<stdair_test::BookingClass> MPL_BookingClass;
  typedef boost::mpl::push_back<MPL_BookingClass,
                                stdair_test::Cabin>::type types;

  if (boost::is_same<stdair_test::BookingClass,
                     stdair_test::Cabin::child>::value == false) {
    BOOST_REQUIRE ("The two types mut be equal, but are not");
  }

  if (boost::is_same<boost::mpl::at_c<types, 1>::type,
                     stdair_test::Cabin>::value == false) {
    BOOST_REQUIRE ("The type must be stdair_test::Cabin, but is not");
  }
}

BOOST_AUTO_TEST_CASE (stdair_service_initialisation_test) {
  // Output log File
  const std::string lLogFilename ("StandardAirlineITTestSuite_init.log");
```

```
  // Set the log parameters
  std::ofstream logOutputFile;

  // Open and clean the log outputfile
  logOutputFile.open (lLogFilename.c_str());
  logOutputFile.clear();

  // Initialise the stdair BOM
  const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
  stdair::STDAIR_Service stdairService (lLogParams);

  // Retrieve (a reference on) the top of the BOM tree
  stdair::BomRoot& lBomRoot = stdairService.getBomRoot();

  // Retrieve the BomRoot key, and compare it to the expected one
  const std::string& lBomRootKeyStr = lBomRoot.describeKey();
  const std::string lBomRootString (" -- ROOT -- ");

  // DEBUG
  STDAIR_LOG_DEBUG ("The BOM root key is '" << lBomRootKeyStr
                    << "'. It should be equal to '" << lBomRootString << "'");

  BOOST_CHECK_EQUAL (lBomRootKeyStr, lBomRootString);
  BOOST_CHECK_MESSAGE (lBomRootKeyStr == lBomRootString,
                       "The BOM root key, '" << lBomRootKeyStr
                       << "', should be equal to '" << lBomRootString
                       << "', but is not.");

  // Build a sample BOM tree
  stdairService.buildSampleBom();

  // DEBUG: Display the whole BOM tree
  const std::string& lCSVDump = stdairService.csvDisplay();
  STDAIR_LOG_DEBUG (lCSVDump);

  // Close the Log outputFile
  logOutputFile.close();
}

BOOST_AUTO_TEST_CASE (bom_structure_instantiation_test) {
  // Step 0.0: initialisation
  // Create the root of the Bom tree (i.e., a BomRoot object)
  stdair::BomRoot& lBomRoot =
    stdair::FacBom<stdair::BomRoot>::instance().create();

  // Step 0.1: Inventory level
  // Create an Inventory (BA)
  const stdair::AirlineCode_T lBAAirlineCode ("BA");
  const stdair::InventoryKey lBAKey (lBAAirlineCode);
  myprovider::Inventory& lBAInv =
    stdair::FacBom<myprovider::Inventory>::instance().create (lBAKey);
  stdair::FacBomManager::addToList (lBomRoot, lBAInv);

  BOOST_CHECK_EQUAL (lBAInv.describeKey(), lBAAirlineCode);
  BOOST_CHECK_MESSAGE (lBAInv.describeKey() == lBAAirlineCode,
                       "The inventory key, '" << lBAInv.describeKey()
                       << "', should be equal to '" << lBAAirlineCode
                       << "', but is not");

  // Create an Inventory for AF
  const stdair::AirlineCode_T lAFAirlineCode ("AF");
```

```
  const stdair::InventoryKey lAFKey (lAFAirlineCode);
  myprovider::Inventory& lAFInv =
    stdair::FacBom<myprovider::Inventory>::instance().create (lAFKey);
  stdair::FacBomManager::addToList (lBomRoot, lAFInv);

  BOOST_CHECK_EQUAL (lAFInv.describeKey(), lAFAirlineCode);
  BOOST_CHECK_MESSAGE (lAFInv.describeKey() == lAFAirlineCode,
                       "The inventory key, '" << lAFInv.describeKey()
                       << "', should be equal to '" << lAFAirlineCode
                       << "', but is not");

  // Browse the inventories
  const myprovider::InventoryList_T& lInventoryList =
      stdair::BomManager::getList<myprovider::Inventory> (lBomRoot);
  const std::string lInventoryKeyArray[2] = {lBAAirlineCode, lAFAirlineCode};
  short idx = 0;
  for (myprovider::InventoryList_T::const_iterator itInv =
         lInventoryList.begin(); itInv != lInventoryList.end();
       ++itInv, ++idx) {
    const myprovider::Inventory* lInv_ptr = *itInv;
    BOOST_REQUIRE (lInv_ptr != NULL);

    BOOST_CHECK_EQUAL (lInventoryKeyArray[idx], lInv_ptr->describeKey());
    BOOST_CHECK_MESSAGE (lInventoryKeyArray[idx] == lInv_ptr->describeKey(),
                         "They inventory key, '" << lInventoryKeyArray[idx]
                         << "', does not match that of the Inventory object: '"
                         << lInv_ptr->describeKey() << "'");
  }
}

BOOST_AUTO_TEST_CASE (bom_structure_serialisation_test) {

  // Backup (thanks to Boost.Serialisation) file
  const std::string lBackupFilename = "StandardAirlineITTestSuite_serial.txt";

  // Output log File
  const std::string lLogFilename ("StandardAirlineITTestSuite_serial.log");

  // Set the log parameters
  std::ofstream logOutputFile;

  // Open and clean the log outputfile
  logOutputFile.open (lLogFilename.c_str());
  logOutputFile.clear();

  // Initialise the stdair BOM
  const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
  stdair::STDAIR_Service stdairService (lLogParams);

  // Build a sample BOM tree
  stdairService.buildSampleBom();

  // DEBUG: Display the whole BOM tree
  const std::string& lCSVDump = stdairService.csvDisplay();
  STDAIR_LOG_DEBUG (lCSVDump);

  // Retrieve (a reference on) the top of the BOM tree
  stdair::BomRoot& lBomRoot = stdairService.getBomRoot();

  // Retrieve the BomRoot key, and compare it to the expected one
  const std::string lBAInvKeyStr ("BA");
  stdair::Inventory* lBAInv_ptr = lBomRoot.getInventory (lBAInvKeyStr);
```

```
// DEBUG
STDAIR_LOG_DEBUG ("There should be an Inventory object corresponding to the '"
                  << lBAInvKeyStr << "' key.");

BOOST_REQUIRE_MESSAGE (lBAInv_ptr != NULL,
                       "An Inventory object should exist with the key, '"
                       << lBAInvKeyStr << "'.");

// create and open a character archive for output
std::ofstream ofs (lBackupFilename.c_str());

// save data to archive
{
  boost::archive::text_oarchive oa (ofs);
  // write class instance to archive
  oa << lBomRoot;
  // archive and stream closed when destructors are called
}

// ... some time later restore the class instance to its orginal state
stdair::BomRoot& lRestoredBomRoot =
  stdair::FacBom<stdair::BomRoot>::instance().create();
{
  // create and open an archive for input
  std::ifstream ifs (lBackupFilename.c_str());
  boost::archive::text_iarchive ia(ifs);
  // read class state from archive
  ia >> lRestoredBomRoot;
  // archive and stream closed when destructors are called
}

// DEBUG: Display the whole BOM tree
std::ostringstream oRestoredCSVDumpStr;
stdair::BomDisplay::csvDisplay (oRestoredCSVDumpStr, lRestoredBomRoot);
STDAIR_LOG_DEBUG (oRestoredCSVDumpStr.str());

// Retrieve the BomRoot key, and compare it to the expected one
const std::string& lBomRootKeyStr = lRestoredBomRoot.describeKey();
const std::string lBomRootString (" -- ROOT -- ");

// DEBUG
STDAIR_LOG_DEBUG ("The BOM root key is '" << lBomRootKeyStr
                  << "'. It should be equal to '" << lBomRootString << "'");

BOOST_CHECK_EQUAL (lBomRootKeyStr, lBomRootString);
BOOST_CHECK_MESSAGE (lBomRootKeyStr == lBomRootString,
                     "The BOM root key, '" << lBomRootKeyStr
                     << "', should be equal to '" << lBomRootString
                     << "', but is not.");

// Retrieve the Inventory
stdair::Inventory* lRestoredBAInv_ptr =
  lRestoredBomRoot.getInventory (lBAInvKeyStr);

// DEBUG
STDAIR_LOG_DEBUG ("There should be an Inventory object corresponding to the '"
                  << lBAInvKeyStr << "' key.");

BOOST_CHECK_MESSAGE (lRestoredBAInv_ptr != NULL,
                     "An Inventory object should exist with the key, '"
                     << lBAInvKeyStr << "'.");
```

```
  // Close the Log outputFile
  logOutputFile.close();
}

// End the test suite
BOOST_AUTO_TEST_SUITE_END()

#else // BOOST_VERSION >= 103900
boost_utf::test_suite* init_unit_test_suite (int, char* []) {
  boost_utf::test_suite* test = BOOST_TEST_SUITE ("Unit test example 1");
  return test;
}
#endif // BOOST_VERSION >= 103900

/*!
```

25 Module Index

25.1 Modules

Here is a list of all modules:

26 Directory Hierarchy

26.1 Directories

This directory hierarchy is sorted roughly, but not completely, alphabetically:

27 Namespace Index

27.1 Namespace List

Here is a list of all namespaces with brief descriptions:

28 Class Index

28.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

29 Class Index

29.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

30 File Index

30.1 File List

Here is a list of all files with brief descriptions:

31 Module Documentation

31.1 Abstract part of the Business Object Model (BOM)

Author

Anh Quan Nguyen <quannaus@users.sourceforge.net>

Date

20/01/2010

31.2 Part of the Business Object Model (BOM) handling

(hash-like)keys

Author

Anh Quan Nguyen <quannaus@users.sourceforge.net>

Date

20/01/2010

32 Directory Documentation

32.1 stdair/basic/ Directory Reference

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- file BasChronometer.hpp
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- file ForecastingMethod.hpp
- file PartnershipTechnique.cpp
- file PartnershipTechnique.hpp
- file PassengerType.cpp
- file PassengerType.hpp
- file ProgressStatus.cpp
- file ProgressStatus.hpp
- file ProgressStatusSet.cpp
- file ProgressStatusSet.hpp
- file RandomGeneration.cpp
- file RandomGeneration.hpp

- file SampleType.cpp
- file SampleType.hpp
- file ServiceInitialisationType.cpp
- file ServiceInitialisationType.hpp
- file StructAbstract.hpp
- file YieldRange.cpp
- file YieldRange.hpp

32.2 batches/ Directory Reference

Files

- file stdair.cpp

32.3 stdair/bom/ Directory Reference

Files

- file AirlineClassList.cpp
- file AirlineClassList.hpp
- file AirlineClassListKey.cpp
- file AirlineClassListKey.hpp
- file AirlineClassListTypes.hpp
- file AirlineFeature.cpp
- file AirlineFeature.hpp
- file AirlineFeatureKey.cpp
- file AirlineFeatureKey.hpp
- file AirlineFeatureTypes.hpp
- file AirlineStruct.cpp
- file AirlineStruct.hpp
- file AirportPair.cpp
- file AirportPair.hpp
- file AirportPairKey.cpp
- file AirportPairKey.hpp
- file AirportPairTypes.hpp
- file BomAbstract.hpp
- file BomArchive.cpp
- file BomArchive.hpp
- file BomDisplay.cpp
- file BomDisplay.hpp
- file BomHolder.hpp
- file BomHolderKey.cpp
- file BomHolderKey.hpp
- file BomJSONExport.cpp
- file BomJSONExport.hpp

- file BomJSONImport.cpp
- file BomJSONImport.hpp
- file BomKeyManager.cpp
- file BomKeyManager.hpp
- file BomManager.hpp
- file BomRetriever.cpp
- file BomRetriever.hpp
- file BomRoot.cpp
- file BomRoot.hpp
- file BomRootKey.cpp
- file BomRootKey.hpp
- file BookingClass.cpp
- file BookingClass.hpp
- file BookingClassKey.cpp
- file BookingClassKey.hpp
- file BookingClassTypes.hpp
- file BookingRequestStruct.cpp
- file BookingRequestStruct.hpp
- file BookingRequestTypes.hpp
- file Bucket.cpp
- file Bucket.hpp
- file BucketKey.cpp
- file BucketKey.hpp
- file BucketTypes.hpp
- file CancellationStruct.cpp
- file CancellationStruct.hpp
- file CancellationTypes.hpp
- file DatePeriod.cpp
- file DatePeriod.hpp
- file DatePeriodKey.cpp
- file DatePeriodKey.hpp
- file DatePeriodTypes.hpp
- file DoWStruct.cpp
- file DoWStruct.hpp
- file EventQueue.cpp
- file EventQueue.hpp
- file EventQueueKey.cpp
- file EventQueueKey.hpp
- file EventQueueTypes.hpp
- file EventStruct.cpp
- file EventStruct.hpp
- file EventTypes.hpp
- file FareFamily.cpp
- file FareFamily.hpp
- file FareFamilyKey.cpp
- file FareFamilyKey.hpp

- file FareFamilyTypes.hpp
- file FareFeatures.cpp
- file FareFeatures.hpp
- file FareFeaturesKey.cpp
- file FareFeaturesKey.hpp
- file FareFeaturesTypes.hpp
- file FareOptionStruct.cpp
- file FareOptionStruct.hpp
- file FareOptionTypes.hpp
- file FlightDate.cpp
- file FlightDate.hpp
- file FlightDateKey.cpp
- file FlightDateKey.hpp
- file FlightDateTypes.hpp
- file FlightPeriod.cpp
- file FlightPeriod.hpp
- file FlightPeriodKey.cpp
- file FlightPeriodKey.hpp
- file FlightPeriodTypes.hpp
- file GuillotineBlock.cpp
- file GuillotineBlock.hpp
- file GuillotineBlockKey.cpp
- file GuillotineBlockKey.hpp
- file GuillotineBlockTypes.hpp
- file Inventory.cpp
- file Inventory.hpp
- file InventoryKey.cpp
- file InventoryKey.hpp
- file InventoryTypes.hpp
- file key_types.hpp
- file KeyAbstract.hpp
- file LegCabin.cpp
- file LegCabin.hpp
- file LegCabinKey.cpp
- file LegCabinKey.hpp
- file LegCabinTypes.hpp
- file LegDate.cpp
- file LegDate.hpp
- file LegDateKey.cpp
- file LegDateKey.hpp
- file LegDateTypes.hpp
- file OnDDate.cpp
- file OnDDate.hpp
- file OnDDateKey.cpp
- file OnDDateKey.hpp
- file OnDDateTypes.hpp

- file OptimisationNotificationStruct.cpp
- file OptimisationNotificationStruct.hpp
- file OptimisationNotificationTypes.hpp
- file ParsedKey.cpp
- file ParsedKey.hpp
- file PeriodStruct.cpp
- file PeriodStruct.hpp
- file PosChannel.cpp
- file PosChannel.hpp
- file PosChannelKey.cpp
- file PosChannelKey.hpp
- file PosChannelTypes.hpp
- file RMEventStruct.cpp
- file RMEventStruct.hpp
- file RMEventTypes.hpp
- file SegmentCabin.cpp
- file SegmentCabin.hpp
- file SegmentCabinKey.cpp
- file SegmentCabinKey.hpp
- file SegmentCabinTypes.hpp
- file SegmentDate.cpp
- file SegmentDate.hpp
- file SegmentDateKey.cpp
- file SegmentDateKey.hpp
- file SegmentDateTypes.hpp
- file SegmentPeriod.cpp
- file SegmentPeriod.hpp
- file SegmentPeriodKey.cpp
- file SegmentPeriodKey.hpp
- file SegmentPeriodTypes.hpp
- file SnapshotStruct.cpp
- file SnapshotStruct.hpp
- file SnapshotTypes.hpp
- file TimePeriod.cpp
- file TimePeriod.hpp
- file TimePeriodKey.cpp
- file TimePeriodKey.hpp
- file TimePeriodTypes.hpp
- file TravelSolutionStruct.cpp
- file TravelSolutionStruct.hpp
- file TravelSolutionTypes.hpp
- file VirtualClassStruct.cpp
- file VirtualClassStruct.hpp
- file VirtualClassTypes.hpp
- file YieldFeatures.cpp
- file YieldFeatures.hpp

- file YieldFeaturesKey.cpp
- file YieldFeaturesKey.hpp
- file YieldFeaturesTypes.hpp
- file YieldStore.cpp
- file YieldStore.hpp
- file YieldStoreKey.cpp
- file YieldStoreKey.hpp
- file YieldStoreTypes.hpp

32.4 stdair/ui/cmdline/ Directory Reference

Files

- file readline_autocomp.hpp
- file SReadline.hpp

  C++ wrapper around libreadline.

32.5 stdair/command/ Directory Reference

Files

- file CmdAbstract.cpp
- file CmdAbstract.hpp
- file CmdBomManager.cpp
- file CmdBomManager.hpp
- file CmdBomSerialiser.cpp
- file CmdBomSerialiser.hpp
- file DBManagerForAirlines.cpp
- file DBManagerForAirlines.hpp

32.6 stdair/config/ Directory Reference

Files

- file stdair-paths.hpp

32.7 stdair/dbadaptor/ Directory Reference

Files

- file DbaAbstract.cpp
- file DbaAbstract.hpp
- file DbaAirline.cpp
- file DbaAirline.hpp

32.8 stdair/factory/ Directory Reference

Files

- file FacAbstract.cpp
- file FacAbstract.hpp
- file FacBom.hpp
- file FacBomManager.hpp

32.9 stdair/service/ Directory Reference

Files

- file DBSessionManager.cpp
- file DBSessionManager.hpp
- file FacServiceAbstract.cpp
- file FacServiceAbstract.hpp
- file FacSTDAIRServiceContext.cpp
- file FacSTDAIRServiceContext.hpp
- file FacSupervisor.cpp
- file FacSupervisor.hpp
- file Logger.cpp
- file Logger.hpp
- file ServiceAbstract.cpp
- file ServiceAbstract.hpp
- file STDAIR_Service.cpp
- file STDAIR_ServiceContext.cpp
- file STDAIR_ServiceContext.hpp

32.10 test/stdair/ Directory Reference

Files

- file MPBomRoot.cpp
- file MPBomRoot.hpp
- file MPInventory.cpp
- file MPInventory.hpp
- file StandardAirlineITTestSuite.cpp
- file StdairTestLib.hpp

32.11 stdair/ Directory Reference

Directories

- directory basic
- directory bom
- directory command
- directory config
- directory dbadaptor
- directory factory
- directory service
- directory ui

Files

- file stdair_basic_types.hpp
- file stdair_date_time_types.hpp
- file stdair_db.hpp
- file stdair_demand_types.hpp
- file stdair_event_types.hpp
- file stdair_exceptions.hpp
- file stdair_fare_types.hpp
- file stdair_file.hpp
- file stdair_inventory_types.hpp
- file stdair_log.hpp
- file stdair_maths_types.hpp
- file stdair_rm_types.hpp
- file STDAIR_Service.hpp
- file stdair_service_types.hpp
- file stdair_types.hpp

32.12 test/ Directory Reference

Directories

- directory stdair

32.13 stdair/ui/ Directory Reference

Directories

- directory cmdline

33 Namespace Documentation

33.1 boost Namespace Reference

Forward declarations.

Namespaces

- namespace serialization

33.1.1 Detailed Description

Forward declarations.

33.2 boost::serialization Namespace Reference

33.3 bpt Namespace Reference

Typedefs

- typedef char ptree

33.3.1 Typedef Documentation

33.3.1.1 typedef char bpt::ptree

Definition at line 21 of file BomJSONExport.hpp.

33.4 soci Namespace Reference

Classes

- struct type_conversion< stdair::AirlineStruct >

33.5 stdair Namespace Reference

Handle on the StdAir library context.

Namespaces

- namespace LOG

Classes

- struct BasChronometer
- struct DefaultDCPList
- struct DefaultDtdFratMap
- struct DefaultDtdProbMap
- struct BasDBParams

  Structure holding the parameters for connection to a database.
- struct BasFileMgr
- struct BasLogParams

  Structure holding parameters for logging.
- struct date_time_element
- struct ContinuousAttributeLite

  Class modeling the distribution of values that can be taken by a continuous attribute.
- struct DemandGenerationMethod

  Enumeration of demand (booking request) generation methods.
- class DictionaryManager

  Class wrapper of dictionary business methods.
- struct EventType
- struct ForecastingMethod
- struct PartnershipTechnique

  Enumeration of partnership techniques.
- struct PassengerType
- struct ProgressStatus
- struct ProgressStatusSet
- struct RandomGeneration

  Class holding a random generator.
- struct SampleType

  Enumeration of BOM sample types.
- struct ServiceInitialisationType

  Enumeration of service initialisation types.
- struct StructAbstract

  Base class for the light structures.
- class YieldRange
- class AirlineClassList

  Class representing the actual attributes for a segment-features.
- struct AirlineClassListKey

  Key of airport-pair.
- class AirlineFeature
- struct AirlineFeatureKey
- struct AirlineStruct
- class AirportPair

  Class representing the actual attributes for an airport-pair.
- struct AirportPairKey

Key of airport-pair.

- class BomAbstract

  Base class for the Business Object Model (BOM) layer.
- class BomArchive

  Utility class to archive/restore BOM objects with Boost serialisation.
- class BomDisplay

  Utility class to display StdAir objects with a pretty format.
- class BomHolder

  Class representing the holder of BOM object containers (list and map).
- struct BomHolderKey
- class BomJSONExport

  Utility class to export StdAir objects in a JSON format.
- class BomJSONImport

  Utility class to import StdAir objects in a JSON format.
- class BomKeyManager

  Utility class to extract key structures from strings.
- class BomManager

  Utility class for StdAir-based objects.
- class BomRetriever

  Utility class to retrieve StdAir objects.
- class BomRoot

  Class representing the actual attributes for the Bom root.
- struct BomRootKey

  Key of the BOM structure root.
- class BookingClass
- struct BookingClassKey
- struct BookingRequestStruct

  Structure holding the elements of a booking request.
- class Bucket

  Class representing the actual attributes for an airline booking class.
- struct BucketKey

  Key of booking-class.
- struct CancellationStruct

  Structure holding the elements of a travel solution.
- class DatePeriod

  Class representing the actual attributes for a fare date-period.
- struct DatePeriodKey

  Key of date-period.
- struct DoWStruct
- class EventQueue

  Class holding event structures.
- struct EventQueueKey
- struct EventStruct
- class FareFamily

Class representing the actual attributes for a family fare.

- struct FareFamilyKey

  Key of a given fare family, made of a fare family code.
- class FareFeatures

  Class representing the actual attributes for a fare date-period.
- struct FareFeaturesKey

  Key of date-period.
- struct FareOptionStruct

  Structure holding the elements of a fare option.
- class FlightDate

  Class representing the actual attributes for an airline flight-date.
- struct FlightDateKey

  Key of a given flight-date, made of a flight number and a departure date.
- class FlightPeriod
- struct FlightPeriodKey
- class GuillotineBlock

  Class representing the actual attributes for an airline guillotine-block.
- struct GuillotineBlockKey

  Key of a given guillotine block, made of a guillotine number.
- class Inventory

  Class representing the actual attributes for an airline inventory.
- struct InventoryKey

  Key of a given inventory, made of the airline code.
- struct KeyAbstract

  Base class for the keys of Business Object Model (BOM) layer.
  Note that that key allows to differentiate two objects at the same level only. For instance, the segment-date key allows to differentiate two segment-dates under a given flight-date, but does not allow to differentiate two segemnt-dates in general.
- class LegCabin

  Class representing the actual attributes for an airline leg-cabin.
- struct LegCabinKey

  Key of a given leg-cabin, made of a cabin code (only).
- class LegDate
- struct LegDateKey
- class OnDDate

  Class representing the actual attributes for an airline flight-date.
- struct OnDDateKey

  Key of a given O&D-date, made of a list of OnD strings. a OnD string contains the airline code, the flight number, the date and the segment (origin and destination).
- struct OptimisationNotificationStruct
- struct ParsedKey
- struct PeriodStruct
- class PosChannel

  Class representing the actual attributes for a fare point of sale.

- struct PosChannelKey

  Key of point of sale and channel.
- struct RMEventStruct
- class SegmentCabin

  Class representing the actual attributes for an airline segment-cabin.
- struct SegmentCabinKey

  Key of a given segment-cabin, made of a cabin code (only).
- class SegmentDate

  Class representing the actual attributes for an airline segment-date.
- struct SegmentDateKey

  Key of a given segment-date, made of an origin and a destination airports.
- class SegmentPeriod
- struct SegmentPeriodKey
- struct SnapshotStruct
- class TimePeriod

  Class representing the actual attributes for a fare time-period.
- struct TimePeriodKey

  Key of time-period.
- struct TravelSolutionStruct

  Structure holding the elements of a travel solution.
- struct VirtualClassStruct
- class YieldFeatures

  Class representing the actual attributes for a yield date-period.
- struct YieldFeaturesKey

  Key of date-period.
- class YieldStore
- struct YieldStoreKey
- class CmdAbstract
- class CmdBomManager
- class CmdBomSerialiser
- class DBManagerForAirlines
- class DbaAbstract
- class FacAbstract
- class FacBom

  Base class for Factory layer.
- class FacBomManager

  Utility class for linking StdAir-based objects.
- class DBSessionManager
- class FacServiceAbstract
- class FacSTDAIRServiceContext

  Factory for Bucket.
- class FacSupervisor
- class Logger
- class ServiceAbstract

- class STDAIR_ServiceContext

  Class holding the context of the Stdair services.
- class RootException

  Root of the stdair exceptions.
- class FileNotFoundException
- class NonInitialisedLogServiceException
- class NonInitialisedServiceException
- class NonInitialisedContainerException
- class NonInitialisedRelationShipException
- class MemoryAllocationException
- class ObjectLinkingException
- class DocumentNotFoundException
- class ParserException
- class SerialisationException
- class KeyNotFoundException
- class CodeConversionException
- class CodeDuplicationException
- class ObjectCreationgDuplicationException
- class ObjectNotFoundException
- class ParsingFileFailedException
- class SQLDatabaseException
- class NonInitialisedDBSessionManagerException
- class SQLDatabaseConnectionImpossibleException
- class EventException
- class EventQueueException
- class RootFilePath

  Root of the input and output files.
- class InputFilePath
- class STDAIR_Service

  Interface for the STDAIR Services.

Typedefs

- typedef date_time_element< 0, 23 > hour_t
- typedef date_time_element< 0, 59 > minute_t
- typedef date_time_element< 0, 59 > second_t
- typedef date_time_element< 1900, 2100 > year_t
- typedef date_time_element< 1, 12 > month_t
- typedef date_time_element< 1, 31 > day_t
- typedef std::istreambuf_iterator< char > base_iterator_t
- typedef boost::spirit::multi_pass< base_iterator_t > iterator_t
- typedef boost::spirit::qi::int_parser< unsigned int, 10, 1, 1 > int1_p_t
- typedef boost::spirit::qi::uint_parser< int, 10, 2, 2 > uint2_p_t
- typedef boost::spirit::qi::uint_parser< int, 10, 4, 4 > uint4_p_t
- typedef boost::spirit::qi::uint_parser< int, 10, 1, 4 > uint1_4_p_t

- typedef boost::spirit::qi::uint_parser< hour_t, 10, 2, 2 > hour_p_t
- typedef boost::spirit::qi::uint_parser< minute_t, 10, 2, 2 > minute_p_t
- typedef boost::spirit::qi::uint_parser< second_t, 10, 2, 2 > second_p_t
- typedef boost::spirit::qi::uint_parser< year_t, 10, 4, 4 > year_p_t
- typedef boost::spirit::qi::uint_parser< month_t, 10, 2, 2 > month_p_t
- typedef boost::spirit::qi::uint_parser< day_t, 10, 2, 2 > day_p_t
- typedef unsigned short DictionaryKey_T
- typedef std::list< AirlineClassList * > AirlineClassListList_T
- typedef std::map< const MapKey_T, AirlineClassList * > AirlineClassListMap_T
- typedef std::pair< MapKey_T, AirlineClassList * > AirlineClassListWithKey_T
- typedef std::list< AirlineClassListWithKey_T > AirlineClassListDetailedList_T
- typedef std::list< AirlineFeature * > AirlineFeatureList_T
- typedef std::map< const MapKey_T, AirlineFeature * > AirlineFeatureMap_T
- typedef std::list< AirportPair * > AirportPairList_T
- typedef std::map< const MapKey_T, AirportPair * > AirportPairMap_T
- typedef std::pair< MapKey_T, AirportPair * > AirportPairWithKey_T
- typedef std::list< AirportPairWithKey_T > AirportPairDetailedList_T
- typedef std::map< const std::type_info *, BomAbstract * > HolderMap_T
- typedef boost::tokenizer< boost::char_separator< char > > Tokeniser_T
- typedef std::list< BookingClass * > BookingClassList_T
- typedef std::map< const MapKey_T, BookingClass * > BookingClassMap_T
- typedef boost::shared_ptr< BookingRequestStruct > BookingRequestPtr_T
- typedef std::string DemandGeneratorKey_T
- typedef std::list< Bucket * > BucketList_T
- typedef std::map< const MapKey_T, Bucket * > BucketMap_T
- typedef boost::shared_ptr< CancellationStruct > CancellationPtr_T
- typedef std::list< DatePeriod * > DatePeriodList_T
- typedef std::map< const MapKey_T, DatePeriod * > DatePeriodMap_T
- typedef std::pair< MapKey_T, DatePeriod * > DatePeriodWithKey_T
- typedef std::list< DatePeriodWithKey_T > DatePeriodDetailedList_T
- typedef std::list< EventQueue * > EventQueueList_T
- typedef std::map< const MapKey_T, EventQueue * > EventQueueMap_T
- typedef std::pair< const LongDuration_T, EventStruct > EventListElement_T
- typedef std::map< const LongDuration_T, EventStruct > EventList_T
- typedef std::list< FareFamily * > FareFamilyList_T
- typedef std::map< const MapKey_T, FareFamily * > FareFamilyMap_T
- typedef std::list< FareFeatures * > FareFeaturesList_T
- typedef std::map< const MapKey_T, FareFeatures * > FareFeaturesMap_T
- typedef std::pair< MapKey_T, FareFeatures * > FareFeaturesWithKey_T
- typedef std::list< FareFeaturesWithKey_T > FareFeaturesDetailedList_T
- typedef std::list< FareOptionStruct > FareOptionList_T
- typedef std::list< FlightDate * > FlightDateList_T
- typedef std::map< const MapKey_T, FlightDate * > FlightDateMap_T
- typedef std::list< FlightPeriod * > FlightPeriodList_T
- typedef std::map< const MapKey_T, FlightPeriod * > FlightPeriodMap_T
- typedef std::list< GuillotineBlock * > GuillotineBlockList_T

- typedef std::map< const MapKey_T, GuillotineBlock * > GuillotineBlockMap_T
- typedef std::map< const SegmentCabin *, BlockNumber_T > SegmentCabinIndexMap_T
- typedef std::map< const MapKey_T, BlockIndex_T > ValueTypeIndexMap_T
- typedef std::list< Inventory * > InventoryList_T
- typedef std::map< const MapKey_T, Inventory * > InventoryMap_T
- typedef std::string MapKey_T
- typedef std::list< std::string > KeyList_T
- typedef std::list< LegCabin * > LegCabinList_T
- typedef std::map< const MapKey_T, LegCabin * > LegCabinMap_T
- typedef std::list< LegDate * > LegDateList_T
- typedef std::map< const MapKey_T, LegDate * > LegDateMap_T
- typedef std::list< OnDDate * > OnDDateList_T
- typedef std::map< const MapKey_T, OnDDate * > OnDDateMap_T
- typedef std::pair< std::string, YieldDemandPair_T > StringDemandStructPair_T
- typedef std::map< std::string, YieldDemandPair_T > StringDemandStructMap_T
- typedef std::map< std::string, CabinClassPairList_T > StringCabinClassPairListMap_T
- typedef std::pair< std::string, CabinClassPairList_T > StringCabinClassPair_T
- typedef std::map< CabinCode_T, WTPDemandPair_T > CabinForecastMap_T
- typedef std::pair< CabinCode_T, WTPDemandPair_T > CabinForecastPair_T
- typedef boost::shared_ptr< OptimisationNotificationStruct > OptimisationNotificationPtr_T
- typedef std::list< PosChannel * > PosChannelList_T
- typedef std::map< const MapKey_T, PosChannel * > PosChannelMap_T
- typedef std::pair< MapKey_T, PosChannel * > PosChannelWithKey_T
- typedef std::list< PosChannelWithKey_T > PosChannelDetailedList_T
- typedef boost::shared_ptr< RMEventStruct > RMEventPtr_T
- typedef std::list< RMEventStruct > RMEventList_T
- typedef std::list< SegmentCabin * > SegmentCabinList_T
- typedef std::map< const MapKey_T, SegmentCabin * > SegmentCabinMap_T
- typedef std::list< SegmentDate * > SegmentDateList_T
- typedef std::map< const MapKey_T, SegmentDate * > SegmentDateMap_T
- typedef std::list< SegmentPeriod * > SegmentPeriodList_T
- typedef std::map< const MapKey_T, SegmentPeriod * > SegmentPeriodMap_T
- typedef std::pair< MapKey_T, SegmentPeriod * > SegmentPeriodWithKey_T
- typedef std::list< SegmentPeriodWithKey_T > SegmentPeriodDetailedList_T
- typedef boost::shared_ptr< SnapshotStruct > SnapshotPtr_T
- typedef std::list< TimePeriod * > TimePeriodList_T
- typedef std::map< const MapKey_T, TimePeriod * > TimePeriodMap_T
- typedef std::pair< MapKey_T, TimePeriod * > TimePeriodWithKey_T
- typedef std::list< TimePeriodWithKey_T > TimePeriodDetailedList_T
- typedef std::list< TravelSolutionStruct > TravelSolutionList_T
- typedef KeyList_T SegmentPath_T
- typedef std::list< SegmentPath_T > SegmentPathList_T
- typedef std::map< const ClassCode_T, Availability_T > ClassAvailabilityMap_T

- typedef std::list< ClassAvailabilityMap_T > ClassAvailabilityMapHolder_T
- typedef std::map< const ClassCode_T, YieldValue_T > ClassYieldMap_T
- typedef std::list< ClassYieldMap_T > ClassYieldMapHolder_T
- typedef std::list< BidPriceVector_T > BidPriceVectorHolder_T
- typedef std::map< const ClassCode_T, const BidPriceVector_T * > ClassBpvMap_T
- typedef std::list< ClassBpvMap_T > ClassBpvMapHolder_T
- typedef std::list< VirtualClassStruct > VirtualClassList_T
- typedef std::map< const Yield_T, VirtualClassStruct > VirtualClassMap_T
- typedef std::list< YieldFeatures * > YieldFeaturesList_T
- typedef std::map< const MapKey_T, YieldFeatures * > YieldFeaturesMap_T
- typedef std::pair< MapKey_T, YieldFeatures * > YieldFeaturesWithKey_T
- typedef std::list< YieldFeaturesWithKey_T > YieldFeaturesDetailedList_T
- typedef std::list< YieldStore * > YieldStoreList_T
- typedef std::map< const MapKey_T, YieldStore * > YieldStoreMap_T
- typedef std::string LocationCode_T
- typedef unsigned long int Distance_T
- typedef LocationCode_T AirportCode_T
- typedef LocationCode_T CityCode_T
- typedef std::string KeyDescription_T
- typedef std::string AirlineCode_T
- typedef unsigned short FlightNumber_T
- typedef unsigned short GuillotineNumber_T
- typedef std::string CabinCode_T
- typedef std::string FamilyCode_T
- typedef std::string ClassCode_T
- typedef unsigned long Identity_T
- typedef std::string TripType_T
- typedef double MonetaryValue_T
- typedef double RealNumber_T
- typedef double Percentage_T
- typedef double PriceValue_T
- typedef double YieldValue_T
- typedef std::string PriceCurrency_T
- typedef double Revenue_T
- typedef double Multiplier_T
- typedef double NbOfSeats_T
- typedef unsigned int Count_T
- typedef short PartySize_T
- typedef double NbOfRequests_T
- typedef NbOfRequests_T NbOfBookings_T
- typedef NbOfRequests_T NbOfCancellations_T
- typedef unsigned short NbOfTravelSolutions_T
- typedef std::string ClassList_String_T
- typedef unsigned short NbOfSegments_T
- typedef unsigned short NbOfAirlines_T

- typedef double Availability_T
- typedef double Fare_T
- typedef bool Flag_T
- typedef unsigned int UnsignedIndex_T
- typedef std::string Filename_T
- typedef std::string FileAddress_T
- typedef float ProgressPercentage_T
- typedef boost::posix_time::time_duration Duration_T
- typedef boost::gregorian::date Date_T
- typedef boost::posix_time::time_duration Time_T
- typedef boost::posix_time::ptime DateTime_T
- typedef boost::gregorian::date_period DatePeriod_T
- typedef std::string DOW_String_T
- typedef boost::gregorian::date_duration DateOffset_T
- typedef unsigned int DayDuration_T
- typedef bool SaturdayStay_T
- typedef long int IntDuration_T
- typedef unsigned long long int LongDuration_T
- typedef float FloatDuration_T
- typedef soci::session DBSession_T
- typedef soci::statement DBRequestStatement_T
- typedef std::string DBConnectionName_T
- typedef bool ChangeFees_T
- typedef bool NonRefundable_T
- typedef unsigned int SaturdayStayRatio_T
- typedef unsigned int ChangeFeesRatio_T
- typedef unsigned int NonRefundableRatio_T
- typedef std::string PassengerType_T
- typedef std::string DistributionPatternId_T
- typedef std::string CancellationRateCurveId_T
- typedef std::string AirlinePreferenceId_T
- typedef std::pair< Percentage_T, Percentage_T > CancellationNoShowRatePair_T
- typedef std::string CharacteristicsPatternId_T
- typedef std::string CharacteristicsIndex_T
- typedef double WTP_T
- typedef boost::tuples::tuple< double, WTP_T > CharacteristicsWTP_tuple_T
- typedef std::pair< WTP_T, MeanStdDevPair_T > WTPDemandPair_T
- typedef NbOfRequests_T NbOfNoShows_T
- typedef double MatchingIndicator_T
- typedef std::string DemandStreamKeyStr_T
- typedef std::string ChannelLabel_T
- typedef std::string FrequentFlyer_T
- typedef std::string RequestStatus_T
- typedef std::map< Identity_T, Identity_T > BookingTSIDMap_T
- typedef std::pair< CabinCode_T, ClassCode_T > CabinClassPair_T

- typedef std::list< CabinClassPair_T > CabinClassPairList_T
- typedef double ProportionFactor_T
- typedef std::list< ProportionFactor_T > ProportionFactorList_T
- typedef std::string OnDString_T
- typedef std::list< OnDString_T > OnDStringList_T
- typedef std::string EventName_T
- typedef double NbOfEvents_T
- typedef std::string EventQueueID_T
- typedef std::string EventGeneratorKey_T
- typedef double NbOfFareRules_T
- typedef std::string NetworkID_T
- typedef std::vector< AirlineCode_T > AirlineCodeList_T
- typedef std::vector< ClassList_String_T > ClassList_StringList_T
- typedef std::vector< ClassCode_T > ClassCodeList_T
- typedef unsigned short SubclassCode_T
- typedef std::string FlightPathCode_T
- typedef std::map< CabinCode_T, ClassList_String_T > CabinBookingClassMap_T
- typedef double CabinCapacity_T
- typedef double NbOfFlightDates_T
- typedef double CommittedSpace_T
- typedef double UPR_T
- typedef double BookingLimit_T
- typedef double AuthorizationLevel_T
- typedef double CapacityAdjustment_T
- typedef double BlockSpace_T
- typedef bool AvailabilityStatus_T
- typedef std::vector< Availability_T > BucketAvailabilities_T
- typedef double NbOfYields_T
- typedef double NbOfInventoryControlRules_T
- typedef bool CensorshipFlag_T
- typedef short DTD_T
- typedef short DCP_T
- typedef std::list< DCP_T > DCPList_T
- typedef std::map< DTD_T, RealNumber_T > DTDFratMap_T
- typedef std::map< FloatDuration_T, float > DTDProbMap_T
- typedef std::vector< CensorshipFlag_T > CensorshipFlagList_T
- typedef double BookingRatio_T
- typedef double Yield_T
- typedef unsigned int YieldLevel_T
- typedef std::map< YieldLevel_T, MeanStdDevPair_T > YieldLevelDemandMap_T
- typedef std::pair< Yield_T, MeanStdDevPair_T > YieldDemandPair_T
- typedef double BidPrice_T
- typedef std::vector< BidPrice_T > BidPriceVector_T
- typedef unsigned int SeatIndex_T

- typedef std::string ControlMode_T
- typedef double OverbookingRate_T
- typedef double ProtectionLevel_T
- typedef std::vector< double > EmsrValueList_T
- typedef std::vector< double > BookingLimitVector_T
- typedef std::vector< double > ProtectionLevelVector_T
- typedef boost::multi_array< double, 2 > SnapshotBlock_T
- typedef SnapshotBlock_T::index_range SnapshotBlockRange_T
- typedef SnapshotBlock_T::array_view< 1 >::type SegmentCabinDTDSnapshotView_T
- typedef SnapshotBlock_T::array_view< 2 >::type SegmentCabinDTDRangeSnapshotView_T
- typedef SnapshotBlock_T::const_array_view< 1 >::type ConstSegmentCabinDTDSnapshotView_T
- typedef SnapshotBlock_T::const_array_view< 2 >::type ConstSegmentCabinDTDRangeSnapshotView_T
- typedef unsigned short BlockNumber_T
- typedef unsigned short BlockIndex_T
- typedef unsigned int ReplicationNumber_T
- typedef unsigned long int ExponentialSeed_T
- typedef unsigned long int UniformSeed_T
- typedef unsigned long int RandomSeed_T
- typedef boost::minstd_rand BaseGenerator_T
- typedef boost::uniform_real UniformDistribution_T
- typedef boost::variate_generator< BaseGenerator_T &, UniformDistribution_T > UniformGenerator_T
- typedef boost::normal_distribution NormalDistribution_T
- typedef boost::variate_generator< BaseGenerator_T &, NormalDistribution_T > NormalGenerator_T
- typedef boost::exponential_distribution ExponentialDistribution_T
- typedef boost::variate_generator< BaseGenerator_T &, ExponentialDistribution_T > ExponentialGenerator_T
- typedef double MeanValue_T
- typedef double StdDevValue_T
- typedef std::pair< MeanValue_T, StdDevValue_T > MeanStdDevPair_T
- typedef float Probability_T
- typedef std::string ForecasterMode_T
- typedef short HistoricalDataLimit_T
- typedef std::string OptimizerMode_T
- typedef NbOfBookings_T PolicyDemand_T
- typedef std::vector< double > GeneratedDemandVector_T
- typedef std::vector< GeneratedDemandVector_T > GeneratedDemandVectorHolder_T
- typedef double SellupProbability_T
- typedef std::vector< SellupProbability_T > SellupProbabilityVector_T
- typedef std::vector< double > SellupFactorHolder_T
- typedef boost::shared_ptr< STDAIR_Service > STDAIR_ServicePtr_T

Functions

- const std::string DEFAULT_BOM_ROOT_KEY (" -- ROOT -- ")
- const double DEFAULT_EPSILON_VALUE (0.0001)
- const unsigned int DEFAULT_FLIGHT_SPEED (900)
- const NbOfFlightDates_T DEFAULT_NB_OF_FLIGHTDATES (0.0)
- const Duration_T NULL_BOOST_TIME_DURATION (-1,-1,-1)
- const unsigned int DEFAULT_NB_OF_DAYS_IN_A_YEAR (365)
- const unsigned int DEFAULT_NUMBER_OF_SUBDIVISIONS (1000)
- const DayDuration_T DEFAULT_DAY_DURATION (0)
- const DatePeriod_T BOOST_DEFAULT_DATE_PERIOD (Date_T(2007, 1, 1), Date_T(2007, 1, 1))
- const DOW_String_T DEFAULT_DOW_STRING ("0000000")
- const DateOffset_T DEFAULT_DATE_OFFSET (0)
- const Date_T DEFAULT_DATE (2010, boost::gregorian::Jan, 1)
- const DateTime_T DEFAULT_DATETIME (DEFAULT_DATE, NULL_BOOST_TIME_DURATION)
- const Duration_T DEFAULT_EPSILON_DURATION (0, 0, 0, 1)
- const Count_T SECONDS_IN_ONE_DAY (86400)
- const Count_T MILLISECONDS_IN_ONE_SECOND (1000)
- const RandomSeed_T DEFAULT_RANDOM_SEED (120765987)
- const AirportCode_T AIRPORT_LHR ("LHR")
- const AirportCode_T AIRPORT_SYD ("SYD")
- const CityCode_T POS_LHR ("LHR")
- const Date_T DATE_20110115 (2011, boost::gregorian::Jan, 15)
- const Date_T DATE_20111231 (2011, boost::gregorian::Dec, 31)
- const DayDuration_T NO_ADVANCE_PURCHASE (0)
- const SaturdayStay_T SATURDAY_STAY (true)
- const SaturdayStay_T NO_SATURDAY_STAY (false)
- const ChangeFees_T CHANGE_FEES (true)
- const ChangeFees_T NO_CHANGE_FEES (false)
- const NonRefundable_T NON_REFUNDABLE (true)
- const NonRefundable_T No_NON_REFUNDABLE (false)
- const SaturdayStay_T DEFAULT_BOM_TREE_SATURDAY_STAY (true)
- const ChangeFees_T DEFAULT_BOM_TREE_CHANGE_FEES (true)
- const NonRefundable_T DEFAULT_BOM_TREE_NON_REFUNDABLE (true)
- const DayDuration_T NO_STAY_DURATION (0)
- const AirlineCode_T AIRLINE_CODE_BA ("BA")
- const CabinCode_T CABIN_Y ("Y")
- const ClassCode_T CLASS_CODE_Y ("Y")
- const ClassCode_T CLASS_CODE_Q ("Q")
- const AirportCode_T AIRPORT_SIN ("SIN")
- const AirportCode_T AIRPORT_BKK ("BKK")
- const CityCode_T POS_SIN ("SIN")
- const CabinCode_T CABIN_ECO ("Eco")
- const FrequentFlyer_T FREQUENT_FLYER_MEMBER ("M")
- const ClassCode_T DEFAULT_FAMILY_CODE ("0")

- const NbOfAirlines_T DEFAULT_NBOFAIRLINES (0)
- const FlightPathCode_T DEFAULT_FLIGHTPATH_CODE ("")
- const Distance_T DEFAULT_DISTANCE_VALUE (0)
- const ClassCode_T DEFAULT_CLOSED_CLASS_CODE ("CC")
- const NbOfBookings_T DEFAULT_CLASS_NB_OF_BOOKINGS (0)
- const NbOfBookings_T DEFAULT_CLASS_TOTAL_NB_OF_BOOKINGS (0)
- const NbOfBookings_T DEFAULT_CLASS_UNCONSTRAINED_DEMAND (0)
- const NbOfBookings_T DEFAULT_CLASS_REMAINING_DEMAND_MEAN (0)
- const NbOfBookings_T DEFAULT_CLASS_REMAINING_DEMAND_STANDARD_-DEVIATION (0)
- const NbOfCancellations_T DEFAULT_CLASS_NB_OF_CANCELLATIONS (0)
- const NbOfNoShows_T DEFAULT_CLASS_NB_OF_NOSHOWS (0)
- const CabinCapacity_T DEFAULT_CABIN_CAPACITY (100.0)
- const CommittedSpace_T DEFAULT_COMMITTED_SPACE (0.0)
- const BlockSpace_T DEFAULT_BLOCK_SPACE (0.0)
- const Availability_T DEFAULT_NULL_AVAILABILITY (0.0)
- const Availability_T DEFAULT_AVAILABILITY (9.0)
- const Availability_T MAXIMAL_AVAILABILITY (9999.0)
- const CensorshipFlag_T DEFAULT_CLASS_CENSORSHIPFLAG (false)
- const BookingLimit_T DEFAULT_CLASS_BOOKING_LIMIT (9999.0)
- const AuthorizationLevel_T DEFAULT_CLASS_AUTHORIZATION_LEVEL (9999.0)
- const AuthorizationLevel_T DEFAULT_CLASS_MAX_AUTHORIZATION_LEVEL (9999.0)
- const AuthorizationLevel_T DEFAULT_CLASS_MIN_AUTHORIZATION_LEVEL (0.0)
- const OverbookingRate_T DEFAULT_CLASS_OVERBOOKING_RATE (0.0)
- const BookingRatio_T DEFAULT_OND_BOOKING_RATE (0.0)
- const Fare_T DEFAULT_FARE_VALUE (0.0)
- const Yield_T DEFAULT_CLASS_YIELD_VALUE (0.0)
- const Revenue_T DEFAULT_REVENUE_VALUE (0.0)
- const Percentage_T DEFAULT_LOAD_FACTOR_VALUE (100.0)
- const Yield_T DEFAULT_YIELD_VALUE (0.0)
- const Yield_T DEFAULT_YIELD_MAX_VALUE (std::numeric_limits< double >::max())
- const NbOfBookings_T DEFAULT_YIELD_NB_OF_BOOKINGS (0.0)
- const Identity_T DEFAULT_BOOKING_NUMBER (0)
- const NbOfCancellations_T DEFAULT_YIELD_NB_OF_CANCELLATIONS (0.0)
- const NbOfNoShows_T DEFAULT_YIELD_NB_OF_NOSHOWS (0.0)
- const Availability_T DEFAULT_YIELD_AVAILABILITY (0.0)
- const CensorshipFlag_T DEFAULT_YIELD_CENSORSHIPFLAG (false)
- const BookingLimit_T DEFAULT_YIELD_BOOKING_LIMIT (0.0)
- const OverbookingRate_T DEFAULT_YIELD_OVERBOOKING_RATE (0.0)
- const Fare_T DEFAULT_OND_FARE_VALUE (0.0)
- const EventQueueID_T DEFAULT_EVENT_QUEUE_ID ("EQ01")
- const Count_T DEFAULT_PROGRESS_STATUS (0)
- const Date_T DEFAULT_EVENT_OLDEST_DATE (2008, boost::gregorian::Jan, 1)
- const DateTime_T DEFAULT_EVENT_OLDEST_DATETIME (DEFAULT_EVENT_-OLDEST_DATE, NULL_BOOST_TIME_DURATION)

- const PartySize_T DEFAULT_PARTY_SIZE (1)
- const DayDuration_T DEFAULT_STAY_DURATION (7)
- const WTP_T DEFAULT_WTP (1000.0)
- const Date_T DEFAULT_PREFERRED_DEPARTURE_DATE (DEFAULT_DEPARTURE_-DATE)
- const Duration_T DEFAULT_PREFERRED_DEPARTURE_TIME (8, 0, 0)
- const DateOffset_T DEFAULT_ADVANCE_PURCHASE (22)
- const Date_T DEFAULT_REQUEST_DATE (DEFAULT_PREFERRED_DEPARTURE_-DATE-DEFAULT_ADVANCE_PURCHASE)
- const Duration_T DEFAULT_REQUEST_TIME (8, 0, 0)
- const DateTime_T DEFAULT_REQUEST_DATE_TIME (DEFAULT_REQUEST_-DATE, DEFAULT_REQUEST_TIME)
- const CabinCode_T DEFAULT_PREFERRED_CABIN ("M")
- const CityCode_T DEFAULT_POS ("ALL")
- const ChannelLabel_T DEFAULT_CHANNEL ("DC")
- const ChannelLabel_T CHANNEL_DN ("DN")
- const ChannelLabel_T CHANNEL_IN ("IN")
- const TripType_T TRIP_TYPE_ONE_WAY ("OW")
- const TripType_T TRIP_TYPE_ROUND_TRIP ("RT")
- const TripType_T TRIP_TYPE_INBOUND ("RI")
- const TripType_T TRIP_TYPE_OUTBOUND ("RO")
- const FrequentFlyer_T DEFAULT_FF_TIER ("N")
- const PriceValue_T DEFAULT_VALUE_OF_TIME (100.0)
- const Duration_T DEFAULT_MINIMAL_CONNECTION_TIME (0, 30, 0)
- const Duration_T DEFAULT_MAXIMAL_CONNECTION_TIME (24, 0, 0)
- const MatchingIndicator_T DEFAULT_MATCHING_INDICATOR (0.0)
- const PriceCurrency_T DEFAULT_CURRENCY ("EUR")
- const AvailabilityStatus_T DEFAULT_AVAILABILITY_STATUS (false)
- const AirlineCode_T DEFAULT_AIRLINE_CODE ("XX")
- const AirlineCode_T DEFAULT_NULL_AIRLINE_CODE ("")
- const FlightNumber_T DEFAULT_FLIGHT_NUMBER (9999)
- const GuillotineNumber_T DEFAULT_GUILLOTINE_NUMBER (9999)
- const Date_T DEFAULT_DEPARTURE_DATE (1900, boost::gregorian::Jan, 1)
- const AirportCode_T DEFAULT_AIRPORT_CODE ("XXX")
- const AirportCode_T DEFAULT_NULL_AIRPORT_CODE ("")
- const AirportCode_T DEFAULT_ORIGIN ("XXX")
- const AirportCode_T DEFAULT_DESTINATION ("XXX")
- const CabinCode_T DEFAULT_CABIN_CODE ("X")
- const FamilyCode_T DEFAULT_FARE_FAMILY_CODE ("EcoSaver")
- const FamilyCode_T DEFAULT_NULL_FARE_FAMILY_CODE ("NoFF")
- const ClassCode_T DEFAULT_CLASS_CODE ("X")
- const ClassCode_T DEFAULT_NULL_CLASS_CODE ("")
- const BidPrice_T DEFAULT_BID_PRICE (0.0)
- const unsigned short MAXIMAL_NUMBER_OF_LEGS_IN_FLIGHT (7)
- const unsigned short MAXIMAL_NUMBER_OF_SEGMENTS_IN_OND (3)
- const SeatIndex_T DEFAULT_SEAT_INDEX (1)
- const std::string DEFAULT_FARE_FAMILY_VALUE_TYPE ("FF")

- const std::string DEFAULT_SEGMENT_CABIN_VALUE_TYPE ("SC")
- const std::string DEFAULT_KEY_FLD_DELIMITER (";")
- const std::string DEFAULT_KEY_SUB_FLD_DELIMITER (",")
- const boost::char_separator< char > DEFAULT_KEY_TOKEN_DELIMITER (";, ")
- template<int MIN, int MAX>
  date_time_element< MIN, MAX > operator* (const date_time_element< MIN, MAX > &o1, const date_time_element< MIN, MAX > &o2)
- template<int MIN, int MAX>
  date_time_element< MIN, MAX > operator+ (const date_time_element< MIN, MAX > &o1, const date_time_element< MIN, MAX > &o2)
- template void AirlineClassListKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void AirlineClassListKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)
- template void BomRootKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void BomRootKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)
- void intDisplay (std::ostream &oStream, const int &iInt)
- template void BucketKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void BucketKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)
- template void FareFamilyKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void FareFamilyKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)
- template void FlightDateKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void FlightDateKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)
- template void GuillotineBlockKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void GuillotineBlockKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)
- template void InventoryKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void InventoryKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)
- template void OnDDateKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void OnDDateKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)
- const boost::char_separator< char > TokeniserDashSeparator ("-")
- const boost::char_separator< char > TokeniserTimeSeparator (":")
- template void SegmentCabinKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)

- template void SegmentCabinKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)
- template void SegmentDateKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void SegmentDateKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)
- template<class Archive , class BOM_OBJECT1 , class BOM_OBJECT2 > void serialiseHelper (BOM_OBJECT1 &ioObject1, Archive &ioArchive, const unsigned int iFileVersion)
- template void BomRoot::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void BomRoot::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)
- template void Inventory::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void Inventory::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)
- template void FlightDate::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void FlightDate::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)
- template void SegmentDate::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void SegmentDate::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)
- template void SegmentCabin::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void SegmentCabin::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)

Variables

- const std::string DOW_STR []
- const CensorshipFlagList_T DEFAULT_CLASS_CENSORSHIPFLAG_LIST
- const Date_T DEFAULT_DICO_STUDIED_DATE
- const AirlineCodeList_T DEFAULT_AIRLINE_CODE_LIST
- const ClassList_StringList_T DEFAULT_CLASS_CODE_LIST
- const BidPriceVector_T DEFAULT_BID_PRICE_VECTOR = std::vector<BidPrice_T>()
- const int DEFAULT_MAX_DTD = 365
- const DCPList_T DEFAULT_DCP_LIST = DefaultDCPList::init()
- const DTDFratMap_T DEFAULT_DTD_FRAT5COEF_MAP
- const DTDProbMap_T DEFAULT_DTD_PROB_MAP
- const OnDStringList_T DEFAULT_OND_STRING_LIST
- const std::string DISPLAY_LEVEL_STRING_ARRAY [51]
- const std::string DEFAULT_KEY_FLD_DELIMITER
- const std::string DEFAULT_KEY_SUB_FLD_DELIMITER

- const boost::char_separator< char > DEFAULT_KEY_TOKEN_DELIMITER
- const Distance_T DEFAULT_DISTANCE_VALUE
- const ClassCode_T DEFAULT_CLOSED_CLASS_CODE
- const NbOfBookings_T DEFAULT_CLASS_NB_OF_BOOKINGS
- const NbOfBookings_T DEFAULT_CLASS_TOTAL_NB_OF_BOOKINGS
- const NbOfBookings_T DEFAULT_CLASS_UNCONSTRAINED_DEMAND
- const NbOfBookings_T DEFAULT_CLASS_REMAINING_DEMAND_MEAN
- const NbOfBookings_T DEFAULT_CLASS_REMAINING_DEMAND_STANDARD_-DEVIATION
- const NbOfCancellations_T DEFAULT_CLASS_NB_OF_CANCELLATIONS
- const NbOfNoShows_T DEFAULT_CLASS_NB_OF_NOSHOWS
- const CabinCapacity_T DEFAULT_CABIN_CAPACITY
- const CommittedSpace_T DEFAULT_COMMITTED_SPACE
- const BlockSpace_T DEFAULT_BLOCK_SPACE
- const Availability_T DEFAULT_NULL_AVAILABILITY
- const Availability_T DEFAULT_AVAILABILITY
- const CensorshipFlag_T DEFAULT_CLASS_CENSORSHIPFLAG
- const BookingLimit_T DEFAULT_CLASS_BOOKING_LIMIT
- const AuthorizationLevel_T DEFAULT_CLASS_AUTHORIZATION_LEVEL
- const AuthorizationLevel_T DEFAULT_CLASS_MAX_AUTHORIZATION_LEVEL
- const AuthorizationLevel_T DEFAULT_CLASS_MIN_AUTHORIZATION_LEVEL
- const OverbookingRate_T DEFAULT_CLASS_OVERBOOKING_RATE
- const Fare_T DEFAULT_FARE_VALUE
- const Revenue_T DEFAULT_REVENUE_VALUE
- const PriceCurrency_T DEFAULT_CURRENCY
- const Percentage_T DEFAULT_LOAD_FACTOR_VALUE
- const DayDuration_T DEFAULT_DAY_DURATION
- const double DEFAULT_EPSILON_VALUE
- const AirportCode_T AIRPORT_LHR
- const AirportCode_T AIRPORT_SYD
- const CityCode_T POS_LHR
- const DayDuration_T NO_ADVANCE_PURCHASE
- const SaturdayStay_T SATURDAY_STAY
- const SaturdayStay_T NO_SATURDAY_STAY
- const ChangeFees_T CHANGE_FEES
- const ChangeFees_T NO_CHANGE_FEES
- const NonRefundable_T NON_REFUNDABLE
- const NonRefundable_T NO_NON_REFUNDABLE
- const DayDuration_T NO_STAY_DURATION
- const CabinCode_T CABIN_Y
- const AirlineCode_T AIRLINE_CODE_BA
- const ClassCode_T CLASS_CODE_Y
- const ClassCode_T CLASS_CODE_Q
- const AirportCode_T AIRPORT_SIN
- const AirportCode_T AIRPORT_BKK
- const CityCode_T POS_SIN

- const CabinCode_T CABIN_ECO
- const FrequentFlyer_T FREQUENT_FLYER_MEMBER
- const EventQueueID_T DEFAULT_EVENT_QUEUE_ID
- const Count_T DEFAULT_PROGRESS_STATUS
- const Date_T DEFAULT_EVENT_OLDEST_DATE
- const DateTime_T DEFAULT_EVENT_OLDEST_DATETIME
- const std::string DEFAULT_BOM_ROOT_KEY
- const NbOfFlightDates_T DEFAULT_NB_OF_FLIGHTDATES
- const unsigned int DEFAULT_FLIGHT_SPEED
- const BookingRatio_T DEFAULT_OND_BOOKING_RATE
- const Count_T SECONDS_IN_ONE_DAY
- const Count_T MILLISECONDS_IN_ONE_SECOND
- const Date_T DEFAULT_DATE
- const DateTime_T DEFAULT_DATETIME
- const Duration_T DEFAULT_EPSILON_DURATION
- const RandomSeed_T DEFAULT_RANDOM_SEED
- const Duration_T NULL_BOOST_TIME_DURATION
- const Fare_T DEFAULT_CLASS_FARE_VALUE
- const NbOfAirlines_T DEFAULT_NBOFAIRLINES
- const unsigned int DEFAULT_NB_OF_DAYS_IN_A_YEAR
- const ChannelLabel_T DEFAULT_CHANNEL
- const unsigned int DEFAULT_NUMBER_OF_SUBDIVISIONS
- const AirlineCode_T DEFAULT_AIRLINE_CODE
- const AirlineCode_T DEFAULT_NULL_AIRLINE_CODE
- const FlightNumber_T DEFAULT_FLIGHT_NUMBER
- const GuillotineNumber_T DEFAULT_GUILLOTINE_NUMBER
- const Date_T DEFAULT_DEPARTURE_DATE
- const AirportCode_T DEFAULT_AIRPORT_CODE
- const AirportCode_T DEFAULT_NULL_AIRPORT_CODE
- const AirportCode_T DEFAULT_ORIGIN
- const AirportCode_T DEFAULT_DESTINATION
- const CabinCode_T DEFAULT_CABIN_CODE
- const FamilyCode_T DEFAULT_FARE_FAMILY_CODE
- const FamilyCode_T DEFAULT_NULL_FARE_FAMILY_CODE
- const ClassCode_T DEFAULT_CLASS_CODE
- const ClassCode_T DEFAULT_NULL_CLASS_CODE
- const BidPrice_T DEFAULT_BID_PRICE
- const unsigned short MAXIMAL_NUMBER_OF_LEGS_IN_FLIGHT
- const unsigned short MAXIMAL_NUMBER_OF_SEGMENTS_IN_OND
- const Availability_T MAXIMAL_AVAILABILITY
- const SeatIndex_T DEFAULT_SEAT_INDEX
- const std::string DEFAULT_FARE_FAMILY_VALUE_TYPE
- const std::string DEFAULT_SEGMENT_CABIN_VALUE_TYPE
- const DatePeriod_T BOOST_DEFAULT_DATE_PERIOD
- const DOW_String_T DEFAULT_DOW_STRING
- const DateOffset_T DEFAULT_DATE_OFFSET

- const PartySize_T DEFAULT_PARTY_SIZE
- const DayDuration_T DEFAULT_STAY_DURATION
- const WTP_T DEFAULT_WTP
- const CityCode_T DEFAULT_POS
- const Date_T DEFAULT_PREFERRED_DEPARTURE_DATE
- const Duration_T DEFAULT_PREFERRED_DEPARTURE_TIME
- const DateOffset_T DEFAULT_ADVANCE_PURCHASE
- const Date_T DEFAULT_REQUEST_DATE
- const Duration_T DEFAULT_REQUEST_TIME
- const DateTime_T DEFAULT_REQUEST_DATE_TIME
- const CabinCode_T DEFAULT_PREFERRED_CABIN
- const ChannelLabel_T CHANNEL_DN
- const ChannelLabel_T CHANNEL_IN
- const TripType_T TRIP_TYPE_ONE_WAY
- const TripType_T TRIP_TYPE_ROUND_TRIP
- const TripType_T TRIP_TYPE_INBOUND
- const TripType_T TRIP_TYPE_OUTBOUND
- const FrequentFlyer_T DEFAULT_FF_TIER
- const PriceValue_T DEFAULT_VALUE_OF_TIME
- const Duration_T DEFAULT_MINIMAL_CONNECTION_TIME
- const Duration_T DEFAULT_MAXIMAL_CONNECTION_TIME
- const FlightPathCode_T DEFAULT_FLIGHTPATH_CODE
- const Availability_T DEFAULT_CLASS_AVAILABILITY
- const AvailabilityStatus_T DEFAULT_AVAILABILITY_STATUS
- const unsigned short DEFAULT_NUMBER_OF_REQUIRED_SEATS
- const MatchingIndicator_T DEFAULT_MATCHING_INDICATOR
- const AirlineCode_T DEFAULT_DICO_STUDIED_AIRLINE
- const Yield_T DEFAULT_YIELD_VALUE
- const Yield_T DEFAULT_YIELD_MAX_VALUE

33.5.1 Detailed Description

Handle on the StdAir library context.

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Date

20/01/2010 StdAir aims at providing a clean API, and the corresponding C++ implementation, for the basis of Airline IT Business Object Model (BOM), that is, to be used by several other Open Source projects, such as RMOL and OpenTREP.

Install the StdAir library for Airline IT Standard C++ fundaments.

33.5.2 Typedef Documentation

33.5.2.1 typedef date_time_element<0, 23> stdair::hour_t

Type definitions for the date and time elements.

Definition at line 61 of file BasParserHelperTypes.hpp.

33.5.2.2 typedef date_time_element<0, 59> stdair::minute_t

Definition at line 62 of file BasParserHelperTypes.hpp.

33.5.2.3 typedef date_time_element<0, 59> stdair::second_t

Definition at line 63 of file BasParserHelperTypes.hpp.

33.5.2.4 typedef date_time_element<1900, 2100> stdair::year_t

Definition at line 64 of file BasParserHelperTypes.hpp.

33.5.2.5 typedef date_time_element<1, 12> stdair::month_t

Definition at line 65 of file BasParserHelperTypes.hpp.

33.5.2.6 typedef date_time_element<1, 31> stdair::day_t

Definition at line 66 of file BasParserHelperTypes.hpp.

33.5.2.7 typedef std::istreambuf_iterator<char> stdair::base_iterator_t

Definition at line 26 of file BasParserTypes.hpp.

33.5.2.8 typedef boost::spirit::multi_pass<base_iterator_t> stdair::iterator_t

Definition at line 27 of file BasParserTypes.hpp.

33.5.2.9 typedef boost::spirit::qi::int_parser<unsigned int, 10, 1, 1> stdair::int1_p_t

1-digit-integer parser

Definition at line 35 of file BasParserTypes.hpp.

33.5.2.10 typedef boost::spirit::qi::uint_parser<int, 10, 2, 2> stdair::uint2_p_t

2-digit-integer parser

Definition at line 38 of file BasParserTypes.hpp.

33.5.2.11 typedef boost::spirit::qi::uint_parser<int, 10, 4, 4> stdair::uint4_p_t

4-digit-integer parser

Definition at line 41 of file BasParserTypes.hpp.

33.5.2.12 typedef boost::spirit::qi::uint_parser<int, 10, 1, 4> stdair::uint1_4_p_t

Up-to-4-digit-integer parser

Definition at line 44 of file BasParserTypes.hpp.

33.5.2.13 typedef boost::spirit::qi::uint_parser<hour_t, 10, 2, 2> stdair::hour_p_t

Date & time element parsers.

Definition at line 47 of file BasParserTypes.hpp.

33.5.2.14 typedef boost::spirit::qi::uint_parser<minute_t, 10, 2, 2> stdair::minute_p_t

Definition at line 48 of file BasParserTypes.hpp.

33.5.2.15 typedef boost::spirit::qi::uint_parser<second_t, 10, 2, 2> stdair::second_p_t

Definition at line 49 of file BasParserTypes.hpp.

33.5.2.16 typedef boost::spirit::qi::uint_parser<year_t, 10, 4, 4> stdair::year_p_t

Definition at line 50 of file BasParserTypes.hpp.

33.5.2.17 typedef boost::spirit::qi::uint_parser<month_t, 10, 2, 2> stdair::month_p_t

Definition at line 51 of file BasParserTypes.hpp.

33.5.2.18 typedef boost::spirit::qi::uint_parser<day_t, 10, 2, 2> stdair::day_p_t

Definition at line 52 of file BasParserTypes.hpp.

33.5.2.19 typedef unsigned short stdair::DictionaryKey_T

Dictionary key.

Definition at line 17 of file DictionaryManager.hpp.

33.5.2.20 typedef std::list<AirlineClassList*> stdair::AirlineClassListList_T

Define the segment-features list.

Definition at line 17 of file AirlineClassListTypes.hpp.

33.5.2.21 typedef std::map<const MapKey_T, AirlineClassList*> stdair::AirlineClassListMap_T

Define the segment-features map.

Definition at line 23 of file AirlineClassListTypes.hpp.

33.5.2.22 typedef std::pair<MapKey_T, AirlineClassList*> stdair::AirlineClassListWithKey_T

Define the list of pair<MapKey_T, AirlineCodeList>.

Definition at line 26 of file AirlineClassListTypes.hpp.

33.5.2.23 typedef std::list<AirlineClassListWithKey_T> stdair::AirlineClassListDetailedList_T

Definition at line 27 of file AirlineClassListTypes.hpp.

33.5.2.24 typedef std::list<AirlineFeature*> stdair::AirlineFeatureList_T

Define the airline feature list.

Definition at line 17 of file AirlineFeatureTypes.hpp.

33.5.2.25 typedef std::map<const MapKey_T, AirlineFeature*> stdair::AirlineFeatureMap_T

Define the airline feature map.

Definition at line 23 of file AirlineFeatureTypes.hpp.

33.5.2.26 typedef std::list<AirportPair*> stdair::AirportPairList_T

Define the airport-pair list.

Definition at line 17 of file AirportPairTypes.hpp.

33.5.2.27 typedef std::map<const MapKey_T, AirportPair*> stdair::AirportPairMap_T

Define the airport-pair map.

Definition at line 23 of file AirportPairTypes.hpp.

33.5.2.28 typedef std::pair<MapKey_T, AirportPair*> stdair::AirportPairWithKey_T

Define the list of pair<MapKey_T, AirportPair>.

Definition at line 26 of file AirportPairTypes.hpp.

33.5.2.29 typedef std::list<AirportPairWithKey_T> stdair::AirportPairDetailedList_T

Definition at line 27 of file AirportPairTypes.hpp.

33.5.2.30 typedef std::map<const std::type_info*, BomAbstract*> stdair::HolderMap_T

Definition at line 48 of file BomAbstract.hpp.

33.5.2.31 typedef boost::tokenizer< boost::char_separator< char > > stdair::Tokeniser_T

Boost Tokeniser.

Definition at line 27 of file BomKeyManager.cpp.

33.5.2.32 typedef std::list<BookingClass*> stdair::BookingClassList_T

Define the booking class list.

Definition at line 17 of file BookingClassTypes.hpp.

33.5.2.33 typedef std::map<const MapKey_T, BookingClass*> stdair::BookingClassMap_T

Define the booking class map.

Definition at line 23 of file BookingClassTypes.hpp.

33.5.2.34 typedef boost::shared_ptr<BookingRequestStruct> stdair::BookingRequestPtr_T

Define the smart pointer to a booking request.

Definition at line 14 of file BookingRequestTypes.hpp.

33.5.2.35 typedef std::string stdair::DemandGeneratorKey_T

Define the hash key for the demand generator.

Definition at line 21 of file BookingRequestTypes.hpp.

33.5.2.36 typedef std::list<Bucket*> stdair::BucketList_T

Define the bucket list.

Definition at line 17 of file BucketTypes.hpp.

33.5.2.37 typedef std::map<const MapKey_T, Bucket*> stdair::BucketMap_T

Define the bucket map.

Definition at line 23 of file BucketTypes.hpp.

33.5.2.38 typedef boost::shared_ptr<CancellationStruct> stdair::CancellationPtr_T

Define the smart pointer to a cancellation .

Definition at line 14 of file CancellationTypes.hpp.

33.5.2.39 typedef std::list<DatePeriod*> stdair::DatePeriodList_T

Define the date-period list.

Definition at line 17 of file DatePeriodTypes.hpp.

33.5.2.40 typedef std::map<const MapKey_T, DatePeriod*> stdair::DatePeriodMap_T

Define the date-period map.

Definition at line 23 of file DatePeriodTypes.hpp.

33.5.2.41 typedef std::pair<MapKey_T, DatePeriod*> stdair::DatePeriodWithKey_T

Define the list of pair<MapKey_T, DatePeriod>.

Definition at line 26 of file DatePeriodTypes.hpp.

33.5.2.42 typedef std::list<DatePeriodWithKey_T> stdair::DatePeriodDetailedList_T

Definition at line 27 of file DatePeriodTypes.hpp.

33.5.2.43 typedef std::list<EventQueue*> stdair::EventQueueList_T

Define the EventQueue list.

Definition at line 17 of file EventQueueTypes.hpp.

33.5.2.44 typedef std::map<const MapKey_T, EventQueue*> stdair::EventQueueMap_T

Define the EventQueue map.

Definition at line 23 of file EventQueueTypes.hpp.

33.5.2.45 typedef std::pair<const LongDuration_T, EventStruct> stdair::EventListElement_T

Define an element of a event list.

Definition at line 22 of file EventTypes.hpp.

33.5.2.46 typedef std::map<const LongDuration_T, EventStruct> stdair::EventList_T

Define a list of events.

Definition at line 32 of file EventTypes.hpp.

33.5.2.47 typedef std::list<FareFamily*> stdair::FareFamilyList_T

Define the fare family list.

Definition at line 17 of file FareFamilyTypes.hpp.

33.5.2.48 typedef std::map<const MapKey_T, FareFamily*> stdair::FareFamilyMap_T

Define the fare family map.

Definition at line 23 of file FareFamilyTypes.hpp.

33.5.2.49 typedef std::list<FareFeatures*> stdair::FareFeaturesList_T

Define the date-period list.

Definition at line 17 of file FareFeaturesTypes.hpp.

33.5.2.50 typedef std::map<const MapKey_T, FareFeatures*> stdair::FareFeaturesMap_T

Define the date-period map.

Definition at line 23 of file FareFeaturesTypes.hpp.

33.5.2.51 typedef std::pair<MapKey_T, FareFeatures*> stdair::FareFeaturesWithKey_T

Define the list of pair<MapKey_T, FareFeatures>.

Definition at line 26 of file FareFeaturesTypes.hpp.

33.5.2.52 typedef std::list<FareFeaturesWithKey_T> stdair::FareFeaturesDetailedList_T

Definition at line 27 of file FareFeaturesTypes.hpp.

33.5.2.53 typedef std::list<FareOptionStruct> stdair::FareOptionList_T

Define the booking class list.

Definition at line 18 of file FareOptionTypes.hpp.

33.5.2.54 typedef std::list<FlightDate*> stdair::FlightDateList_T

Define the flight-date list.

Definition at line 17 of file FlightDateTypes.hpp.

33.5.2.55 typedef std::map<const MapKey_T, FlightDate*> stdair::FlightDateMap_T

Define the flight-date map.

Definition at line 24 of file FlightDateTypes.hpp.

33.5.2.56 typedef std::list<FlightPeriod*> stdair::FlightPeriodList_T

Define the flight-period list.

Definition at line 17 of file FlightPeriodTypes.hpp.

33.5.2.57 typedef std::map<const MapKey_T, FlightPeriod*> stdair::FlightPeriodMap_T

Define the flight-period map.

Definition at line 23 of file FlightPeriodTypes.hpp.

33.5.2.58 typedef std::list<GuillotineBlock*> stdair::GuillotineBlockList_T

Define the guillotine-block list.

Definition at line 20 of file GuillotineBlockTypes.hpp.

33.5.2.59 typedef std::map<const MapKey_T, GuillotineBlock*> stdair::GuillotineBlockMap_T

Define the guillotine-block map.

Definition at line 27 of file GuillotineBlockTypes.hpp.

33.5.2.60 typedef std::map<const SegmentCabin*, BlockNumber_T> stdair::SegmentCabinIndexMap_T

Define the map between the segment-cabins and the block number.

Definition at line 30 of file GuillotineBlockTypes.hpp.

33.5.2.61 typedef std::map<const MapKey_T, BlockIndex_T> stdair::ValueTypeIndexMap_T

Define the map between the value type of the snapshots and their index.

Definition at line 33 of file GuillotineBlockTypes.hpp.

33.5.2.62 typedef std::list<Inventory*> stdair::InventoryList_T

Define the Inventory list.

Definition at line 17 of file InventoryTypes.hpp.

33.5.2.63 typedef std::map<const MapKey_T, Inventory*> stdair::InventoryMap_T

Define the Inventory map.

Definition at line 23 of file InventoryTypes.hpp.

33.5.2.64 typedef std::string stdair::MapKey_T

Key of a STL map.

Definition at line 15 of file key_types.hpp.

33.5.2.65 typedef std::list<std::string> stdair::KeyList_T

List of keys.

Definition at line 18 of file key_types.hpp.

33.5.2.66 typedef std::list<LegCabin*> stdair::LegCabinList_T

Define the leg-cabin list.

Definition at line 17 of file LegCabinTypes.hpp.

33.5.2.67 typedef std::map<const MapKey_T, LegCabin*> stdair::LegCabinMap_T

Define the leg-cabin map.

Definition at line 23 of file LegCabinTypes.hpp.

33.5.2.68 typedef std::list<LegDate*> stdair::LegDateList_T

Define the leg-date list.

Definition at line 17 of file LegDateTypes.hpp.

33.5.2.69 typedef std::map<const MapKey_T, LegDate*> stdair::LegDateMap_T

Define the leg-date map.

Definition at line 23 of file LegDateTypes.hpp.

33.5.2.70 typedef std::list<OnDDate*> stdair::OnDDateList_T

Define the O&D date list.

Definition at line 19 of file OnDDateTypes.hpp.

33.5.2.71 typedef std::map<const MapKey_T, OnDDate*> stdair::OnDDateMap_T

Define the OnD date map.

Definition at line 25 of file OnDDateTypes.hpp.

33.5.2.72 typedef std::pair<std::string, YieldDemandPair_T> stdair::StringDemandStructPair_T

Define the yield mean and standard deviation for a certain cabin/class path. This map is mandatory when using the default BOM tree. This map can be empty if yields are charged otherwise (input file, ...)

Definition at line 32 of file OnDDateTypes.hpp.

33.5.2.73 typedef std::map<std::string, YieldDemandPair_T> stdair::StringDemandStructMap_T

Definition at line 33 of file OnDDateTypes.hpp.

33.5.2.74 typedef std::map<std::string, CabinClassPairList_T> stdair::StringCabinClassPairListMap_T

Define the string matching a (cabin,class) path. (i.e, the string is "Y:M;" for a one leg O&D with the cabin Y and the class M; the string is "Y:M;Y:Y;" for a two legs O&D with the cabin Y and the class M for the first leg, and the cabin Y and the class Y for the second leg).

Definition at line 41 of file OnDDateTypes.hpp.

33.5.2.75 typedef std::pair<std::string, CabinClassPairList_T> stdair::StringCabinClassPair_T

Definition at line 42 of file OnDDateTypes.hpp.

33.5.2.76 typedef std::map<CabinCode_T, WTPDemandPair_T> stdair::CabinForecastMap_T

Define the WTP mean and standard deviation for a certain cabin code. This information is needed to forecast O&D demand per cabin.

Definition at line 48 of file OnDDateTypes.hpp.

33.5.2.77 typedef std::pair<CabinCode_T, WTPDemandPair_T> stdair::CabinForecastPair_T

Definition at line 49 of file OnDDateTypes.hpp.

33.5.2.78 typedef boost:: shared_ptr<OptimisationNotificationStruct> stdair::OptimisationNotificationPtr_T

Define the smart pointer to a optimisation notification.

Definition at line 14 of file OptimisationNotificationTypes.hpp.

33.5.2.79 typedef std::list<PosChannel*> stdair::PosChannelList_T

Define the fare-point_of_sale list.

Definition at line 17 of file PosChannelTypes.hpp.

33.5.2.80 typedef std::map<const MapKey_T, PosChannel*> stdair::PosChannelMap_T

Define the fare-point_of_sale map.

Definition at line 23 of file PosChannelTypes.hpp.

33.5.2.81 typedef std::pair<MapKey_T, PosChannel*> stdair::PosChannelWithKey_T

Define the list of pair<MapKey_T, PosChannel>.

Definition at line 26 of file PosChannelTypes.hpp.

33.5.2.82 typedef std::list<PosChannelWithKey_T> stdair::PosChannelDetailedList_T

Definition at line 27 of file PosChannelTypes.hpp.

33.5.2.83 typedef boost::shared_ptr<RMEventStruct> stdair::RMEventPtr_T

Define the smart pointer to a RM event .

Definition at line 16 of file RMEventTypes.hpp.

33.5.2.84 typedef std::list<RMEventStruct> stdair::RMEventList_T

Define the list of RM events.

Definition at line 23 of file RMEventTypes.hpp.

33.5.2.85 typedef std::list<SegmentCabin*> stdair::SegmentCabinList_T

Define the segment-cabin list.

Definition at line 17 of file SegmentCabinTypes.hpp.

33.5.2.86 typedef std::map<const MapKey_T, SegmentCabin*> stdair::SegmentCabinMap_T

Define the segment-cabin map.

Definition at line 23 of file SegmentCabinTypes.hpp.

33.5.2.87 typedef std::list<SegmentDate*> stdair::SegmentDateList_T

Define the segment-date list.

Definition at line 17 of file SegmentDateTypes.hpp.

33.5.2.88 typedef std::map<const MapKey_T, SegmentDate*> stdair::SegmentDateMap_T

Define the segment-date map.

Definition at line 23 of file SegmentDateTypes.hpp.

33.5.2.89 typedef std::list<SegmentPeriod*> stdair::SegmentPeriodList_T

Define the segment-period list.

Definition at line 17 of file SegmentPeriodTypes.hpp.

33.5.2.90 typedef std::map<const MapKey_T, SegmentPeriod*> stdair::SegmentPeriodMap_T

Define the segment-period map.

Definition at line 23 of file SegmentPeriodTypes.hpp.

33.5.2.91 typedef std::pair<MapKey_T, SegmentPeriod*> stdair::SegmentPeriodWithKey_T

Define the list of pair<MapKey_T, SegmentPeriod>.

Definition at line 26 of file SegmentPeriodTypes.hpp.

33.5.2.92 typedef std::list<SegmentPeriodWithKey_T> stdair::SegmentPeriodDetailedList_T

Definition at line 27 of file SegmentPeriodTypes.hpp.

33.5.2.93 typedef boost::shared_ptr<SnapshotStruct> stdair::SnapshotPtr_T

Define the smart pointer to a snapshot .

Definition at line 14 of file SnapshotTypes.hpp.

33.5.2.94 typedef std::list<TimePeriod*> stdair::TimePeriodList_T

Define the time-period list.

Definition at line 17 of file TimePeriodTypes.hpp.

33.5.2.95 typedef std::map<const MapKey_T, TimePeriod*> stdair::TimePeriodMap_T

Define the time-period map.

Definition at line 23 of file TimePeriodTypes.hpp.

33.5.2.96 typedef std::pair<MapKey_T, TimePeriod*> stdair::TimePeriodWithKey_T

Define the list of pair<MapKey_T, TimePeriod>.

Definition at line 26 of file TimePeriodTypes.hpp.

33.5.2.97 typedef std::list<TimePeriodWithKey_T> stdair::TimePeriodDetailedList_T

Definition at line 27 of file TimePeriodTypes.hpp.

33.5.2.98 typedef std::list<TravelSolutionStruct> stdair::TravelSolutionList_T

Define the booking class list.

Definition at line 19 of file TravelSolutionTypes.hpp.

33.5.2.99 typedef KeyList_T stdair::SegmentPath_T

Define the segment path key.

Definition at line 25 of file TravelSolutionTypes.hpp.

33.5.2.100 typedef std::list<SegmentPath_T> stdair::SegmentPathList_T

Define the list of segment paths.

Definition at line 28 of file TravelSolutionTypes.hpp.

33.5.2.101 typedef std::map<const ClassCode_T, Availability_T> stdair::ClassAvailabilityMap_T

Define booking class - availability map.

Definition at line 31 of file TravelSolutionTypes.hpp.

33.5.2.102 typedef std::list<ClassAvailabilityMap_T> stdair::ClassAvailabilityMapHolder_T

Define list of booking class - availability maps.

Definition at line 34 of file TravelSolutionTypes.hpp.

33.5.2.103 typedef std::map<const ClassCode_T, YieldValue_T> stdair::ClassYieldMap_T

Define booking class - yield map.

Definition at line 37 of file TravelSolutionTypes.hpp.

33.5.2.104 typedef std::list<ClassYieldMap_T> stdair::ClassYieldMapHolder_T

Define list of booking class - yield maps.

Definition at line 40 of file TravelSolutionTypes.hpp.

33.5.2.105 typedef std::list<BidPriceVector_T> stdair::BidPriceVectorHolder_T

Define list of bid price vectors.

Definition at line 43 of file TravelSolutionTypes.hpp.

33.5.2.106 typedef std::map<const ClassCode_T, const BidPriceVector_T*> stdair::ClassBpvMap_T

Define booking class - bid price reference map.

Definition at line 46 of file TravelSolutionTypes.hpp.

33.5.2.107 typedef std::list<ClassBpvMap_T> stdair::ClassBpvMapHolder_T

Define list of booking class - bid price reference maps.

Definition at line 49 of file TravelSolutionTypes.hpp.

33.5.2.108 typedef std::list<VirtualClassStruct> stdair::VirtualClassList_T

Define the booking class list.

Definition at line 17 of file VirtualClassTypes.hpp.

33.5.2.109 typedef std::map<const Yield_T, VirtualClassStruct> stdair::VirtualClassMap_T

Define the booking class map.

Definition at line 23 of file VirtualClassTypes.hpp.

33.5.2.110 typedef std::list<YieldFeatures*> stdair::YieldFeaturesList_T

Define the date-period list.

Definition at line 17 of file YieldFeaturesTypes.hpp.

33.5.2.111 typedef std::map<const MapKey_T, YieldFeatures*> stdair::YieldFeaturesMap_T

Define the date-period map.

Definition at line 23 of file YieldFeaturesTypes.hpp.

33.5.2.112 typedef std::pair<MapKey_T, YieldFeatures*> stdair::YieldFeaturesWithKey_T

Define the list of pair<MapKey_T, YieldFeatures>.

Definition at line 26 of file YieldFeaturesTypes.hpp.

33.5.2.113 typedef std::list<YieldFeaturesWithKey_T> stdair::YieldFeaturesDetailedList_T

Definition at line 27 of file YieldFeaturesTypes.hpp.

33.5.2.114 typedef std::list<YieldStore*> stdair::YieldStoreList_T

Define the Inventory list.

Definition at line 17 of file YieldStoreTypes.hpp.

33.5.2.115 typedef std::map<const MapKey_T, YieldStore*> stdair::YieldStoreMap_T

Define the Inventory map.

Definition at line 23 of file YieldStoreTypes.hpp.

33.5.2.116 typedef std::string stdair::LocationCode_T

Location code (3-letter-code, e.g., LON).

Definition at line 16 of file stdair_basic_types.hpp.

33.5.2.117 typedef unsigned long int stdair::Distance_T

Define a distance (kilometers).

Definition at line 19 of file stdair_basic_types.hpp.

33.5.2.118 typedef LocationCode_T stdair::AirportCode_T

Define the Airport Code type (3-letter-code, e.g., LHR).

Definition at line 22 of file stdair_basic_types.hpp.

33.5.2.119 typedef LocationCode_T stdair::CityCode_T

City code

Definition at line 25 of file stdair_basic_types.hpp.

33.5.2.120 typedef std::string stdair::KeyDescription_T

Define the key description.

Definition at line 28 of file stdair_basic_types.hpp.

33.5.2.121 typedef std::string stdair::AirlineCode_T

Define the Airline Code type (2-letter-code, e.g., BA).

Definition at line 31 of file stdair_basic_types.hpp.

33.5.2.122 typedef unsigned short stdair::FlightNumber_T

Define the type for flight numbers.

Definition at line 34 of file stdair_basic_types.hpp.

33.5.2.123 typedef unsigned short stdair::GuillotineNumber_T

Define the type for guillotine numbers.

Definition at line 37 of file stdair_basic_types.hpp.

33.5.2.124 typedef std::string stdair::CabinCode_T

Define the cabin code (class of service, e.g., first, business, economy).

Definition at line 41 of file stdair_basic_types.hpp.

33.5.2.125 typedef std::string stdair::FamilyCode_T

Define the code of the fare family (e.g., 1, 2, 3, etc.).

Definition at line 44 of file stdair_basic_types.hpp.

33.5.2.126 typedef std::string stdair::ClassCode_T

Define the booking class code (product segment class, e.g., H, B, K, etc.).

Definition at line 48 of file stdair_basic_types.hpp.

33.5.2.127 typedef unsigned long stdair::Identity_T

Define a identity number.

Definition at line 51 of file stdair_basic_types.hpp.

33.5.2.128 typedef std::string stdair::TripType_T

Type of trip type (RO=outbound of round-trip, RI=inbound of round-trip, OW=one way).

Definition at line 55 of file stdair_basic_types.hpp.

33.5.2.129 typedef double stdair::MonetaryValue_T

Monetary value

Definition at line 58 of file stdair_basic_types.hpp.

33.5.2.130 typedef double stdair::RealNumber_T

Real number

Definition at line 61 of file stdair_basic_types.hpp.

33.5.2.131 typedef double stdair::Percentage_T

Define a percentage value (between 0 and 100%).

Definition at line 64 of file stdair_basic_types.hpp.

33.5.2.132 typedef double stdair::PriceValue_T

Define a price value (e.g., 1000.0 Euros).

Definition at line 67 of file stdair_basic_types.hpp.

33.5.2.133 typedef double stdair::YieldValue_T

Define a yield value (e.g., 1000.0 Euros).

Definition at line 70 of file stdair_basic_types.hpp.

33.5.2.134 typedef std::string stdair::PriceCurrency_T

Define a price currency (e.g., EUR for Euros).

Definition at line 73 of file stdair_basic_types.hpp.

33.5.2.135 typedef double stdair::Revenue_T

Define an amount of revenue.

Definition at line 76 of file stdair_basic_types.hpp.

33.5.2.136 typedef double stdair::Multiplier_T

Define the name of a multiplier.

Definition at line 79 of file stdair_basic_types.hpp.

33.5.2.137 typedef double stdair::NbOfSeats_T

Define the number of seats (it can be non integer, because the overbooking can be applied at booking class or PNR level).

Definition at line 83 of file stdair_basic_types.hpp.

33.5.2.138 typedef unsigned int stdair::Count_T

Count

Definition at line 86 of file stdair_basic_types.hpp.

33.5.2.139 typedef short stdair::PartySize_T

Number of passengers (in a group) for a booking.

Definition at line 89 of file stdair_basic_types.hpp.

33.5.2.140 typedef double stdair::NbOfRequests_T

Define a number of requests.

Definition at line 92 of file stdair_basic_types.hpp.

33.5.2.141 typedef NbOfRequests_T stdair::NbOfBookings_T

Define a number of bookings.

Definition at line 95 of file stdair_basic_types.hpp.

33.5.2.142 typedef NbOfRequests_T stdair::NbOfCancellations_T

Define a number of cancellations.

Define a number of cancellations (travellers).

Definition at line 98 of file stdair_basic_types.hpp.

33.5.2.143 typedef unsigned short stdair::NbOfTravelSolutions_T

Define a number of travel solutions (in a travel solution block).

Definition at line 102 of file stdair_basic_types.hpp.

33.5.2.144 typedef std::string stdair::ClassList_String_T

Define the list of class codes as a string.

Definition at line 105 of file stdair_basic_types.hpp.

33.5.2.145 typedef unsigned short stdair::NbOfSegments_T

Define a number of segment-dates (in a path).

Definition at line 108 of file stdair_basic_types.hpp.

33.5.2.146 typedef unsigned short stdair::NbOfAirlines_T

Define a number of airlines (in a path).

Definition at line 111 of file stdair_basic_types.hpp.

33.5.2.147 typedef double stdair::Availability_T

Define an availability.

Definition at line 114 of file stdair_basic_types.hpp.

33.5.2.148 typedef double stdair::Fare_T

Define the price of a travel solution.

Definition at line 117 of file stdair_basic_types.hpp.

33.5.2.149 typedef bool stdair::Flag_T

Define the censorship flag.

Definition at line 120 of file stdair_basic_types.hpp.

33.5.2.150 typedef unsigned int stdair::UnsignedIndex_T

Define the unsigned index type.

Definition at line 123 of file stdair_basic_types.hpp.

33.5.2.151 typedef std::string stdair::Filename_T

File or directory name.

It may contain paths, relative or absolute (e.g., /foo/bar or C:).

Definition at line 129 of file stdair_basic_types.hpp.

33.5.2.152 typedef std::string stdair::FileAddress_T

Define the file address type (e.g. "a_directory/a_filename").

NOTE: That type should be deprecated.

Definition at line 133 of file stdair_basic_types.hpp.

33.5.2.153 typedef float stdair::ProgressPercentage_T

Progress status (usually, a percentage expressed as a floating point number).

Definition at line 137 of file stdair_basic_types.hpp.

33.5.2.154 typedef boost::posix_time::time_duration stdair::Duration_T

Define the type for durations (e.g., elapsed in-flight time).

Definition at line 17 of file stdair_date_time_types.hpp.

33.5.2.155 typedef boost::gregorian::date stdair::Date_T

Define the type for date (e.g., departure date of a flight).

Definition at line 20 of file stdair_date_time_types.hpp.

33.5.2.156 typedef boost::posix_time::time_duration stdair::Time_T

Time

Definition at line 23 of file stdair_date_time_types.hpp.

33.5.2.157 typedef boost::posix_time::ptime stdair::DateTime_T

Define an accurate time (date+time).

Definition at line 26 of file stdair_date_time_types.hpp.

33.5.2.158 typedef boost::gregorian::date_period stdair::DatePeriod_T

Define the Period (e.g., period during which flights depart).

Definition at line 29 of file stdair_date_time_types.hpp.

33.5.2.159 typedef std::string stdair::DOW_String_T

Define the Day-Of-the-Week as a string.

Definition at line 32 of file stdair_date_time_types.hpp.

33.5.2.160 typedef boost::gregorian::date_duration stdair::DateOffset_T

Define the Date Offset (e.g., -1).

Definition at line 35 of file stdair_date_time_types.hpp.

33.5.2.161 typedef unsigned int stdair::DayDuration_T

Define a duration in number of days.

Definition at line 38 of file stdair_date_time_types.hpp.

33.5.2.162 typedef bool stdair::SaturdayStay_T

Define the Saturday stay status of a travel.

Define the saturday stay of a tickets.

Definition at line 41 of file stdair_date_time_types.hpp.

33.5.2.163 typedef long int stdair::IntDuration_T

Time duration in (integer) number of seconds

Definition at line 44 of file stdair_date_time_types.hpp.

33.5.2.164 typedef unsigned long long int stdair::LongDuration_T

Time duration in (unsigned long long integer) number of milliseconds

Definition at line 47 of file stdair_date_time_types.hpp.

33.5.2.165 typedef float stdair::FloatDuration_T

Duration in (float) number of time units

Definition at line 50 of file stdair_date_time_types.hpp.

33.5.2.166 typedef soci::session stdair::DBSession_T

Database session handler.

Definition at line 20 of file stdair_db.hpp.

33.5.2.167 typedef soci::statement stdair::DBRequestStatement_T

Database request statement handler.

Definition at line 23 of file stdair_db.hpp.

33.5.2.168 typedef std::string stdair::DBConnectionName_T

Define the name of an database connection.

Definition at line 26 of file stdair_db.hpp.

33.5.2.169 typedef bool stdair::ChangeFees_T

Define the availability option allowing the ticket change.

Definition at line 29 of file stdair_demand_types.hpp.

33.5.2.170 typedef bool stdair::NonRefundable_T

Define the refundable availability of a tickets.

Definition at line 32 of file stdair_demand_types.hpp.

33.5.2.171 typedef unsigned int stdair::SaturdayStayRatio_T

Define the average ratio (between 0 and 100) of demand with a saturday stay status equal to TRUE.

Definition at line 39 of file stdair_demand_types.hpp.

33.5.2.172 typedef unsigned int stdair::ChangeFeesRatio_T

Define the average ratio of demand with change fee availability.

Definition at line 43 of file stdair_demand_types.hpp.

33.5.2.173 typedef unsigned int stdair::NonRefundableRatio_T

Define the average ratio of demand with non-refundable availability.

Definition at line 47 of file stdair_demand_types.hpp.

33.5.2.174 typedef std::string stdair::PassengerType_T

Define the passenger characteristics, leisure or business for instance (1-letter-code, e.g., L or B).

Definition at line 51 of file stdair_demand_types.hpp.

33.5.2.175 typedef std::string stdair::DistributionPatternId_T

Define the identifier of a distribution pattern (e.g., 1).

Definition at line 54 of file stdair_demand_types.hpp.

33.5.2.176 typedef std::string stdair::CancellationRateCurveId_T

Define the identifier of a cancellation rate curve (e.g., C1).

Definition at line 57 of file stdair_demand_types.hpp.

33.5.2.177 typedef std::string stdair::AirlinePreferenceId_T

Define the identifier of an airline preference set list (e.g., AP1).

Definition at line 60 of file stdair_demand_types.hpp.

33.5.2.178 typedef std::pair<Percentage_T, Percentage_T> stdair::CancellationNoShowRatePair_T

Define a cancellation & and no-show rate pair.

Definition at line 63 of file stdair_demand_types.hpp.

33.5.2.179 typedef std::string stdair::CharacteristicsPatternId_T

Define the identifier of a demand characteristics pattern (e.g. Ch12); for a customer choice model

Definition at line 67 of file stdair_demand_types.hpp.

33.5.2.180 typedef std::string stdair::CharacteristicsIndex_T

Define characteristics component index (e.g. W for WTP)

Definition at line 70 of file stdair_demand_types.hpp.

33.5.2.181 typedef double stdair::WTP_T

Define a Willingness-To-Pay (WTP) (e.g., 1000.0 Euros).

Definition at line 73 of file stdair_demand_types.hpp.

33.5.2.182 typedef boost::tuples::tuple<double, WTP_T> stdair::CharacteristicsWTP_tuple_T

Define the name of a WTP-component of characteristics pattern.

Definition at line 76 of file stdair_demand_types.hpp.

33.5.2.183 typedef std::pair<WTP_T, MeanStdDevPair_T> stdair::WTPDemandPair_T

Define the <WTP, demand> pair type.

Definition at line 79 of file stdair_demand_types.hpp.

33.5.2.184 typedef NbOfRequests_T stdair::NbOfNoShows_T

Define a number of no-shows.

Definition at line 85 of file stdair_demand_types.hpp.

33.5.2.185 typedef double stdair::MatchingIndicator_T

Define a indicator of demand to class matching.

Definition at line 88 of file stdair_demand_types.hpp.

33.5.2.186 typedef std::string stdair::DemandStreamKeyStr_T

Type definition for the hashed key of the DemandStreamKey object.

Definition at line 91 of file stdair_demand_types.hpp.

33.5.2.187 typedef std::string stdair::ChannelLabel_T

Type of booking channel (D=direct, I=indirect, N=oNline, F=oFfline).

Definition at line 94 of file stdair_demand_types.hpp.

33.5.2.188 typedef std::string stdair::FrequentFlyer_T

Type of frequent flyer (P=Platinum, G=Gold, S=Silver, M=Member, N=None).

Definition at line 97 of file stdair_demand_types.hpp.

33.5.2.189 typedef std::string stdair::RequestStatus_T

Define the Request status for booking (1-letter-code, e.g., B: booked, C: cancelled, R: Rejected).

Definition at line 101 of file stdair_demand_types.hpp.

33.5.2.190 typedef std::map<Identity_T, Identity_T> stdair::BookingTSIDMap_T

Define a map between a BookingID and a TravelSolutionID.

Definition at line 104 of file stdair_demand_types.hpp.

33.5.2.191 typedef std::pair<CabinCode_T, ClassCode_T> stdair::CabinClassPair_T

Define a pair (cabin code, class code) e.g., (economy, K).

Definition at line 107 of file stdair_demand_types.hpp.

33.5.2.192 typedef std::list<CabinClassPair_T> stdair::CabinClassPairList_T

Define a list of pair (cabin code, class code).

Definition at line 110 of file stdair_demand_types.hpp.

33.5.2.193 typedef double stdair::ProportionFactor_T

Define the forecast booking requests proportion.

Definition at line 113 of file stdair_demand_types.hpp.

33.5.2.194 typedef std::list<ProportionFactor_T> stdair::ProportionFactorList_T

Define the list of forecast booking requests proportions.

Definition at line 116 of file stdair_demand_types.hpp.

33.5.2.195 typedef std::string stdair::OnDString_T

Define the O&D string key (e.g. "SQ;11,2010-Feb-08;SIN,BKK").

Definition at line 119 of file stdair_demand_types.hpp.

33.5.2.196 typedef std::list<OnDString_T> stdair::OnDStringList_T

Define the list of O&D string key.

Definition at line 122 of file stdair_demand_types.hpp.

33.5.2.197 typedef std::string stdair::EventName_T

Define the name of an event.

Definition at line 14 of file stdair_event_types.hpp.

33.5.2.198 typedef double stdair::NbOfEvents_T

Define a number of events.

Definition at line 17 of file stdair_event_types.hpp.

33.5.2.199 typedef std::string stdair::EventQueueID_T

Define an ID for an EventQueue object.

Definition at line 20 of file stdair_event_types.hpp.

33.5.2.200 typedef std::string stdair::EventGeneratorKey_T

Define a key string of an event generator.

Definition at line 23 of file stdair_event_types.hpp.

33.5.2.201 typedef double stdair::NbOfFareRules_T

Define a number of fare rules.

Definition at line 12 of file stdair_fare_types.hpp.

33.5.2.202 typedef std::string stdair::NetworkID_T

Define the type for network ID.

Definition at line 23 of file stdair_inventory_types.hpp.

33.5.2.203 typedef std::vector<AirlineCode_T> stdair::AirlineCodeList_T

Define a list of airline code.

Definition at line 26 of file stdair_inventory_types.hpp.

33.5.2.204 typedef std::vector<ClassList_String_T> stdair::ClassList_StringList_T

Define the list of list of class codes as a string.

Definition at line 29 of file stdair_inventory_types.hpp.

33.5.2.205 typedef std::vector<ClassCode_T> stdair::ClassCodeList_T

Define a list of class code.

Definition at line 32 of file stdair_inventory_types.hpp.

33.5.2.206 typedef unsigned short stdair::SubclassCode_T

Define the sub-class code (e.g., 0, 1, 2, etc.). The subclass is a sub-structure for the booking class, allowing to have specific rules for some criteria like POS.

Definition at line 37 of file stdair_inventory_types.hpp.

33.5.2.207 typedef std::string stdair::FlightPathCode_T

Define the flight path code (code made by a suite of flight numbers).

Definition at line 40 of file stdair_inventory_types.hpp.

33.5.2.208 typedef std::map<CabinCode_T, ClassList_String_T> stdair::CabinBookingClassMap_T

Map between the cabin codes and the booking class codes within each cabin.

Definition at line 44 of file stdair_inventory_types.hpp.

33.5.2.209 typedef double stdair::CabinCapacity_T

Define the cabin capacity (resource, e.g., 200 seats).

The capacity is expressed as a double to cope with overbooking.

Definition at line 48 of file stdair_inventory_types.hpp.

33.5.2.210 typedef double stdair::NbOfFlightDates_T

Define a number of flight dates.

Definition at line 51 of file stdair_inventory_types.hpp.

33.5.2.211 typedef double stdair::CommittedSpace_T

Define the commited space of a cabin.

Definition at line 54 of file stdair_inventory_types.hpp.

33.5.2.212 typedef double stdair::UPR_T

Define the unsold protection (UPR).

Definition at line 57 of file stdair_inventory_types.hpp.

33.5.2.213 typedef double stdair::BookingLimit_T

Define the value of the booking limit.

Define the Booking Limit.

It is a double, as it allows for overbooking.

Definition at line 60 of file stdair_inventory_types.hpp.

33.5.2.214 typedef double stdair::AuthorizationLevel_T

Define the value of the authorization level.

Definition at line 63 of file stdair_inventory_types.hpp.

33.5.2.215 typedef double stdair::CapacityAdjustment_T

Define the value of the adjustment for cabin capacity.

Definition at line 66 of file stdair_inventory_types.hpp.

33.5.2.216 typedef double stdair::BlockSpace_T

Define the number of seat which could not be used for the booking.

Definition at line 69 of file stdair_inventory_types.hpp.

33.5.2.217 typedef bool stdair::AvailabilityStatus_T

Define an availability status (AVS).

Definition at line 72 of file stdair_inventory_types.hpp.

33.5.2.218 typedef std::vector<Availability_T> stdair::BucketAvailabilities_T

Define a list of availabilities.

Definition at line 75 of file stdair_inventory_types.hpp.

33.5.2.219 typedef double stdair::NbOfYields_T

Define a number of yields.

Definition at line 78 of file stdair_inventory_types.hpp.

33.5.2.220 typedef double stdair::NbOfInventoryControlRules_T

Define a number of InventoryControlRules.

Definition at line 81 of file stdair_inventory_types.hpp.

33.5.2.221 typedef bool stdair::CensorshipFlag_T

Define availibility of booking limit.

Definition at line 84 of file stdair_inventory_types.hpp.

33.5.2.222 typedef short stdair::DTD_T

Define the type of day-to-departure.

Definition at line 87 of file stdair_inventory_types.hpp.

33.5.2.223 typedef short stdair::DCP_T

Define the type of data collection point.

Definition at line 90 of file stdair_inventory_types.hpp.

33.5.2.224 typedef std::list<DCP_T> stdair::DCPList_T

Define the type of data collection point list.

Definition at line 93 of file stdair_inventory_types.hpp.

33.5.2.225 typedef std::map<DTD_T, RealNumber_T> stdair::DTDFratMap_T

Define the DTD (days to departure) frat5 coef map.

Definition at line 96 of file stdair_inventory_types.hpp.

33.5.2.226 typedef std::map<FloatDuration_T, float> stdair::DTDProbMap_T

Define the DTD (days to departure) probability map.

Definition at line 99 of file stdair_inventory_types.hpp.

33.5.2.227 typedef std::vector<CensorshipFlag_T> stdair::CensorshipFlagList_T

Define the list of censorship flags (une list per booking class, one censorship flag per DCP).

Definition at line 103 of file stdair_inventory_types.hpp.

33.5.2.228 typedef double stdair::BookingRatio_T

Define the bookingRatio (for instance OnD bookings over whole class bookings).

Definition at line 107 of file stdair_inventory_types.hpp.

33.5.2.229 typedef double stdair::Yield_T

Define the yield of a virtual class.

Definition at line 110 of file stdair_inventory_types.hpp.

33.5.2.230 typedef unsigned int stdair::YieldLevel_T

Define the yield level (yield as an integer).

Definition at line 113 of file stdair_inventory_types.hpp.

33.5.2.231 typedef std::map<YieldLevel_T, MeanStdDevPair_T> stdair::YieldLevelDemandMap_T

Define the <YieldLevel, demand> demand map.

Definition at line 116 of file stdair_inventory_types.hpp.

33.5.2.232 typedef std::pair<Yield_T, MeanStdDevPair_T> stdair::YieldDemandPair_T

Define the <Yield, demand> pair type.

Definition at line 119 of file stdair_inventory_types.hpp.

33.5.2.233 typedef double stdair::BidPrice_T

Define the Bid-Price.

Definition at line 122 of file stdair_inventory_types.hpp.

33.5.2.234 typedef std::vector<BidPrice_T> stdair::BidPriceVector_T

Define a Bid-Price Vector.

Definition at line 125 of file stdair_inventory_types.hpp.

33.5.2.235 typedef unsigned int stdair::SeatIndex_T

Define the current index of a Bid-Price Vector (for a given LegCabin).

Definition at line 128 of file stdair_inventory_types.hpp.

33.5.2.236 typedef std::string stdair::ControlMode_T

Mode of inventory control.

Definition at line 131 of file stdair_inventory_types.hpp.

33.5.2.237 typedef double stdair::OverbookingRate_T

Define the rate of overbooking

Definition at line 134 of file stdair_inventory_types.hpp.

33.5.2.238 typedef double stdair::ProtectionLevel_T

Define the Protection Level.

It is a double, as it allows for overbooking.

Definition at line 142 of file stdair_inventory_types.hpp.

33.5.2.239 typedef std::vector<double> stdair::EmsrValueList_T

Define the list of EMSR values for the EMSR algorithm.

Definition at line 145 of file stdair_inventory_types.hpp.

33.5.2.240 typedef std::vector<double> stdair::BookingLimitVector_T

Define the vector of booking limits.

It is a vector of double.

Definition at line 149 of file stdair_inventory_types.hpp.

33.5.2.241 typedef std::vector<double> stdair::ProtectionLevelVector_T

Define the vector of protection levels.

It is a vector of double.

Definition at line 153 of file stdair_inventory_types.hpp.

33.5.2.242 typedef boost::multi_array<double, 2> stdair::SnapshotBlock_T

Define a snapshot block.

Definition at line 156 of file stdair_inventory_types.hpp.

33.5.2.243 typedef SnapshotBlock_T::index_range stdair::SnapshotBlockRange_T

Define a range for array view.

Definition at line 159 of file stdair_inventory_types.hpp.

33.5.2.244 typedef SnapshotBlock_T::array_view<1>::type stdair::SegmentCabinDTDSnapshotView_T

Define a view for a given DTD.

Definition at line 162 of file stdair_inventory_types.hpp.

33.5.2.245 typedef SnapshotBlock_T::array_view<2>::type stdair::SegmentCabinDTDRangeSnapshotView_T

Define a view for a given range of DTD.

Definition at line 165 of file stdair_inventory_types.hpp.

33.5.2.246 typedef SnapshotBlock_T::const_array_view<1>::type stdair::ConstSegmentCabinDTDSnapshotView_T

Define a const view for a given DTD.

Definition at line 168 of file stdair_inventory_types.hpp.

33.5.2.247 typedef SnapshotBlock_T::const_array_view<2>::type stdair::ConstSegmentCabinDTDRangeSnapshotView_T

Define a const view for a given range of DTD.

Definition at line 171 of file stdair_inventory_types.hpp.

33.5.2.248 typedef unsigned short stdair::BlockNumber_T

Define the snapshot block number.

Definition at line 174 of file stdair_inventory_types.hpp.

33.5.2.249 typedef unsigned short stdair::BlockIndex_T

Define the index type within a snapshot block.

Definition at line 177 of file stdair_inventory_types.hpp.

33.5.2.250 typedef unsigned int stdair::ReplicationNumber_T

Define the replication number.

Definition at line 24 of file stdair_maths_types.hpp.

33.5.2.251 typedef unsigned long int stdair::ExponentialSeed_T

Define the seed type of an Exponential function.

Definition at line 29 of file stdair_maths_types.hpp.

33.5.2.252 typedef unsigned long int stdair::UniformSeed_T

Define the seed type of an Uniform function.

Definition at line 34 of file stdair_maths_types.hpp.

33.5.2.253 typedef unsigned long int stdair::RandomSeed_T

Seed for the random generation, so that it can be reproductible.

Definition at line 39 of file stdair_maths_types.hpp.

33.5.2.254 typedef boost::minstd_rand stdair::BaseGenerator_T

Random number generator.

Definition at line 44 of file stdair_maths_types.hpp.

33.5.2.255 typedef boost::uniform_real stdair::UniformDistribution_T

Uniform distribution of real numbers (by default, double).

Definition at line 49 of file stdair_maths_types.hpp.

33.5.2.256 typedef boost::variate_generator<BaseGenerator_T&, UniformDistribution_T> stdair::UniformGenerator_T

Uniform random generator.

Definition at line 55 of file stdair_maths_types.hpp.

33.5.2.257 typedef boost::normal_distribution stdair::NormalDistribution_T

Normal distribution of real numbers (by default, double).

Definition at line 60 of file stdair_maths_types.hpp.

33.5.2.258 typedef boost::variate_generator<BaseGenerator_T&, NormalDistribution_T> stdair::NormalGenerator_T

Nornal random generator.

Definition at line 66 of file stdair_maths_types.hpp.

33.5.2.259 typedef boost::exponential_distribution stdair::ExponentialDistribution_T

Type definiton for the exponential distribution (characteristics).

Definition at line 69 of file stdair_maths_types.hpp.

33.5.2.260 typedef boost::variate_generator<BaseGenerator_T&, ExponentialDistribution_T> stdair::ExponentialGenerator_T

Type definition for the exponential distribution random generator.

Definition at line 74 of file stdair_maths_types.hpp.

33.5.2.261 typedef double stdair::MeanValue_T

Define a mean value (e.g., 20.2).

Definition at line 79 of file stdair_maths_types.hpp.

33.5.2.262 typedef double stdair::StdDevValue_T

Define a standard deviation value (e.g., 1.5).

Definition at line 84 of file stdair_maths_types.hpp.

33.5.2.263 typedef std::pair<MeanValue_T, StdDevValue_T> stdair::MeanStdDevPair_T

Define a couple (mean, standart deviation) (e.g., (20.2,1.5)).

Definition at line 89 of file stdair_maths_types.hpp.

33.5.2.264 typedef float stdair::Probability_T

Probability.

Definition at line 94 of file stdair_maths_types.hpp.

33.5.2.265 typedef std::string stdair::ForecasterMode_T

Mode of the forecaster.

Definition at line 17 of file stdair_rm_types.hpp.

33.5.2.266 typedef short stdair::HistoricalDataLimit_T

Limit of similar flight-dates used in the forecaster.

Definition at line 20 of file stdair_rm_types.hpp.

33.5.2.267 typedef std::string stdair::OptimizerMode_T

Mode of the forecaster.

Definition at line 23 of file stdair_rm_types.hpp.

33.5.2.268 typedef NbOfBookings_T stdair::PolicyDemand_T

Define the demand for a policy.

Definition at line 26 of file stdair_rm_types.hpp.

33.5.2.269 typedef std::vector<double> stdair::GeneratedDemandVector_T

Define the vector of generated demand (for MC integration use).

It is a vector of double.

Definition at line 30 of file stdair_rm_types.hpp.

33.5.2.270 typedef std::vector<GeneratedDemandVector_T> stdair::GeneratedDemandVectorHolder_T

Define the holder of the generated demand vectors.

Definition at line 33 of file stdair_rm_types.hpp.

33.5.2.271 typedef double stdair::SellupProbability_T

Define the sellup probability.

Definition at line 36 of file stdair_rm_types.hpp.

33.5.2.272 typedef std::vector<SellupProbability_T> stdair::SellupProbabilityVector_T

Define the sellup probability vector.

Definition at line 39 of file stdair_rm_types.hpp.

33.5.2.273 typedef std::vector<double> stdair::SellupFactorHolder_T

Define the holder of sellup factors (used for computing Q-eq bookings)

Definition at line 42 of file stdair_rm_types.hpp.

33.5.2.274 typedef boost::shared_ptr<STDAIR_Service> stdair::STDAIR_ServicePtr_T

Pointer on the STDAIR Service handler.

Definition at line 13 of file stdair_service_types.hpp.

33.5.3 Function Documentation

33.5.3.1 const std::string stdair::DEFAULT_BOM_ROOT_KEY (" -- ROOT -- ")

Default value for the BOM tree root key (" -- ROOT -- ").

33.5.3.2 const double stdair::DEFAULT_EPSILON_VALUE (0. *0001*)

Default very small value.

33.5.3.3 const unsigned int stdair::DEFAULT_FLIGHT_SPEED (900)

Default flight speed (number of kilometers per hour).

33.5.3.4 const NbOfFlightDates_T stdair::DEFAULT_NB_OF_FLIGHTDATES (0. *0*)

Default number of generated flight dates.

33.5.3.5 const Duration_T stdair::NULL_BOOST_TIME_DURATION (*- 1, - 1, - 1*)

Null time duration (in boost::time_duration unit).

33.5.3.6 const unsigned int stdair::DEFAULT_NB_OF_DAYS_IN_A_YEAR (365)

Default number of days in a year.

33.5.3.7 const unsigned int stdair::DEFAULT_NUMBER_OF_SUBDIVISIONS (1000)

Higher value per thousand

33.5.3.8 const DayDuration_T stdair::DEFAULT_DAY_DURATION (0)

Default number of duration days.

33.5.3.9 const DatePeriod_T stdair::BOOST_DEFAULT_DATE_PERIOD (Date_T(2007, 1, 1) , Date_T(2007, 1, 1))

Default date period (0-length, i.e., it lasts one day).

33.5.3.10 const DOW_String_T stdair::DEFAULT_DOW_STRING ("0000000")

Default DOW String (e.g., "0000000").

33.5.3.11 const DateOffset_T stdair::DEFAULT_DATE_OFFSET (0)

Default Date Offset (e.g., 0).

33.5.3.12 const Date_T stdair::DEFAULT_DATE (2010 , boost::gregorian::Jan , 1)

Default date for the General.

33.5.3.13 const DateTime_T stdair::DEFAULT_DATETIME (DEFAULT_DATE , NULL_BOOST_TIME_DURATION)

Default date-time.

33.5.3.14 const Duration_T stdair::DEFAULT_EPSILON_DURATION (0 , 0 , 0 , 1)

Default epsilon duration (1 nanosecond).

33.5.3.15 const Count_T stdair::SECONDS_IN_ONE_DAY (86400)

Number of seconds in one day.

33.5.3.16 const Count_T stdair::MILLISECONDS_IN_ONE_SECOND (1000)

Number of milliseconds in one second

33.5.3.17 const RandomSeed_T stdair::DEFAULT_RANDOM_SEED (120765987)

Default random seed.

33.5.3.18 const AirportCode_T stdair::AIRPORT_LHR ("LHR")

Default origin airport (e.g., "LHR").

33.5.3.19 const AirportCode_T stdair::AIRPORT_SYD ("SYD")

Default destination airport (e.g., "SYD").

33.5.3.20 const CityCode_T stdair::POS_LHR ("LHR")

London city code (e.g., "LHR").

33.5.3.21 const Date_T stdair::DATE_20110115 (2011 , boost::gregorian::Jan , 15)

Date.

33.5.3.22 const Date_T stdair::DATE_20111231 (2011 , boost::gregorian::Dec , 31)

33.5.3.23 const DayDuration_T stdair::NO_ADVANCE_PURCHASE (0)

Advance purchase 0 day.

33.5.3.24 const SaturdayStay_T stdair::SATURDAY_STAY (true)

Default saturdayStay value (true).

33.5.3.25 const SaturdayStay_T stdair::NO_SATURDAY_STAY (false)

Default saturdayStay value (false).

33.5.3.26 const ChangeFees_T stdair::CHANGE_FEES (true)

Default change fees value (true).

33.5.3.27 const ChangeFees_T stdair::NO_CHANGE_FEES (false)

Default change fees value (false).

33.5.3.28 const NonRefundable_T stdair::NON_REFUNDABLE (true)

Default non refundable value (true).

33.5.3.29 const NonRefundable_T stdair::No_NON_REFUNDABLE (false)

Default refundable value (false).

33.5.3.30 const SaturdayStay_T stdair::DEFAULT_BOM_TREE_SATURDAY_STAY (true)

Default saturdayStay value (true).

33.5.3.31 const ChangeFees_T stdair::DEFAULT_BOM_TREE_CHANGE_FEES (true)

Default change fees value (true).

33.5.3.32 const NonRefundable_T stdair::DEFAULT_BOM_TREE_NON_REFUNDABLE (true)

Default non refundable value (true).

33.5.3.33 const DayDuration_T stdair::NO_STAY_DURATION (0)

Stay duration 0 day.

33.5.3.34 const AirlineCode_T stdair::AIRLINE_CODE_BA ("BA")

Airline code "BA".

33.5.3.35 const CabinCode_T stdair::CABIN_Y ("Y")

Cabin 'Y'.

33.5.3.36 const ClassCode_T stdair::CLASS_CODE_Y ("Y")

Class code 'Y'.

33.5.3.37 const ClassCode_T stdair::CLASS_CODE_Q ("Q")

Class code 'Q'.

33.5.3.38 const AirportCode_T stdair::AIRPORT_SIN ("SIN")

Singapour airport (e.g., "SIN").

33.5.3.39 const AirportCode_T stdair::AIRPORT_BKK ("BKK")

Bangkok airport (e.g., "BKK").

33.5.3.40 const CityCode_T stdair::POS_SIN ("SIN")

Singapour city code (e.g., "SIN").

33.5.3.41 const CabinCode_T stdair::CABIN_ECO ("Eco")

Economic cabin (e.g., "Eco").

33.5.3.42 const FrequentFlyer_T stdair::FREQUENT_FLYER_MEMBER ("M")

Frequent flyer tier (e.g., "M" meaning member).

33.5.3.43 const ClassCode_T stdair::DEFAULT_FAMILY_CODE ("0")

Default family code value ("X").

33.5.3.44 const NbOfAirlines_T stdair::DEFAULT_NBOFAIRLINES (0)

Default number of airlines.

33.5.3.45 const FlightPathCode_T stdair::DEFAULT_FLIGHTPATH_CODE ("")

Default flight-path code value ("").

33.5.3.46 const Distance_T stdair::DEFAULT_DISTANCE_VALUE (0)

Default distance value (kilometers).

33.5.3.47 const ClassCode_T stdair::DEFAULT_CLOSED_CLASS_CODE ("CC")

Default closed class code.

33.5.3.48 const NbOfBookings_T stdair::DEFAULT_CLASS_NB_OF_BOOKINGS (0)

Default number of bookings (with counted cancellation) for BookingClass.

33.5.3.49 const NbOfBookings_T stdair::DEFAULT_CLASS_TOTAL_NB_OF_BOOKINGS (0)

Default number of booking (without cancellation) demands for BookingClass.

33.5.3.50 const NbOfBookings_T stdair::DEFAULT_CLASS_UNCONSTRAINED_DEMAND (0)

Default unconstrained demand for BookingClass.

33.5.3.51 const NbOfBookings_T stdair::DEFAULT_CLASS_REMAINING_DEMAND_MEAN (0)

Default remaining future demand mean for BookingClass.

33.5.3.52 const NbOfBookings_T stdair::DEFAULT_CLASS_REMAINING_DEMAND_STANDARD_DEVIATION (0)

Default remaining futre demand standard deviation for BookingClass.

33.5.3.53 const NbOfCancellations_T stdair::DEFAULT_CLASS_NB_OF_-CANCELLATIONS (0)

Default number of cancellations for BookingClass.

33.5.3.54 const NbOfNoShows_T stdair::DEFAULT_CLASS_NB_OF_NOSHOWS (0)

Default number of no-shows for BookingClass.

33.5.3.55 const CabinCapacity_T stdair::DEFAULT_CABIN_CAPACITY (100.*0*)

Default cabin capacity for Leg cabins.

33.5.3.56 const CommittedSpace_T stdair::DEFAULT_COMMITTED_SPACE (0.*0*)

Default committed space value for Leg cabins.

33.5.3.57 const BlockSpace_T stdair::DEFAULT_BLOCK_SPACE (0.*0*)

Default commited space value for Leg cabins.

33.5.3.58 const Availability_T stdair::DEFAULT_NULL_AVAILABILITY (0.*0*)

Default null availability (0.0).

33.5.3.59 const Availability_T stdair::DEFAULT_AVAILABILITY (9.*0*)

Default availability (9.0).

33.5.3.60 const Availability_T stdair::MAXIMAL_AVAILABILITY (9999.*0*)

Maximal offered capacity in a cabin.

33.5.3.61 const CensorshipFlag_T stdair::DEFAULT_CLASS_CENSORSHIPFLAG (false)

Default boolean for censorship flag given the status of availability for BookingClass.

33.5.3.62 const BookingLimit_T stdair::DEFAULT_CLASS_BOOKING_LIMIT (9999.*0*)

Default booking limit value for BookingClass.

33.5.3.63 const AuthorizationLevel_T stdair::DEFAULT_CLASS_-AUTHORIZATION_LEVEL (9999.*0*)

Default authorization level for BookingClass.

33.5.3.64 const AuthorizationLevel_T stdair::DEFAULT_-CLASS_MAX_AUTHORIZATION_LEVEL (9999. *0*)

Default MAX value of authorization level for BookingClass.

33.5.3.65 const AuthorizationLevel_T stdair::DEFAULT_CLASS_MIN_-AUTHORIZATION_LEVEL (0. *0*)

Default MIN value of authorization level for BookingClass.

33.5.3.66 const OverbookingRate_T stdair::DEFAULT_CLASS_OVERBOOKING_-RATE (0. *0*)

Default over-booking rate for BookingClass.

33.5.3.67 const BookingRatio_T stdair::DEFAULT_OND_BOOKING_RATE (0. *0*)

Default booking rate for OnD bookings over overall class bookings.

33.5.3.68 const Fare_T stdair::DEFAULT_FARE_VALUE (0. *0*)

Default Fare value.

33.5.3.69 const Yield_T stdair::DEFAULT_CLASS_YIELD_VALUE (0. *0*)

Default yield value for a virtual class.

33.5.3.70 const Revenue_T stdair::DEFAULT_REVENUE_VALUE (0. *0*)

Default Revenue value.

33.5.3.71 const Percentage_T stdair::DEFAULT_LOAD_FACTOR_VALUE (100. *0*)

Default load factor value (100%).

33.5.3.72 const Yield_T stdair::DEFAULT_YIELD_VALUE (0. *0*)

Default yield value.

33.5.3.73 const Yield_T stdair::DEFAULT_YIELD_MAX_VALUE (std::numeric_limits< double >:: *max()*)

Default yield max value.

33.5.3.74 const NbOfBookings_T stdair::DEFAULT_YIELD_NB_OF_BOOKINGS (0. *0*)

Default number of bookings for YieldRangeStruct_T.

33.5.3.75 const Identity_T stdair::DEFAULT_BOOKING_NUMBER (0)

Default booking number.

33.5.3.76 const NbOfCancellations_T stdair::DEFAULT_YIELD_NB_OF_CANCELLATIONS (0. 0)

Default cancellation number for YieldRangeStruct_T.

33.5.3.77 const NbOfNoShows_T stdair::DEFAULT_YIELD_NB_OF_NOSHOWS (0. 0)

Default no-shows number for YieldRangeStruct_T.

33.5.3.78 const Availability_T stdair::DEFAULT_YIELD_AVAILABILITY (0. 0)

Default availability for YieldRangeStruct_T.

33.5.3.79 const CensorshipFlag_T stdair::DEFAULT_YIELD_CENSORSHIPFLAG (false)

Default boolean for booking limit availability for YieldRangeStruct_T.

33.5.3.80 const BookingLimit_T stdair::DEFAULT_YIELD_BOOKING_LIMIT (0. 0)

Default booking limit value for YieldRangeStruct_T.

33.5.3.81 const OverbookingRate_T stdair::DEFAULT_YIELD_OVERBOOKING_RATE (0. 0)

Default over-booking rate for YieldRangeStruct_T.

33.5.3.82 const Fare_T stdair::DEFAULT_OND_FARE_VALUE (0. 0)

Default value of Fare.

33.5.3.83 const EventQueueID_T stdair::DEFAULT_EVENT_QUEUE_ID ("EQ01")

Default ID for the event queue.

33.5.3.84 const Count_T stdair::DEFAULT_PROGRESS_STATUS (0)

Default progress status.

33.5.3.85 const Date_T stdair::DEFAULT_EVENT_OLDEST_DATE (2008 , boost::gregorian::Jan , 1)

Default reference (oldest) date for the events. No event can occur before that date.

33.5.3.86 const DateTime_T stdair::DEFAULT_EVENT_OLDEST_DATETIME (DEFAULT_EVENT_OLDEST_DATE , NULL_BOOST_TIME_DURATION)

Default reference (oldest) date-time for the events. No event can occur before that date-time.

33.5.3.87 const PartySize_T stdair::DEFAULT_PARTY_SIZE (1)

Default party size in a request.

33.5.3.88 const DayDuration_T stdair::DEFAULT_STAY_DURATION (7)

Default duration for a stay.

33.5.3.89 const WTP_T stdair::DEFAULT_WTP (1000. *0*)

Default Willingness-to-Pay (WTP, as expressed as a monetary unit).

33.5.3.90 const Date_T stdair::DEFAULT_PREFERRED_DEPARTURE_DATE (DEFAULT_DEPARTURE_DATE)

Default departure date.

33.5.3.91 const Duration_T stdair::DEFAULT_PREFERRED_DEPARTURE_TIME (8 , 0 , 0)

Default preferred departure time (08:00).

33.5.3.92 const DateOffset_T stdair::DEFAULT_ADVANCE_PURCHASE (22)

Default advance purchase.

33.5.3.93 const Date_T stdair::DEFAULT_REQUEST_DATE (DEFAULT_PREFERRED_DEPARTURE_DATE- *DEFAULT_ADVANCE_PURCHASE*)

Default request date.

33.5.3.94 const Duration_T stdair::DEFAULT_REQUEST_TIME (8 , 0 , 0)

Default preferred departure time (08:00).

33.5.3.95 const DateTime_T stdair::DEFAULT_REQUEST_DATE_TIME (DEFAULT_REQUEST_DATE , DEFAULT_REQUEST_TIME)

Default request date-time.

33.5.3.96 const CabinCode_T stdair::DEFAULT_PREFERRED_CABIN ("M")

Default preferred cabin.

33.5.3.97 const CityCode_T stdair::DEFAULT_POS ("ALL")

Default point-of-sale.

33.5.3.98 const ChannelLabel_T stdair::DEFAULT_CHANNEL ("DC")

Default channel (e.g., "DC" meaning Different Channels).

33.5.3.99 const ChannelLabel_T stdair::CHANNEL_DN ("DN")

DN channel (e.g., direct on-line).

33.5.3.100 const ChannelLabel_T stdair::CHANNEL_IN ("IN")

IN channel (e.g., indirect on-line).

33.5.3.101 const TripType_T stdair::TRIP_TYPE_ONE_WAY ("OW")

Trip type one-way (e.g., "OW").

33.5.3.102 const TripType_T stdair::TRIP_TYPE_ROUND_TRIP ("RT")

Trip type round-trip (e.g., "RT").

33.5.3.103 const TripType_T stdair::TRIP_TYPE_INBOUND ("RI")

Trip type inbound (e.g., "RI").

33.5.3.104 const TripType_T stdair::TRIP_TYPE_OUTBOUND ("RO")

Trip type outbound (e.g., "RO").

33.5.3.105 const FrequentFlyer_T stdair::DEFAULT_FF_TIER ("N")

Default frequent flyer tier (non member).

33.5.3.106 const PriceValue_T stdair::DEFAULT_VALUE_OF_TIME (100. *0*)

Default value of time (expressed as a monetary unit per hour).

33.5.3.107 const Duration_T stdair::DEFAULT_MINIMAL_CONNECTION_TIME (0 , 30 , 0)

Default Minimal connection time.

33.5.3.108 const Duration_T stdair::DEFAULT_MAXIMAL_CONNECTION_TIME (24 , 0 , 0)

Default maximal connection time.

33.5.3.109 const MatchingIndicator_T stdair::DEFAULT_MATCHING_INDICATOR (0. *0*)

Default Matching Indicator value.

33.5.3.110 const PriceCurrency_T stdair::DEFAULT_CURRENCY ("EUR")

Default currency (euro).

33.5.3.111 const AvailabilityStatus_T stdair::DEFAULT_AVAILABILITY_STATUS (false)

Default availability status for a travel solution.

33.5.3.112 const AirlineCode_T stdair::DEFAULT_AIRLINE_CODE ("XX")

Default airline code value ("XX").

33.5.3.113 const AirlineCode_T stdair::DEFAULT_NULL_AIRLINE_CODE ("")

Default airline code value ("").

33.5.3.114 const FlightNumber_T stdair::DEFAULT_FLIGHT_NUMBER (9999)

Default flight number (9999).

33.5.3.115 const GuillotineNumber_T stdair::DEFAULT_GUILLOTINE_NUMBER (9999)

Default guillotine number (9999).

33.5.3.116 const Date_T stdair::DEFAULT_DEPARTURE_DATE (1900 , boost::gregorian::Jan , 1)

Default flight departure date (01/01/1900).

33.5.3.117 const AirportCode_T stdair::DEFAULT_AIRPORT_CODE ("XXX")

Default airport code value ("XXX").

33.5.3.118 const AirportCode_T stdair::DEFAULT_NULL_AIRPORT_CODE ("")

Default airport code value (")..

33.5.3.119 const AirportCode_T stdair::DEFAULT_ORIGIN ("XXX")

Default Origin.

33.5.3.120 const AirportCode_T stdair::DEFAULT_DESTINATION ("XXX")

Default destination.

33.5.3.121 const CabinCode_T stdair::DEFAULT_CABIN_CODE ("X")

Default cabin code.

33.5.3.122 const FamilyCode_T stdair::DEFAULT_FARE_FAMILY_CODE ("EcoSaver")

Default fare family Code.

33.5.3.123 const FamilyCode_T stdair::DEFAULT_NULL_FARE_FAMILY_CODE ("NoFF")

Default null fare family Code ("NoFF").

33.5.3.124 const ClassCode_T stdair::DEFAULT_CLASS_CODE ("X")

Default class code value ("X").

33.5.3.125 const ClassCode_T stdair::DEFAULT_NULL_CLASS_CODE ("")

Default null class code value ("").

33.5.3.126 const BidPrice_T stdair::DEFAULT_BID_PRICE (0.0)

Default Bid-Price.

33.5.3.127 const unsigned short stdair::MAXIMAL_NUMBER_OF_LEGS_IN_FLIGHT (7)

Maximal number of legs linked to a single flight-date.

Note that the number of derived segments is n∗(n+1)/2 if n is the number of legs.

33.5.3.128 const unsigned short stdair::MAXIMAL_NUMBER_OF_SEGMENTS_IN_OND (3)

Maximal number of segments linked to a single O&D (Origin & Destination).

33.5.3.129 const SeatIndex_T stdair::DEFAULT_SEAT_INDEX (1)

Default seat index (for a bucket and/or Bid-Price Vector slot).

33.5.3.130 const std::string stdair::DEFAULT_FARE_FAMILY_VALUE_TYPE ("FF")

Default value type (within a guillotine block) for fare family.

33.5.3.131 const std::string stdair::DEFAULT_SEGMENT_CABIN_VALUE_TYPE ("SC")

Default value type (within a guillotine block) for segment-cabin.

33.5.3.132 const std::string stdair::DEFAULT_KEY_FLD_DELIMITER (";")

Default delimiter for string display (e.g delimiter for inventory key and flight-date key).

33.5.3.133 const std::string stdair::DEFAULT_KEY_SUB_FLD_DELIMITER (",")

Default sub delimiter for string display (e.g delimiter for flight number and departure date of a flight-date key).

33.5.3.134 const boost::char_separator<char> stdair::DEFAULT_KEY_TOKEN_DELIMITER (";,")

Default token for decoding a full string display.

33.5.3.135 template<int MIN, int MAX> date_time_element<MIN, MAX> stdair::operator* (const date_time_element< MIN, MAX > & *o1*, const date_time_element< MIN, MAX > & *o2*) [inline]

Operator* overload.

Definition at line 47 of file BasParserHelperTypes.hpp.

References stdair::date_time_element< MIN, MAX >::_value.

33.5.3.136 template<int MIN, int MAX> date_time_element<MIN, MAX> stdair::operator+ (const date_time_element< MIN, MAX > & *o1*, const date_time_element< MIN, MAX > & *o2*) [inline]

Operator+ overload.

Definition at line 55 of file BasParserHelperTypes.hpp.

References stdair::date_time_element< MIN, MAX >::_value.

33.5.3.137 template void stdair::AirlineClassListKey::serialize< ba::text_oarchive > (ba::text_oarchive & , unsigned *int*)

33.5.3.138 template void stdair::AirlineClassListKey::serialize< ba::text_iarchive > (ba::text_iarchive & , unsigned *int*)

33.5.3.139 template void stdair::BomRootKey::serialize< ba::text_oarchive > (ba::text_oarchive & , unsigned *int*)

33.5.3.140 template void stdair::BomRootKey::serialize< ba::text_iarchive > (ba::text_iarchive & , unsigned *int*)

33.5.3.141 void stdair::intDisplay (std::ostream & *oStream*, const int & *iInt*)

Definition at line 137 of file BookingRequestStruct.cpp.

33.5.3.142 template void stdair::BucketKey::serialize< ba::text_oarchive > (ba::text_oarchive & , unsigned *int*)

33.5.3.143 template void stdair::BucketKey::serialize< ba::text_iarchive > (ba::text_iarchive & , unsigned *int*)

33.5.3.144 template void stdair::FareFamilyKey::serialize< ba::text_oarchive > (ba::text_oarchive & , unsigned *int*)

33.5.3.145 template void stdair::FareFamilyKey::serialize< ba::text_iarchive > (ba::text_iarchive & , unsigned *int*)

33.5.3.146 template void stdair::FlightDateKey::serialize< ba::text_oarchive > (ba::text_oarchive & , unsigned *int*)

33.5.3.147 template void stdair::FlightDateKey::serialize< ba::text_iarchive > (ba::text_iarchive & , unsigned *int*)

33.5.3.148 template void stdair::GuillotineBlockKey::serialize< ba::text_oarchive > (ba::text_oarchive & , unsigned *int*)

33.5.3.149 template void stdair::GuillotineBlockKey::serialize< ba::text_iarchive > (ba::text_iarchive & , unsigned *int*)

33.5.3.150 template void stdair::InventoryKey::serialize< ba::text_oarchive > (ba::text_oarchive & , unsigned *int*)

33.5.3.151 template void stdair::InventoryKey::serialize< ba::text_iarchive > (ba::text_iarchive & , unsigned *int*)

33.5.3.152 template void stdair::OnDDateKey::serialize< ba::text_oarchive > (ba::text_oarchive & , unsigned *int*)

33.5.3.153 template void stdair::OnDDateKey::serialize< ba::text_iarchive > (ba::text_iarchive & , unsigned *int*)

33.5.3.154 const boost::char_separator<char> stdair::TokeniserDashSeparator ("-")

Dash delimitor for the tokenisation process.

Referenced by stdair::ParsedKey::getFlightDateKey().

33.5.3.155 const boost::char_separator<char> stdair::TokeniserTimeSeparator (":")

Time delimitor for the tokenisation process.

Referenced by stdair::ParsedKey::getBoardingTime().

33.5.3.156 template void stdair::SegmentCabinKey::serialize< ba::text_oarchive > (ba::text_oarchive & , unsigned *int*)

33.5.3.157 template void stdair::SegmentCabinKey::serialize< ba::text_iarchive > (ba::text_iarchive & , unsigned *int*)

33.5.3.158 template void stdair::SegmentDateKey::serialize< ba::text_oarchive > (ba::text_oarchive & , unsigned *int*)

33.5.3.159 template void stdair::SegmentDateKey::serialize< ba::text_iarchive > (ba::text_iarchive & , unsigned *int*)

33.5.3.160 template<class Archive , class BOM_OBJECT1 , class BOM_OBJECT2 > void stdair::serialiseHelper (BOM_OBJECT1 & *ioObject1,* Archive & *ioArchive,* const unsigned int *iFileVersion*)

Definition at line 34 of file CmdBomSerialiser.cpp.

References stdair::BomHolder< BOM >::_bomList, stdair::BomHolder< BOM >::_bomMap, and stdair::FacBomManager::linkWithParent().

33.5.3.161 template void stdair::BomRoot::serialize< ba::text_oarchive > (ba::text_oarchive & , unsigned *int*)

33.5.3.162 template void stdair::BomRoot::serialize< ba::text_iarchive > (ba::text_iarchive & , unsigned *int*)

33.5.3.163 template void stdair::Inventory::serialize< ba::text_oarchive > (ba::text_oarchive & , unsigned *int*)

33.5.3.164 template void stdair::Inventory::serialize< ba::text_iarchive > (ba::text_iarchive & , unsigned *int*)

33.5.3.165 template void stdair::FlightDate::serialize< ba::text_oarchive > (ba::text_oarchive & , unsigned *int*)

33.5.3.166 template void stdair::FlightDate::serialize< ba::text_iarchive > (ba::text_iarchive & , unsigned *int*)

33.5.3.167 template void stdair::SegmentDate::serialize< ba::text_oarchive > (ba::text_oarchive & , unsigned *int*)

33.5.3.168 template void stdair::SegmentDate::serialize< ba::text_iarchive > (ba::text_iarchive & , unsigned *int*)

33.5.3.169 template void stdair::SegmentCabin::serialize< ba::text_oarchive > (ba::text_oarchive & , unsigned *int*)

33.5.3.170 template void stdair::SegmentCabin::serialize< ba::text_iarchive > (ba::text_iarchive & , unsigned *int*)

33.5.4 Variable Documentation

33.5.4.1 const std::string stdair::DOW_STR

Initial value:

```
{"Mon", "Tue", "Wed", "Thu", "Fri", "Sat", "Sun"}
```

Day names (in English).

Representation of Dow-Of-the-Week

Definition at line 49 of file BasConst.cpp.

Referenced by stdair::DoWStruct::describe().

33.5.4.2 const CensorshipFlagList_T stdair::DEFAULT_CLASS_CENSORSHIPFLAG_LIST

Initial value:

```
std::vector<CensorshipFlag_T>()
```

Default list of censorship flag given the status of availability for BookingClass.

Definition at line 220 of file BasConst.cpp.

33.5.4.3 const Date_T stdair::DEFAULT_DICO_STUDIED_DATE

Default DICO studied date.

Definition at line 390 of file BasConst.cpp.

33.5.4.4 const AirlineCodeList_T stdair::DEFAULT_AIRLINE_CODE_LIST

Default airline code list value (empty vector).

Definition at line 400 of file BasConst.cpp.

33.5.4.5 const ClassList_StringList_T stdair::DEFAULT_CLASS_CODE_LIST

Default class code list value (empty vector).

Definition at line 439 of file BasConst.cpp.

33.5.4.6 const BidPriceVector_T stdair::DEFAULT_BID_PRICE_VECTOR = std::vector<BidPrice_T>()

Default Bid-Price Vector.

Default Bid-Price Vector (empty vector).

Definition at line 445 of file BasConst.cpp.

33.5.4.7 const int stdair::DEFAULT_MAX_DTD = 365

Default value for max day-to-departure (365).

Definition at line 466 of file BasConst.cpp.

Referenced by stdair::GuillotineBlock::initSnapshotBlocks().

33.5.4.8 const DCPList_T stdair::DEFAULT_DCP_LIST = DefaultDCPList::init()

Defaut data collection point list.

Definition at line 469 of file BasConst.cpp.

33.5.4.9 const DTDFratMap_T stdair::DEFAULT_DTD_FRAT5COEF_MAP

Initial value:

```
DefaultDtdFratMap::init()
```

Default frat5 coef map for demand to come forecaster.

Default frat5 coef map.

Definition at line 487 of file BasConst.cpp.

33.5.4.10 const DTDProbMap_T stdair::DEFAULT_DTD_PROB_MAP

Initial value:

```
DefaultDtdProbMap::init()
```

Default arrival pattern map.

Definition at line 504 of file BasConst.cpp.

33.5.4.11 const OnDStringList_T stdair::DEFAULT_OND_STRING_LIST

Default list of full keys.

Definition at line 529 of file BasConst.cpp.

33.5.4.12 const std::string stdair::DISPLAY_LEVEL_STRING_ARRAY

Array with the indentation spaces needed for all the BOM hierachical levels.

Definition at line 535 of file BasConst.cpp.

33.5.4.13 const std::string stdair::DEFAULT_KEY_FLD_DELIMITER

Default delimiter for string display (e.g delimiter for inventory key and flight-date key). Typically set to ';'.

Referenced by stdair::SegmentCabin::getFullerKey(), stdair::LegCabin::getFullerKey(), and stdair::ParsedKey::toString().

33.5.4.14 const std::string stdair::DEFAULT_KEY_SUB_FLD_DELIMITER

Default sub delimiter for string display (e.g delimiter for flight number and departure date of a flight-date key). Typically set to ','.

Referenced by stdair::SegmentDateKey::toString(), stdair::PosChannelKey::toString(), stdair::ParsedKey::toString(), stdair::FlightDateKey::toString(), stdair::AirportPairKey::toString(), and stdair::AirlineClassListKey::toString().

33.5.4.15 const boost::char_separator<char> stdair::DEFAULT_KEY_TOKEN_DELIMITER

Default token for decoding a full string display.

Referenced by stdair::BomKeyManager::extractKeys().

33.5.4.16 const Distance_T stdair::DEFAULT_DISTANCE_VALUE

Default distance value, in kilometers (0).

Default distance value (kilometers).

Definition at line 30 of file BasConst_General.hpp.

33.5.4.17 const ClassCode_T stdair::DEFAULT_CLOSED_CLASS_CODE

Default closed class code ("CC").

33.5.4.18 const NbOfBookings_T stdair::DEFAULT_CLASS_NB_OF_BOOKINGS

Default number of bookings (with counted cancellation) for BookingClass (0).

Default number of bookings for BookingClass.

Default number of bookings (0).

Definition at line 27 of file BasConst_General.hpp.

33.5.4.19 const NbOfBookings_T stdair::DEFAULT_CLASS_TOTAL_NB_OF_BOOKINGS

Default number of bookings (without cancellation) for BookingClass (0).

33.5.4.20 const NbOfBookings_T stdair::DEFAULT_CLASS_UNCONSTRAINED_DEMAND

Default unconstrained demand for BookingClass (0).

33.5.4.21 const NbOfBookings_T stdair::DEFAULT_CLASS_REMAINING_DEMAND_MEAN

Default remaining future demand mean for BookingClass (0).

33.5.4.22 const NbOfBookings_T stdair::DEFAULT_CLASS_REMAINING_DEMAND_STANDARD_DEVIATION

Default remaining futre demand standard deviation for BookingClass (0).

33.5.4.23 const NbOfCancellations_T stdair::DEFAULT_CLASS_NB_OF_CANCELLATIONS

Default number of cancellations for BookingClass (0).

33.5.4.24 const NbOfNoShows_T stdair::DEFAULT_CLASS_NB_OF_NOSHOWS

Default number of no-shows for BookingClass (0).

33.5.4.25 const CabinCapacity_T stdair::DEFAULT_CABIN_CAPACITY

Default cabin capacity for Leg cabins (0.0).

Default cabin capacity for Leg cabins.

Definition at line 21 of file BasConst_General.hpp.

33.5.4.26 const CommittedSpace_T stdair::DEFAULT_COMMITTED_SPACE

Default commited space value for Leg cabins (0.0).

33.5.4.27 const BlockSpace_T stdair::DEFAULT_BLOCK_SPACE

Default commited space value for Leg cabins (0.0).

33.5.4.28 const Availability_T stdair::DEFAULT_NULL_AVAILABILITY

Default null availability (0.0).

33.5.4.29 const Availability_T stdair::DEFAULT_AVAILABILITY

Default availability (9.0).

33.5.4.30 const CensorshipFlag_T stdair::DEFAULT_CLASS_CENSORSHIPFLAG

Default boolean for censorship flag given the status of availability for BookingClass.

33.5.4.31 const BookingLimit_T stdair::DEFAULT_CLASS_BOOKING_LIMIT

Default booking limit value for BookingClass.

33.5.4.32 const AuthorizationLevel_T stdair::DEFAULT_CLASS_-AUTHORIZATION_LEVEL

Default authorization level for BookingClass.

33.5.4.33 const AuthorizationLevel_T stdair::DEFAULT_CLASS_MAX_-AUTHORIZATION_LEVEL

Default MAX value of authorization level for BookingClass.

33.5.4.34 const AuthorizationLevel_T stdair::DEFAULT_CLASS_MIN_-AUTHORIZATION_LEVEL

Default MIN value of authorization level for BookingClass.

33.5.4.35 const OverbookingRate_T stdair::DEFAULT_CLASS_OVERBOOKING_-RATE

Default over-booking rate for BookingClass.

33.5.4.36 const Fare_T stdair::DEFAULT_FARE_VALUE

Default fare.

Default value of Fare.

Definition at line 36 of file BasConst_General.hpp.

33.5.4.37 const Revenue_T stdair::DEFAULT_REVENUE_VALUE

Default revenue value for BookingClass.

Default revenue value.

Definition at line 42 of file BasConst_General.hpp.

33.5.4.38 const PriceCurrency_T stdair::DEFAULT_CURRENCY

Default currency (euro).

Definition at line 39 of file BasConst_General.hpp.

33.5.4.39 const Percentage_T stdair::DEFAULT_LOAD_FACTOR_VALUE

Default load factor value (100%).

33.5.4.40 const DayDuration_T stdair::DEFAULT_DAY_DURATION

Default number of duration days (0).

Default Duration in days (e.g., 0).

Definition at line 26 of file BasConst_Period_BOM.hpp.

33.5.4.41 const double stdair::DEFAULT_EPSILON_VALUE

Default epsilon value between customer requirements and a fare rule.

Default epsilon value (1e-4).

Definition at line 18 of file BasConst_General.hpp.

33.5.4.42 const AirportCode_T stdair::AIRPORT_LHR

London Heathrow airport (e.g., "LHR").

33.5.4.43 const AirportCode_T stdair::AIRPORT_SYD

Sydney airport (e.g., "SYD").

33.5.4.44 const CityCode_T stdair::POS_LHR

London city code (e.g., "LHR").

33.5.4.45 const DayDuration_T stdair::NO_ADVANCE_PURCHASE

Advance purchase 0 day.

33.5.4.46 const SaturdayStay_T stdair::SATURDAY_STAY

Default saturdayStay value (true).

33.5.4.47 const SaturdayStay_T stdair::NO_SATURDAY_STAY

Default saturdayStay value (false).

33.5.4.48 const ChangeFees_T stdair::CHANGE_FEES

Default change fees value (true).

33.5.4.49 const ChangeFees_T stdair::NO_CHANGE_FEES

Default change fees value (false).

33.5.4.50 const NonRefundable_T stdair::NON_REFUNDABLE

Default non refundable value (true).

33.5.4.51 const NonRefundable_T stdair::NO_NON_REFUNDABLE

Default refundable value (false).

33.5.4.52 const DayDuration_T stdair::NO_STAY_DURATION

Stay duration 0 day.

33.5.4.53 const CabinCode_T stdair::CABIN_Y

Cabin 'Y'.

33.5.4.54 const AirlineCode_T stdair::AIRLINE_CODE_BA

Airline code "BA".

33.5.4.55 const ClassCode_T stdair::CLASS_CODE_Y

Class code 'Y'.

33.5.4.56 const ClassCode_T stdair::CLASS_CODE_Q

Class code 'Q'.

33.5.4.57 const AirportCode_T stdair::AIRPORT_SIN

Singapour airport (e.g., "SIN").

33.5.4.58 const AirportCode_T stdair::AIRPORT_BKK

Bangkok airport (e.g., "BKK").

33.5.4.59 const CityCode_T stdair::POS_SIN

Singapour city code (e.g., "SIN").

33.5.4.60 const CabinCode_T stdair::CABIN_ECO

Economic cabin (e.g., "Eco").

33.5.4.61 const FrequentFlyer_T stdair::FREQUENT_FLYER_MEMBER

Frequent flyer tier (e.g., "M" meaning member).

33.5.4.62 const EventQueueID_T stdair::DEFAULT_EVENT_QUEUE_ID

Default ID for the event queue.

33.5.4.63 const Count_T stdair::DEFAULT_PROGRESS_STATUS

Default progress status.

Referenced by stdair::ProgressStatus::reset().

33.5.4.64 const Date_T stdair::DEFAULT_EVENT_OLDEST_DATE

Default reference (oldest) date for the events. No event can occur before that date.

33.5.4.65 const DateTime_T stdair::DEFAULT_EVENT_OLDEST_DATETIME

Default reference (oldest) date-time for the events. No event can occur before that date-time.

Referenced by stdair::EventStruct::describe(), and stdair::EventStruct::EventStruct().

33.5.4.66 const std::string stdair::DEFAULT_BOM_ROOT_KEY

Default value for the BOM tree root key (" -- ROOT -- ").

33.5.4.67 const NbOfFlightDates_T stdair::DEFAULT_NB_OF_FLIGHTDATES

Default number of generated flight dates (0).

33.5.4.68 const unsigned int stdair::DEFAULT_FLIGHT_SPEED

Default flight speed (number of kilometers per hour).

33.5.4.69 const BookingRatio_T stdair::DEFAULT_OND_BOOKING_RATE

Default booking rate for OnD bookings over overall class bookings.

33.5.4.70 const Count_T stdair::SECONDS_IN_ONE_DAY

Number of seconds in one day (86400).

33.5.4.71 const Count_T stdair::MILLISECONDS_IN_ONE_SECOND

Number of milliseconds in one second (1000).

33.5.4.72 const Date_T stdair::DEFAULT_DATE

Default date for the General (1-Jan-2010).

33.5.4.73 const DateTime_T stdair::DEFAULT_DATETIME

Default date-time (1-Jan-2010).

33.5.4.74 const Duration_T stdair::DEFAULT_EPSILON_DURATION

Default epsilon duration (1 nanosecond).

33.5.4.75 const RandomSeed_T stdair::DEFAULT_RANDOM_SEED

Default random seed (120765987).

Referenced by stdair::BookingClass::generateDemandSamples().

33.5.4.76 const Duration_T stdair::NULL_BOOST_TIME_DURATION

Null time duration (in boost::time_duration unit).

Definition at line 23 of file BasConst_TravelSolution.hpp.

33.5.4.77 const Fare_T stdair::DEFAULT_CLASS_FARE_VALUE

Default value of Availability.

33.5.4.78 const NbOfAirlines_T stdair::DEFAULT_NBOFAIRLINES

Default number of airlines (0).

33.5.4.79 const unsigned int stdair::DEFAULT_NB_OF_DAYS_IN_A_YEAR

Default number of days in a year (365).

33.5.4.80 const ChannelLabel_T stdair::DEFAULT_CHANNEL

Default channel.

Default channel (e.g., direct on-line).

Definition at line 48 of file BasConst_Request.hpp.

33.5.4.81 const unsigned int stdair::DEFAULT_NUMBER_OF_SUBDIVISIONS

Higher value per thousand

Referenced by stdair::DictionaryManager::keyToValue(), and stdair::DictionaryManager::valueToKey().

33.5.4.82 const AirlineCode_T stdair::DEFAULT_AIRLINE_CODE

Default airline code value ("XX").

Referenced by stdair::BomRetriever::retrieveDummyLegCabin(), and stdair::BomRetriever::retrieveDummySegmentCab

33.5.4.83 const AirlineCode_T stdair::DEFAULT_NULL_AIRLINE_CODE

Default airline code value ("").

33.5.4.84 const FlightNumber_T stdair::DEFAULT_FLIGHT_NUMBER

Default flight number (9999).

Referenced by stdair::BomRetriever::retrieveDummyLegCabin(), and stdair::BomRetriever::retrieveDummySegmentCab

33.5.4.85 const GuillotineNumber_T stdair::DEFAULT_GUILLOTINE_NUMBER

Default guillotine number (9999).

33.5.4.86 const Date_T stdair::DEFAULT_DEPARTURE_DATE

Default flight departure date (01/01/1900).

Referenced by stdair::BomRetriever::retrieveDummyLegCabin(), and stdair::BomRetriever::retrieveDummySegmentCab

33.5.4.87 const AirportCode_T stdair::DEFAULT_AIRPORT_CODE

Default airport code value ("XXX").

33.5.4.88 const AirportCode_T stdair::DEFAULT_NULL_AIRPORT_CODE

Default airport code value ("")..

33.5.4.89 const AirportCode_T stdair::DEFAULT_ORIGIN

Default Origin ("XXX").

Referenced by stdair::BomRetriever::retrieveDummyLegCabin(), and stdair::BomRetriever::retrieveDummySegmentCab

33.5.4.90 const AirportCode_T stdair::DEFAULT_DESTINATION

Default Destination ("XXX").

Referenced by stdair::BomRetriever::retrieveDummySegmentCabin().

33.5.4.91 const CabinCode_T stdair::DEFAULT_CABIN_CODE

Default Cabin Code ("X").

Referenced by stdair::BomRetriever::retrieveDummyLegCabin(), and stdair::BomRetriever::retrieveDummySegmentCab

33.5.4.92 const FamilyCode_T stdair::DEFAULT_FARE_FAMILY_CODE

Default Fare Family Code ("EcoSaver").

33.5.4.93 const FamilyCode_T stdair::DEFAULT_NULL_FARE_FAMILY_CODE

Default null fare family Code ("NoFF").

33.5.4.94 const ClassCode_T stdair::DEFAULT_CLASS_CODE

Default class code value ("X").

33.5.4.95 const ClassCode_T stdair::DEFAULT_NULL_CLASS_CODE

Default null class code value ("").

33.5.4.96 const BidPrice_T stdair::DEFAULT_BID_PRICE

Default Bid-Price (0.0).

33.5.4.97 const unsigned short stdair::MAXIMAL_NUMBER_OF_LEGS_IN_FLIGHT

Maximal number of legs linked to a single flight-date (e.g., 7).

Note that the number of derived segments is n∗(n+1)/2 if n is the number of legs.

33.5.4.98 const unsigned short stdair::MAXIMAL_NUMBER_OF_SEGMENTS_IN_OND

Maximal number of segments linked to a single O&D (Origin & Destination)(e.g., 3).

33.5.4.99 const Availability_T stdair::MAXIMAL_AVAILABILITY

Maximal offered capacity in a cabin.

33.5.4.100 const SeatIndex_T stdair::DEFAULT_SEAT_INDEX

Default seat index (for a bucket and/or Bid-Price Vector slot)(e.g., 1).

33.5.4.101 const std::string stdair::DEFAULT_FARE_FAMILY_VALUE_TYPE

Default value type (within a guillotine block) for fare family.

33.5.4.102 const std::string stdair::DEFAULT_SEGMENT_CABIN_VALUE_TYPE

Default value type (within a guillotine block) for segment-cabin.

33.5.4.103 const DatePeriod_T stdair::BOOST_DEFAULT_DATE_PERIOD

Default date period (0-length, i.e., it lasts one day).

33.5.4.104 const DOW_String_T stdair::DEFAULT_DOW_STRING

Default DOW String (e.g., "1111100").

Referenced by stdair::DoWStruct::intersection(), and stdair::DoWStruct::shift().

33.5.4.105 const DateOffset_T stdair::DEFAULT_DATE_OFFSET

Default Date Offset (e.g., 0).

33.5.4.106 const PartySize_T stdair::DEFAULT_PARTY_SIZE

Default party size in a request (e.g., 1).

33.5.4.107 const DayDuration_T stdair::DEFAULT_STAY_DURATION

Default duration for a stay (e.g., 7 days).

33.5.4.108 const WTP_T stdair::DEFAULT_WTP

Default Willingness-to-Pay (WTP, as expressed as a monetary unit).

33.5.4.109 const CityCode_T stdair::DEFAULT_POS

Default Point-Of-Sale (POS, e.g., "WORLD").

33.5.4.110 const Date_T stdair::DEFAULT_PREFERRED_DEPARTURE_DATE

Default departure date (e.g., 01-Jan-2011).

33.5.4.111 const Duration_T stdair::DEFAULT_PREFERRED_DEPARTURE_TIME

Default preferred departure time (e.g., 08:00).

33.5.4.112 const DateOffset_T stdair::DEFAULT_ADVANCE_PURCHASE

Default advance purchase (e.g., 22 days).

33.5.4.113 const Date_T stdair::DEFAULT_REQUEST_DATE

Default request date (e.g., 10-Jan-2011).

33.5.4.114 const Duration_T stdair::DEFAULT_REQUEST_TIME

Default preferred departure time (e.g., 08:00).

33.5.4.115 const DateTime_T stdair::DEFAULT_REQUEST_DATE_TIME

Default request date-time (e.g., 08:00).

33.5.4.116 const CabinCode_T stdair::DEFAULT_PREFERRED_CABIN

Default preferred cabin (e.g., 'M').

33.5.4.117 const ChannelLabel_T stdair::CHANNEL_DN

DN channel (e.g., direct on-line).

33.5.4.118 const ChannelLabel_T stdair::CHANNEL_IN

IN channel (e.g., indirect on-line).

33.5.4.119 const TripType_T stdair::TRIP_TYPE_ONE_WAY

Trip type one-way (e.g., "OW").

Referenced by stdair::BookingRequestStruct::display().

33.5.4.120 const TripType_T stdair::TRIP_TYPE_ROUND_TRIP

Trip type round-trip (e.g., "RT").

Referenced by stdair::YieldFeatures::isTripTypeValid(), and stdair::FareFeatures::isTripTypeValid().

33.5.4.121 const TripType_T stdair::TRIP_TYPE_INBOUND

Trip type inbound (e.g., "RI").

Referenced by stdair::YieldFeatures::isTripTypeValid(), and stdair::FareFeatures::isTripTypeValid().

33.5.4.122 const TripType_T stdair::TRIP_TYPE_OUTBOUND

Trip type outbound (e.g., "RO").

Referenced by stdair::YieldFeatures::isTripTypeValid(), and stdair::FareFeatures::isTripTypeValid().

33.5.4.123 const FrequentFlyer_T stdair::DEFAULT_FF_TIER

Default frequent flyer tier (e.g., non member).

33.5.4.124 const PriceValue_T stdair::DEFAULT_VALUE_OF_TIME

Default value of time (expressed as a monetary unit per hour).

33.5.4.125 const Duration_T stdair::DEFAULT_MINIMAL_CONNECTION_TIME

Default Minimal connection time.

33.5.4.126 const Duration_T stdair::DEFAULT_MAXIMAL_CONNECTION_TIME

Default maximal connection time.

33.5.4.127 const FlightPathCode_T stdair::DEFAULT_FLIGHTPATH_CODE

Default flightPathCode value (”).

33.5.4.128 const Availability_T stdair::DEFAULT_CLASS_AVAILABILITY

Default value of Availability.

33.5.4.129 const AvailabilityStatus_T stdair::DEFAULT_AVAILABILITY_STATUS

Default availability status for a travel solution.

33.5.4.130 const unsigned short stdair::DEFAULT_NUMBER_OF_REQUIRED_SEATS

Default nember of required seats by the demand.

33.5.4.131 const MatchingIndicator_T stdair::DEFAULT_MATCHING_INDICATOR

Default Matching Indicator value between customer requirements and a fare rule.

33.5.4.132 const AirlineCode_T stdair::DEFAULT_DICO_STUDIED_AIRLINE

Default DICO studied airline.

33.5.4.133 const Yield_T stdair::DEFAULT_YIELD_VALUE

Default yield value.

33.5.4.134 const Yield_T stdair::DEFAULT_YIELD_MAX_VALUE

Default yield max value.

33.6 stdair::LOG Namespace Reference

Enumerations

- enum EN_LogLevel {
  CRITICAL = 0, ERROR, NOTIFICATION, WARNING,
  DEBUG, VERBOSE, LAST_VALUE }

Variables

- static const std::string _logLevels [LAST_VALUE]

33.6.1 Detailed Description

Level of logs.

33.6.2 Enumeration Type Documentation

33.6.2.1 enum stdair::LOG::EN_LogLevel

Enumerator:

CRITICAL
ERROR
NOTIFICATION
WARNING
DEBUG
VERBOSE
LAST_VALUE

Definition at line 18 of file stdair_log.hpp.

33.6.3 Variable Documentation

33.6.3.1 const std::string stdair::LOG::_logLevels[LAST_VALUE] [static]

Initial value:

```
{"C", "E", "N", "W", "D", "V"}
```

Definition at line 28 of file stdair_log.hpp.

Referenced by stdair::Logger::log(), stdair::BasLogParams::toShortString(), and stdair::BasLogParams::toString().

33.7 stdair_test Namespace Reference

Classes

- struct BookingClass
- struct Cabin

33.7.1 Detailed Description

Namespace gathering classes and structures for test purposes

33.8 swift Namespace Reference

The wrapper namespace.

Classes

- class SKeymap

  The readline keymap wrapper.
- class SReadline

  The readline library wrapper.

33.8.1 Detailed Description

The wrapper namespace. The namespace is also used for other library elements.

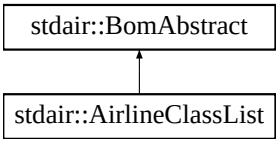
34 Class Documentation

34.1 stdair::AirlineClassList Class Reference

Class representing the actual attributes for a segment-features.

`#include <stdair/bom/AirlineClassList.hpp>`

Inheritance diagram for stdair::AirlineClassList:



Public Types

- typedef AirlineClassListKey Key_T

Public Member Functions

- const Key_T & getKey () const
- BomAbstract *const getParent () const
- const AirlineCodeList_T & getAirlineCodeList () const
- const ClassList_StringList_T & getClassCodeList () const
- const HolderMap_T & getHolderMap () const
- const stdair::Yield_T & getYield () const
- const stdair::Fare_T & getFare () const
- void setYield (const Yield_T &iYield)
- void setFare (const Fare_T &iFare)
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Protected Member Functions

- AirlineClassList (const Key_T &)
- virtual ~AirlineClassList ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent
- HolderMap_T _holderMap
- Yield_T _yield
- Fare_T _fare

Friends

- class FacBom
- class FacBomManager
- class boost::serialization::access

34.1.1 Detailed Description

Class representing the actual attributes for a segment-features.

Definition at line 27 of file AirlineClassList.hpp.

34.1.2 Member Typedef Documentation

34.1.2.1 typedef AirlineClassListKey stdair::AirlineClassList::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 37 of file AirlineClassList.hpp.

34.1.3 Constructor & Destructor Documentation

34.1.3.1 stdair::AirlineClassList::AirlineClassList (const Key_T & *iKey*) [protected]

Main constructor.

Definition at line 32 of file AirlineClassList.cpp.

34.1.3.2 stdair::AirlineClassList::~AirlineClassList ( ) [protected, virtual]

Destructor.

Definition at line 37 of file AirlineClassList.cpp.

34.1.4 Member Function Documentation

34.1.4.1 const Key_T& stdair::AirlineClassList::getKey ( ) const [inline]

Get the airline class list key.

Definition at line 43 of file AirlineClassList.hpp.

References _key.

34.1.4.2 BomAbstract* const stdair::AirlineClassList::getParent ( ) const [inline]

Get the parent object.

Definition at line 48 of file AirlineClassList.hpp.

References _parent.

34.1.4.3 const AirlineCodeList_T& stdair::AirlineClassList::getAirlineCodeList ( ) const [inline]

Get the airline code list (part of the primary key).

Definition at line 53 of file AirlineClassList.hpp.

References _key, and stdair::AirlineClassListKey::getAirlineCodeList().

34.1.4.4 const ClassList_StringList_T& stdair::AirlineClassList::getClassCodeList ( ) const [inline]

Get the class code list (part of the primary key).

Definition at line 58 of file AirlineClassList.hpp.

References _key, and stdair::AirlineClassListKey::getClassCodeList().

34.1.4.5 const HolderMap_T& stdair::AirlineClassList::getHolderMap ( ) const [inline]

Get the map of children holders.

Definition at line 63 of file AirlineClassList.hpp.

References _holderMap.

34.1.4.6 const stdair::Yield_T& stdair::AirlineClassList::getYield ( ) const [inline]

Get the yield.

Definition at line 68 of file AirlineClassList.hpp.

References _yield.

34.1.4.7 const stdair::Fare_T& stdair::AirlineClassList::getFare ( ) const [inline]

Get the fare.

Definition at line 73 of file AirlineClassList.hpp.

References _fare.

34.1.4.8 void stdair::AirlineClassList::setYield (const Yield_T & *iYield*) [inline]

Definition at line 79 of file AirlineClassList.hpp.

References _yield.

34.1.4.9 void stdair::AirlineClassList::setFare (const Fare_T & *iFare*) [inline]

Definition at line 83 of file AirlineClassList.hpp.

References _fare.

34.1.4.10 void stdair::AirlineClassList::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 94 of file AirlineClassList.hpp.

References toString().

34.1.4.11 void stdair::AirlineClassList::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 103 of file AirlineClassList.hpp.

34.1.4.12 std::string stdair::AirlineClassList::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 41 of file AirlineClassList.cpp.

References _fare, _yield, and describeKey().

Referenced by toStream().

34.1.4.13 const std::string stdair::AirlineClassList::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 114 of file AirlineClassList.hpp.

References _key, and stdair::AirlineClassListKey::toString().

Referenced by toString().

34.1.4.14 template<class Archive > void stdair::AirlineClassList::serialize (Archive & *ar*, const unsigned int *iFileVersion*)

Serialisation.

Definition at line 63 of file AirlineClassList.cpp.

References _fare, _key, and _yield.

34.1.5 Friends And Related Function Documentation

34.1.5.1 friend class FacBom [friend]

Definition at line 28 of file AirlineClassList.hpp.

34.1.5.2 friend class FacBomManager [friend]

Definition at line 29 of file AirlineClassList.hpp.

34.1.5.3 friend class boost::serialization::access [friend]

Definition at line 30 of file AirlineClassList.hpp.

34.1.6 Member Data Documentation

34.1.6.1 Key_T stdair::AirlineClassList::_key [protected]

Primary key (flight number and departure date).

Definition at line 164 of file AirlineClassList.hpp.

Referenced by describeKey(), getAirlineCodeList(), getClassCodeList(), getKey(), and serialize().

34.1.6.2 BomAbstract* stdair::AirlineClassList::_parent [protected]

Pointer on the parent class (Inventory).

Definition at line 169 of file AirlineClassList.hpp.

Referenced by getParent().

34.1.6.3 HolderMap_T stdair::AirlineClassList::_holderMap [protected]

Map holding the children (SegmentDate and LegDate objects).

Definition at line 174 of file AirlineClassList.hpp.

Referenced by getHolderMap().

34.1.6.4 Yield_T stdair::AirlineClassList::_yield [protected]

Definition at line 179 of file AirlineClassList.hpp.

Referenced by getYield(), serialize(), setYield(), and toString().

34.1.6.5 Fare_T stdair::AirlineClassList::_fare [protected]

Definition at line 184 of file AirlineClassList.hpp.

Referenced by getFare(), serialize(), setFare(), and toString().

The documentation for this class was generated from the following files:

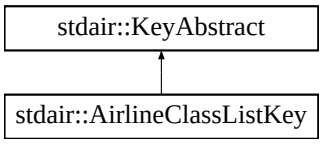
- stdair/bom/AirlineClassList.hpp
- stdair/bom/AirlineClassList.cpp

34.2 stdair::AirlineClassListKey Struct Reference

Key of airport-pair.

`#include <stdair/bom/AirlineClassListKey.hpp>`

Inheritance diagram for stdair::AirlineClassListKey:



Public Member Functions

- AirlineClassListKey (const AirlineCodeList_T &, const ClassList_StringList_T &)
- AirlineClassListKey (const AirlineClassListKey &)
- ~AirlineClassListKey ()
- const AirlineCodeList_T & getAirlineCodeList () const
- const ClassList_StringList_T & getClassCodeList () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Friends

- class boost::serialization::access

34.2.1 Detailed Description

Key of airport-pair.

Definition at line 25 of file AirlineClassListKey.hpp.

34.2.2 Constructor & Destructor Documentation

34.2.2.1 stdair::AirlineClassListKey::AirlineClassListKey (const AirlineCodeList_T & *iAirlineCodeList,* const ClassList_StringList_T & *iClassCodeList*)

Constructor.

Definition at line 24 of file AirlineClassListKey.cpp.

34.2.2.2 stdair::AirlineClassListKey::AirlineClassListKey (const AirlineClassListKey & *iKey*)

Copy constructor.

Definition at line 30 of file AirlineClassListKey.cpp.

34.2.2.3 stdair::AirlineClassListKey::~AirlineClassListKey ( )

Destructor.

Definition at line 36 of file AirlineClassListKey.cpp.

34.2.3 Member Function Documentation

34.2.3.1 const AirlineCodeList_T& stdair::AirlineClassListKey::getAirlineCodeList ( ) const [inline]

Get the airline code list.

Definition at line 56 of file AirlineClassListKey.hpp.

Referenced by stdair::AirlineClassList::getAirlineCodeList().

34.2.3.2 const ClassList_StringList_T& stdair::AirlineClassListKey::getClassCodeList ( ) const [inline]

Get the class code list.

Definition at line 61 of file AirlineClassListKey.hpp.

Referenced by stdair::AirlineClassList::getClassCodeList().

34.2.3.3 void stdair::AirlineClassListKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 40 of file AirlineClassListKey.cpp.

References toString().

34.2.3.4 void stdair::AirlineClassListKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 45 of file AirlineClassListKey.cpp.

34.2.3.5 const std::string stdair::AirlineClassListKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from stdair::KeyAbstract.

Definition at line 49 of file AirlineClassListKey.cpp.

References stdair::DEFAULT_KEY_SUB_FLD_DELIMITER.

Referenced by stdair::AirlineClassList::describeKey(), and toStream().

34.2.3.6 template<class Archive > void stdair::AirlineClassListKey::serialize (Archive & *ar,* const unsigned int *iFileVersion*)

Serialisation.

Definition at line 86 of file AirlineClassListKey.cpp.

34.2.4 Friends And Related Function Documentation

34.2.4.1 friend class boost::serialization::access [friend]

Definition at line 26 of file AirlineClassListKey.hpp.

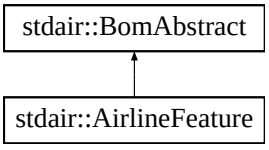
The documentation for this struct was generated from the following files:

- stdair/bom/AirlineClassListKey.hpp
- stdair/bom/AirlineClassListKey.cpp

34.3 stdair::AirlineFeature Class Reference

`#include <stdair/bom/AirlineFeature.hpp>`

Inheritance diagram for stdair::AirlineFeature:



Public Types

- typedef AirlineFeatureKey Key_T

Public Member Functions

- const Key_T & getKey () const
- void init (const ForecasterMode_T &, const HistoricalDataLimit_T &, const ControlMode_-T &)
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const

Protected Member Functions

- AirlineFeature ()
- AirlineFeature (const AirlineFeature &)
- AirlineFeature (const Key_T &)
- virtual ~AirlineFeature ()

Protected Attributes

- Key_T _key
- ForecasterMode_T _forecasterMode
- HistoricalDataLimit_T _historicalDataLimit
- ControlMode_T _controlMode

Friends

- class FacBom

34.3.1 Detailed Description

Class representing the actual attributes for an airline booking class.

Definition at line 16 of file AirlineFeature.hpp.

34.3.2 Member Typedef Documentation

34.3.2.1 typedef AirlineFeatureKey stdair::AirlineFeature::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 22 of file AirlineFeature.hpp.

34.3.3 Constructor & Destructor Documentation

34.3.3.1 stdair::AirlineFeature::AirlineFeature ( ) [protected]

Default constructors.

34.3.3.2 stdair::AirlineFeature::AirlineFeature (const AirlineFeature &) [protected]

34.3.3.3 stdair::AirlineFeature::AirlineFeature (const Key_T & *iKey*) [protected]

Definition at line 13 of file AirlineFeature.cpp.

34.3.3.4 stdair::AirlineFeature::~AirlineFeature ( ) [protected, virtual]

Destructor.

Definition at line 17 of file AirlineFeature.cpp.

34.3.4 Member Function Documentation

34.3.4.1 const Key_T& stdair::AirlineFeature::getKey ( ) const [inline]

Get the airline feature key.

Definition at line 27 of file AirlineFeature.hpp.

References _key.

34.3.4.2 void stdair::AirlineFeature::init (const ForecasterMode_T & *iForecastMode*, const HistoricalDataLimit_T & *iHistoricalDataLimit*, const ControlMode_T & *iControlMode*)

Intialization method.

Definition at line 21 of file AirlineFeature.cpp.

References _controlMode, _forecasterMode, and _historicalDataLimit.

34.3.4.3 void stdair::AirlineFeature::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 41 of file AirlineFeature.hpp.

References toString().

34.3.4.4 void stdair::AirlineFeature::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 45 of file AirlineFeature.hpp.

34.3.4.5 std::string stdair::AirlineFeature::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 30 of file AirlineFeature.cpp.

References _controlMode, _forecasterMode, _historicalDataLimit, and describeKey().

Referenced by toStream().

34.3.4.6 const std::string stdair::AirlineFeature::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 51 of file AirlineFeature.hpp.

References _key, and stdair::AirlineFeatureKey::toString().

Referenced by toString().

34.3.5 Friends And Related Function Documentation

34.3.5.1 friend class FacBom [friend]

Definition at line 17 of file AirlineFeature.hpp.

34.3.6 Member Data Documentation

34.3.6.1 Key_T stdair::AirlineFeature::_key [protected]

The key of both structure and objects.

Definition at line 64 of file AirlineFeature.hpp.

Referenced by describeKey(), and getKey().

34.3.6.2 ForecasterMode_T stdair::AirlineFeature::_forecasterMode [protected]

The type of forecaster.

Definition at line 67 of file AirlineFeature.hpp.

Referenced by init(), and toString().

34.3.6.3 HistoricalDataLimit_T stdair::AirlineFeature::_historicalDataLimit [protected]

The size of the moving average window.

Definition at line 70 of file AirlineFeature.hpp.

Referenced by init(), and toString().

34.3.6.4 ControlMode_T stdair::AirlineFeature::_controlMode [protected]

The type of inventory control.

Definition at line 73 of file AirlineFeature.hpp.

Referenced by init(), and toString().

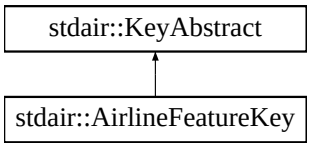
The documentation for this class was generated from the following files:

- stdair/bom/AirlineFeature.hpp
- stdair/bom/AirlineFeature.cpp

34.4 stdair::AirlineFeatureKey Struct Reference

`#include <stdair/bom/AirlineFeatureKey.hpp>`

Inheritance diagram for stdair::AirlineFeatureKey:



Public Member Functions

- AirlineFeatureKey (const AirlineCode_T &iAirlineCode)
- ~AirlineFeatureKey ()
- const AirlineCode_T & getAirlineCode () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const

34.4.1 Detailed Description

Key of AirlineFeature.

Definition at line 15 of file AirlineFeatureKey.hpp.

34.4.2 Constructor & Destructor Documentation

34.4.2.1 stdair::AirlineFeatureKey::AirlineFeatureKey (const AirlineCode_T & *iAirlineCode*)

Constructor.

Definition at line 12 of file AirlineFeatureKey.cpp.

34.4.2.2 stdair::AirlineFeatureKey::~AirlineFeatureKey ( )

Destructor.

Definition at line 17 of file AirlineFeatureKey.cpp.

34.4.3 Member Function Documentation

34.4.3.1 const AirlineCode_T& stdair::AirlineFeatureKey::getAirlineCode ( ) const [inline]

Get the airline code.

Definition at line 27 of file AirlineFeatureKey.hpp.

34.4.3.2 void stdair::AirlineFeatureKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 21 of file AirlineFeatureKey.cpp.

References toString().

34.4.3.3 void stdair::AirlineFeatureKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 26 of file AirlineFeatureKey.cpp.

34.4.3.4 const std::string stdair::AirlineFeatureKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from stdair::KeyAbstract.

Definition at line 30 of file AirlineFeatureKey.cpp.

Referenced by stdair::AirlineFeature::describeKey(), and toStream().

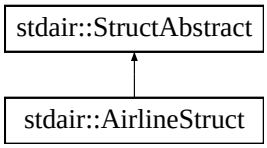
The documentation for this struct was generated from the following files:

- stdair/bom/AirlineFeatureKey.hpp
- stdair/bom/AirlineFeatureKey.cpp

34.5 stdair::AirlineStruct Struct Reference

`#include <stdair/bom/AirlineStruct.hpp>`

Inheritance diagram for stdair::AirlineStruct:



Public Member Functions

- const AirlineCode_T & getAirlineCode () const
- const std::string & getAirlineName () const
- void setAirlineCode (const AirlineCode_T &iAirlineCode)
- void setAirlineName (const std::string &iAirlineName)
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string describe () const
- AirlineStruct (const AirlineCode_T &, const std::string &iAirlineName)
- AirlineStruct ()
- AirlineStruct (const AirlineStruct &)
- ~AirlineStruct ()

34.5.1 Detailed Description

Structure holding parameters describing an airline.

Definition at line 18 of file AirlineStruct.hpp.

34.5.2 Constructor & Destructor Documentation

34.5.2.1 stdair::AirlineStruct::AirlineStruct (const AirlineCode_T & *iAirlineCode*, const std::string & *iAirlineName*)

Main constructor.

Definition at line 24 of file AirlineStruct.cpp.

34.5.2.2 stdair::AirlineStruct::AirlineStruct ( )

Default constructor.

Definition at line 15 of file AirlineStruct.cpp.

34.5.2.3 stdair::AirlineStruct::AirlineStruct (const AirlineStruct & *iAirlineStruct*)

Default copy constructor.

Definition at line 19 of file AirlineStruct.cpp.

34.5.2.4 stdair::AirlineStruct::~AirlineStruct ( )

Destructor.

Definition at line 30 of file AirlineStruct.cpp.

34.5.3 Member Function Documentation

34.5.3.1 const AirlineCode_T& stdair::AirlineStruct::getAirlineCode ( ) const [inline]

Get the airline code.

Definition at line 22 of file AirlineStruct.hpp.

Referenced by soci::type_conversion< stdair::AirlineStruct >::to_base(), and stdair::DBManagerForAirlines::updateAirli

34.5.3.2 const std::string& stdair::AirlineStruct::getAirlineName ( ) const [inline]

Get the airline name.

Definition at line 27 of file AirlineStruct.hpp.

Referenced by soci::type_conversion< stdair::AirlineStruct >::to_base(), and stdair::DBManagerForAirlines::updateAirli

34.5.3.3 void stdair::AirlineStruct::setAirlineCode (const AirlineCode_T & *iAirlineCode*) [inline]

Set the airline code.

Definition at line 33 of file AirlineStruct.hpp.

Referenced by soci::type_conversion< stdair::AirlineStruct >::from_base().

34.5.3.4 void stdair::AirlineStruct::setAirlineName (const std::string & *iAirlineName*) [inline]

Set the airline name.

Definition at line 38 of file AirlineStruct.hpp.

Referenced by soci::type_conversion< stdair::AirlineStruct >::from_base().

34.5.3.5 void stdair::AirlineStruct::toStream (std::ostream & *ioOut*) const

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::StructAbstract.

Definition at line 34 of file AirlineStruct.cpp.

References describe().

34.5.3.6 void stdair::AirlineStruct::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::StructAbstract.

Definition at line 39 of file AirlineStruct.cpp.

34.5.3.7 const std::string stdair::AirlineStruct::describe ( ) const [virtual]

Display of the structure.

Implements stdair::StructAbstract.

Definition at line 43 of file AirlineStruct.cpp.

Referenced by toStream().

The documentation for this struct was generated from the following files:

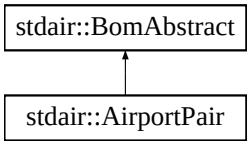
- stdair/bom/AirlineStruct.hpp
- stdair/bom/AirlineStruct.cpp

34.6 stdair::AirportPair Class Reference

Class representing the actual attributes for an airport-pair.

`#include <stdair/bom/AirportPair.hpp>`

Inheritance diagram for stdair::AirportPair:



Public Types

- typedef AirportPairKey Key_T

Public Member Functions

- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const
- const Key_T & getKey () const
- const AirportCode_T & getBoardingPoint () const
- const AirportCode_T & getOffPoint () const
- BomAbstract ∗const getParent () const
- const HolderMap_T & getHolderMap () const

Protected Member Functions

- AirportPair (const Key_T &)
- virtual ∼AirportPair ()

Protected Attributes

- Key_T _key
- BomAbstract ∗ _parent
- HolderMap_T _holderMap

Friends

- class FacBom
- class FacBomManager

34.6.1 Detailed Description

Class representing the actual attributes for an airport-pair.

Definition at line 18 of file AirportPair.hpp.

34.6.2 Member Typedef Documentation

34.6.2.1 typedef AirportPairKey stdair::AirportPair::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 27 of file AirportPair.hpp.

34.6.3 Constructor & Destructor Documentation

34.6.3.1 stdair::AirportPair::AirportPair (const Key_T & *iKey*) [protected]

Main constructor.

Definition at line 28 of file AirportPair.cpp.

34.6.3.2 stdair::AirportPair::~AirportPair ( ) [protected, virtual]

Destructor.

Definition at line 33 of file AirportPair.cpp.

34.6.4 Member Function Documentation

34.6.4.1 void stdair::AirportPair::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 36 of file AirportPair.hpp.

References toString().

34.6.4.2 void stdair::AirportPair::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 45 of file AirportPair.hpp.

34.6.4.3 std::string stdair::AirportPair::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 37 of file AirportPair.cpp.

References describeKey().

Referenced by toStream().

34.6.4.4 const std::string stdair::AirportPair::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 56 of file AirportPair.hpp.

References _key, and stdair::AirportPairKey::toString().

Referenced by toString().

34.6.4.5 const Key_T& stdair::AirportPair::getKey ( ) const [inline]

Get the primary key (origin airport, destination airport).

Definition at line 65 of file AirportPair.hpp.

References _key.

34.6.4.6 const AirportCode_T& stdair::AirportPair::getBoardingPoint ( ) const [inline]

Get the origin airport.

Definition at line 72 of file AirportPair.hpp.

References _key, and stdair::AirportPairKey::getBoardingPoint().

34.6.4.7 const AirportCode_T& stdair::AirportPair::getOffPoint ( ) const [inline]

Get the destination airport.

Definition at line 79 of file AirportPair.hpp.

References _key, and stdair::AirportPairKey::getOffPoint().

34.6.4.8 BomAbstract* const stdair::AirportPair::getParent ( ) const [inline]

Get a reference on the parent object instance.

Definition at line 86 of file AirportPair.hpp.

References _parent.

34.6.4.9 const HolderMap_T& stdair::AirportPair::getHolderMap ( ) const [inline]

Get a reference on the children holder.

Definition at line 93 of file AirportPair.hpp.

References _holderMap.

34.6.5 Friends And Related Function Documentation

34.6.5.1 friend class FacBom [friend]

Definition at line 19 of file AirportPair.hpp.

34.6.5.2 friend class FacBomManager [friend]

Definition at line 20 of file AirportPair.hpp.

34.6.6 Member Data Documentation

34.6.6.1 Key_T stdair::AirportPair::_key [protected]

Primary key (flight number and departure date).

Definition at line 123 of file AirportPair.hpp.

Referenced by describeKey(), getBoardingPoint(), getKey(), and getOffPoint().

34.6.6.2 BomAbstract* stdair::AirportPair::_parent [protected]

Pointer on the parent class (Inventory).

Definition at line 128 of file AirportPair.hpp.

Referenced by getParent().

34.6.6.3 HolderMap_T stdair::AirportPair::_holderMap [protected]

Map holding the children.

Definition at line 133 of file AirportPair.hpp.

Referenced by getHolderMap().

The documentation for this class was generated from the following files:

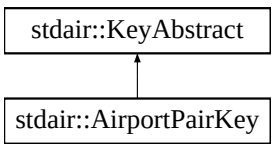
- stdair/bom/AirportPair.hpp
- stdair/bom/AirportPair.cpp

34.7 stdair::AirportPairKey Struct Reference

Key of airport-pair.

`#include <stdair/bom/AirportPairKey.hpp>`

Inheritance diagram for stdair::AirportPairKey:



Public Member Functions

- AirportPairKey (const stdair::AirportCode_T &, const stdair::AirportCode_T &)

- AirportPairKey (const AirportPairKey &)
- ~AirportPairKey ()
- const stdair::AirportCode_T & getBoardingPoint () const
- const stdair::AirportCode_T & getOffPoint () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const

34.7.1 Detailed Description

Key of airport-pair.

Definition at line 16 of file AirportPairKey.hpp.

34.7.2 Constructor & Destructor Documentation

34.7.2.1 stdair::AirportPairKey::AirportPairKey (const stdair::AirportCode_T & *iBoardingPoint,* const stdair::AirportCode_T & *iOffPoint*)

Main constructor.

Definition at line 22 of file AirportPairKey.cpp.

34.7.2.2 stdair::AirportPairKey::AirportPairKey (const AirportPairKey & *iKey*)

Copy constructor.

Definition at line 28 of file AirportPairKey.cpp.

34.7.2.3 stdair::AirportPairKey::~AirportPairKey ( )

Destructor.

Definition at line 34 of file AirportPairKey.cpp.

34.7.3 Member Function Documentation

34.7.3.1 const stdair::AirportCode_T& stdair::AirportPairKey::getBoardingPoint ( ) const [inline]

Get the boarding point.

Definition at line 36 of file AirportPairKey.hpp.

Referenced by stdair::AirportPair::getBoardingPoint().

34.7.3.2 const stdair::AirportCode_T& stdair::AirportPairKey::getOffPoint ( ) const [inline]

Get the arrival point.

Definition at line 43 of file AirportPairKey.hpp.

Referenced by stdair::AirportPair::getOffPoint().

34.7.3.3 void stdair::AirportPairKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 38 of file AirportPairKey.cpp.

References toString().

34.7.3.4 void stdair::AirportPairKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 43 of file AirportPairKey.cpp.

34.7.3.5 const std::string stdair::AirportPairKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key. That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

Reimplemented from stdair::KeyAbstract.

Definition at line 47 of file AirportPairKey.cpp.

References stdair::DEFAULT_KEY_SUB_FLD_DELIMITER.

Referenced by stdair::AirportPair::describeKey(), stdair::BomRetriever::retrieveAirportPairFromKeySet(), and toStream().

The documentation for this struct was generated from the following files:

- stdair/bom/AirportPairKey.hpp
- stdair/bom/AirportPairKey.cpp

34.8 stdair::BasChronometer Struct Reference

`#include <stdair/basic/BasChronometer.hpp>`

Public Member Functions

- BasChronometer ()

- void start ()
- std::string getStart () const
- double elapsed () const

34.8.1 Detailed Description

Structure allowing measuring the time elapsed between two events.

Definition at line 14 of file BasChronometer.hpp.

34.8.2 Constructor & Destructor Documentation

34.8.2.1 stdair::BasChronometer::BasChronometer ( )

Constructor.

Definition at line 12 of file BasChronometer.cpp.

34.8.3 Member Function Documentation

34.8.3.1 void stdair::BasChronometer::start ( )

Start the chronometer from the local time

The elapsed time given is the one elapsed since the start is launched.

Definition at line 16 of file BasChronometer.cpp.

34.8.3.2 std::string stdair::BasChronometer::getStart ( ) const [inline]

Get the start time.

Definition at line 24 of file BasChronometer.hpp.

34.8.3.3 double stdair::BasChronometer::elapsed ( ) const

Return the time elapsed since the structure has been instanciated.

That elapsed time is expressed in seconds.

Definition at line 26 of file BasChronometer.cpp.

The documentation for this struct was generated from the following files:

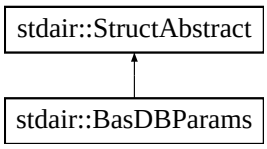
- stdair/basic/BasChronometer.hpp
- stdair/basic/BasChronometer.cpp

34.9 stdair::BasDBParams Struct Reference

Structure holding the parameters for connection to a database.

`#include <stdair/basic/BasDBParams.hpp>`

Inheritance diagram for stdair::BasDBParams:



Public Member Functions

- const std::string & getUser () const
- const std::string & getPassword () const
- const std::string & getHost () const
- const std::string & getPort () const
- const std::string & getDBName () const
- void setUser (const std::string &iUser)
- void setPassword (const std::string &iPasswd)
- void setHost (const std::string &iHost)
- void setPort (const std::string &iPort)
- void setDBName (const std::string &iDBName)
- bool check () const
- const std::string describe () const
- std::string toShortString () const
- std::string toString () const
- BasDBParams (const std::string &iDBUser, const std::string &iDBPasswd, const std::string &iDBHost, const std::string &iDBPort, const std::string &iDBName)
- BasDBParams ()
- BasDBParams (const BasDBParams &)
- ~BasDBParams ()
- void toStream (std::ostream &ioOut) const
- virtual void fromStream (std::istream &ioIn)

34.9.1 Detailed Description

Structure holding the parameters for connection to a database.

Definition at line 19 of file BasDBParams.hpp.

34.9.2 Constructor & Destructor Documentation

34.9.2.1 stdair::BasDBParams::BasDBParams (const std::string & *iDBUser,* const std::string & *iDBPasswd,* const std::string & *iDBHost,* const std::string & *iDBPort,* const std::string & *iDBName*)

Main Constructor.

Definition at line 24 of file BasDBParams.cpp.

34.9.2.2 stdair::BasDBParams::BasDBParams ( )

Default Constructor.

Definition at line 13 of file BasDBParams.cpp.

34.9.2.3 stdair::BasDBParams::BasDBParams (const BasDBParams & *iDBParams*)

Default copy constructor.

Definition at line 17 of file BasDBParams.cpp.

34.9.2.4 stdair::BasDBParams::~BasDBParams ( )

Destructor.

Definition at line 34 of file BasDBParams.cpp.

34.9.3 Member Function Documentation

34.9.3.1 const std::string& stdair::BasDBParams::getUser ( ) const [inline]

Get the database user name.

Definition at line 23 of file BasDBParams.hpp.

34.9.3.2 const std::string& stdair::BasDBParams::getPassword ( ) const [inline]

Get the database user password.

Definition at line 28 of file BasDBParams.hpp.

34.9.3.3 const std::string& stdair::BasDBParams::getHost ( ) const [inline]

Get the database host name.

Definition at line 33 of file BasDBParams.hpp.

34.9.3.4 const std::string& stdair::BasDBParams::getPort ( ) const [inline]

Get the database port number.

Definition at line 38 of file BasDBParams.hpp.

34.9.3.5 const std::string& stdair::BasDBParams::getDBName ( ) const [inline]

Get the database name.

Definition at line 43 of file BasDBParams.hpp.

34.9.3.6 void stdair::BasDBParams::setUser (const std::string & *iUser*) [inline]

Set the database user name.

Definition at line 50 of file BasDBParams.hpp.

34.9.3.7 void stdair::BasDBParams::setPassword (const std::string & *iPasswd*) [inline]

Set the database password.

Definition at line 55 of file BasDBParams.hpp.

34.9.3.8 void stdair::BasDBParams::setHost (const std::string & *iHost*) [inline]

Set the database host name.

Definition at line 60 of file BasDBParams.hpp.

34.9.3.9 void stdair::BasDBParams::setPort (const std::string & *iPort*) [inline]

Set the database port number.

Definition at line 65 of file BasDBParams.hpp.

34.9.3.10 void stdair::BasDBParams::setDBName (const std::string & *iDBName*) [inline]

Set the database name.

Definition at line 70 of file BasDBParams.hpp.

34.9.3.11 bool stdair::BasDBParams::check ( ) const

Check that all the parameters are fine.

Definition at line 57 of file BasDBParams.cpp.

34.9.3.12 const std::string stdair::BasDBParams::describe ( ) const [virtual]

Get the serialised version of the DBParams structure.

Implements stdair::StructAbstract.

Definition at line 38 of file BasDBParams.cpp.

References toString().

34.9.3.13 std::string stdair::BasDBParams::toShortString ( ) const

Get a short display of the DBParams structure.

Definition at line 43 of file BasDBParams.cpp.

34.9.3.14 std::string stdair::BasDBParams::toString ( ) const

Get the serialised version of the DBParams structure.

Definition at line 50 of file BasDBParams.cpp.

Referenced by describe().

34.9.3.15 void stdair::StructAbstract::toStream (std::ostream & *ioOut*) const [inline, inherited]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented in stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 29 of file StructAbstract.hpp.

References stdair::StructAbstract::describe().

Referenced by operator<<().

34.9.3.16 virtual void stdair::StructAbstract::fromStream (std::istream & *ioIn*) [inline, virtual, inherited]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented in stdair::ProgressStatusSet, stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::EventStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 38 of file StructAbstract.hpp.

Referenced by operator>>().

The documentation for this struct was generated from the following files:

- stdair/basic/BasDBParams.hpp
- stdair/basic/BasDBParams.cpp

34.10 stdair::BasFileMgr Struct Reference

`#include <stdair/basic/BasFileMgr.hpp>`

Static Public Member Functions

- static bool doesExistAndIsReadable (const std::string &iFilepath)

34.10.1 Detailed Description

Helper class for operations on files and on the file-system.

Definition at line 13 of file BasFileMgr.hpp.

34.10.2 Member Function Documentation

34.10.2.1 bool stdair::BasFileMgr::doesExistAndIsReadable (const std::string & *iFilepath*) [static]

Definition at line 23 of file BasFileMgr.cpp.

The documentation for this struct was generated from the following files:

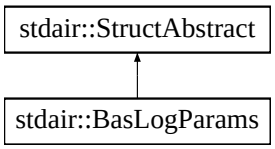
- stdair/basic/BasFileMgr.hpp
- stdair/basic/BasFileMgr.cpp

34.11 stdair::BasLogParams Struct Reference

Structure holding parameters for logging.

`#include <stdair/basic/BasLogParams.hpp>`

Inheritance diagram for stdair::BasLogParams:



Public Member Functions

- const LOG::EN_LogLevel & getLogLevel () const
- std::ostream & getLogStream () const
- const bool getForcedInitialisationFlag () const
- void setForcedInitialisationFlag (const bool iForceMultipleInstance)
- bool check () const
- const std::string describe () const
- std::string toShortString () const
- std::string toString () const
- BasLogParams (const LOG::EN_LogLevel iLogLevel, std::ostream &ioLogOutputStream, const bool iForceMultipleInstance=false)
- BasLogParams (const BasLogParams &)
- ~BasLogParams ()
- void toStream (std::ostream &ioOut) const
- virtual void fromStream (std::istream &ioIn)

Friends

- class Logger

34.11.1 Detailed Description

Structure holding parameters for logging.

Definition at line 19 of file BasLogParams.hpp.

34.11.2 Constructor & Destructor Documentation

34.11.2.1 stdair::BasLogParams::BasLogParams (const LOG::EN_LogLevel *iLogLevel*, std::ostream & *ioLogOutputStream*, const bool *iForceMultipleInstance* = `false`)

Main Constructor.

Parameters

in	*const*	LOG::EN_LogLevel Level of the log (e.g., DEBUG)
	inout]	std::ostream& (STL) Stream to log into.
in	*const*	bool Whether or not multiple initialisation should be forced.

Definition at line 27 of file BasLogParams.cpp.

34.11.2.2 stdair::BasLogParams::BasLogParams (const BasLogParams & *iLogParams*)

Copy constructor.

Definition at line 21 of file BasLogParams.cpp.

34.11.2.3 stdair::BasLogParams::~BasLogParams ( )

Destructor.

Definition at line 35 of file BasLogParams.cpp.

34.11.3 Member Function Documentation

34.11.3.1 const LOG::EN_LogLevel& stdair::BasLogParams::getLogLevel ( ) const `[inline]`

Get the log level.

Definition at line 26 of file BasLogParams.hpp.

34.11.3.2 std::ostream& stdair::BasLogParams::getLogStream ( ) const `[inline]`

Get the log output stream.

Definition at line 33 of file BasLogParams.hpp.

34.11.3.3 const bool stdair::BasLogParams::getForcedInitialisationFlag ( ) const [inline]

State whether or not multiple initialisations are to be forced.

Definition at line 40 of file BasLogParams.hpp.

34.11.3.4 void stdair::BasLogParams::setForcedInitialisationFlag (const bool *iForceMultipleInstance*) [inline]

State whether or not multiple initialisations are to be forced.

Definition at line 49 of file BasLogParams.hpp.

34.11.3.5 bool stdair::BasLogParams::check ( ) const

Check that all the parameters are fine.

34.11.3.6 const std::string stdair::BasLogParams::describe ( ) const [virtual]

Get the serialised version of the DBParams structure.

Implements stdair::StructAbstract.

Definition at line 39 of file BasLogParams.cpp.

References toString().

34.11.3.7 std::string stdair::BasLogParams::toShortString ( ) const

Get a short display of the LOGParams structure.

Definition at line 44 of file BasLogParams.cpp.

References stdair::LOG::_logLevels.

34.11.3.8 std::string stdair::BasLogParams::toString ( ) const

Get the serialised version of the LOGParams structure.

Definition at line 52 of file BasLogParams.cpp.

References stdair::LOG::_logLevels.

Referenced by describe().

34.11.3.9 void stdair::StructAbstract::toStream (std::ostream & *ioOut*) const [inline, inherited]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented in stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct,

stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 29 of file StructAbstract.hpp.

References stdair::StructAbstract::describe().

Referenced by operator<<().

34.11.3.10 virtual void stdair::StructAbstract::fromStream (std::istream & *ioIn*) [inline, virtual, inherited]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented in stdair::ProgressStatusSet, stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::EventStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 38 of file StructAbstract.hpp.

Referenced by operator>>().

34.11.4 Friends And Related Function Documentation

34.11.4.1 friend class Logger [friend]

Definition at line 20 of file BasLogParams.hpp.

The documentation for this struct was generated from the following files:

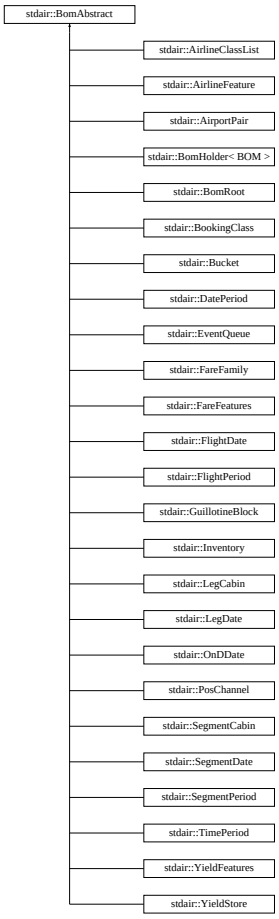
- stdair/basic/BasLogParams.hpp
- stdair/basic/BasLogParams.cpp

34.12 stdair::BomAbstract Class Reference

Base class for the Business Object Model (BOM) layer.

`#include <stdair/bom/BomAbstract.hpp>`

Inheritance diagram for stdair::BomAbstract:



Public Member Functions

- virtual void toStream (std::ostream &ioOut) const =0
- virtual void fromStream (std::istream &ioIn)=0
- virtual std::string toString () const =0
- virtual ~BomAbstract ()

Protected Member Functions

- BomAbstract ()
- BomAbstract (const BomAbstract &)

34.12.1 Detailed Description

Base class for the Business Object Model (BOM) layer.

Definition at line 23 of file BomAbstract.hpp.

34.12.2 Constructor & Destructor Documentation

34.12.2.1 stdair::BomAbstract::BomAbstract ( ) [inline, protected]

Protected Default Constructor to ensure this class is abtract.

Definition at line 40 of file BomAbstract.hpp.

34.12.2.2 stdair::BomAbstract::BomAbstract (const BomAbstract &) [inline, protected]

Definition at line 41 of file BomAbstract.hpp.

34.12.2.3 virtual stdair::BomAbstract::~BomAbstract ( ) [inline, virtual]

Destructor.

Definition at line 44 of file BomAbstract.hpp.

34.12.3 Member Function Documentation

34.12.3.1 virtual void stdair::BomAbstract::toStream (std::ostream & *ioOut*) const [pure virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implemented in stdair::AirlineClassList, stdair::AirlineFeature, stdair::AirportPair, stdair::BomHolder< BOM >, stdair::BomRoot, stdair::BookingClass, stdair::Bucket, stdair::DatePeriod, stdair::EventQueue, stdair::FareFamily, stdair::FareFeatures, stdair::FlightDate, stdair::FlightPeriod, stdair::GuillotineBlock, stdair::Inventory, stdair::LegCabin, stdair::LegDate, stdair::OnDDate, stdair::PosChannel, stdair::SegmentCabin, stdair::SegmentDate, stdair::SegmentPeriod, stdair::TimePeriod, stdair::YieldFeatures, and stdair::YieldStore.

Referenced by operator<<().

34.12.3.2 virtual void stdair::BomAbstract::fromStream (std::istream & *ioIn*) [pure virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implemented in stdair::AirlineClassList, stdair::AirlineFeature, stdair::AirportPair, stdair::BomHolder< BOM >, stdair::BomRoot, stdair::BookingClass, stdair::Bucket, stdair::DatePeriod, stdair::EventQueue, stdair::FareFamily, stdair::FareFeatures, stdair::FlightDate, stdair::FlightPeriod, stdair::GuillotineBlock, stdair::Inventory, stdair::LegCabin, stdair::LegDate, stdair::OnDDate, stdair::PosChannel, stdair::SegmentCabin, stdair::SegmentDate, stdair::SegmentPeriod, stdair::TimePeriod,

stdair::YieldFeatures, and stdair::YieldStore.

Referenced by operator>>().

34.12.3.3 virtual std::string stdair::BomAbstract::toString ( ) const [pure virtual]

Get the serialised version of the Business Object.

Implemented in stdair::AirlineClassList, stdair::AirlineFeature, stdair::AirportPair, stdair::BomHolder< BOM >, stdair::BomRoot, stdair::BookingClass, stdair::Bucket, stdair::DatePeriod, stdair::EventQueue, stdair::FareFamily, stdair::FareFeatures, stdair::FlightDate, stdair::FlightPeriod, stdair::GuillotineBlock, stdair::Inventory, stdair::LegCabin, stdair::LegDate, stdair::OnDDate, stdair::PosChannel, stdair::SegmentCabin, stdair::SegmentDate, stdair::SegmentPeriod, stdair::TimePeriod, stdair::YieldFeatures, and stdair::YieldStore.

The documentation for this class was generated from the following file:

- stdair/bom/BomAbstract.hpp

34.13 stdair::BomArchive Class Reference

Utility class to archive/restore BOM objects with Boost serialisation.

`#include <stdair/bom/BomArchive.hpp>`

Static Public Member Functions

- static void archive (const BomRoot &)
- static std::string archive (const Inventory &)
- static void restore (const std::string &iArchive, Inventory &)
- static void archive (const FlightDate &)

34.13.1 Detailed Description

Utility class to archive/restore BOM objects with Boost serialisation.

Definition at line 28 of file BomArchive.hpp.

34.13.2 Member Function Documentation

34.13.2.1 void stdair::BomArchive::archive (const BomRoot & *iBomRoot*) [static]

Recursively archive (dump in the underlying STL string) the objects of the BOM tree.

Parameters

const	BomRoot& Root of the BOM tree to be archived.

Definition at line 32 of file BomArchive.cpp.

34.13.2.2 std::string stdair::BomArchive::archive (const Inventory & *iInventory*) [static]

Recursively archive (dump in the underlying STL string) the objects of the BOM tree.

Parameters

const	Inventory& Root of the BOM tree to be archived.

Definition at line 36 of file BomArchive.cpp.

34.13.2.3 void stdair::BomArchive::restore (const std::string & *iArchive,* Inventory & *ioInventory*) [static]

Recursively restore (from the underlying STL string) the objects of the BOM tree.

Parameters

const	std::string& String holding the serialised objects.
Inventory&	Root of the BOM tree to be restored.

Definition at line 44 of file BomArchive.cpp.

34.13.2.4 void stdair::BomArchive::archive (const FlightDate & *iFlightDate*) [static]

Recursively archive (dump in the underlying STL string) the objects of the BOM tree.

Parameters

const	FlightDate& Root of the BOM tree to be archived.

Definition at line 52 of file BomArchive.cpp.

The documentation for this class was generated from the following files:

- stdair/bom/BomArchive.hpp
- stdair/bom/BomArchive.cpp

34.14 stdair::BomDisplay Class Reference

Utility class to display StdAir objects with a pretty format.

`#include <stdair/bom/BomDisplay.hpp>`

Static Public Member Functions

- static std::string csvDisplay (const EventQueue &)
- static void list (std::ostream &, const BomRoot &, const AirlineCode_T &iAirlineCode="all", const FlightNumber_T &iFlightNumber=0)

- static void list (std::ostream &, const Inventory &, const unsigned short iInventoryIndex=0, const FlightNumber_T &iFlightNumber=0)
- static void listAirportPairDateRange (std::ostream &, const BomRoot &)
- static void csvDisplay (std::ostream &, const BomRoot &)
- static void csvDisplay (std::ostream &, const Inventory &)
- static void csvDisplay (std::ostream &, const OnDDate &)
- static void csvDisplay (std::ostream &, const FlightDate &)
- static void csvLegDateDisplay (std::ostream &, const FlightDate &)
- static void csvSegmentDateDisplay (std::ostream &, const FlightDate &)
- static void csvLegCabinDisplay (std::ostream &, const FlightDate &)
- static void csvSegmentCabinDisplay (std::ostream &, const FlightDate &)
- static void csvFareFamilyDisplay (std::ostream &, const FlightDate &)
- static void csvBucketDisplay (std::ostream &, const FlightDate &)
- static void csvBookingClassDisplay (std::ostream &, const BookingClass &, const std::string &iLeadingString)
- static void csvBookingClassDisplay (std::ostream &, const FlightDate &)
- static void csvDisplay (std::ostream &, const TravelSolutionList_T &)
- static void csvDisplay (std::ostream &, const DatePeriodList_T &)
- static void csvSimFQTAirRACDisplay (std::ostream &, const BomRoot &)
- static void csvAirportPairDisplay (std::ostream &, const AirportPair &)
- static void csvDateDisplay (std::ostream &, const DatePeriod &)
- static void csvPosChannelDisplay (std::ostream &, const PosChannel &)
- static void csvTimeDisplay (std::ostream &, const TimePeriod &)
- template<typename FEATURE_TYPE >
  static void csvFeatureListDisplay (std::ostream &oStream, const TimePeriod &)
- template<typename FEATURE_TYPE >
  static void csvFeaturesDisplay (std::ostream &oStream, const FEATURE_TYPE &)
- static void csvAirlineClassDisplay (std::ostream &, const AirlineClassList &)

34.14.1 Detailed Description

Utility class to display StdAir objects with a pretty format.

Definition at line 39 of file BomDisplay.hpp.

34.14.2 Member Function Documentation

34.14.2.1 static std::string stdair::BomDisplay::csvDisplay (const EventQueue &) [static]

Recursively display (dump in the underlying output log stream) the objects of the BOM tree.

Parameters

const	stdair::EventQueue& Root of the BOM tree to be displayed.

Returns

std::string Output string in which the BOM tree should be logged/dumped.

34.14.2.2 static void stdair::BomDisplay::list (std::ostream & , const BomRoot & , const AirlineCode_T & *iAirlineCode* = "all", const FlightNumber_T & *iFlightNumber* = 0) [static]

Display (dump in the underlying output log stream) the list of flight-dates contained within the given BOM tree.

Parameters

std::ostream&	Output stream in which the flight-date keys should be logged/dumped.
const	BomRoot& Root of the BOM tree to be displayed.
const	AirlineCode& Airline for which the flight-dates should be displayed. If set to "all" (default), all the inventories will be displayed.
const	FlightNumber_T& Flight number for which all the departure dates should be displayed. If set to 0 (the default), all the flight numbers will be displayed.

34.14.2.3 static void stdair::BomDisplay::list (std::ostream & , const Inventory & , const unsigned short *iInventoryIndex* = 0, const FlightNumber_T & *iFlightNumber* = 0) [static]

Display (dump in the underlying output log stream) the list of flight-dates contained within the given BOM tree.

Parameters

std::ostream&	Output stream in which the flight-date keys should be logged/dumped.
const	Inventory& Root of the BOM tree to be displayed.
const	unsigned short Index, within the list, of the inventory. It is 0 when that inventory is displayed alone.
const	FlightNumber_T& Flight number for which all the departure dates should be displayed. If set to 0 (the default), all the flight numbers will be displayed.

34.14.2.4 static void stdair::BomDisplay::listAirportPairDateRange (std::ostream & , const BomRoot &) [static]

Display the list of aiports pairs and date ranges (contained within the BOM tree)

Parameters

std::ostream&	Output stream in which the airport pairs and date ranges are logged/dumped.
const	BomRoot& Root of the BOM tree to be displayed.

34.14.2.5 static void stdair::BomDisplay::csvDisplay (std::ostream & , const BomRoot &) [static]

Recursively display (dump in the underlying output log stream) the objects of the BOM tree.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	BomRoot& Root of the BOM tree to be displayed.

34.14.2.6 static void stdair::BomDisplay::csvDisplay (std::ostream & , const Inventory &) [static]

Recursively display (dump in the underlying output log stream) the objects of the BOM tree from the level of the given Inventory.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	Inventory& Root of the BOM tree to be displayed.

34.14.2.7 static void stdair::BomDisplay::csvDisplay (std::ostream & , const OnDDate &) [static]

Display the O&D date object information.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	OnDDate& the BOM to be displayed.

34.14.2.8 static void stdair::BomDisplay::csvDisplay (std::ostream & , const FlightDate &) [static]

Recursively display (dump in the underlying output log stream) the objects of the BOM tree from the level of the given FlightDate.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	FlightDate& Root of the BOM tree to be displayed.

34.14.2.9 static void stdair::BomDisplay::csvLegDateDisplay (std::ostream & , const FlightDate &) [static]

Recursively display (dump in the underlying output log stream) the leg-date level objects of the BOM tree.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	FlightDate& Root of the BOM tree to be displayed.

34.14.2.10 static void stdair::BomDisplay::csvSegmentDateDisplay (std::ostream & , const FlightDate &) [static]

Recursively display (dump in the underlying output log stream) the segment-date level objects of the BOM tree.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	FlightDate& Root of the BOM tree to be displayed.

34.14.2.11 static void stdair::BomDisplay::csvLegCabinDisplay (std::ostream & , const FlightDate &) [static]

Recursively display (dump in the underlying output log stream) the leg-cabin level objects of the BOM tree.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	FlightDate& Root of the BOM tree to be displayed.

34.14.2.12 static void stdair::BomDisplay::csvSegmentCabinDisplay (std::ostream & , const FlightDate &) [static]

Recursively display (dump in the underlying output log stream) the segment-cabin level objects of the BOM tree.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	FlightDate& Root of the BOM tree to be displayed.

34.14.2.13 static void stdair::BomDisplay::csvFareFamilyDisplay (std::ostream & , const FlightDate &) [static]

Recursively display (dump in the underlying output log stream) the fare families level objects of the BOM tree.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	FlightDate& Root of the BOM tree to be displayed.

34.14.2.14 static void stdair::BomDisplay::csvBucketDisplay (std::ostream & , const FlightDate &) [static]

Recursively display (dump in the underlying output log stream) the bucket holder level objects of the BOM tree.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	FlightDate& Root of the BOM tree to be displayed.

34.14.2.15 static void stdair::BomDisplay::csvBookingClassDisplay (std::ostream & , const BookingClass & , const std::string & *iLeadingString*) [static]

Display (dump in the underlying output log stream) the segment-class, without going recursively deeper in the BOM tree.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	BookingClass& Root of the BOM tree to be displayed.
const	std::string& Leading string to be displayed.

34.14.2.16 static void stdair::BomDisplay::csvBookingClassDisplay (std::ostream & , const FlightDate &) [static]

Recursively display (dump in the underlying output log stream) the segment-class level objects of the BOM tree.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	FlightDate& Root of the BOM tree to be displayed.

34.14.2.17 static void stdair::BomDisplay::csvDisplay (std::ostream & , const TravelSolutionList_T &) [static]

Display (dump in the underlying output log stream) the full list of travel solution structures.

Parameters

std::ostream&	Output stream in which the list of travel solutions is logged/dumped.
TravelSolution T&	List of travel solutions to display.

34.14.2.18 static void stdair::BomDisplay::csvDisplay (std::ostream & , const DatePeriodList_T &) [static]

Display (dump in the underlying output log stream) the full list of date period fare rule sub bom tree.

Parameters

std::ostream&	Output stream in which the list of travel solutions is logged/dumped.
DatePeriodLis T&	List of date period to display.

34.14.2.19 static void stdair::BomDisplay::csvSimFQTAirRACDisplay (std::ostream & , const BomRoot &) [static]

Recursively display (dump in the underlying output log stream) the objects of the BOM tree.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	BomRoot& Root of the BOM tree to be displayed.

34.14.2.20 static void stdair::BomDisplay::csvAirportPairDisplay (std::ostream & , const AirportPair &) [static]

Recursively display (dump in the underlying output log stream) the objects of the BOM tree from the level of the given airport pair.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	AirportPair& Root of the BOM tree to be displayed.

34.14.2.21 static void stdair::BomDisplay::csvDateDisplay (std::ostream & , const DatePeriod &) [static]

Recursively display (dump in the underlying output log stream) the objects of the BOM tree from the level of the given date range.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	DatePeriod& Root of the BOM tree to be displayed.

34.14.2.22 static void stdair::BomDisplay::csvPosChannelDisplay (std::ostream & , const PosChannel &) [static]

Recursively display (dump in the underlying output log stream) the objects of the BOM tree from the level of the given point of sale channel.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	PosChannel& Root of the BOM tree to be displayed.

34.14.2.23 static void stdair::BomDisplay::csvTimeDisplay (std::ostream & , const TimePeriod &) [static]

Recursively display (dump in the underlying output log stream) the objects of the BOM tree from the level of the given time range.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	TimePeriod& Root of the BOM tree to be displayed.

34.14.2.24 template<typename FEATURE_TYPE > static void stdair::BomDisplay::csvFeatureListDisplay (std::ostream & *oStream,* const TimePeriod &) [static]

Recursively display (dump in the underlying output log stream) the list of fare/yield features objects of the BOM tree.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	TimePeriod& Root of the BOM tree to be displayed.

34.14.2.25 template<typename FEATURE_TYPE > static void stdair::BomDisplay::csvFeaturesDisplay (std::ostream & *oStream*, const FEATURE_TYPE &) [static]

Recursively display (dump in the underlying output log stream) the fare/yield features objects of the BOM tree.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	FEATURE_TYPE& Root of the BOM tree to be displayed.

34.14.2.26 static void stdair::BomDisplay::csvAirlineClassDisplay (std::ostream & , const AirlineClassList &) [static]

Recursively display (dump in the underlying output log stream) the airline class objects of the BOM tree.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	AirlineClassList& Root of the BOM tree to be displayed.

The documentation for this class was generated from the following file:

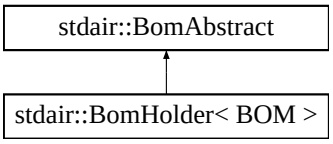
- stdair/bom/BomDisplay.hpp

34.15 stdair::BomHolder< BOM > Class Template Reference

Class representing the holder of BOM object containers (list and map).

`#include <stdair/bom/BomHolder.hpp>`

Inheritance diagram for stdair::BomHolder< BOM >:



Public Types

- typedef stdair::BomHolderKey Key_T
- typedef std::list< BOM * > BomList_T
- typedef std::map< const MapKey_T, BOM * > BomMap_T

Public Member Functions

- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const

Public Attributes

- Key_T _key
- BomList_T _bomList
- BomMap_T _bomMap

Protected Member Functions

- BomHolder ()
- BomHolder (const BomHolder &)
- BomHolder (const Key_T &iKey)
- ~BomHolder ()

Friends

- class FacBom
- class FacBomManager

34.15.1 Detailed Description

template<typename BOM>class stdair::BomHolder< BOM >

Class representing the holder of BOM object containers (list and map).

Definition at line 24 of file BomHolder.hpp.

34.15.2 Member Typedef Documentation

34.15.2.1 template<typename BOM> typedef stdair::BomHolderKey stdair::BomHolder< BOM >::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 34 of file BomHolder.hpp.

34.15.2.2 template<typename BOM> typedef std::list<BOM*> stdair::BomHolder< BOM >::BomList_T

(STL) list of children.

Definition at line 39 of file BomHolder.hpp.

34.15.2.3 template<typename BOM> typedef std::map<const MapKey_T, BOM*> stdair::BomHolder< BOM >::BomMap_T

(STL) map of children.

Definition at line 44 of file BomHolder.hpp.

34.15.3 Constructor & Destructor Documentation

34.15.3.1 template<typename BOM> stdair::BomHolder< BOM >::BomHolder ( ) [protected]

Constructor.

34.15.3.2 template<typename BOM> stdair::BomHolder< BOM >::BomHolder (const BomHolder< BOM > &) [protected]

Copy constructor.

34.15.3.3 template<typename BOM> stdair::BomHolder< BOM >::BomHolder (const Key_T & *iKey*) [inline, protected]

Main constructor.

Definition at line 94 of file BomHolder.hpp.

34.15.3.4 template<typename BOM> stdair::BomHolder< BOM >::~BomHolder ( ) [inline, protected]

Destructor.

Definition at line 99 of file BomHolder.hpp.

34.15.4 Member Function Documentation

34.15.4.1 template<typename BOM> void stdair::BomHolder< BOM >::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 54 of file BomHolder.hpp.

References stdair::BomHolder< BOM >::toString().

34.15.4.2 template<typename BOM> void stdair::BomHolder< BOM >::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 63 of file BomHolder.hpp.

34.15.4.3 template<typename BOM> std::string stdair::BomHolder< BOM >::toString ( ) const [inline, virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 69 of file BomHolder.hpp.

Referenced by stdair::BomHolder< BOM >::toStream().

34.15.4.4 template<typename BOM> const std::string stdair::BomHolder< BOM >::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 76 of file BomHolder.hpp.

34.15.5 Friends And Related Function Documentation

34.15.5.1 template<typename BOM> friend class FacBom [friend]

Friend classes.

Definition at line 26 of file BomHolder.hpp.

34.15.5.2 template<typename BOM> friend class FacBomManager [friend]

Definition at line 27 of file BomHolder.hpp.

34.15.6 Member Data Documentation

34.15.6.1 template<typename BOM> Key_T stdair::BomHolder< BOM >::_key

Key.

Definition at line 99 of file BomHolder.hpp.

34.15.6.2 template<typename BOM> BomList_T stdair::BomHolder< BOM >::_bomList

(STL) list of children.

Definition at line 111 of file BomHolder.hpp.

Referenced by stdair::FacBomManager::cloneHolder(), stdair::BomManager::getList(), stdair::BomManager::hasList(), and stdair::serialiseHelper().

34.15.6.3 template<typename BOM> BomMap_T stdair::BomHolder< BOM >::_bomMap

(STL) map of children.

Definition at line 116 of file BomHolder.hpp.

Referenced by stdair::FacBomManager::cloneHolder(), stdair::BomManager::getMap(), stdair::BomManager::getObjectPtr(), stdair::BomManager::hasMap(), and stdair::serialiseHelper().

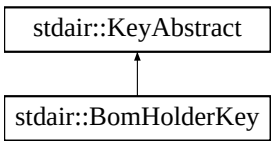
The documentation for this class was generated from the following file:

- stdair/bom/BomHolder.hpp

34.16 stdair::BomHolderKey Struct Reference

`#include <stdair/bom/BomHolderKey.hpp>`

Inheritance diagram for stdair::BomHolderKey:



Public Member Functions

- BomHolderKey ()
- ~BomHolderKey ()
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const
- const std::string describe () const

34.16.1 Detailed Description

Key of the BOM structure holder.

Definition at line 12 of file BomHolderKey.hpp.

34.16.2 Constructor & Destructor Documentation

34.16.2.1 stdair::BomHolderKey::BomHolderKey ( )

Constructor.

Definition at line 13 of file BomHolderKey.cpp.

34.16.2.2 stdair::BomHolderKey::~BomHolderKey ( )

Destructor.

Definition at line 17 of file BomHolderKey.cpp.

34.16.3 Member Function Documentation

34.16.3.1 void stdair::BomHolderKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 21 of file BomHolderKey.cpp.

References toString().

34.16.3.2 void stdair::BomHolderKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 26 of file BomHolderKey.cpp.

34.16.3.3 const std::string stdair::BomHolderKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from stdair::KeyAbstract.

Definition at line 30 of file BomHolderKey.cpp.

Referenced by toStream().

34.16.3.4 const std::string stdair::BomHolderKey::describe ( ) const

Display of the key.

The documentation for this struct was generated from the following files:

- stdair/bom/BomHolderKey.hpp
- stdair/bom/BomHolderKey.cpp

34.17 stdair::BomJSONExport Class Reference

Utility class to export StdAir objects in a JSON format.

`#include <stdair/bom/BomJSONExport.hpp>`

Static Public Member Functions

- static void jsonExport (std::ostream &, const FlightDate &)

34.17.1 Detailed Description

Utility class to export StdAir objects in a JSON format.

Definition at line 34 of file BomJSONExport.hpp.

34.17.2 Member Function Documentation

34.17.2.1 void stdair::BomJSONExport::jsonExport (std::ostream & *oStream*, const FlightDate & *iFlightDate*) [static]

Recursively export (dump in the underlying output log stream) the objects of the BOM tree from the level of the given FlightDate.

Parameters

std::ostream&	Output stream in which the BOM tree should be logged/dumped.
const	FlightDate& Root of the BOM tree to be exported.

Definition at line 29 of file BomJSONExport.cpp.

References stdair::FlightDate::getAirlineCode(), stdair::FlightDate::getDepartureDate(), and stdair::FlightDate::getFlightNumber().

The documentation for this class was generated from the following files:

- stdair/bom/BomJSONExport.hpp
- stdair/bom/BomJSONExport.cpp

34.18 stdair::BomJSONImport Class Reference

Utility class to import StdAir objects in a JSON format.

`#include <stdair/bom/BomJSONImport.hpp>`

Static Public Member Functions

- static bool jsonImportInventoryKey (const std::string &iBomKey, AirlineCode_T &)
- static bool jsonImportFlightDateKey (const std::string &iBomKey, FlightNumber_T &, Date_T &ioDepartureDate)

34.18.1 Detailed Description

Utility class to import StdAir objects in a JSON format.

Definition at line 18 of file BomJSONImport.hpp.

34.18.2 Member Function Documentation

34.18.2.1 bool stdair::BomJSONImport::jsonImportInventoryKey (const std::string & *iBomKey*, AirlineCode_T & *ioAirlineCode*) [static]

Extract the airline code from a given JSON-formatted string.

Parameters

std::string&	JSON-formatted string.
AirlineCode_T&	Airline code extracted from the given string.

Returns

bool State whether the extracting has been successful.

Definition at line 26 of file BomJSONImport.cpp.

34.18.2.2 bool stdair::BomJSONImport::jsonImportFlightDateKey (const std::string & *iBomKey*, FlightNumber_T & *ioFlightNumber*, Date_T & *ioDepartureDate*) [static]

Build a FlightDateKey from a given JSON-formatted string.

Parameters

std::string&	JSON-formatted string.
FlightNumber_T&	Flight number extracted from the given string.
Date_T&	Departure date extracted from the given string.

Returns

bool State whether the extracting has been successful.

Definition at line 56 of file BomJSONImport.cpp.

The documentation for this class was generated from the following files:

- stdair/bom/BomJSONImport.hpp
- stdair/bom/BomJSONImport.cpp

34.19 stdair::BomKeyManager Class Reference

Utility class to extract key structures from strings.

`#include <stdair/bom/BomKeyManager.hpp>`

Static Public Member Functions

- static ParsedKey extractKeys (const std::string &iFullKeyStr)
- static InventoryKey extractInventoryKey (const std::string &iFullKeyStr)
- static FlightDateKey extractFlightDateKey (const std::string &iFullKeyStr)
- static SegmentDateKey extractSegmentDateKey (const std::string &iFullKeyStr)

34.19.1 Detailed Description

Utility class to extract key structures from strings.

Definition at line 29 of file BomKeyManager.hpp.

34.19.2 Member Function Documentation

34.19.2.1 ParsedKey stdair::BomKeyManager::extractKeys (const std::string & *iFullKeyStr*) [static]

Build a ParsedKey structure from a full key string which includes an inventory key, flight-date key elements, segment-date key elements.

Definition at line 30 of file BomKeyManager.cpp.

References stdair::ParsedKey::_airlineCode, stdair::ParsedKey::_boardingPoint, stdair::ParsedKey::_boardingTime, stdair::ParsedKey::_departureDate, stdair::ParsedKey::_flightNumber, stdair::ParsedKey::_fullKey, stdair::ParsedKey::_offPoint, and stdair::DEFAULT_KEY_TOKEN_DELIMITER.

Referenced by stdair::TravelSolutionStruct::describe(), stdair::TravelSolutionStruct::display(), extractFlightDateKey(), extractInventoryKey(), extractSegmentDateKey(), and stdair::BomRetriever::retrieveSegmentDat

34.19.2.2 InventoryKey stdair::BomKeyManager::extractInventoryKey (const std::string & *iFullKeyStr*) [static]

Build a InventoryKey structure from a (full) key string.

The full key string gathers airline code, flight number, origin and destination, cabin and booking class. It corresponds to the output generated by the toString() methods of the XxxKey structures.

Parameters

const	std::string& The full key string.

Returns

InventoryKey The just built InventoryKey structure.

Definition at line 78 of file BomKeyManager.cpp.

References extractKeys(), and stdair::ParsedKey::getInventoryKey().

Referenced by stdair::BomRetriever::retrieveInventoryFromLongKey().

34.19.2.3 FlightDateKey stdair::BomKeyManager::extractFlightDateKey (const std::string & *iFullKeyStr*) [static]

Build a FlightDateKey structure from a (full) key string.

The full key string gathers airline code, flight number, origin and destination, cabin and booking class. It corresponds to the output generated by the toString() methods of the XxxKey structures.

Parameters

const	std::string& The full key string.

Returns

FlightDateKey The just built FlightDateKey structure.

Definition at line 86 of file BomKeyManager.cpp.

References extractKeys(), and stdair::ParsedKey::getFlightDateKey().

Referenced by stdair::OnDDateKey::getDate(), and stdair::BomRetriever::retrieveFlightDateFromLongKey().

34.19.2.4 SegmentDateKey stdair::BomKeyManager::extractSegmentDateKey (const std::string & *iFullKeyStr*) [static]

Build a SegmentDateKey structure from a (full) key string.

The full key string gathers airline code, flight number, origin and destination, cabin and booking class. It corresponds to the output generated by the toString() methods of the XxxKey structures.

Parameters

const	std::string& The full key string.

Returns

SegmentDateKey The just built SegmentDateKey structure.

Definition at line 94 of file BomKeyManager.cpp.

References extractKeys(), and stdair::ParsedKey::getSegmentKey().

Referenced by stdair::OnDDateKey::getDestination(), stdair::OnDDateKey::getOrigin(), and stdair::BomRetriever::retrieveSegmentDateFromLongKey().

The documentation for this class was generated from the following files:

- stdair/bom/BomKeyManager.hpp
- stdair/bom/BomKeyManager.cpp

34.20 stdair::BomManager Class Reference

Utility class for StdAir-based objects.

`#include <stdair/bom/BomManager.hpp>`

Public Member Functions

- template<>
  bool hasList (const SegmentDate &ioSegmentDate)
- template<>
  const BomHolder< SegmentDate >::BomList_T & getList (const SegmentDate &ioSegmentDate)
- template<>
  bool hasMap (const SegmentDate &ioSegmentDate)

Static Public Member Functions

- template<typename OBJECT2 , typename OBJECT1 >
  static const BomHolder< OBJECT2 >::BomList_T & getList (const OBJECT1 &)
- template<typename OBJECT2 , typename OBJECT1 >
  static const BomHolder< OBJECT2 >::BomMap_T & getMap (const OBJECT1 &)
- template<typename OBJECT2 , typename OBJECT1 >
  static bool hasList (const OBJECT1 &)
- template<typename OBJECT2 , typename OBJECT1 >
  static bool hasMap (const OBJECT1 &)
- template<typename PARENT , typename CHILD >
  static PARENT * getParentPtr (const CHILD &)

- template<typename PARENT , typename CHILD >
  static PARENT & getParent (const CHILD &)
- template<typename OBJECT2 , typename OBJECT1 >
  static OBJECT2 * getObjectPtr (const OBJECT1 &, const MapKey_T &)
- template<typename OBJECT2 , typename OBJECT1 >
  static OBJECT2 & getObject (const OBJECT1 &, const MapKey_T &)

Friends

- class FacBomManager

34.20.1 Detailed Description

Utility class for StdAir-based objects.

Most of those methods work for objects specified and instantianted outside StdAir, as long as those objects inherit from StdAir objects.

Definition at line 32 of file BomManager.hpp.

34.20.2 Member Function Documentation

34.20.2.1 template<typename OBJECT2 , typename OBJECT1 > const BomHolder< OBJECT2 >::BomList_T & stdair::BomManager::getList (const OBJECT1 & *iObject1*) [static]

Get the container (STL list) of OBJECT2 objects within the OBJECT1 object.

Definition at line 127 of file BomManager.hpp.

References stdair::BomHolder< BOM >::_bomList.

34.20.2.2 template<typename OBJECT2 , typename OBJECT1 > const BomHolder< OBJECT2 >::BomMap_T & stdair::BomManager::getMap (const OBJECT1 & *iObject1*) [static]

Get the container (STL map) of OBJECT2 objects within the OBJECT1 object.

Definition at line 138 of file BomManager.hpp.

References stdair::BomHolder< BOM >::_bomMap.

34.20.2.3 template<typename OBJECT2 , typename OBJECT1 > bool stdair::BomManager::hasList (const OBJECT1 & *iObject1*) [static]

Check if the list of object2 has been initialised.

Definition at line 157 of file BomManager.hpp.

References stdair::BomHolder< BOM >::_bomList.

34.20.2.4 template<typename OBJECT2 , typename OBJECT1 > bool stdair::BomManager::hasMap (const OBJECT1 & *iObject1*) [static]

Check if the map of object2 has been initialised.

Definition at line 177 of file BomManager.hpp.

References stdair::BomHolder< BOM >::_bomMap.

34.20.2.5 template<typename PARENT , typename CHILD > PARENT * stdair::BomManager::getParentPtr (const CHILD & *iChild*) [static]

Get the PARENT of the given CHILD.

If the types do not match, NULL is returned.

Definition at line 196 of file BomManager.hpp.

34.20.2.6 template<typename PARENT , typename CHILD > PARENT & stdair::BomManager::getParent (const CHILD & *iChild*) [static]

Get the PARENT of the given CHILD.

Definition at line 206 of file BomManager.hpp.

34.20.2.7 template<typename OBJECT2 , typename OBJECT1 > OBJECT2 * stdair::BomManager::getObjectPtr (const OBJECT1 & *iObject1,* const MapKey_T & *iKey*) [static]

Get the OBJECT2 pointer corresponding to the given string key.

If such a OBJECT2 does not exist, return NULL.

Definition at line 217 of file BomManager.hpp.

References stdair::BomHolder< BOM >::_bomMap.

34.20.2.8 template<typename OBJECT2 , typename OBJECT1 > OBJECT2 & stdair::BomManager::getObject (const OBJECT1 & *iObject1,* const MapKey_T & *iKey*) [static]

Get the OBJECT2 corresponding the the given string key.

Definition at line 259 of file BomManager.hpp.

References STDAIR_LOG_ERROR.

34.20.2.9 template<> bool stdair::BomManager::hasList (const SegmentDate & *ioSegmentDate*) [inline]

Definition at line 304 of file BomManager.hpp.

34.20.2.10 template<> const BomHolder<SegmentDate>::BomList_T& stdair::BomManager::getList (const SegmentDate & *ioSegmentDate*) [inline]

Definition at line 319 of file BomManager.hpp.

34.20.2.11 template<> bool stdair::BomManager::hasMap (const SegmentDate & *ioSegmentDate*) [inline]

Definition at line 332 of file BomManager.hpp.

34.20.3 Friends And Related Function Documentation

34.20.3.1 friend class FacBomManager [friend]

Definition at line 33 of file BomManager.hpp.

The documentation for this class was generated from the following file:

- stdair/bom/BomManager.hpp

34.21 stdair::BomRetriever Class Reference

Utility class to retrieve StdAir objects.

`#include <stdair/bom/BomRetriever.hpp>`

Static Public Member Functions

- static Inventory * retrieveInventoryFromLongKey (const BomRoot &, const std::string &iFullKeyStr)
- static Inventory * retrieveInventoryFromKey (const BomRoot &, const InventoryKey &)
- static Inventory * retrieveInventoryFromKey (const BomRoot &, const AirlineCode_T &)
- static FlightDate * retrieveFlightDateFromLongKey (const BomRoot &, const std::string &iFullKeyStr)
- static FlightDate * retrieveFlightDateFromKeySet (const BomRoot &, const AirlineCode_T &, const FlightNumber_T &, const Date_T &iFlightDateDate)
- static FlightDate * retrieveFlightDateFromLongKey (const Inventory &, const std::string &iFullKeyStr)
- static FlightDate * retrieveFlightDateFromKey (const Inventory &, const FlightDateKey &)
- static FlightDate * retrieveFlightDateFromKey (const Inventory &, const FlightNumber_T &, const Date_T &iFlightDateDate)
- static SegmentDate * retrieveSegmentDateFromLongKey (const BomRoot &, const std::string &iFullKeyStr)

- static SegmentDate * retrieveSegmentDateFromLongKey (const Inventory &, const std::string &iFullKeyStr)
- static SegmentDate * retrieveSegmentDateFromLongKey (const FlightDate &, const std::string &iFullKeyStr)
- static SegmentDate * retrieveSegmentDateFromKey (const FlightDate &, const SegmentDateKey &)
- static SegmentDate * retrieveSegmentDateFromKey (const FlightDate &, const AirportCode_T &iOrigin, const AirportCode_T &iDestination)
- static BookingClass * retrieveBookingClassFromLongKey (const Inventory &, const std::string &iFullKeyStr, const ClassCode_T &)
- static AirportPair * retrieveAirportPairFromKeySet (const BomRoot &, const stdair::AirportCode_T &, const stdair::AirportCode_T &)
- static void retrieveDatePeriodListFromKey (const AirportPair &, const stdair::Date_T &, stdair::DatePeriodList_T &)
- static void retrieveDatePeriodListFromKeySet (const BomRoot &, const stdair::AirportCode_T &, const stdair::AirportCode_T &, const stdair::Date_T &, stdair::DatePeriodList_T &)
- static stdair::LegCabin & retrieveDummyLegCabin (stdair::BomRoot &)
- static stdair::SegmentCabin & retrieveDummySegmentCabin (stdair::BomRoot &)

34.21.1 Detailed Description

Utility class to retrieve StdAir objects.

Definition at line 35 of file BomRetriever.hpp.

34.21.2 Member Function Documentation

34.21.2.1 Inventory * stdair::BomRetriever::retrieveInventoryFromLongKey (const BomRoot & *iBomRoot*, const std::string & *iFullKeyStr*) [static]

Retrieve an Inventory object from a (full) key string.

The full key string gathers airline code, flight number, origin and destination, cabin and booking class. It corresponds to the output generated by the toString() methods of the XxxKey structures.

Parameters

const	BomRoot& The root of the BOM tree.
const	std::string& The full key string.

Returns

Inventory* The just retrieved Inventory object.

Definition at line 29 of file BomRetriever.cpp.

References stdair::BomKeyManager::extractInventoryKey(), and stdair::BomRoot::getInventory().

Referenced by retrieveFlightDateFromLongKey().

34.21.2.2 Inventory * stdair::BomRetriever::retrieveInventoryFromKey (const BomRoot & *iBomRoot,* const InventoryKey & *iKey*) [static]

Retrieve an Inventory object from an InventoryKey structure.

Parameters

const	BomRoot& The root of the BOM tree.
const	InventoryKey& The key.

Returns

Inventory* The just retrieved Inventory object.

Definition at line 43 of file BomRetriever.cpp.

References stdair::BomRoot::getInventory().

Referenced by retrieveDummyLegCabin(), retrieveDummySegmentCabin(), and retrieveFlightDateFromKeySet().

34.21.2.3 Inventory * stdair::BomRetriever::retrieveInventoryFromKey (const BomRoot & *iBomRoot,* const AirlineCode_T & *iAirlineCode*) [static]

Retrieve an Inventory object from an InventoryKey structure.

Parameters

const	BomRoot& The root of the BOM tree.
const	AirlineCode_T& The key.

Returns

Inventory* The just retrieved Inventory object.

Definition at line 55 of file BomRetriever.cpp.

References stdair::BomRoot::getInventory().

34.21.2.4 FlightDate * stdair::BomRetriever::retrieveFlightDateFromLongKey (const BomRoot & *iBomRoot,* const std::string & *iFullKeyStr*) [static]

Retrieve a FlightDate object from a (full) key string.

The full key string gathers airline code, flight number, origin and destination, cabin and booking class. It corresponds to the output generated by the toString() methods of the XxxKey structures.

Parameters

const	BomRoot& The root of the BOM tree.
const	std::string& The full key string.

Returns

FlightDate* The just retrieved FlightDate object.

Definition at line 68 of file BomRetriever.cpp.

References stdair::BomKeyManager::extractFlightDateKey(), stdair::Inventory::getFlightDate(), and retrieveInventoryFromLongKey().

Referenced by retrieveSegmentDateFromLongKey().

34.21.2.5 FlightDate * stdair::BomRetriever::retrieveFlightDateFromKeySet (const BomRoot & *iBomRoot,* const AirlineCode_T & *iAirlineCode,* const FlightNumber_T & *iFlightNumber,* const Date_T & *iFlightDateDate*) [static]

Retrieve a FlightDate object from a set of keys.

Parameters

const	BomRoot& The root of the BOM tree.
const	AirlineCode_T& The key.
const	FlightNumber_T& Part of the key.
const	Date_T& Part of the key.

Returns

FlightDate* The just retrieved FlightDate object.

Definition at line 91 of file BomRetriever.cpp.

References retrieveFlightDateFromKey(), and retrieveInventoryFromKey().

Referenced by stdair::STDAIR_Service::check(), stdair::STDAIR_Service::csvDisplay(), and stdair::STDAIR_Service::jsonExport().

34.21.2.6 FlightDate * stdair::BomRetriever::retrieveFlightDateFromLongKey (const Inventory & *iInventory,* const std::string & *iFullKeyStr*) [static]

Retrieve a FlightDate object from a (full) key string.

The full key string gathers airline code, flight number, origin and destination, cabin and booking class. It corresponds to the output generated by the toString() methods of the XxxKey structures.

Parameters

const	Inventory& The root of the BOM tree.
const	std::string& The full key string.

Returns

FlightDate* The just retrieved FlightDate object.

Definition at line 114 of file BomRetriever.cpp.

References stdair::BomKeyManager::extractFlightDateKey(), and stdair::Inventory::getFlightDate().

34.21.2.7 FlightDate * stdair::BomRetriever::retrieveFlightDateFromKey (const Inventory & *ilnventory,* const FlightDateKey & *iKey*) [static]

Retrieve a FlightDate object from an FlightDateKey structure.

Parameters

const	Inventory& The root of the BOM tree.
const	FlightDateKey& The key.

Returns

FlightDate* The just retrieved FlightDate object.

Definition at line 129 of file BomRetriever.cpp.

References stdair::Inventory::getFlightDate().

Referenced by retrieveDummyLegCabin(), retrieveDummySegmentCabin(), retrieveFlightDateFromKeySet(), and retrieveSegmentDateFromLongKey().

34.21.2.8 FlightDate * stdair::BomRetriever::retrieveFlightDateFromKey (const Inventory & *ilnventory,* const FlightNumber_T & *iFlightNumber,* const Date_T & *iFlightDateDate*) [static]

Retrieve a FlightDate object from an FlightDateKey structure.

Parameters

const	Inventory& The root of the BOM tree.
const	FlightNumber_T& Part of the key.
const	Date_T& Part of the key.

Returns

FlightDate* The just retrieved FlightDate object.

Definition at line 141 of file BomRetriever.cpp.

References stdair::Inventory::getFlightDate().

34.21.2.9 SegmentDate * stdair::BomRetriever::retrieveSegmentDateFromLongKey (const BomRoot & *iBomRoot,* const std::string & *iFullKeyStr*) [static]

Retrieve a SegmentDate object from a (full) key string.

The full key string gathers airline code, segment number, origin and destination, cabin and booking class. It corresponds to the output generated by the toString() methods of the XxxKey structures.

Parameters

const	BomRoot& The root of the BOM tree.
const	std::string& The full key string.

Returns

SegmentDate* The just retrieved SegmentDate object.

Definition at line 155 of file BomRetriever.cpp.

References stdair::BomKeyManager::extractSegmentDateKey(), stdair::FlightDate::getSegmentDate(), and retrieveFlightDateFromLongKey().

Referenced by retrieveBookingClassFromLongKey().

34.21.2.10 SegmentDate * stdair::BomRetriever::retrieveSegmentDateFromLongKey (const Inventory & *iInventory,* const std::string & *iFullKeyStr*) [static]

Retrieve a SegmentDate object from a (full) key string.

The full key string gathers airline code, segment number, origin and destination, cabin and booking class. It corresponds to the output generated by the toString() methods of the XxxKey structures.

Parameters

const	Inventory& The root of the BOM tree.
const	std::string& The full key string.

Returns

SegmentDate* The just retrieved SegmentDate object.

Definition at line 178 of file BomRetriever.cpp.

References stdair::ParsedKey::_airlineCode, stdair::BomKeyManager::extractKeys(), stdair::Inventory::getAirlineCode(), stdair::ParsedKey::getFlightDateKey(), stdair::ParsedKey::getSegmentKey(), retrieveFlightDateFromKey(), retrieveSegmentDateFromKey(), STDAIR_LOG_DEBUG, stdair::SegmentDateKey::toString(), and stdair::FlightDateKey::toString().

34.21.2.11 SegmentDate * stdair::BomRetriever::retrieveSegmentDateFromLongKey (const FlightDate & *iFlightDate,* const std::string & *iFullKeyStr*) [static]

Retrieve a SegmentDate object from a (full) key string.

The full key string gathers airline code, segment number, origin and destination, cabin and booking class. It corresponds to the output generated by the toString() methods of the XxxKey structures.

Parameters

const	FlightDate& The root of the BOM tree.
const	std::string& The full key string.

Returns

SegmentDate* The just retrieved SegmentDate object.

Definition at line 210 of file BomRetriever.cpp.

References stdair::BomKeyManager::extractSegmentDateKey(), and stdair::FlightDate::getSegmentDate().

34.21.2.12 SegmentDate * stdair::BomRetriever::retrieveSegmentDateFromKey (const FlightDate & *iFlightDate,* const SegmentDateKey & *iKey*) [static]

Retrieve a SegmentDate object from an SegmentDateKey structure.

Parameters

const	FlightDate& The root of the BOM tree.
const	SegmentDateKey& The key.

Returns

SegmentDate* The just retrieved SegmentDate object.

Definition at line 225 of file BomRetriever.cpp.

References stdair::FlightDate::getSegmentDate().

Referenced by retrieveSegmentDateFromLongKey().

34.21.2.13 SegmentDate * stdair::BomRetriever::retrieveSegmentDateFromKey (const FlightDate & *iFlightDate,* const AirportCode_T & *iOrigin,* const AirportCode_T & *iDestination*) [static]

Retrieve a SegmentDate object from an SegmentDateKey structure.

Parameters

const	FlightDate& The root of the BOM tree.
const	AirportCode_T& Origin, part of the key.
const	AirportCode_T& Destination, part of the key.

Returns

SegmentDate* The just retrieved SegmentDate object.

Definition at line 237 of file BomRetriever.cpp.

References stdair::FlightDate::getSegmentDate().

34.21.2.14 BookingClass * stdair::BomRetriever::retrieveBookingClassFromLongKey (const Inventory & *iInventory,* const std::string & *iFullKeyStr,* const ClassCode_T & *iClassCode*) [static]

Retrieve a BookingClass object from a (full) key string.

The full key string gathers airline code, segment number, origin and destination, cabin and booking class. It corresponds to the output generated by the toString() methods of the XxxKey structures.

Besides being attached to segment-cabin objects (and fare family objects, when they exist), the booking-class objects must also be attached directly to the segment-date.

Hence, if an assertion fails within that method call, chances are that the booking-class

objects have not been attached to the segment-date objects. Check, for instance, the CmdBomManager::buildSampleBom() to see how that should be properly done.

Parameters

const	Inventory& The root of the BOM tree.
const	std::string& Part of the full key string.
const	ClassCode_T& Part of the full key string.

Returns

BookingClass* The just retrieved BookingClass object.

Definition at line 251 of file BomRetriever.cpp.

References retrieveSegmentDateFromLongKey().

34.21.2.15 AirportPair * stdair::BomRetriever::retrieveAirportPairFromKeySet (const BomRoot & *iBomRoot,* const stdair::AirportCode_T & *iOrigin,* const stdair::AirportCode_T & *iDestination*) [static]

Retrieve an AirportPair object from an AirportPair structure.

Parameters

const	BomRoot& The root of the BOM tree.
const	AirportCode_T& Origin, part of the key.
const	AirportCode_T& Destination, part of the key.

Returns

AirportPair* The just retrieved AirportPair object.

Definition at line 273 of file BomRetriever.cpp.

References stdair::AirportPairKey::toString().

Referenced by retrieveDatePeriodListFromKeySet().

34.21.2.16 void stdair::BomRetriever::retrieveDatePeriodListFromKey (const AirportPair & *iAirportPair,* const stdair::Date_T & *iDepartureDate,* stdair::DatePeriodList_T & *ioDatePeriodList*) [static]

Retrieve a list of date-period corresponding to a flight date.

Parameters

const	AirportPair& The root of the BOM tree.
const	Date_T& Departure Date of the flight
stdair::DatePeT&	List of DatePeriod to display.

Definition at line 291 of file BomRetriever.cpp.

References stdair::DatePeriod::isDepartureDateValid().

Referenced by retrieveDatePeriodListFromKeySet().

34.21.2.17 void stdair::BomRetriever::retrieveDatePeriodListFromKeySet (const BomRoot & *iBomRoot,* const stdair::AirportCode_T & *iOrigin,* const stdair::AirportCode_T & *iDestination,* const stdair::Date_T & *iDepartureDate,* stdair::DatePeriodList_T & *ioDatePeriodList*) [static]

Retrieve a list of date-period from a set of keys.

Parameters

const	BomRoot& The root of the BOM tree.
const	AirportCode_T& Part of the AirportPair key: the origin airport
const	AirportCode_T& Part of the AirportPair key: the destination airport.
const	Date_T& Departure date of the flight
stdair::DatePe T&	List of DatePeriod to display.

Definition at line 322 of file BomRetriever.cpp.

References retrieveAirportPairFromKeySet(), and retrieveDatePeriodListFromKey().

Referenced by stdair::STDAIR_Service::check(), and stdair::STDAIR_Service::csvDisplay().

34.21.2.18 LegCabin & stdair::BomRetriever::retrieveDummyLegCabin (stdair::BomRoot & *iBomRoot*) [static]

Retrieve the sample leg-cabin of the dummy inventory of "XX".

Parameters

stdair::BomRo	The BOM tree.

Definition at line 345 of file BomRetriever.cpp.

References stdair::DEFAULT_AIRLINE_CODE, stdair::DEFAULT_CABIN_CODE, stdair::DEFAULT_-DEPARTURE_DATE, stdair::DEFAULT_FLIGHT_NUMBER, stdair::DEFAULT_ORIGIN, stdair::LegDate::getLegCabin(), stdair::FlightDate::getLegDate(), retrieveFlightDateFromKey(), and retrieveInventoryFromKey().

34.21.2.19 SegmentCabin & stdair::BomRetriever::retrieveDummySegmentCabin (stdair::BomRoot & *iBomRoot*) [static]

Retrieve the sample segment-cabin of the dummy inventory of "XX".

Parameters

stdair::BomRo	The BOM tree.

Definition at line 403 of file BomRetriever.cpp.

References stdair::DEFAULT_AIRLINE_CODE, stdair::DEFAULT_CABIN_CODE, stdair::DEFAULT_-DEPARTURE_DATE, stdair::DEFAULT_DESTINATION, stdair::DEFAULT_FLIGHT_NUMBER, stdair::DEFAULT_ORIGIN, stdair::FlightDate::getSegmentDate(), retrieveFlightDateFromKey(), retrieveInventoryFromKey(), and stdair::SegmentCabinKey::toString().

The documentation for this class was generated from the following files:

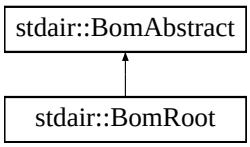
- stdair/bom/BomRetriever.hpp
- stdair/bom/BomRetriever.cpp

34.22 stdair::BomRoot Class Reference

Class representing the actual attributes for the Bom root.

`#include <stdair/bom/BomRoot.hpp>`

Inheritance diagram for stdair::BomRoot:



Public Types

- typedef BomRootKey Key_T

Public Member Functions

- const Key_T & getKey () const
- const HolderMap_T & getHolderMap () const
- Inventory * getInventory (const std::string &iInventoryKeyStr) const
- Inventory * getInventory (const InventoryKey &) const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Protected Member Functions

- BomRoot ()
- BomRoot (const BomRoot &)
- BomRoot (const Key_T &iKey)
- ~BomRoot ()

Protected Attributes

- Key_T _key
- HolderMap_T _holderMap

Friends

- class FacBom
- class FacBomManager
- class boost::serialization::access

34.22.1 Detailed Description

Class representing the actual attributes for the Bom root.

Definition at line 30 of file BomRoot.hpp.

34.22.2 Member Typedef Documentation

34.22.2.1 typedef BomRootKey stdair::BomRoot::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 39 of file BomRoot.hpp.

34.22.3 Constructor & Destructor Documentation

34.22.3.1 stdair::BomRoot::BomRoot ( ) [protected]

Default constructor.

Definition at line 17 of file BomRoot.cpp.

34.22.3.2 stdair::BomRoot::BomRoot (const BomRoot & *iBomRoot*) [protected]

Copy constructor.

Definition at line 22 of file BomRoot.cpp.

34.22.3.3 stdair::BomRoot::BomRoot (const Key_T & *iKey*) [protected]

Main constructor.

Definition at line 27 of file BomRoot.cpp.

34.22.3.4 stdair::BomRoot::~BomRoot ( ) [protected]

Destructor.

Definition at line 31 of file BomRoot.cpp.

34.22.4 Member Function Documentation

34.22.4.1 const Key_T& stdair::BomRoot::getKey ( ) const [inline]

Get the inventory key (airline code).

Definition at line 45 of file BomRoot.hpp.

References _key.

34.22.4.2 const HolderMap_T& stdair::BomRoot::getHolderMap ( ) const [inline]

Get the map of children.

Definition at line 50 of file BomRoot.hpp.

References _holderMap.

34.22.4.3 Inventory * stdair::BomRoot::getInventory (const std::string & *iInventoryKeyStr*) const

Get a pointer on the Inventory object corresponding to the given key.

Note

The Inventory object can be inherited from, if needed. In that case, a dynamic_-cast<> may be needed.

Parameters

const	std::string& The flight-date key.

Returns

Inventory* Found Inventory object. NULL if not found.

Definition at line 42 of file BomRoot.cpp.

Referenced by getInventory(), stdair::BomRetriever::retrieveInventoryFromKey(), and stdair::BomRetriever::retrieveInver

34.22.4.4 Inventory * stdair::BomRoot::getInventory (const InventoryKey & *iInventoryKey*) const

Get a pointer on the Inventory object corresponding to the given key.

Note

The Inventory object can be inherited from, if needed. In that case, a dynamic_-cast<> may be needed.

Parameters

const	InventoryKey& The flight-date key

Returns

Inventory* Found Inventory object. NULL if not found.

Definition at line 49 of file BomRoot.cpp.

References getInventory(), and stdair::InventoryKey::toString().

34.22.4.5 void stdair::BomRoot::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 86 of file BomRoot.hpp.

References toString().

34.22.4.6 void stdair::BomRoot::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 95 of file BomRoot.hpp.

34.22.4.7 std::string stdair::BomRoot::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 35 of file BomRoot.cpp.

References _key, and stdair::BomRootKey::toString().

Referenced by toStream().

34.22.4.8 const std::string stdair::BomRoot::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 106 of file BomRoot.hpp.

References _key, and stdair::BomRootKey::toString().

34.22.4.9 template<class Archive > void stdair::BomRoot::serialize (Archive & *ar,* const unsigned int *iFileVersion*)

Serialisation.

That method is used both for serialisation a BOM tree (into a backup file/stream), as well as re-instantiating a BOM tree from a back-up file/stream.

Note

The implementation of that method is to be found in the CmdBomSerialiser command.

Definition at line 133 of file CmdBomSerialiser.cpp.

References _key.

34.22.5 Friends And Related Function Documentation

34.22.5.1 friend class FacBom [friend]

Definition at line 31 of file BomRoot.hpp.

34.22.5.2 friend class FacBomManager [friend]

Definition at line 32 of file BomRoot.hpp.

34.22.5.3 friend class boost::serialization::access [friend]

Definition at line 33 of file BomRoot.hpp.

34.22.6 Member Data Documentation

34.22.6.1 Key_T stdair::BomRoot::_key [protected]

Primary key.

Definition at line 166 of file BomRoot.hpp.

Referenced by describeKey(), getKey(), serialize(), and toString().

34.22.6.2 HolderMap_T stdair::BomRoot::_holderMap [protected]

Map holding the children (Inventory objects).

Definition at line 171 of file BomRoot.hpp.

Referenced by getHolderMap().

The documentation for this class was generated from the following files:

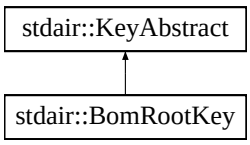
- stdair/bom/BomRoot.hpp
- stdair/bom/BomRoot.cpp
- stdair/command/CmdBomSerialiser.cpp

34.23 stdair::BomRootKey Struct Reference

Key of the BOM structure root.

`#include <stdair/bom/BomRootKey.hpp>`

Inheritance diagram for stdair::BomRootKey:



Public Member Functions

- BomRootKey ()
- BomRootKey (const std::string &iIdentification)
- BomRootKey (const BomRootKey &)
- ~BomRootKey ()
- const std::string & getID () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Friends

- class boost::serialization::access

34.23.1 Detailed Description

Key of the BOM structure root.

Definition at line 25 of file BomRootKey.hpp.

34.23.2 Constructor & Destructor Documentation

34.23.2.1 stdair::BomRootKey::BomRootKey ( )

Default constructor.

Definition at line 18 of file BomRootKey.cpp.

34.23.2.2 stdair::BomRootKey::BomRootKey (const std::string & *iIdentification*)

Constructor.

Definition at line 28 of file BomRootKey.cpp.

34.23.2.3 stdair::BomRootKey::BomRootKey (const BomRootKey & *iBomRootKey*)

Copy constructor.

Definition at line 23 of file BomRootKey.cpp.

34.23.2.4 stdair::BomRootKey::~BomRootKey ( )

Destructor.

Definition at line 33 of file BomRootKey.cpp.

34.23.3 Member Function Documentation

34.23.3.1 const std::string& stdair::BomRootKey::getID ( ) const [inline]

Get the identification.

Definition at line 56 of file BomRootKey.hpp.

34.23.3.2 void stdair::BomRootKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 37 of file BomRootKey.cpp.

References toString().

34.23.3.3 void stdair::BomRootKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 42 of file BomRootKey.cpp.

34.23.3.4 const std::string stdair::BomRootKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from stdair::KeyAbstract.

Definition at line 46 of file BomRootKey.cpp.

Referenced by stdair::BomRoot::describeKey(), toStream(), and stdair::BomRoot::toString().

34.23.3.5 template<class Archive > void stdair::BomRootKey::serialize (Archive & *ar,* const unsigned int *iFileVersion*)

Serialisation.

Definition at line 68 of file BomRootKey.cpp.

34.23.4 Friends And Related Function Documentation

34.23.4.1 friend class boost::serialization::access [friend]

Definition at line 26 of file BomRootKey.hpp.

The documentation for this struct was generated from the following files:

- stdair/bom/BomRootKey.hpp
- stdair/bom/BomRootKey.cpp

34.24 stdair_test::BookingClass Struct Reference

`#include <test/stdair/StdairTestLib.hpp>`

Public Member Functions

- BookingClass (const std::string &iClassCode)
- std::string toString () const

Public Attributes

- std::string _classCode

34.24.1 Detailed Description

BookingClass

Definition at line 16 of file StdairTestLib.hpp.

34.24.2 Constructor & Destructor Documentation

34.24.2.1 stdair_test::BookingClass::BookingClass (const std::string & *iClassCode*) [inline]

Constructor.

Definition at line 19 of file StdairTestLib.hpp.

34.24.3 Member Function Documentation

34.24.3.1 std::string stdair_test::BookingClass::toString ( ) const [inline]

Display .

Definition at line 24 of file StdairTestLib.hpp.

References _classCode.

34.24.4 Member Data Documentation

34.24.4.1 std::string stdair_test::BookingClass::_classCode

Definition at line 17 of file StdairTestLib.hpp.

Referenced by stdair_test::Cabin::toString(), and toString().

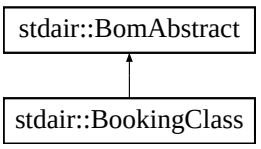
The documentation for this struct was generated from the following file:

- test/stdair/StdairTestLib.hpp

34.25 stdair::BookingClass Class Reference

`#include <stdair/bom/BookingClass.hpp>`

Inheritance diagram for stdair::BookingClass:



Public Types

- typedef BookingClassKey Key_T

Public Member Functions

- const Key_T & getKey () const
- const ClassCode_T & getClassCode () const
- BomAbstract *const getParent () const
- const HolderMap_T & getHolderMap () const
- const SubclassCode_T & getSubclassCode () const
- const AuthorizationLevel_T & getAuthorizationLevel () const
- const ProtectionLevel_T & getProtection () const
- const ProtectionLevel_T & getCumulatedProtection () const
- const BookingLimit_T & getCumulatedBookingLimit () const
- const NbOfSeats_T & getNegotiatedSpace () const
- const OverbookingRate_T & getNoShowPercentage () const
- const OverbookingRate_T & getCancellationPercentage () const
- const NbOfBookings_T & getNbOfBookings () const
- const NbOfBookings_T & getNbOfGroupBookings () const
- const NbOfBookings_T & getNbOfPendingGroupBookings () const
- const NbOfBookings_T & getNbOfStaffBookings () const
- const NbOfBookings_T & getNbOfWLBookings () const
- const NbOfCancellations_T & getNbOfCancellations () const
- const NbOfBookings_T & getETB () const
- const Availability_T & getNetClassAvailability () const
- const Availability_T & getSegmentAvailability () const
- const Availability_T & getNetRevenueAvailability () const
- const Yield_T & getYield () const
- const MeanValue_T & getMean () const
- const StdDevValue_T & getStdDev () const
- const GeneratedDemandVector_T & getGeneratedDemandVector () const
- void setCumulatedProtection (const ProtectionLevel_T &iPL)
- void setProtection (const ProtectionLevel_T &iPL)
- void setCumulatedBookingLimit (const BookingLimit_T &iBL)
- void setAuthorizationLevel (const AuthorizationLevel_T &iAU)
- void setSegmentAvailability (const Availability_T &iAvl)
- void setYield (const Yield_T &iYield)
- void setMean (const MeanValue_T &iMean)
- void setStdDev (const StdDevValue_T &iStdDev)
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const
- void sell (const NbOfBookings_T &)
- void cancel (const NbOfBookings_T &)
- void generateDemandSamples (const int &)
- void generateDemandSamples (const int &, const RandomSeed_T &)

Protected Member Functions

- BookingClass (const Key_T &)
- virtual ~BookingClass ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent
- HolderMap_T _holderMap
- SubclassCode_T _subclassCode
- ProtectionLevel_T _cumulatedProtection
- ProtectionLevel_T _protection
- BookingLimit_T _cumulatedBookingLimit
- AuthorizationLevel_T _au
- NbOfSeats_T _nego
- OverbookingRate_T _noShowPercentage
- OverbookingRate_T _cancellationPercentage
- NbOfBookings_T _nbOfBookings
- NbOfBookings_T _groupNbOfBookings
- NbOfBookings_T _groupPendingNbOfBookings
- NbOfBookings_T _staffNbOfBookings
- NbOfBookings_T _wlNbOfBookings
- NbOfCancellations_T _nbOfCancellations
- NbOfBookings_T _etb
- Availability_T _netClassAvailability
- Availability_T _segmentAvailability
- Availability_T _netRevenueAvailability
- Yield_T _yield
- MeanValue_T _mean
- StdDevValue_T _stdDev
- GeneratedDemandVector_T _generatedDemandVector

Friends

- class FacBom
- class FacBomManager

34.25.1 Detailed Description

Class representing the actual attributes for an airline booking class.

Definition at line 24 of file BookingClass.hpp.

34.25.2 Member Typedef Documentation

34.25.2.1 typedef BookingClassKey stdair::BookingClass::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 31 of file BookingClass.hpp.

34.25.3 Constructor & Destructor Documentation

34.25.3.1 stdair::BookingClass::BookingClass (const Key_T & *iKey*) [protected]

Constructor.

Definition at line 27 of file BookingClass.cpp.

34.25.3.2 stdair::BookingClass::~BookingClass ( ) [protected, virtual]

Destructor.

Definition at line 39 of file BookingClass.cpp.

34.25.4 Member Function Documentation

34.25.4.1 const Key_T& stdair::BookingClass::getKey ( ) const [inline]

Get the booking class key.

Definition at line 36 of file BookingClass.hpp.

References _key.

34.25.4.2 const ClassCode_T& stdair::BookingClass::getClassCode ( ) const [inline]

Get the booking code (part of the primary key).

Definition at line 41 of file BookingClass.hpp.

References _key, and stdair::BookingClassKey::getClassCode().

34.25.4.3 BomAbstract* const stdair::BookingClass::getParent ( ) const [inline]

Get the parent object.

Definition at line 46 of file BookingClass.hpp.

References _parent.

34.25.4.4 const HolderMap_T& stdair::BookingClass::getHolderMap ( ) const [inline]

Get the map of children holders.

Definition at line 51 of file BookingClass.hpp.

References _holderMap.

34.25.4.5 const SubclassCode_T& stdair::BookingClass::getSubclassCode ( ) const [inline]

Get teh sub-class code.

Definition at line 56 of file BookingClass.hpp.

References _subclassCode.

34.25.4.6 const AuthorizationLevel_T& stdair::BookingClass::getAuthorizationLevel ( ) const [inline]

Get the authorisation level (AU, i.e., cumulated protection).

Definition at line 61 of file BookingClass.hpp.

References _au.

34.25.4.7 const ProtectionLevel_T& stdair::BookingClass::getProtection ( ) const [inline]

Get the protection.

Definition at line 66 of file BookingClass.hpp.

References _protection.

34.25.4.8 const ProtectionLevel_T& stdair::BookingClass::getCumulatedProtection ( ) const [inline]

Get the cumulated protection.

Definition at line 71 of file BookingClass.hpp.

References _cumulatedProtection.

34.25.4.9 const BookingLimit_T& stdair::BookingClass::getCumulatedBookingLimit ( ) const [inline]

Get the cumulated booking limit.

Definition at line 76 of file BookingClass.hpp.

References _cumulatedBookingLimit.

34.25.4.10 const NbOfSeats_T& stdair::BookingClass::getNegotiatedSpace ( ) const [inline]

Get the negotiated space.

Definition at line 81 of file BookingClass.hpp.

References _nego.

34.25.4.11 const OverbookingRate_T& stdair::BookingClass::getNoShowPercentage ( ) const [inline]

Get the no-show rate.

Definition at line 86 of file BookingClass.hpp.

References _noShowPercentage.

34.25.4.12 const OverbookingRate_T& stdair::BookingClass::getCancellationPercentage ( ) const [inline]

Get the cancellation rate.

Definition at line 91 of file BookingClass.hpp.

References _cancellationPercentage.

34.25.4.13 const NbOfBookings_T& stdair::BookingClass::getNbOfBookings ( ) const [inline]

Get the number of bookings.

Definition at line 96 of file BookingClass.hpp.

References _nbOfBookings.

34.25.4.14 const NbOfBookings_T& stdair::BookingClass::getNbOfGroupBookings ( ) const [inline]

Get the number of group bookings.

Definition at line 101 of file BookingClass.hpp.

References _groupNbOfBookings.

34.25.4.15 const NbOfBookings_T& stdair::BookingClass::getNbOfPendingGroupBookings ( ) const [inline]

Get the number of pending group bookings.

Definition at line 106 of file BookingClass.hpp.

References _groupPendingNbOfBookings.

34.25.4.16 const NbOfBookings_T& stdair::BookingClass::getNbOfStaffBookings ( ) const [inline]

Get the number of staff bookings.

Definition at line 111 of file BookingClass.hpp.

References _staffNbOfBookings.

34.25.4.17 const NbOfBookings_T& stdair::BookingClass::getNbOfWLBookings ( ) const [inline]

Get the number of wait-list bookings.

Definition at line 116 of file BookingClass.hpp.

References _wlNbOfBookings.

34.25.4.18 const NbOfCancellations_T& stdair::BookingClass::getNbOfCancellations ( ) const [inline]

Get the number of cancellations.

Definition at line 121 of file BookingClass.hpp.

References _nbOfCancellations.

34.25.4.19 const NbOfBookings_T& stdair::BookingClass::getETB ( ) const [inline]

Get the expected number of passengers to board (ETB).

Definition at line 126 of file BookingClass.hpp.

References _etb.

34.25.4.20 const Availability_T& stdair::BookingClass::getNetClassAvailability ( ) const [inline]

Get the net segment class availability.

Definition at line 131 of file BookingClass.hpp.

References _netClassAvailability.

34.25.4.21 const Availability_T& stdair::BookingClass::getSegmentAvailability ( ) const [inline]

Get the segment class availability.

Definition at line 136 of file BookingClass.hpp.

References _segmentAvailability.

34.25.4.22 const Availability_T& stdair::BookingClass::getNetRevenueAvailability ( ) const [inline]

Net revenue availability.

Definition at line 141 of file BookingClass.hpp.

References _netRevenueAvailability.

34.25.4.23 const Yield_T& stdair::BookingClass::getYield ( ) const [inline]

Yield.

Definition at line 146 of file BookingClass.hpp.

References _yield.

34.25.4.24 const MeanValue_T& stdair::BookingClass::getMean ( ) const [inline]

Demand distribution.

Definition at line 149 of file BookingClass.hpp.

References _mean.

34.25.4.25 const StdDevValue_T& stdair::BookingClass::getStdDev ( ) const [inline]

Definition at line 150 of file BookingClass.hpp.

References _stdDev.

34.25.4.26 const GeneratedDemandVector_T& stdair::BookingClass::getGeneratedDemandVector ( ) const [inline]

Generated demand vector.

Definition at line 153 of file BookingClass.hpp.

References _generatedDemandVector.

Referenced by stdair::VirtualClassStruct::getGeneratedDemandVector().

34.25.4.27 void stdair::BookingClass::setCumulatedProtection (const ProtectionLevel_T & *iPL*) [inline]

Cumulated protection.

Definition at line 160 of file BookingClass.hpp.

References _cumulatedProtection.

34.25.4.28 void stdair::BookingClass::setProtection (const ProtectionLevel_T & *iPL*) [inline]

Protection.

Definition at line 165 of file BookingClass.hpp.

References _protection.

34.25.4.29 void stdair::BookingClass::setCumulatedBookingLimit (const BookingLimit_T & *iBL*) [inline]

Cumulated booking limit.

Definition at line 170 of file BookingClass.hpp.

References _cumulatedBookingLimit.

34.25.4.30 void stdair::BookingClass::setAuthorizationLevel (const AuthorizationLevel_T & *iAU*) [inline]

Authorization level.

Definition at line 175 of file BookingClass.hpp.

References _au.

34.25.4.31 void stdair::BookingClass::setSegmentAvailability (const Availability_T & *iAvl*) [inline]

Set availability.

Definition at line 180 of file BookingClass.hpp.

References _segmentAvailability.

34.25.4.32 void stdair::BookingClass::setYield (const Yield_T & *iYield*) [inline]

Yield.

Definition at line 185 of file BookingClass.hpp.

References _yield.

34.25.4.33 void stdair::BookingClass::setMean (const MeanValue_T & *iMean*) [inline]

Demand distribution.

Definition at line 188 of file BookingClass.hpp.

References _mean.

34.25.4.34 void stdair::BookingClass::setStdDev (const StdDevValue_T & *iStdDev*) [inline]

Definition at line 189 of file BookingClass.hpp.

References _stdDev.

34.25.4.35 void stdair::BookingClass::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 195 of file BookingClass.hpp.

References toString().

34.25.4.36 void stdair::BookingClass::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 201 of file BookingClass.hpp.

34.25.4.37 std::string stdair::BookingClass::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 43 of file BookingClass.cpp.

References describeKey().

Referenced by toStream().

34.25.4.38 const std::string stdair::BookingClass::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 208 of file BookingClass.hpp.

References _key, and stdair::BookingClassKey::toString().

Referenced by toString().

34.25.4.39 void stdair::BookingClass::sell (const NbOfBookings_T & *iNbOfBookings*)

Register a sale.

Definition at line 50 of file BookingClass.cpp.

References _nbOfBookings.

34.25.4.40 void stdair::BookingClass::cancel (const NbOfBookings_T & *iNbOfCancellations*)

Register a cancellation.

Definition at line 55 of file BookingClass.cpp.

References _nbOfBookings, and _nbOfCancellations.

34.25.4.41 void stdair::BookingClass::generateDemandSamples (const int & *K*)

Generate demand samples for Monte-Carlo method with the default random seed.

Definition at line 61 of file BookingClass.cpp.

References _generatedDemandVector, _mean, _stdDev, stdair::DEFAULT_RANDOM_SEED, and stdair::RandomGeneration::generateNormal().

34.25.4.42 void stdair::BookingClass::generateDemandSamples (const int & *K*, const RandomSeed_T & *iSeed*)

Generate demand samples for Monte-Carlo method with the given random seed.

Definition at line 73 of file BookingClass.cpp.

References _generatedDemandVector, _mean, _stdDev, and stdair::RandomGeneration::generateNormal().

34.25.5 Friends And Related Function Documentation

34.25.5.1 friend class FacBom [friend]

Definition at line 25 of file BookingClass.hpp.

34.25.5.2 friend class FacBomManager [friend]

Definition at line 26 of file BookingClass.hpp.

34.25.6 Member Data Documentation

34.25.6.1 Key_T stdair::BookingClass::_key [protected]

Primary key (booking class code).

Definition at line 245 of file BookingClass.hpp.

Referenced by describeKey(), getClassCode(), and getKey().

34.25.6.2 BomAbstract* stdair::BookingClass::_parent [protected]

Pointer on the parent class (SegmentCabin).

Definition at line 248 of file BookingClass.hpp.

Referenced by getParent().

34.25.6.3 HolderMap_T stdair::BookingClass::_holderMap [protected]

Map holding the children (SegmentDate and LegDate objects).

Definition at line 251 of file BookingClass.hpp.

Referenced by getHolderMap().

34.25.6.4 SubclassCode_T stdair::BookingClass::_subclassCode [protected]

Sub-class code.

Definition at line 254 of file BookingClass.hpp.

Referenced by getSubclassCode().

34.25.6.5 ProtectionLevel_T stdair::BookingClass::_cumulatedProtection [protected]

Cumulated protection.

Definition at line 257 of file BookingClass.hpp.

Referenced by getCumulatedProtection(), and setCumulatedProtection().

34.25.6.6 ProtectionLevel_T stdair::BookingClass::_protection [protected]

Protection.

Definition at line 260 of file BookingClass.hpp.

Referenced by getProtection(), and setProtection().

34.25.6.7 BookingLimit_T stdair::BookingClass::_cumulatedBookingLimit [protected]

Cumulated booking limit.

Definition at line 263 of file BookingClass.hpp.

Referenced by getCumulatedBookingLimit(), and setCumulatedBookingLimit().

34.25.6.8 AuthorizationLevel_T stdair::BookingClass::_au [protected]

Authorization level.

Definition at line 266 of file BookingClass.hpp.

Referenced by getAuthorizationLevel(), and setAuthorizationLevel().

34.25.6.9 NbOfSeats_T stdair::BookingClass::_nego [protected]

Negotiated space.

Definition at line 269 of file BookingClass.hpp.

Referenced by getNegotiatedSpace().

34.25.6.10 OverbookingRate_T stdair::BookingClass::_noShowPercentage [protected]

Overbooking rate.

Definition at line 272 of file BookingClass.hpp.

Referenced by getNoShowPercentage().

34.25.6.11 OverbookingRate_T stdair::BookingClass::_cancellationPercentage [protected]

Cancellation rate.

Definition at line 275 of file BookingClass.hpp.

Referenced by getCancellationPercentage().

34.25.6.12 NbOfBookings_T stdair::BookingClass::_nbOfBookings [protected]

Number of bookings.

Definition at line 278 of file BookingClass.hpp.

Referenced by cancel(), getNbOfBookings(), and sell().

34.25.6.13 NbOfBookings_T stdair::BookingClass::_groupNbOfBookings [protected]

Number of group bookings.

Definition at line 281 of file BookingClass.hpp.

Referenced by getNbOfGroupBookings().

34.25.6.14 NbOfBookings_T stdair::BookingClass::_groupPendingNbOfBookings [protected]

Number of pending group bookings.

Definition at line 284 of file BookingClass.hpp.

Referenced by getNbOfPendingGroupBookings().

34.25.6.15 NbOfBookings_T stdair::BookingClass::_staffNbOfBookings [protected]

Number of staff bookings.

Definition at line 287 of file BookingClass.hpp.

Referenced by getNbOfStaffBookings().

34.25.6.16 NbOfBookings_T stdair::BookingClass::_wlNbOfBookings [protected]

Number of wait-list bookings.

Definition at line 290 of file BookingClass.hpp.

Referenced by getNbOfWLBookings().

34.25.6.17 NbOfCancellations_T stdair::BookingClass::_nbOfCancellations [protected]

Number of cancellations.

Definition at line 293 of file BookingClass.hpp.

Referenced by cancel(), and getNbOfCancellations().

34.25.6.18 NbOfBookings_T stdair::BookingClass::_etb [protected]

Expected to board (ETB).

Definition at line 296 of file BookingClass.hpp.

Referenced by getETB().

34.25.6.19 Availability_T stdair::BookingClass::_netClassAvailability [protected]

Net segment class availability.

Definition at line 299 of file BookingClass.hpp.

Referenced by getNetClassAvailability().

34.25.6.20 Availability_T stdair::BookingClass::_segmentAvailability [protected]

Segment class availability.

Definition at line 302 of file BookingClass.hpp.

Referenced by getSegmentAvailability(), and setSegmentAvailability().

34.25.6.21 Availability_T stdair::BookingClass::_netRevenueAvailability [protected]

Net revenue availability.

Definition at line 305 of file BookingClass.hpp.

Referenced by getNetRevenueAvailability().

34.25.6.22 Yield_T stdair::BookingClass::_yield [protected]

Yield.

Definition at line 308 of file BookingClass.hpp.

Referenced by getYield(), and setYield().

34.25.6.23 MeanValue_T stdair::BookingClass::_mean [protected]

Remaining demand distribution forecast.

Definition at line 311 of file BookingClass.hpp.

Referenced by generateDemandSamples(), getMean(), and setMean().

34.25.6.24 StdDevValue_T stdair::BookingClass::_stdDev [protected]

Definition at line 312 of file BookingClass.hpp.

Referenced by generateDemandSamples(), getStdDev(), and setStdDev().

34.25.6.25 GeneratedDemandVector_T stdair::BookingClass::_generatedDemandVector [protected]

Vector of number of demand samples drawn from the demand distribution.

Definition at line 315 of file BookingClass.hpp.

Referenced by generateDemandSamples(), and getGeneratedDemandVector().

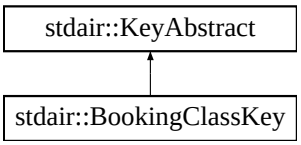
The documentation for this class was generated from the following files:

- stdair/bom/BookingClass.hpp
- stdair/bom/BookingClass.cpp

34.26 stdair::BookingClassKey Struct Reference

`#include <stdair/bom/BookingClassKey.hpp>`

Inheritance diagram for stdair::BookingClassKey:



Public Member Functions

- BookingClassKey (const ClassCode_T &iClassCode)
- BookingClassKey (const BookingClassKey &)
- ~BookingClassKey ()
- const ClassCode_T & getClassCode () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const

34.26.1 Detailed Description

Key of a given leg-cabin, made of a cabin code.

Definition at line 16 of file BookingClassKey.hpp.

34.26.2 Constructor & Destructor Documentation

34.26.2.1 stdair::BookingClassKey::BookingClassKey (const ClassCode_T & *iClassCode*)

Constructor.

Definition at line 24 of file BookingClassKey.cpp.

34.26.2.2 stdair::BookingClassKey::BookingClassKey (const BookingClassKey & *iKey*)

Default copy constructor.

Definition at line 19 of file BookingClassKey.cpp.

34.26.2.3 stdair::BookingClassKey::~BookingClassKey ( )

Destructor.

Definition at line 29 of file BookingClassKey.cpp.

34.26.3 Member Function Documentation

34.26.3.1 const ClassCode_T& stdair::BookingClassKey::getClassCode ( ) const [inline]

Get the class code.

Definition at line 34 of file BookingClassKey.hpp.

Referenced by stdair::BookingClass::getClassCode().

34.26.3.2 void stdair::BookingClassKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 33 of file BookingClassKey.cpp.

References toString().

34.26.3.3 void stdair::BookingClassKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 38 of file BookingClassKey.cpp.

34.26.3.4 const std::string stdair::BookingClassKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-cabin.

Reimplemented from stdair::KeyAbstract.

Definition at line 42 of file BookingClassKey.cpp.

Referenced by stdair::BookingClass::describeKey(), and toStream().

The documentation for this struct was generated from the following files:

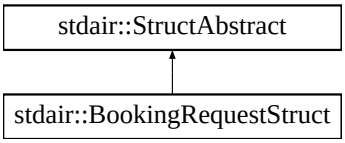
- stdair/bom/BookingClassKey.hpp
- stdair/bom/BookingClassKey.cpp

34.27 stdair::BookingRequestStruct Struct Reference

Structure holding the elements of a booking request.

`#include <stdair/bom/BookingRequestStruct.hpp>`

Inheritance diagram for stdair::BookingRequestStruct:



Public Member Functions

- const DemandGeneratorKey_T & getDemandGeneratorKey () const
- const AirportCode_T & getOrigin () const
- const AirportCode_T & getDestination () const
- const CityCode_T & getPOS () const
- const Date_T & getPreferedDepartureDate () const
- const Duration_T & getPreferredDepartureTime () const
- const DateTime_T & getRequestDateTime () const
- const CabinCode_T & getPreferredCabin () const
- const NbOfSeats_T & getPartySize () const
- const ChannelLabel_T & getBookingChannel () const
- const TripType_T & getTripType () const
- const DayDuration_T & getStayDuration () const
- const FrequentFlyer_T & getFrequentFlyerType () const
- const WTP_T & getWTP () const
- const PriceValue_T & getValueOfTime () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string describe () const
- const std::string display () const
- BookingRequestStruct (const DemandGeneratorKey_T &iGeneratorKey, const AirportCode_T &iOrigin, const AirportCode_T &iDestination, const CityCode_T &iPOS, const

Date_T &iDepartureDate, const DateTime_T &iRequestDateTime, const CabinCode_T &iPreferredCabin, const NbOfSeats_T &iPartySize, const ChannelLabel_T &iChannel, const TripType_T &iTripType, const DayDuration_T &iStayDuration, const FrequentFlyer_T &iFrequentFlyerType, const Duration_T &iPreferredDepartureTime, const WTP_T &iWTP, const PriceValue_T &iValueOfTime)

- BookingRequestStruct (const AirportCode_T &iOrigin, const AirportCode_T &iDestination, const CityCode_T &iPOS, const Date_T &iDepartureDate, const DateTime_T &iRequestDateTime, const CabinCode_T &iPreferredCabin, const NbOfSeats_T &iPartySize, const ChannelLabel_T &iChannel, const TripType_T &iTripType, const DayDuration_T &iStayDuration, const FrequentFlyer_T &iFrequentFlyerType, const Duration_T &iPreferredDepartureTime, const WTP_T &iWTP, const PriceValue_T &iValueOfTime)
- BookingRequestStruct (const BookingRequestStruct &)
- ~BookingRequestStruct ()

34.27.1 Detailed Description

Structure holding the elements of a booking request.

Definition at line 21 of file BookingRequestStruct.hpp.

34.27.2 Constructor & Destructor Documentation

34.27.2.1 stdair::BookingRequestStruct::BookingRequestStruct (const DemandGeneratorKey_T & *iGeneratorKey,* const AirportCode_T & *iOrigin,* const AirportCode_T & *iDestination,* const CityCode_T & *iPOS,* const Date_T & *iDepartureDate,* const DateTime_T & *iRequestDateTime,* const CabinCode_T & *iPreferredCabin,* const NbOfSeats_T & *iPartySize,* const ChannelLabel_T & *iChannel,* const TripType_T & *iTripType,* const DayDuration_T & *iStayDuration,* const FrequentFlyer_T & *iFrequentFlyerType,* const Duration_T & *iPreferredDepartureTime,* const WTP_T & *iWTP,* const PriceValue_T & *iValueOfTime*)

Default constructor.

Definition at line 57 of file BookingRequestStruct.cpp.

34.27.2.2 stdair::BookingRequestStruct::BookingRequestStruct (const AirportCode_T & *iOrigin,* const AirportCode_T & *iDestination,* const CityCode_T & *iPOS,* const Date_T & *iDepartureDate,* const DateTime_T & *iRequestDateTime,* const CabinCode_T & *iPreferredCabin,* const NbOfSeats_T & *iPartySize,* const ChannelLabel_T & *iChannel,* const TripType_T & *iTripType,* const DayDuration_T & *iStayDuration,* const FrequentFlyer_T & *iFrequentFlyerType,* const Duration_T & *iPreferredDepartureTime,* const WTP_T & *iWTP,* const PriceValue_T & *iValueOfTime*)

Constructor without the demand generator key, used for batches.

Definition at line 85 of file BookingRequestStruct.cpp.

34.27.2.3 stdair::BookingRequestStruct::BookingRequestStruct (const BookingRequestStruct & *iBookingRequest*)

Copy constructor.

Definition at line 37 of file BookingRequestStruct.cpp.

34.27.2.4 stdair::BookingRequestStruct::~BookingRequestStruct ( )

Destructor.

Definition at line 111 of file BookingRequestStruct.cpp.

34.27.3 Member Function Documentation

34.27.3.1 const DemandGeneratorKey_T& stdair::BookingRequestStruct::getDemandGeneratorKey ( ) const [inline]

Get the demand generator key.

Definition at line 25 of file BookingRequestStruct.hpp.

34.27.3.2 const AirportCode_T& stdair::BookingRequestStruct::getOrigin ( ) const [inline]

Get the requested origin.

Definition at line 30 of file BookingRequestStruct.hpp.

34.27.3.3 const AirportCode_T& stdair::BookingRequestStruct::getDestination ( ) const [inline]

Get the requested destination.

Definition at line 35 of file BookingRequestStruct.hpp.

34.27.3.4 const CityCode_T& stdair::BookingRequestStruct::getPOS ( ) const [inline]

Get the point-of-sale.

Definition at line 40 of file BookingRequestStruct.hpp.

34.27.3.5 const Date_T& stdair::BookingRequestStruct::getPreferedDepartureDate ( ) const [inline]

Get the requested departure date.

Definition at line 45 of file BookingRequestStruct.hpp.

34.27.3.6 const Duration_T& stdair::BookingRequestStruct::getPreferredDepartureTime ( ) const [inline]

Get the preferred departure time.

Definition at line 50 of file BookingRequestStruct.hpp.

34.27.3.7 const DateTime_T& stdair::BookingRequestStruct::getRequestDateTime ( ) const [inline]

Get the request datetime.

Definition at line 55 of file BookingRequestStruct.hpp.

34.27.3.8 const CabinCode_T& stdair::BookingRequestStruct::getPreferredCabin ( ) const [inline]

Get the preferred cabin.

Definition at line 60 of file BookingRequestStruct.hpp.

34.27.3.9 const NbOfSeats_T& stdair::BookingRequestStruct::getPartySize ( ) const [inline]

Get the party size.

Definition at line 65 of file BookingRequestStruct.hpp.

34.27.3.10 const ChannelLabel_T& stdair::BookingRequestStruct::getBookingChannel ( ) const [inline]

Get the reservation channel.

Definition at line 70 of file BookingRequestStruct.hpp.

34.27.3.11 const TripType_T& stdair::BookingRequestStruct::getTripType ( ) const [inline]

Get the trip type.

Definition at line 75 of file BookingRequestStruct.hpp.

34.27.3.12 const DayDuration_T& stdair::BookingRequestStruct::getStayDuration ( ) const [inline]

Get the duration of stay.

Definition at line 80 of file BookingRequestStruct.hpp.

34.27.3.13 const FrequentFlyer_T& stdair::BookingRequestStruct::getFrequentFlyerType ( ) const [inline]

Get the frequent flyer type.

Definition at line 85 of file BookingRequestStruct.hpp.

34.27.3.14 const WTP_T& stdair::BookingRequestStruct::getWTP ( ) const [inline]

Get the willingness-to-pay.

Definition at line 90 of file BookingRequestStruct.hpp.

34.27.3.15 const PriceValue_T& stdair::BookingRequestStruct::getValueOfTime ( ) const [inline]

Get the value of time.

Definition at line 95 of file BookingRequestStruct.hpp.

34.27.3.16 void stdair::BookingRequestStruct::toStream (std::ostream & *ioOut*) const

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::StructAbstract.

Definition at line 115 of file BookingRequestStruct.cpp.

References describe().

34.27.3.17 void stdair::BookingRequestStruct::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::StructAbstract.

Definition at line 120 of file BookingRequestStruct.cpp.

34.27.3.18 const std::string stdair::BookingRequestStruct::describe ( ) const [virtual]

Display of the structure.

Implements stdair::StructAbstract.

Definition at line 124 of file BookingRequestStruct.cpp.

Referenced by toStream().

34.27.3.19 const std::string stdair::BookingRequestStruct::display ( ) const

Display of the structure.

- #id,
- request_date (YYMMDD),

- request_time (HHMMSS),
- POS (three-letter code),
- Channel (two-letter code):
  - 'D' for direct or 'I' for indirect,
  - 'N' for oNline or 'F' for oFfline,
- Origin (three-letter code),
- Destination (three-letter code),
- Preferred departure date (YYMMDD),
- Preferred departure time (HHMM),
- Min departure time (HHMM),
- Max departure time (HHMM),
- Preferred arrival date (YYMMDD),
- Preferred arrival time (HHMM),
- Preferred cabin:
  - 'F' for first,
  - 'C' for club/business,
  - 'W' for economy plus,
  - 'M' for economy,
- Trip type:
  - 'OW' for a one-way trip,
  - 'RO' for the outbound part of a rount-trip,
  - 'RI' for the inbound part of a rount-trip,
- Duration of stay (expressed as a number of days),
- Frequent flyer tier:
  - 'G' for gold,
  - 'S' for silver,
  - 'K' for basic,
  - 'N' for none,
- Willingness-to-pay (WTP, expressed as a monetary unit, e.g., EUR),
- Disutility per stop (expressed as a monetary unit, e.g., EUR),
- Value of time (EUR per hour),

Returns

const std::string The output of the booking request structure.

Definition at line 147 of file BookingRequestStruct.cpp.

References stdair::TRIP_TYPE_ONE_WAY.

The documentation for this struct was generated from the following files:

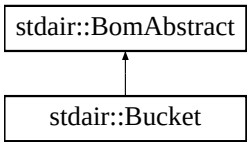
- stdair/bom/BookingRequestStruct.hpp
- stdair/bom/BookingRequestStruct.cpp

34.28 stdair::Bucket Class Reference

Class representing the actual attributes for an airline booking class.

`#include <stdair/bom/Bucket.hpp>`

Inheritance diagram for stdair::Bucket:



Public Types

- typedef BucketKey Key_T

Public Member Functions

- const Key_T & getKey () const
- BomAbstract *const getParent () const
- const HolderMap_T & getHolderMap () const
- const SeatIndex_T & getSeatIndex () const
- const Yield_T & getYieldRangeUpperValue () const
- const CabinCapacity_T & getAvailability () const
- const NbOfSeats_T & getSoldSeats () const
- void setYieldRangeUpperValue (const Yield_T &iYield)
- void setAvailability (const CabinCapacity_T &iAvl)
- void setSoldSeats (const NbOfSeats_T &iSoldSeats)
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Protected Member Functions

- Bucket (const Key_T &)
- virtual ~Bucket ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent
- HolderMap_T _holderMap
- Yield_T _yieldRangeUpperValue
- CabinCapacity_T _availability
- NbOfSeats_T _soldSeats

Friends

- class FacBom
- class FacBomManager
- class boost::serialization::access

34.28.1 Detailed Description

Class representing the actual attributes for an airline booking class.

Definition at line 29 of file Bucket.hpp.

34.28.2 Member Typedef Documentation

34.28.2.1 typedef BucketKey stdair::Bucket::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 39 of file Bucket.hpp.

34.28.3 Constructor & Destructor Documentation

34.28.3.1 stdair::Bucket::Bucket (const Key_T & *iKey*) [protected]

Default constructor.

Definition at line 24 of file Bucket.cpp.

34.28.3.2 stdair::Bucket::~Bucket ( ) [protected, virtual]

Destructor.

Definition at line 28 of file Bucket.cpp.

34.28.4 Member Function Documentation

34.28.4.1 const Key_T& stdair::Bucket::getKey ( ) const [inline]

Get the primary key of the bucket.

Definition at line 46 of file Bucket.hpp.

References _key.

34.28.4.2 BomAbstract* const stdair::Bucket::getParent ( ) const [inline]

Get the parent object.

Definition at line 53 of file Bucket.hpp.

References _parent.

34.28.4.3 const HolderMap_T& stdair::Bucket::getHolderMap ( ) const [inline]

Get the map of children holders.

Definition at line 58 of file Bucket.hpp.

References _holderMap.

34.28.4.4 const SeatIndex_T& stdair::Bucket::getSeatIndex ( ) const [inline]

Get the seat index (part of the primary key).

Definition at line 63 of file Bucket.hpp.

References _key, and stdair::BucketKey::getSeatIndex().

34.28.4.5 const Yield_T& stdair::Bucket::getYieldRangeUpperValue ( ) const [inline]

Get the upper yield range.

Definition at line 68 of file Bucket.hpp.

References _yieldRangeUpperValue.

34.28.4.6 const CabinCapacity_T& stdair::Bucket::getAvailability ( ) const [inline]

Get the availability.

Definition at line 73 of file Bucket.hpp.

References _availability.

34.28.4.7 const NbOfSeats_T& stdair::Bucket::getSoldSeats ( ) const [inline]

Get the number of seats already sold.

Definition at line 78 of file Bucket.hpp.

References _soldSeats.

34.28.4.8 void stdair::Bucket::setYieldRangeUpperValue (const Yield_T & *iYield*) [inline]

Set the upper yield range.

Definition at line 85 of file Bucket.hpp.

References _yieldRangeUpperValue.

34.28.4.9 void stdair::Bucket::setAvailability (const CabinCapacity_T & *iAvl*) [inline]

Set the availability.

Definition at line 90 of file Bucket.hpp.

References _availability.

34.28.4.10 void stdair::Bucket::setSoldSeats (const NbOfSeats_T & *iSoldSeats*) [inline]

Set the number of seats already sold.

Definition at line 95 of file Bucket.hpp.

References _soldSeats.

34.28.4.11 void stdair::Bucket::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 107 of file Bucket.hpp.

References toString().

34.28.4.12 void stdair::Bucket::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 116 of file Bucket.hpp.

34.28.4.13 std::string stdair::Bucket::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 32 of file Bucket.cpp.

References describeKey().

Referenced by toStream().

34.28.4.14 const std::string stdair::Bucket::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 127 of file Bucket.hpp.

References _key, and stdair::BucketKey::toString().

Referenced by toString().

34.28.4.15 template<class Archive > void stdair::Bucket::serialize (Archive & *ar*, const unsigned int *iFileVersion*)

Serialisation.

Definition at line 54 of file Bucket.cpp.

References _key.

34.28.5 Friends And Related Function Documentation

34.28.5.1 friend class FacBom [friend]

Definition at line 30 of file Bucket.hpp.

34.28.5.2 friend class FacBomManager [friend]

Definition at line 31 of file Bucket.hpp.

34.28.5.3 friend class boost::serialization::access [friend]

Definition at line 32 of file Bucket.hpp.

34.28.6 Member Data Documentation

34.28.6.1 Key_T stdair::Bucket::_key [protected]

Primary key (upper yield range).

Definition at line 178 of file Bucket.hpp.

Referenced by describeKey(), getKey(), getSeatIndex(), and serialize().

34.28.6.2 BomAbstract* stdair::Bucket::_parent [protected]

Pointer on the parent class (LegCabin).

Definition at line 183 of file Bucket.hpp.

Referenced by getParent().

34.28.6.3 HolderMap_T stdair::Bucket::_holderMap [protected]

Map holding the children (empty for now).

Definition at line 188 of file Bucket.hpp.

Referenced by getHolderMap().

34.28.6.4 Yield_T stdair::Bucket::_yieldRangeUpperValue [protected]

Upper yield range.

Definition at line 196 of file Bucket.hpp.

Referenced by getYieldRangeUpperValue(), and setYieldRangeUpperValue().

34.28.6.5 CabinCapacity_T stdair::Bucket::_availability [protected]

Availability.

Definition at line 201 of file Bucket.hpp.

Referenced by getAvailability(), and setAvailability().

34.28.6.6 NbOfSeats_T stdair::Bucket::_soldSeats [protected]

Number of seats already sold.

Definition at line 206 of file Bucket.hpp.

Referenced by getSoldSeats(), and setSoldSeats().

The documentation for this class was generated from the following files:

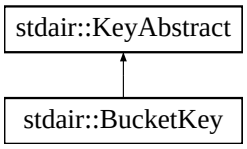
- stdair/bom/Bucket.hpp
- stdair/bom/Bucket.cpp

34.29 stdair::BucketKey Struct Reference

Key of booking-class.

`#include <stdair/bom/BucketKey.hpp>`

Inheritance diagram for stdair::BucketKey:



Public Member Functions

- BucketKey (const SeatIndex_T &)
- BucketKey (const BucketKey &)
- ~BucketKey ()
- const SeatIndex_T & getSeatIndex () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Friends

- class boost::serialization::access

34.29.1 Detailed Description

Key of booking-class.

Definition at line 26 of file BucketKey.hpp.

34.29.2 Constructor & Destructor Documentation

34.29.2.1 stdair::BucketKey::BucketKey (const SeatIndex_T & *iSeatIndex*)

Main constructor.

Definition at line 22 of file BucketKey.cpp.

34.29.2.2 stdair::BucketKey::BucketKey (const BucketKey & *iBucketKey*)

Copy constructor.

Definition at line 27 of file BucketKey.cpp.

34.29.2.3 stdair::BucketKey::~BucketKey ( )

Destructor.

Definition at line 32 of file BucketKey.cpp.

34.29.3 Member Function Documentation

34.29.3.1 const SeatIndex_T& stdair::BucketKey::getSeatIndex ( ) const [inline]

Get the seat index.

Definition at line 54 of file BucketKey.hpp.

Referenced by stdair::Bucket::getSeatIndex().

34.29.3.2 void stdair::BucketKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 36 of file BucketKey.cpp.

References toString().

34.29.3.3 void stdair::BucketKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 41 of file BucketKey.cpp.

34.29.3.4 const std::string stdair::BucketKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-cabin.

Reimplemented from stdair::KeyAbstract.

Definition at line 45 of file BucketKey.cpp.

Referenced by stdair::Bucket::describeKey(), and toStream().

34.29.3.5 template<class Archive > void stdair::BucketKey::serialize (Archive & *ar,* const unsigned int *iFileVersion*)

Serialisation.

Definition at line 67 of file BucketKey.cpp.

34.29.4 Friends And Related Function Documentation

34.29.4.1 friend class boost::serialization::access [friend]

Definition at line 27 of file BucketKey.hpp.

The documentation for this struct was generated from the following files:

- stdair/bom/BucketKey.hpp
- stdair/bom/BucketKey.cpp

34.30 stdair_test::Cabin Struct Reference

`#include <test/stdair/StdairTestLib.hpp>`

Public Types

- typedef BookingClass child

Public Member Functions

- Cabin (const BookingClass &iBkgClass)
- std::string toString () const

Public Attributes

- BookingClass _bookingClass

34.30.1 Detailed Description

Cabin

Definition at line 32 of file StdairTestLib.hpp.

34.30.2 Member Typedef Documentation

34.30.2.1 typedef BookingClass stdair_test::Cabin::child

Child type.

Definition at line 46 of file StdairTestLib.hpp.

34.30.3 Constructor & Destructor Documentation

34.30.3.1 stdair_test::Cabin::Cabin (const BookingClass & *iBkgClass*) [inline]

Definition at line 34 of file StdairTestLib.hpp.

34.30.4 Member Function Documentation

34.30.4.1 std::string stdair_test::Cabin::toString ( ) const [inline]

Display .

Definition at line 39 of file StdairTestLib.hpp.

References _bookingClass, and stdair_test::BookingClass::_classCode.

34.30.5 Member Data Documentation

34.30.5.1 BookingClass stdair_test::Cabin::_bookingClass

Definition at line 33 of file StdairTestLib.hpp.

Referenced by toString().

The documentation for this struct was generated from the following file:

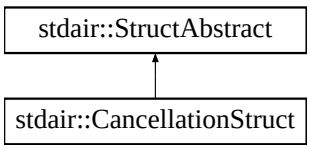
- test/stdair/StdairTestLib.hpp

34.31 stdair::CancellationStruct Struct Reference

Structure holding the elements of a travel solution.

`#include <stdair/bom/CancellationStruct.hpp>`

Inheritance diagram for stdair::CancellationStruct:



Public Member Functions

- const SegmentPath_T & getSegmentPath () const
- const ClassList_String_T & getClassList () const
- const PartySize_T & getPartySize () const
- const DateTime_T & getCancellationDateTime () const
- void toStream (std::ostream &ioOut) const

- void fromStream (std::istream &ioIn)
- const std::string describe () const
- const std::string display () const
- CancellationStruct (const SegmentPath_T &, const ClassList_String_T &, const PartySize_T &, const DateTime_T &)
- ~CancellationStruct ()

34.31.1 Detailed Description

Structure holding the elements of a travel solution.

Definition at line 22 of file CancellationStruct.hpp.

34.31.2 Constructor & Destructor Documentation

34.31.2.1 stdair::CancellationStruct::CancellationStruct (const SegmentPath_T & *iSegPath,* const ClassList_String_T & *iList,* const PartySize_T & *iSize,* const DateTime_T & *iDateTime*)

Default constructor.

Definition at line 13 of file CancellationStruct.cpp.

34.31.2.2 stdair::CancellationStruct::~CancellationStruct ( )

Destructor.

Definition at line 22 of file CancellationStruct.cpp.

34.31.3 Member Function Documentation

34.31.3.1 const SegmentPath_T& stdair::CancellationStruct::getSegmentPath ( ) const [inline]

Get the segment path.

Definition at line 26 of file CancellationStruct.hpp.

34.31.3.2 const ClassList_String_T& stdair::CancellationStruct::getClassList ( ) const [inline]

Get the class list.

Definition at line 31 of file CancellationStruct.hpp.

34.31.3.3 const PartySize_T& stdair::CancellationStruct::getPartySize ( ) const [inline]

Get the party size.

Definition at line 36 of file CancellationStruct.hpp.

34.31.3.4 const DateTime_T& stdair::CancellationStruct::getCancellationDateTime ( ) const [inline]

Get the datetime.

Definition at line 41 of file CancellationStruct.hpp.

34.31.3.5 void stdair::CancellationStruct::toStream (std::ostream & *ioOut*) const

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::StructAbstract.

Definition at line 26 of file CancellationStruct.cpp.

References describe().

34.31.3.6 void stdair::CancellationStruct::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::StructAbstract.

Definition at line 31 of file CancellationStruct.cpp.

34.31.3.7 const std::string stdair::CancellationStruct::describe ( ) const [virtual]

Display of the structure.

Implements stdair::StructAbstract.

Definition at line 35 of file CancellationStruct.cpp.

Referenced by toStream().

34.31.3.8 const std::string stdair::CancellationStruct::display ( ) const

Display of the structure.

Definition at line 54 of file CancellationStruct.cpp.

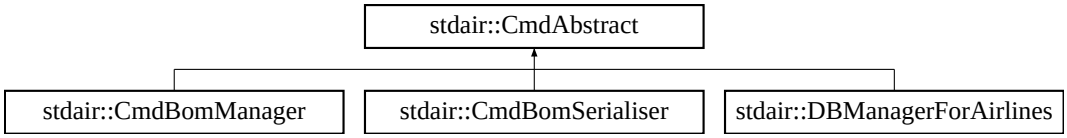
The documentation for this struct was generated from the following files:

- stdair/bom/CancellationStruct.hpp
- stdair/bom/CancellationStruct.cpp

34.32 stdair::CmdAbstract Class Reference

`#include <stdair/command/CmdAbstract.hpp>`

Inheritance diagram for stdair::CmdAbstract:



34.32.1 Detailed Description

Base class for the Command layer.

Definition at line 11 of file CmdAbstract.hpp.

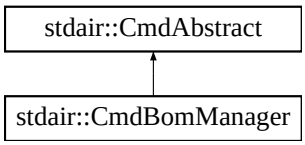
The documentation for this class was generated from the following file:

- stdair/command/CmdAbstract.hpp

34.33 stdair::CmdBomManager Class Reference

`#include <stdair/command/CmdBomManager.hpp>`

Inheritance diagram for stdair::CmdBomManager:



Friends

- class STDAIR_Service

34.33.1 Detailed Description

Class wrapping utility functions for handling the BOM tree objects.

Definition at line 25 of file CmdBomManager.hpp.

34.33.2 Friends And Related Function Documentation

34.33.2.1 friend class STDAIR_Service [friend]

Definition at line 27 of file CmdBomManager.hpp.

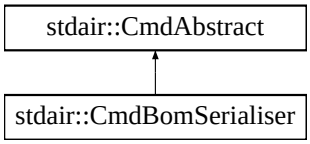
The documentation for this class was generated from the following file:

- stdair/command/CmdBomManager.hpp

34.34 stdair::CmdBomSerialiser Class Reference

`#include <stdair/command/CmdBomSerialiser.hpp>`

Inheritance diagram for stdair::CmdBomSerialiser:



34.34.1 Detailed Description

Class wrapping utility functions for handling the BOM tree objects.

Definition at line 25 of file CmdBomSerialiser.hpp.

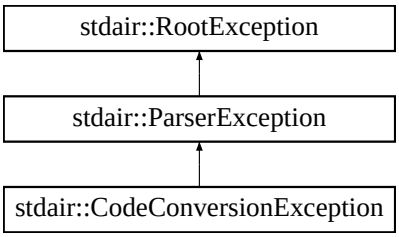
The documentation for this class was generated from the following file:

- stdair/command/CmdBomSerialiser.hpp

34.35 stdair::CodeConversionException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::CodeConversionException:



Public Member Functions

- CodeConversionException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.35.1 Detailed Description

Code conversion.

Definition at line 133 of file stdair_exceptions.hpp.

34.35.2 Constructor & Destructor Documentation

34.35.2.1 stdair::CodeConversionException::CodeConversionException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 136 of file stdair_exceptions.hpp.

34.35.3 Member Function Documentation

34.35.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.35.4 Member Data Documentation

34.35.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

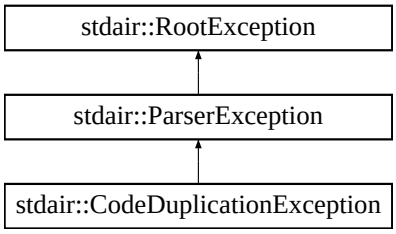
The documentation for this class was generated from the following file:

- stdair/stdair_exceptions.hpp

34.36 stdair::CodeDuplicationException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::CodeDuplicationException:



Public Member Functions

- CodeDuplicationException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.36.1 Detailed Description

Code duplication.

Definition at line 141 of file stdair_exceptions.hpp.

34.36.2 Constructor & Destructor Documentation

34.36.2.1 stdair::CodeDuplicationException::CodeDuplicationException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 144 of file stdair_exceptions.hpp.

34.36.3 Member Function Documentation

34.36.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.36.4 Member Data Documentation

34.36.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

The documentation for this class was generated from the following file:

- stdair/stdair_exceptions.hpp

34.37 COMMAND Struct Reference

`#include <stdair/ui/cmdline/readline_autocomp.hpp>`

Public Attributes

- char const * name
- pt2Func * func
- char * doc

34.37.1 Detailed Description

A structure which contains information on the commands this program can understand.

Definition at line 41 of file readline_autocomp.hpp.

34.37.2 Member Data Documentation

34.37.2.1 char const* COMMAND::name

User printable name of the function.

Definition at line 45 of file readline_autocomp.hpp.

Referenced by com_help(), and find_command().

34.37.2.2 pt2Func* COMMAND::func

Function to call to do the job.

Definition at line 50 of file readline_autocomp.hpp.

Referenced by execute_line().

34.37.2.3 char* COMMAND::doc

Documentation for this function.

Definition at line 55 of file readline_autocomp.hpp.

The documentation for this struct was generated from the following file:

- stdair/ui/cmdline/readline_autocomp.hpp

34.38 stdair::ContinuousAttributeLite< T > Struct Template Reference

Class modeling the distribution of values that can be taken by a continuous attribute.

`#include <stdair/basic/ContinuousAttributeLite.hpp>`

Public Types

- typedef std::map< T, stdair::Probability_T > ContinuousDistribution_T

Public Member Functions

- const T getValue (const stdair::Probability_T &iCumulativeProbability) const
- const stdair::Probability_T getRemainingProportion (const T &iValue) const
- const double getDerivativeValue (const T iKey) const
- const T getUpperBound (const T iKey) const
- const std::string displayCumulativeDistribution () const
- ContinuousAttributeLite (const ContinuousDistribution_T &iValueMap)
- ContinuousAttributeLite (const ContinuousAttributeLite &iCAL)
- ContinuousAttributeLite & operator= (const ContinuousAttributeLite &iCAL)
- virtual ~ContinuousAttributeLite ()

34.38.1 Detailed Description

template<typename T>struct stdair::ContinuousAttributeLite< T >

Class modeling the distribution of values that can be taken by a continuous attribute.

Definition at line 26 of file ContinuousAttributeLite.hpp.

34.38.2 Member Typedef Documentation

34.38.2.1 template<typename T > typedef std::map<T, stdair::Probability_T> stdair::ContinuousAttributeLite< T >::ContinuousDistribution_T

Type for the probability mass function.

Definition at line 32 of file ContinuousAttributeLite.hpp.

34.38.3 Constructor & Destructor Documentation

34.38.3.1 template<typename T > stdair::ContinuousAttributeLite< T >::ContinuousAttributeLite (const ContinuousDistribution_T & *iValueMap*) [inline]

Constructor.

Definition at line 204 of file ContinuousAttributeLite.hpp.

34.38.3.2 template<typename T > stdair::ContinuousAttributeLite< T >::ContinuousAttributeLite (const ContinuousAttributeLite< T > & *iCAL*) [inline]

Copy constructor.

Definition at line 212 of file ContinuousAttributeLite.hpp.

34.38.3.3 template<typename T > virtual stdair::ContinuousAttributeLite< T >::~ContinuousAttributeLite ( ) [inline, virtual]

Destructor.

Definition at line 231 of file ContinuousAttributeLite.hpp.

34.38.4 Member Function Documentation

34.38.4.1 template<typename T > const T stdair::ContinuousAttributeLite< T >::getValue (const stdair::Probability_T & *iCumulativeProbability*) const [inline]

Get value from inverse cumulative distribution.

Definition at line 39 of file ContinuousAttributeLite.hpp.

References stdair::DictionaryManager::keyToValue(), and stdair::DictionaryManager::valueToKey().

34.38.4.2 template<typename T > const stdair::Probability_T stdair::ContinuousAttributeLite< T >::getRemainingProportion (const T & *iValue*) const [inline]

Get remaining proportion from cumulative distribution.

Definition at line 84 of file ContinuousAttributeLite.hpp.

References stdair::DictionaryManager::keyToValue().

34.38.4.3 template<typename T > const double stdair::ContinuousAttributeLite< T >::getDerivativeValue (const T *iKey*) const [inline]

Get the value of the derivative function in a key point.

Definition at line 131 of file ContinuousAttributeLite.hpp.

References stdair::DictionaryManager::keyToValue().

34.38.4.4 template<typename T > const T stdair::ContinuousAttributeLite< T >::getUpperBound (const T *iKey*) const [inline]

Get the upper bound.

Definition at line 163 of file ContinuousAttributeLite.hpp.

34.38.4.5 template<typename T > const std::string stdair::ContinuousAttributeLite< T >::displayCumulativeDistribution ( ) const [inline]

Display cumulative distribution.

Definition at line 182 of file ContinuousAttributeLite.hpp.

References stdair::DictionaryManager::keyToValue().

34.38.4.6 template<typename T > ContinuousAttributeLite& stdair::ContinuousAttributeLite< T >::operator= (const ContinuousAttributeLite< T > & *iCAL*) [inline]

Copy operator.

Definition at line 221 of file ContinuousAttributeLite.hpp.

The documentation for this struct was generated from the following file:

- stdair/basic/ContinuousAttributeLite.hpp

34.39 stdair::date_time_element< MIN, MAX > Struct Template Reference

`#include <stdair/basic/BasParserHelperTypes.hpp>`

Public Member Functions

- date_time_element ()
- date_time_element (const date_time_element &t)
- date_time_element (int i)
- void check () const

Public Attributes

- unsigned int _value

34.39.1 Detailed Description

template<int MIN = 0, int MAX = 0>struct stdair::date_time_element< MIN, MAX >

Date & time element parser.

Definition at line 23 of file BasParserHelperTypes.hpp.

34.39.2 Constructor & Destructor Documentation

34.39.2.1 template<int MIN = 0, int MAX = 0> stdair::date_time_element< MIN, MAX >::date_time_element ( ) [inline]

Default constructor.

Definition at line 28 of file BasParserHelperTypes.hpp.

34.39.2.2 template<int MIN = 0, int MAX = 0> stdair::date_time_element< MIN, MAX >::date_time_element (const date_time_element< MIN, MAX > & *t*) [inline]

Default copy constructor.

Definition at line 30 of file BasParserHelperTypes.hpp.

34.39.2.3 template<int MIN = 0, int MAX = 0> stdair::date_time_element< MIN, MAX >::date_time_element (int *i*) [inline]

Constructor.

Definition at line 32 of file BasParserHelperTypes.hpp.

34.39.3 Member Function Documentation

34.39.3.1 template<int MIN = 0, int MAX = 0> void stdair::date_time_element< MIN, MAX >::check ( ) const [inline]

Checker.

Definition at line 34 of file BasParserHelperTypes.hpp.

References stdair::date_time_element< MIN, MAX >::_value.

34.39.4 Member Data Documentation

34.39.4.1 template<int MIN = 0, int MAX = 0> unsigned int stdair::date_time_element< MIN, MAX >::_value

Definition at line 24 of file BasParserHelperTypes.hpp.

Referenced by stdair::date_time_element< MIN, MAX >::check(), stdair::operator*(), and stdair::operator+().

The documentation for this struct was generated from the following file:

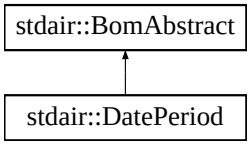
- stdair/basic/BasParserHelperTypes.hpp

34.40 stdair::DatePeriod Class Reference

Class representing the actual attributes for a fare date-period.

`#include <stdair/bom/DatePeriod.hpp>`

Inheritance diagram for stdair::DatePeriod:



Public Types

- typedef DatePeriodKey Key_T

Public Member Functions

- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const
- const Key_T & getKey () const
- BomAbstract *const getParent () const
- const HolderMap_T & getHolderMap () const
- const DatePeriod_T & getDatePeriod () const
- bool isDepartureDateValid (const Date_T &) const

Protected Member Functions

- DatePeriod (const Key_T &)
- virtual ~DatePeriod ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent
- HolderMap_T _holderMap

Friends

- class FacBom
- class FacBomManager

34.40.1 Detailed Description

Class representing the actual attributes for a fare date-period.

Definition at line 18 of file DatePeriod.hpp.

34.40.2 Member Typedef Documentation

34.40.2.1 typedef DatePeriodKey stdair::DatePeriod::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 27 of file DatePeriod.hpp.

34.40.3 Constructor & Destructor Documentation

34.40.3.1 stdair::DatePeriod::DatePeriod (const Key_T & *iKey*) [protected]

Main constructor.

Definition at line 28 of file DatePeriod.cpp.

34.40.3.2 stdair::DatePeriod::~DatePeriod ( ) [protected, virtual]

Destructor.

Definition at line 33 of file DatePeriod.cpp.

34.40.4 Member Function Documentation

34.40.4.1 void stdair::DatePeriod::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 36 of file DatePeriod.hpp.

References toString().

34.40.4.2 void stdair::DatePeriod::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 45 of file DatePeriod.hpp.

34.40.4.3 std::string stdair::DatePeriod::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 37 of file DatePeriod.cpp.

References describeKey().

Referenced by toStream().

34.40.4.4 const std::string stdair::DatePeriod::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 56 of file DatePeriod.hpp.

References _key, and stdair::DatePeriodKey::toString().

Referenced by toString().

34.40.4.5 const Key_T& stdair::DatePeriod::getKey ( ) const [inline]

Get the primary key (date period).

Definition at line 65 of file DatePeriod.hpp.

References _key.

34.40.4.6 BomAbstract* const stdair::DatePeriod::getParent ( ) const [inline]

Get a reference on the parent object instance.

Definition at line 72 of file DatePeriod.hpp.

References _parent.

34.40.4.7 const HolderMap_T& stdair::DatePeriod::getHolderMap ( ) const [inline]

Get a reference on the children holder.

Definition at line 79 of file DatePeriod.hpp.

References _holderMap.

34.40.4.8 const DatePeriod_T& stdair::DatePeriod::getDatePeriod ( ) const [inline]

Get the date period.

Definition at line 86 of file DatePeriod.hpp.

References _key, and stdair::DatePeriodKey::getDatePeriod().

Referenced by isDepartureDateValid().

34.40.4.9 bool stdair::DatePeriod::isDepartureDateValid (const Date_T & *iFlightDate*) const

Check if the given departure date is included in the departure period of the segment path.

Definition at line 45 of file DatePeriod.cpp.

References getDatePeriod().

Referenced by stdair::BomRetriever::retrieveDatePeriodListFromKey().

34.40.5 Friends And Related Function Documentation

34.40.5.1 friend class FacBom [friend]

Definition at line 19 of file DatePeriod.hpp.

34.40.5.2 friend class FacBomManager [friend]

Definition at line 20 of file DatePeriod.hpp.

34.40.6 Member Data Documentation

34.40.6.1 Key_T stdair::DatePeriod::_key [protected]

Primary key (date period).

Definition at line 125 of file DatePeriod.hpp.

Referenced by describeKey(), getDatePeriod(), and getKey().

34.40.6.2 BomAbstract* stdair::DatePeriod::_parent [protected]

Pointer on the parent class.

Definition at line 130 of file DatePeriod.hpp.

Referenced by getParent().

34.40.6.3 HolderMap_T stdair::DatePeriod::_holderMap [protected]

Map holding the children.

Definition at line 135 of file DatePeriod.hpp.

Referenced by getHolderMap().

The documentation for this class was generated from the following files:

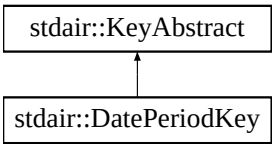
- stdair/bom/DatePeriod.hpp
- stdair/bom/DatePeriod.cpp

34.41 stdair::DatePeriodKey Struct Reference

Key of date-period.

`#include <stdair/bom/DatePeriodKey.hpp>`

Inheritance diagram for stdair::DatePeriodKey:



Public Member Functions

- DatePeriodKey (const DatePeriod_T &)
- DatePeriodKey (const DatePeriodKey &)
- ~DatePeriodKey ()
- const DatePeriod_T & getDatePeriod () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const

34.41.1 Detailed Description

Key of date-period.

Definition at line 14 of file DatePeriodKey.hpp.

34.41.2 Constructor & Destructor Documentation

34.41.2.1 stdair::DatePeriodKey::DatePeriodKey (const DatePeriod_T & *iDatePeriod*)

Main Constructor.

Definition at line 22 of file DatePeriodKey.cpp.

34.41.2.2 stdair::DatePeriodKey::DatePeriodKey (const DatePeriodKey & *iKey*)

Copy constructor.

Definition at line 27 of file DatePeriodKey.cpp.

34.41.2.3 stdair::DatePeriodKey::~DatePeriodKey ( )

Destructor.

Definition at line 32 of file DatePeriodKey.cpp.

34.41.3 Member Function Documentation

34.41.3.1 const DatePeriod_T& stdair::DatePeriodKey::getDatePeriod ( ) const [inline]

Get the date period.

Definition at line 32 of file DatePeriodKey.hpp.

Referenced by stdair::DatePeriod::getDatePeriod().

34.41.3.2 void stdair::DatePeriodKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 36 of file DatePeriodKey.cpp.

References toString().

34.41.3.3 void stdair::DatePeriodKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 41 of file DatePeriodKey.cpp.

34.41.3.4 const std::string stdair::DatePeriodKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key. That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

Reimplemented from stdair::KeyAbstract.

Definition at line 45 of file DatePeriodKey.cpp.

Referenced by stdair::DatePeriod::describeKey(), and toStream().

The documentation for this struct was generated from the following files:

- stdair/bom/DatePeriodKey.hpp
- stdair/bom/DatePeriodKey.cpp

34.42 stdair::DbaAbstract Class Reference

`#include <stdair/dbadaptor/DbaAbstract.hpp>`

Public Member Functions

- virtual ~DbaAbstract ()
- virtual void toStream (std::ostream &ioOut) const
- virtual void fromStream (std::istream &ioIn)

Protected Member Functions

- DbaAbstract ()

34.42.1 Detailed Description

Base class for the Database Adaptor (DBA) layer.

Definition at line 13 of file DbaAbstract.hpp.

34.42.2 Constructor & Destructor Documentation

34.42.2.1 virtual stdair::DbaAbstract::~DbaAbstract ( ) [inline, virtual]

Destructor.

Definition at line 17 of file DbaAbstract.hpp.

34.42.2.2 stdair::DbaAbstract::DbaAbstract ( ) [inline, protected]

Protected Default Constructor to ensure this class is abtract.

Definition at line 29 of file DbaAbstract.hpp.

34.42.3 Member Function Documentation

34.42.3.1 virtual void stdair::DbaAbstract::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Definition at line 21 of file DbaAbstract.hpp.

Referenced by operator<<().

34.42.3.2 virtual void stdair::DbaAbstract::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Definition at line 25 of file DbaAbstract.hpp.

Referenced by operator>>().

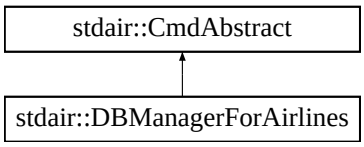
The documentation for this class was generated from the following file:

- stdair/dbadaptor/DbaAbstract.hpp

34.43 stdair::DBManagerForAirlines Class Reference

`#include <stdair/command/DBManagerForAirlines.hpp>`

Inheritance diagram for stdair::DBManagerForAirlines:



Static Public Member Functions

- static void updateAirlineInDB (DBSession_T &, const AirlineStruct &)
- static bool retrieveAirline (DBSession_T &, const AirlineCode_T &, AirlineStruct &)
- static void prepareSelectStatement (DBSession_T &, DBRequestStatement_T &, AirlineStruct &)
- static bool iterateOnStatement (DBRequestStatement_T &, AirlineStruct &)

34.43.1 Detailed Description

Class building the Business Object Model (BOM) from data retrieved from the database.

Definition at line 18 of file DBManagerForAirlines.hpp.

34.43.2 Member Function Documentation

34.43.2.1 void stdair::DBManagerForAirlines::updateAirlineInDB (DBSession_T & *ioSociSession,* const AirlineStruct & *iAirline*) [static]

Update the fields of the database row corresponding to the given BOM object. DBSession_-T& AirlineStruct& .

Definition at line 99 of file DBManagerForAirlines.cpp.

References stdair::AirlineStruct::getAirlineCode(), and stdair::AirlineStruct::getAirlineName().

34.43.2.2 bool stdair::DBManagerForAirlines::retrieveAirline (DBSession_T & *ioSociSession,* const AirlineCode_T & *iAirlineCode,* AirlineStruct & *ioAirline*) [static]

Retrieve, from the (MySQL) database, the row corresponding to the given BOM code, and fill the given BOM object with that retrieved data. DBSession_T& const AirlineCode_-T& AirlineStruct& .

Definition at line 134 of file DBManagerForAirlines.cpp.

References iterateOnStatement().

34.43.2.3 void stdair::DBManagerForAirlines::prepareSelectStatement (DBSession_T & *ioSociSession,* DBRequestStatement_T & *ioSelectStatement,* AirlineStruct & *ioAirline*) [static]

Prepare (parse and put in cache) the SQL statement. DBSession_T& DBRequestStatement_-T& AirlineStruct& .

Definition at line 26 of file DBManagerForAirlines.cpp.

34.43.2.4 bool stdair::DBManagerForAirlines::iterateOnStatement (DBRequestStatement_T & *ioStatement,* AirlineStruct & *ioAirline*) [static]

Iterate on the SQL statement.

The SQL has to be already prepared. DBRequestStatement_T& AirlineStruct& .

Definition at line 82 of file DBManagerForAirlines.cpp.

Referenced by retrieveAirline().

The documentation for this class was generated from the following files:

- stdair/command/DBManagerForAirlines.hpp
- stdair/command/DBManagerForAirlines.cpp

34.44 stdair::DBSessionManager Class Reference

`#include <stdair/service/DBSessionManager.hpp>`

Public Member Functions

- DBSession_T & getDBSession () const

Static Public Member Functions

- static DBSessionManager & instance ()

Friends

- class FacSupervisor
- class STDAIR_Service

34.44.1 Detailed Description

Class holding the database session.

Note that the database access is handled by the SOCI library.

Definition at line 17 of file DBSessionManager.hpp.

34.44.2 Member Function Documentation

34.44.2.1 DBSessionManager & stdair::DBSessionManager::instance ( ) [static]

Return the static DBSessionManager instance.

Definition at line 82 of file DBSessionManager.cpp.

34.44.2.2 DBSession_T & stdair::DBSessionManager::getDBSession ( ) const

Retrieve the database session handler, held by the static instance of DBSessionManager.

Definition at line 92 of file DBSessionManager.cpp.

34.44.3 Friends And Related Function Documentation

34.44.3.1 friend class FacSupervisor [friend]

Definition at line 19 of file DBSessionManager.hpp.

34.44.3.2 friend class STDAIR_Service [friend]

Definition at line 20 of file DBSessionManager.hpp.

The documentation for this class was generated from the following files:

- stdair/service/DBSessionManager.hpp
- stdair/service/DBSessionManager.cpp

34.45 stdair::DefaultDCPList Struct Reference

```
#include <stdair/basic/BasConst_Inventory.hpp>
```

Static Public Member Functions

- static DCPList_T init ()

34.45.1 Detailed Description

Definition at line 94 of file BasConst_Inventory.hpp.

34.45.2 Member Function Documentation

34.45.2.1 DCPList_T stdair::DefaultDCPList::init ( ) [static]

Definition at line 470 of file BasConst.cpp.

The documentation for this struct was generated from the following files:

- stdair/basic/BasConst_Inventory.hpp
- stdair/basic/BasConst.cpp

34.46 stdair::DefaultDtdFratMap Struct Reference

`#include <stdair/basic/BasConst_Inventory.hpp>`

Static Public Member Functions

- static DTDFratMap_T init ()

34.46.1 Detailed Description

Definition at line 98 of file BasConst_Inventory.hpp.

34.46.2 Member Function Documentation

34.46.2.1 DTDFratMap_T stdair::DefaultDtdFratMap::init ( ) [static]

Definition at line 489 of file BasConst.cpp.

The documentation for this struct was generated from the following files:

- stdair/basic/BasConst_Inventory.hpp
- stdair/basic/BasConst.cpp

34.47 stdair::DefaultDtdProbMap Struct Reference

`#include <stdair/basic/BasConst_Inventory.hpp>`

Static Public Member Functions

- static DTDProbMap_T init ()

34.47.1 Detailed Description

Definition at line 102 of file BasConst_Inventory.hpp.

34.47.2 Member Function Documentation

34.47.2.1 DTDProbMap_T stdair::DefaultDtdProbMap::init ( ) [static]

Definition at line 506 of file BasConst.cpp.

The documentation for this struct was generated from the following files:

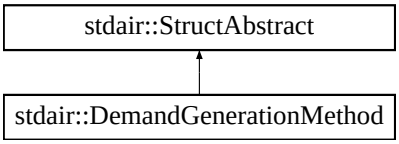
- stdair/basic/BasConst_Inventory.hpp
- stdair/basic/BasConst.cpp

34.48 stdair::DemandGenerationMethod Struct Reference

Enumeration of demand (booking request) generation methods.

`#include <stdair/basic/DemandGenerationMethod.hpp>`

Inheritance diagram for stdair::DemandGenerationMethod:



Public Types

- enum EN_DemandGenerationMethod { POI_PRO = 0, STA_ORD, LAST_VALUE }

Public Member Functions

- EN_DemandGenerationMethod getMethod () const
- char getMethodAsChar () const
- std::string getMethodAsString () const
- const std::string describe () const
- bool operator== (const EN_DemandGenerationMethod &) const
- DemandGenerationMethod (const EN_DemandGenerationMethod &)

- DemandGenerationMethod (const char iMethod)
- DemandGenerationMethod (const std::string &iMethod)
- DemandGenerationMethod (const DemandGenerationMethod &)
- void toStream (std::ostream &ioOut) const
- virtual void fromStream (std::istream &ioIn)

Static Public Member Functions

- static const std::string & getLabel (const EN_DemandGenerationMethod &)
- static EN_DemandGenerationMethod getMethod (const char)
- static char getMethodLabel (const EN_DemandGenerationMethod &)
- static std::string getMethodLabelAsString (const EN_DemandGenerationMethod &)
- static std::string describeLabels ()

34.48.1 Detailed Description

Enumeration of demand (booking request) generation methods.

Definition at line 17 of file DemandGenerationMethod.hpp.

34.48.2 Member Enumeration Documentation

34.48.2.1 enum stdair::DemandGenerationMethod::EN_DemandGenerationMethod

Enumerator:

POI_PRO

STA_ORD

LAST_VALUE

Definition at line 19 of file DemandGenerationMethod.hpp.

34.48.3 Constructor & Destructor Documentation

34.48.3.1 stdair::DemandGenerationMethod::DemandGenerationMethod (const EN_DemandGenerationMethod & *iDemandGenerationMethod*)

Main constructor.

Definition at line 34 of file DemandGenerationMethod.cpp.

34.48.3.2 stdair::DemandGenerationMethod::DemandGenerationMethod (const char *iMethod*)

Alternative constructor.

Definition at line 62 of file DemandGenerationMethod.cpp.

34.48.3.3 stdair::DemandGenerationMethod::DemandGenerationMethod (const std::string & *iMethod*)

Alternative constructor.

Definition at line 68 of file DemandGenerationMethod.cpp.

References getMethod().

34.48.3.4 stdair::DemandGenerationMethod::DemandGenerationMethod (const DemandGenerationMethod & *iDemandGenerationMethod*)

Default copy constructor.

Definition at line 28 of file DemandGenerationMethod.cpp.

34.48.4 Member Function Documentation

34.48.4.1 const std::string & stdair::DemandGenerationMethod::getLabel (const EN_DemandGenerationMethod & *iMethod*) [static]

Get the label as a string (e.g., "PoissonProcess" or "SatisticsOrder").

Definition at line 78 of file DemandGenerationMethod.cpp.

34.48.4.2 DemandGenerationMethod::EN_DemandGenerationMethod stdair::DemandGenerationMethod::getMethod (const char *iMethodChar*) [static]

Get the method value from parsing a single char (e.g., 'P' or 'S').

Definition at line 40 of file DemandGenerationMethod.cpp.

References describeLabels(), LAST_VALUE, POI_PRO, and STA_ORD.

34.48.4.3 char stdair::DemandGenerationMethod::getMethodLabel (const EN_DemandGenerationMethod & *iMethod*) [static]

Get the label as a single char (e.g., 'P' or 'S').

Definition at line 84 of file DemandGenerationMethod.cpp.

34.48.4.4 std::string stdair::DemandGenerationMethod::getMethodLabelAsString (const EN_DemandGenerationMethod & *iMethod*) [static]

Get the label as a string of a single char (e.g., "P" or "S").

Definition at line 90 of file DemandGenerationMethod.cpp.

34.48.4.5 std::string stdair::DemandGenerationMethod::describeLabels ( ) [static]

List the labels.

Definition at line 97 of file DemandGenerationMethod.cpp.

References LAST_VALUE.

Referenced by getMethod().

34.48.4.6 DemandGenerationMethod::EN_DemandGenerationMethod stdair::DemandGenerationMethod::getMethod ( ) const

Get the enumerated value.

Definition at line 110 of file DemandGenerationMethod.cpp.

Referenced by DemandGenerationMethod().

34.48.4.7 char stdair::DemandGenerationMethod::getMethodAsChar ( ) const

Get the enumerated value as a short string (e.g., 'P' or 'S').

Definition at line 115 of file DemandGenerationMethod.cpp.

34.48.4.8 std::string stdair::DemandGenerationMethod::getMethodAsString ( ) const

Get the enumerated value as a short string (e.g., "P" or "S").

Definition at line 121 of file DemandGenerationMethod.cpp.

34.48.4.9 const std::string stdair::DemandGenerationMethod::describe ( ) const [virtual]

Give a description of the structure (e.g., "PoissonProcess" or "SatisticsOrder").

Implements stdair::StructAbstract.

Definition at line 128 of file DemandGenerationMethod.cpp.

34.48.4.10 bool stdair::DemandGenerationMethod::operator== (const EN_DemandGenerationMethod & *iMethod*) const

Comparison operator.

Definition at line 136 of file DemandGenerationMethod.cpp.

34.48.4.11 void stdair::StructAbstract::toStream (std::ostream & *ioOut*) const [inline, inherited]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented in stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 29 of file StructAbstract.hpp.

References stdair::StructAbstract::describe().

Referenced by operator<<().

34.48.4.12 virtual void stdair::StructAbstract::fromStream (std::istream & *ioIn*) [inline, virtual, inherited]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented in stdair::ProgressStatusSet, stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::EventStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 38 of file StructAbstract.hpp.

Referenced by operator>>().

The documentation for this struct was generated from the following files:

- stdair/basic/DemandGenerationMethod.hpp
- stdair/basic/DemandGenerationMethod.cpp

34.49 stdair::DictionaryManager Class Reference

Class wrapper of dictionary business methods.

`#include <stdair/basic/DictionaryManager.hpp>`

Static Public Member Functions

- static const stdair::Probability_T keyToValue (const DictionaryKey_T)
- static const DictionaryKey_T valueToKey (const stdair::Probability_T)

34.49.1 Detailed Description

Class wrapper of dictionary business methods.

Definition at line 22 of file DictionaryManager.hpp.

34.49.2 Member Function Documentation

34.49.2.1 const stdair::Probability_T stdair::DictionaryManager::keyToValue (const DictionaryKey_T *iKey*) [static]

Convert from key to value.

Definition at line 12 of file DictionaryManager.cpp.

References stdair::DEFAULT_NUMBER_OF_SUBDIVISIONS.

Referenced by stdair::ContinuousAttributeLite< T >::displayCumulativeDistribution(), stdair::ContinuousAttributeLite< T >::getDerivativeValue(), stdair::ContinuousAttributeLite< T >::getRemainingProportion(), and stdair::ContinuousAttributeLite< T >::getValue().

34.49.2.2 const DictionaryKey_T stdair::DictionaryManager::valueToKey (const stdair::Probability_T *iValue*) [static]

Convert from value to key.

Definition at line 21 of file DictionaryManager.cpp.

References stdair::DEFAULT_NUMBER_OF_SUBDIVISIONS.

Referenced by stdair::ContinuousAttributeLite< T >::getValue().

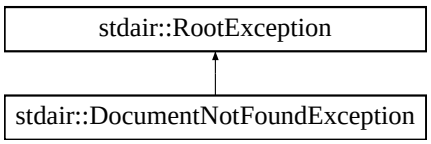
The documentation for this class was generated from the following files:

- stdair/basic/DictionaryManager.hpp
- stdair/basic/DictionaryManager.cpp

34.50 stdair::DocumentNotFoundException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::DocumentNotFoundException:



Public Member Functions

- DocumentNotFoundException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.50.1 Detailed Description

Document not found.

Definition at line 104 of file stdair_exceptions.hpp.

34.50.2 Constructor & Destructor Documentation

34.50.2.1 stdair::DocumentNotFoundException::DocumentNotFoundException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 107 of file stdair_exceptions.hpp.

34.50.3 Member Function Documentation

34.50.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.50.4 Member Data Documentation

34.50.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

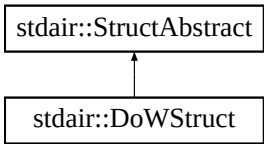
The documentation for this class was generated from the following file:

- stdair/stdair_exceptions.hpp

34.51 stdair::DoWStruct Struct Reference

`#include <stdair/bom/DoWStruct.hpp>`

Inheritance diagram for stdair::DoWStruct:



Public Types

- typedef std::vector< bool > BooleanList_T

Public Member Functions

- bool getDayOfWeek (const unsigned short i) const
- bool getStandardDayOfWeek (const unsigned short i) const
- void setDayOfWeek (const unsigned short, const bool)
- const std::string describe () const
- const std::string describeShort () const
- DoWStruct shift (const long &) const
- DoWStruct intersection (const DoWStruct &) const
- const bool isValid () const
- DoWStruct (const std::string &iDowString)
- DoWStruct ()
- DoWStruct (const DoWStruct &)
- ~DoWStruct ()
- void toStream (std::ostream &ioOut) const
- virtual void fromStream (std::istream &ioIn)

34.51.1 Detailed Description

Define a Day Of the Week (DoW) sequence.

For instance, 1..11.1 means that the period is active on Mon., Thu., Fri. and Sun.

Definition at line 18 of file DoWStruct.hpp.

34.51.2 Member Typedef Documentation

34.51.2.1 typedef std::vector<bool> stdair::DoWStruct::BooleanList_T

Define the bit set representing the DoW.

Definition at line 21 of file DoWStruct.hpp.

34.51.3 Constructor & Destructor Documentation

34.51.3.1 stdair::DoWStruct::DoWStruct (const std::string & *iDowString*)

Constructor from a given bit set (e.g., "0000011" for the week-ends).

Definition at line 21 of file DoWStruct.cpp.

34.51.3.2 stdair::DoWStruct::DoWStruct ( )

Default constructors.

Definition at line 14 of file DoWStruct.cpp.

34.51.3.3 stdair::DoWStruct::DoWStruct (const DoWStruct & *iDowStruct*)

Definition at line 34 of file DoWStruct.cpp.

34.51.3.4 stdair::DoWStruct::~DoWStruct ( ) [inline]

Default destructor.

Definition at line 63 of file DoWStruct.hpp.

34.51.4 Member Function Documentation

34.51.4.1 bool stdair::DoWStruct::getDayOfWeek (const unsigned short *i*) const

Get the i-th day of the week (Monday being the first one).

Definition at line 66 of file DoWStruct.cpp.

Referenced by intersection(), and isValid().

34.51.4.2 bool stdair::DoWStruct::getStandardDayOfWeek (const unsigned short *i*) const

Get the i-th day of the week (Sunday being the first one).

Definition at line 71 of file DoWStruct.cpp.

34.51.4.3 void stdair::DoWStruct::setDayOfWeek (const unsigned short *i*, const bool *iBool*)

Set the new value for the i-th day-of-week.

Definition at line 82 of file DoWStruct.cpp.

Referenced by intersection(), and shift().

34.51.4.4 const std::string stdair::DoWStruct::describe ( ) const [virtual]

Display explicitly (e.g., "Mon.Tue.Wed.Thu.Fri.").

Implements stdair::StructAbstract.

Definition at line 52 of file DoWStruct.cpp.

References stdair::DOW_STR.

Referenced by stdair::PeriodStruct::describe().

34.51.4.5 const std::string stdair::DoWStruct::describeShort ( ) const

Display as a bit set (e.g., "1111100").

Definition at line 40 of file DoWStruct.cpp.

Referenced by stdair::PeriodStruct::describeShort().

34.51.4.6 DoWStruct stdair::DoWStruct::shift (const long & *iNbOfDays*) const

Build a new DoW struct by shifting the current DoW by a given number.

Definition at line 88 of file DoWStruct.cpp.

References stdair::DEFAULT_DOW_STRING, and setDayOfWeek().

Referenced by stdair::PeriodStruct::addDateOffset().

34.51.4.7 DoWStruct stdair::DoWStruct::intersection (const DoWStruct & *iDoW*) const

Build a new DoW struct by intersecting two DoW structs.

Definition at line 104 of file DoWStruct.cpp.

References stdair::DEFAULT_DOW_STRING, getDayOfWeek(), and setDayOfWeek().

Referenced by stdair::PeriodStruct::intersection().

34.51.4.8 const bool stdair::DoWStruct::isValid ( ) const

Return if the DoW struct is valid (i.e., has at least one "true").

Definition at line 117 of file DoWStruct.cpp.

References getDayOfWeek().

Referenced by stdair::PeriodStruct::isValid().

34.51.4.9 void stdair::StructAbstract::toStream (std::ostream & *ioOut*) const [inline, inherited]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented in stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 29 of file StructAbstract.hpp.

References stdair::StructAbstract::describe().

Referenced by operator<<().

34.51.4.10 virtual void stdair::StructAbstract::fromStream (std::istream & *ioIn*) [inline, virtual, inherited]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented in stdair::ProgressStatusSet, stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::EventStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 38 of file StructAbstract.hpp.

Referenced by operator>>().

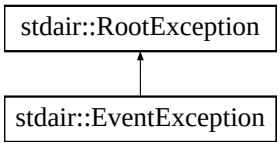
The documentation for this struct was generated from the following files:

- stdair/bom/DoWStruct.hpp
- stdair/bom/DoWStruct.cpp

34.52 stdair::EventException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::EventException:



Public Member Functions

- EventException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.52.1 Detailed Description

Event.

Definition at line 196 of file stdair_exceptions.hpp.

34.52.2 Constructor & Destructor Documentation

34.52.2.1 stdair::EventException::EventException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 199 of file stdair_exceptions.hpp.

34.52.3 Member Function Documentation

34.52.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.52.4 Member Data Documentation

34.52.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

The documentation for this class was generated from the following file:

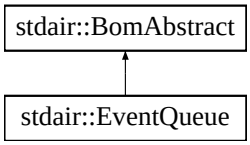
- stdair/stdair_exceptions.hpp

34.53 stdair::EventQueue Class Reference

Class holding event structures.

`#include <stdair/bom/EventQueue.hpp>`

Inheritance diagram for stdair::EventQueue:



Public Types

- typedef EventQueueKey Key_T
- typedef std::map< EventType::EN_EventType, ProgressStatus > ProgressStatusMap_T

Public Member Functions

- const Key_T & getKey () const
- BomAbstract *const getParent () const
- const HolderMap_T & getHolderMap () const
- const ProgressStatus & getStatus () const

- const Count_T & getCurrentNbOfEvents () const
- const Count_T & getExpectedTotalNbOfEvents () const
- const Count_T & getActualTotalNbOfEvents () const
- ProgressStatus getStatus (const EventType::EN_EventType &) const
- const Count_T & getCurrentNbOfEvents (const EventType::EN_EventType &) const
- const Count_T & getExpectedTotalNbOfEvents (const EventType::EN_EventType &) const
- const Count_T & getActualTotalNbOfEvents (const EventType::EN_EventType &) const
- void setStatus (const ProgressStatus &iProgressStatus)
- void setStatus (const Count_T &iCurrentNbOfEvents, const Count_T &iExpectedTotalNbOfEvents, const Count_T &iActualTotalNbOfEvents)
- void setStatus (const Count_T &iCurrentNbOfEvents, const Count_T &iActualTotalNbOfEvents)
- void setCurrentNbOfEvents (const Count_T &iCurrentNbOfEvents)
- void setExpectedTotalNbOfEvents (const Count_T &iExpectedTotalNbOfEvents)
- void setActualTotalNbOfEvents (const Count_T &iActualTotalNbOfEvents)
- void setStatus (const EventType::EN_EventType &iType, const ProgressStatus &iProgressStatus)
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const
- std::string display () const
- void reset ()
- ProgressStatusSet popEvent (EventStruct &)
- bool addEvent (EventStruct &)
- bool isQueueDone () const
- void addStatus (const EventType::EN_EventType &, const NbOfRequests_T &iExpectedTotalNbOfEvents)
- void updateStatus (const EventType::EN_EventType &, const ProgressStatus &iProgressStatus)
- void updateStatus (const EventType::EN_EventType &, const NbOfEvents_T &iActualTotalNbOfEvents)
- ProgressPercentage_T calculateProgress () const
- ProgressPercentage_T calculateProgress (const EventType::EN_EventType &) const
- Count_T getQueueSize () const
- bool isQueueEmpty () const

Protected Member Functions

- EventQueue (const Key_T &)
- EventQueue (const EventQueue &)
- ~EventQueue ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent
- HolderMap_T _holderMap
- EventList_T _eventList
- ProgressStatus _progressStatus
- ProgressStatusMap_T _progressStatusMap

Friends

- class FacBom
- class FacBomManager

34.53.1 Detailed Description

Class holding event structures.

Event types may be:

- booking requests,
- optimisation notifications,
- (simulation) break point,
- schedule changes.

The event content would be, respectively:

- a demand stream (generating booking requests),
- a DCP rule (generation optimisation notifications),
- a break point rule (generating simulation break points),
- a schedule update (generating schedule changes).

The EventQueue object keeps track of the simulation progress, overall and broken down (independently) both by event type and by content key. Following is a full example:

- Break down by event type:
  - Booking request: 9 events out of {expected: 20, actual: 20}
  - Optimisation notification: 7 events out of {expected: 32, actual: 32}
- Break down by content key:
  - "SIN-BKK" demand stream: 5 events out of {expected: 10, actual: 11}
  - "SIN-NRT" demand stream: 4 events out of {expected: 10, actual: 9}

  - "SQ 12" DCP rule: 2 events out of {expected: 16, actual: 16}
  - "SQ 25" DCP rule: 5 events out of {expected: 16, actual: 16}
- Overall status: 16 events out of {expected: 52, actual: 52}

Definition at line 59 of file EventQueue.hpp.

34.53.2 Member Typedef Documentation

34.53.2.1 typedef EventQueueKey stdair::EventQueue::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 68 of file EventQueue.hpp.

34.53.2.2 typedef std::map<EventType::EN_EventType, ProgressStatus> stdair::EventQueue::ProgressStatusMap_T

Definition of the (STL) map of ProgressStatus structures, one for each event type (e.g., booking request, optimisation notification).

Definition at line 76 of file EventQueue.hpp.

34.53.3 Constructor & Destructor Documentation

34.53.3.1 stdair::EventQueue::EventQueue (const Key_T & *iKey*) [protected]

Constructor.

Definition at line 23 of file EventQueue.cpp.

34.53.3.2 stdair::EventQueue::EventQueue (const EventQueue & *iEventQueue*) [protected]

Default copy constructor.

Definition at line 30 of file EventQueue.cpp.

34.53.3.3 stdair::EventQueue::~EventQueue ( ) [protected]

Destructor.

Definition at line 38 of file EventQueue.cpp.

References _eventList.

34.53.4 Member Function Documentation

34.53.4.1 const Key_T& stdair::EventQueue::getKey ( ) const [inline]

Get the event queue key.

Definition at line 82 of file EventQueue.hpp.

References _key.

34.53.4.2 BomAbstract* const stdair::EventQueue::getParent ( ) const [inline]

Get the parent object.

Definition at line 87 of file EventQueue.hpp.

References _parent.

34.53.4.3 const HolderMap_T& stdair::EventQueue::getHolderMap ( ) const [inline]

Get the map of children holders.

Definition at line 92 of file EventQueue.hpp.

References _holderMap.

34.53.4.4 const ProgressStatus& stdair::EventQueue::getStatus ( ) const [inline]

Get the overall progress status (for the whole event queue).

Definition at line 97 of file EventQueue.hpp.

References _progressStatus.

Referenced by popEvent().

34.53.4.5 const Count_T& stdair::EventQueue::getCurrentNbOfEvents ( ) const [inline]

Get the current number of events (for the whole event queue).

Definition at line 101 of file EventQueue.hpp.

References _progressStatus, and stdair::ProgressStatus::getCurrentNb().

34.53.4.6 const Count_T& stdair::EventQueue::getExpectedTotalNbOfEvents ( ) const [inline]

Get the expected total number of events (for the whole event queue).

Definition at line 105 of file EventQueue.hpp.

References _progressStatus, and stdair::ProgressStatus::getExpectedNb().

Referenced by stdair::STDAIR_Service::getExpectedTotalNumberOfEventsToBeGenerated().

34.53.4.7 const Count_T& stdair::EventQueue::getActualTotalNbOfEvents ( ) const [inline]

Get the actual total number of events (for the whole event queue).

Definition at line 109 of file EventQueue.hpp.

References _progressStatus, and stdair::ProgressStatus::getActualNb().

Referenced by stdair::STDAIR_Service::getActualTotalNumberOfEventsToBeGenerated().

34.53.4.8 ProgressStatus stdair::EventQueue::getStatus (const EventType::EN_EventType & *iType*) const

Get the progress status for the given event type (e.g., booking request, optimisation notification, schedule change, break point).

Definition at line 257 of file EventQueue.cpp.

References _progressStatusMap.

34.53.4.9 const Count_T & stdair::EventQueue::getCurrentNbOfEvents (const EventType::EN_EventType & *iType*) const

Get the current number of events for the given event type.

Definition at line 97 of file EventQueue.cpp.

References _progressStatusMap, display(), stdair::ProgressStatus::getCurrentNb(), and STDAIR_LOG_ERROR.

34.53.4.10 const Count_T & stdair::EventQueue::getExpectedTotalNbOfEvents (const EventType::EN_EventType & *iType*) const

Get the expected total number of events for the given event type.

Definition at line 116 of file EventQueue.cpp.

References _progressStatusMap, display(), stdair::ProgressStatus::getExpectedNb(), and STDAIR_LOG_ERROR.

34.53.4.11 const Count_T & stdair::EventQueue::getActualTotalNbOfEvents (const EventType::EN_EventType & *iType*) const

Get the actual total number of events for the given event type.

Definition at line 138 of file EventQueue.cpp.

References _progressStatusMap, display(), stdair::ProgressStatus::getActualNb(), and STDAIR_LOG_ERROR.

34.53.4.12 void stdair::EventQueue::setStatus (const ProgressStatus & *iProgressStatus*) [inline]

Set/update the progress status.

Definition at line 131 of file EventQueue.hpp.

References _progressStatus.

Referenced by popEvent().

34.53.4.13 void stdair::EventQueue::setStatus (const Count_T & *iCurrentNbOfEvents,* const Count_T & *iExpectedTotalNbOfEvents,* const Count_T & *iActualTotalNbOfEvents*) [inline]

Set/update the progress status.

Definition at line 135 of file EventQueue.hpp.

References _progressStatus, stdair::ProgressStatus::setActualNb(), stdair::ProgressStatus::setCurrentNb(), and stdair::ProgressStatus::setExpectedNb().

34.53.4.14 void stdair::EventQueue::setStatus (const Count_T & *iCurrentNbOfEvents,* const Count_T & *iActualTotalNbOfEvents*) [inline]

Set/update the progress status.

Definition at line 143 of file EventQueue.hpp.

References _progressStatus, stdair::ProgressStatus::setActualNb(), and stdair::ProgressStatus::setCurrentNb().

34.53.4.15 void stdair::EventQueue::setCurrentNbOfEvents (const Count_T & *iCurrentNbOfEvents*) [inline]

Set the current number of events (for the whole event queue).

Definition at line 149 of file EventQueue.hpp.

References _progressStatus, and stdair::ProgressStatus::setCurrentNb().

34.53.4.16 void stdair::EventQueue::setExpectedTotalNbOfEvents (const Count_T & *iExpectedTotalNbOfEvents*) [inline]

Set the expected total number of events (for the whole event queue).

Definition at line 153 of file EventQueue.hpp.

References _progressStatus, and stdair::ProgressStatus::setExpectedNb().

34.53.4.17 void stdair::EventQueue::setActualTotalNbOfEvents (const Count_T & *iActualTotalNbOfEvents*) [inline]

Set the actual total number of events (for the whole event queue).

Definition at line 157 of file EventQueue.hpp.

References _progressStatus, and stdair::ProgressStatus::setActualNb().

34.53.4.18 void stdair::EventQueue::setStatus (const EventType::EN_EventType & *iType,* const ProgressStatus & *iProgressStatus*)

Set the progress status for the given event type (e.g., booking request, optimisation notification, schedule change, break point).

Definition at line 241 of file EventQueue.cpp.

References _progressStatusMap.

34.53.4.19 void stdair::EventQueue::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 176 of file EventQueue.hpp.

References toString().

34.53.4.20 void stdair::EventQueue::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 185 of file EventQueue.hpp.

34.53.4.21 std::string stdair::EventQueue::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 43 of file EventQueue.cpp.

References _eventList, _progressStatus, stdair::ProgressStatus::getActualNb(), stdair::ProgressStatus::getCurrentNb(), and stdair::ProgressStatus::getExpectedNb().

Referenced by display(), toStream(), and updateStatus().

34.53.4.22 const std::string stdair::EventQueue::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 196 of file EventQueue.hpp.

References _key, and stdair::EventQueueKey::toString().

34.53.4.23 std::string stdair::EventQueue::display ( ) const

Definition at line 53 of file EventQueue.cpp.

References toString().

Referenced by calculateProgress(), getActualTotalNbOfEvents(), getCurrentNbOfEvents(), and getExpectedTotalNbOfEvents().

34.53.4.24 void stdair::EventQueue::reset ( )

Reset the event queue.

The event queue is fully emptied.

Definition at line 78 of file EventQueue.cpp.

References _eventList, _progressStatus, _progressStatusMap, and stdair::ProgressStatus::reset().

Referenced by stdair::STDAIR_Service::reset().

34.53.4.25 ProgressStatusSet stdair::EventQueue::popEvent (EventStruct & *ioEventStruct*)

Pop the next coming (in time) event, and remove it from the event queue.

- The next coming (in time) event corresponds to the event having the earliest date-time stamp. In other words, it is the first/front element of the event queue.
- That (first) event/element is then removed from the event queue
- The progress status is updated for the corresponding event generator.

Definition at line 291 of file EventQueue.cpp.

References _eventList, _progressStatus, stdair::EventStruct::getEventType(), getStatus(), stdair::ProgressStatusSet::setOverallStatus(), setStatus(), and stdair::ProgressStatusSet::setTypeSpecificStatus().

Referenced by stdair::STDAIR_Service::popEvent().

34.53.4.26 bool stdair::EventQueue::addEvent (EventStruct & *ioEventStruct*)

Add event.

If there already is an event with the same date-time, move the given event one nanosecond forward, and retry the insertion until it succeeds.

That method:

- first adds the event structure in the dedicated list,
- then retrieves the corresponding demand stream,
- and update accordingly the corresponding progress statuses.

Parameters

stdair::EventS	The reference on EventStruct is not constant, because the EventStruct object can be altered: its date-time stamp can be changed accordingly to the location where it has been inserted in the event queue.

Definition at line 351 of file EventQueue.cpp.

References _eventList.

34.53.4.27 bool stdair::EventQueue::isQueueDone ( ) const

States whether the event queue has reached the end.

For now, that method states whether the event queue is empty.

Definition at line 72 of file EventQueue.cpp.

References _eventList, and isQueueEmpty().

Referenced by stdair::STDAIR_Service::isQueueDone().

34.53.4.28 void stdair::EventQueue::addStatus (const EventType::EN_EventType & *iType*, const NbOfRequests_T & *iExpectedTotalNbOfEvents*)

Initialise the progress statuses for the given event type (e.g., request, snapshot).

The progress status is actually a pair of counters:

- The current number of (already generated) events, for the given event type. That number is initialised to 0 (no event has been generated yet).
- The total number of events (to be generated), also for the given event type.

Definition at line 197 of file EventQueue.cpp.

References _progressStatus, stdair::ProgressStatus::getActualNb(), stdair::ProgressStatus::getExpectedNb(), stdair::ProgressStatus::setActualNb(), stdair::ProgressStatus::setExpectedNb(), and updateStatus().

34.53.4.29 void stdair::EventQueue::updateStatus (const EventType::EN_EventType & *iType*, const ProgressStatus & *iProgressStatus*)

Set/update the progress status for the corresponding event type (e.g., booking request, optimisation notification, schedule change, break point).

If there is no ProgressStatus object for that event type yet, one is inserted. Otherwise, the ProgressStatus object is updated.

Definition at line 156 of file EventQueue.cpp.

References _progressStatusMap, stdair::ProgressStatus::getActualNb(), stdair::ProgressStatus::getCurrentNb(), stdair::ProgressStatus::getExpectedNb(), stdair::EventType::getLabel(), stdair::ProgressStatus::setActualNb(), stdair::ProgressStatus::setCurrentNb(), stdair::ProgressStatus::setExpectedNb(), STDAIR_LOG_ERROR, and toString().

Referenced by addStatus().

34.53.4.30 void stdair::EventQueue::updateStatus (const EventType::EN_EventType & *iType*, const NbOfEvents_T & *iActualTotalNbOfEvents*)

Update the progress statuses for the given event type (e.g., booking request, optimisation notification, schedule change, break point).

The progress status is actually a pair of counters:

- The current number of (already generated) events, for the given event type. That number is initialised to 0 (no event has been generated yet).
- The total number of events (to be generated), also for the given event type.

Definition at line 221 of file EventQueue.cpp.

References _progressStatusMap, stdair::ProgressStatus::getActualNb(), and stdair::ProgressStatus::setActualNb().

34.53.4.31 ProgressPercentage_T stdair::EventQueue::calculateProgress ( ) const [inline]

Calculate the progress status.

The progress is status is the ratio of:

- the current number of events, summed over all the demand streams,
- over the total number of events, also summed over all the demand streams.

Definition at line 316 of file EventQueue.hpp.

References _progressStatus, and stdair::ProgressStatus::progress().

34.53.4.32 ProgressPercentage_T stdair::EventQueue::calculateProgress (const EventType::EN_EventType & *iType*) const

Calculate the progress status.

The progress is status is the ratio of:

- the current number of events, summed over all the demand streams,
- over the total number of events, also summed over all the demand streams.

Definition at line 273 of file EventQueue.cpp.

References _progressStatusMap, display(), stdair::ProgressStatus::progress(), and STDAIR_-LOG_ERROR.

34.53.4.33 Count_T stdair::EventQueue::getQueueSize ( ) const

Queue size

Definition at line 62 of file EventQueue.cpp.

References _eventList.

34.53.4.34 bool stdair::EventQueue::isQueueEmpty ( ) const

Is queue empty

Definition at line 67 of file EventQueue.cpp.

References _eventList.

Referenced by isQueueDone().

34.53.5 Friends And Related Function Documentation

34.53.5.1 friend class FacBom [friend]

Definition at line 60 of file EventQueue.hpp.

34.53.5.2 friend class FacBomManager [friend]

Definition at line 61 of file EventQueue.hpp.

34.53.6 Member Data Documentation

34.53.6.1 Key_T stdair::EventQueue::_key [protected]

Primary key (ID).

Definition at line 360 of file EventQueue.hpp.

Referenced by describeKey(), and getKey().

34.53.6.2 BomAbstract* stdair::EventQueue::_parent [protected]

Pointer on the parent class (BomRoot).

Definition at line 365 of file EventQueue.hpp.

Referenced by getParent().

34.53.6.3 HolderMap_T stdair::EventQueue::_holderMap [protected]

Map holding the children (e.g., DemandStream objects for booking requests, DCPRule objects for optimisation notifications).

Definition at line 372 of file EventQueue.hpp.

Referenced by getHolderMap().

34.53.6.4 EventList_T stdair::EventQueue::_eventList [protected]

List of events.

Definition at line 377 of file EventQueue.hpp.

Referenced by addEvent(), getQueueSize(), isQueueDone(), isQueueEmpty(), popEvent(), reset(), toString(), and ~EventQueue().

34.53.6.5 ProgressStatus stdair::EventQueue::_progressStatus [protected]

Counters holding the overall progress status.

Definition at line 382 of file EventQueue.hpp.

Referenced by addStatus(), calculateProgress(), getActualTotalNbOfEvents(), getCurrentNbOfEvents(), getExpectedTotalNbOfEvents(), getStatus(), popEvent(), reset(), setActualTotalNbOfEvents(), setCurrentNbOfEvents(), setExpectedTotalNbOfEvents(), setStatus(), and toString().

34.53.6.6 ProgressStatusMap_T stdair::EventQueue::_progressStatusMap [protected]

Counters holding the overall progress status, for each event type (e.g., booking request, optimisation notification, schedule change, break point).

Definition at line 389 of file EventQueue.hpp.

Referenced by calculateProgress(), getActualTotalNbOfEvents(), getCurrentNbOfEvents(), getExpectedTotalNbOfEvents(), getStatus(), reset(), setStatus(), and updateStatus().

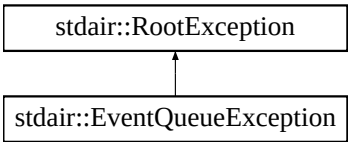
The documentation for this class was generated from the following files:

- stdair/bom/EventQueue.hpp
- stdair/bom/EventQueue.cpp

34.54 stdair::EventQueueException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::EventQueueException:



Public Member Functions

- EventQueueException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.54.1 Detailed Description

EventQueue.

Definition at line 203 of file stdair_exceptions.hpp.

34.54.2 Constructor & Destructor Documentation

34.54.2.1 stdair::EventQueueException::EventQueueException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 206 of file stdair_exceptions.hpp.

34.54.3 Member Function Documentation

34.54.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.54.4 Member Data Documentation

34.54.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

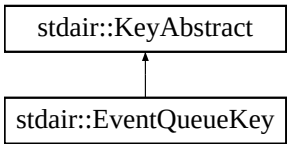
The documentation for this class was generated from the following file:

- stdair/stdair_exceptions.hpp

34.55 stdair::EventQueueKey Struct Reference

`#include <stdair/bom/EventQueueKey.hpp>`

Inheritance diagram for stdair::EventQueueKey:



Public Member Functions

- EventQueueKey (const EventQueueID_T &)
- EventQueueKey (const EventQueueKey &)
- ~EventQueueKey ()
- const EventQueueID_T & getEventQueueID () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const

34.55.1 Detailed Description

Key of eventqueue.

Definition at line 15 of file EventQueueKey.hpp.

34.55.2 Constructor & Destructor Documentation

34.55.2.1 stdair::EventQueueKey::EventQueueKey (const EventQueueID_T & *iEventQueueID*)

Constructors.

Definition at line 12 of file EventQueueKey.cpp.

34.55.2.2 stdair::EventQueueKey::EventQueueKey (const EventQueueKey & *iKey*)

Definition at line 16 of file EventQueueKey.cpp.

34.55.2.3 stdair::EventQueueKey::~EventQueueKey ( )

Destructor.

Definition at line 21 of file EventQueueKey.cpp.

34.55.3 Member Function Documentation

34.55.3.1 const EventQueueID_T& stdair::EventQueueKey::getEventQueueID ( ) const [inline]

Get the ID of the EventQueue object.

Definition at line 31 of file EventQueueKey.hpp.

34.55.3.2 void stdair::EventQueueKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 25 of file EventQueueKey.cpp.

References toString().

34.55.3.3 void stdair::EventQueueKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 30 of file EventQueueKey.cpp.

34.55.3.4 const std::string stdair::EventQueueKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from stdair::KeyAbstract.

Definition at line 34 of file EventQueueKey.cpp.

Referenced by stdair::EventQueue::describeKey(), and toStream().

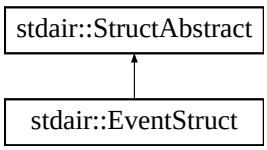
The documentation for this struct was generated from the following files:

- stdair/bom/EventQueueKey.hpp
- stdair/bom/EventQueueKey.cpp

34.56 stdair::EventStruct Struct Reference

`#include <stdair/bom/EventStruct.hpp>`

Inheritance diagram for stdair::EventStruct:



Public Member Functions

- const EventType::EN_EventType & getEventType () const
- const BookingRequestStruct & getBookingRequest () const
- const CancellationStruct & getCancellation () const
- const OptimisationNotificationStruct & getOptimisationNotificationStruct () const
- const SnapshotStruct & getSnapshotStruct () const
- const RMEventStruct & getRMEvent () const
- void fromStream (std::istream &ioIn)
- const std::string describe () const
- EventStruct ()

- EventStruct (const EventType::EN_EventType &, BookingRequestPtr_T)
- EventStruct (const EventType::EN_EventType &, CancellationPtr_T)
- EventStruct (const EventType::EN_EventType &, const DateTime_T &iDCPDate, OptimisationNotificationPtr_T)
- EventStruct (const EventType::EN_EventType &, SnapshotPtr_T)
- EventStruct (const EventType::EN_EventType &, RMEventPtr_T)
- EventStruct (const EventStruct &)
- ~EventStruct ()
- void toStream (std::ostream &ioOut) const

Friends

- struct EventQueue

34.56.1 Detailed Description

Structure holding the details of an event.

Note

No event should be scheduled before the date-time corresponding to the DEFAULT_EVENT_OLDEST_DATETIME constant (as of Feb. 2011, that date is set to Jan. 1, 2010). That constant is specified in the stdair/basic/BasConst.cpp file. In other words, the simulation should not specified to start before that date-time.

Definition at line 35 of file EventStruct.hpp.

34.56.2 Constructor & Destructor Documentation

34.56.2.1 stdair::EventStruct::EventStruct ( )

Default constructor.

Definition at line 25 of file EventStruct.cpp.

34.56.2.2 stdair::EventStruct::EventStruct (const EventType::EN_EventType & *iEventType,* BookingRequestPtr_T *ioRequestPtr*)

Constructor for events corresponding to booking requests.

Definition at line 30 of file EventStruct.cpp.

References stdair::DEFAULT_EVENT_OLDEST_DATETIME.

34.56.2.3 stdair::EventStruct::EventStruct (const EventType::EN_EventType & *iEventType,* CancellationPtr_T *ioCancellationPtr*)

Constructor for events corresponding to cancellations.

Definition at line 54 of file EventStruct.cpp.

References stdair::DEFAULT_EVENT_OLDEST_DATETIME.

34.56.2.4 stdair::EventStruct::EventStruct (const EventType::EN_EventType & *iEventType,* const DateTime_T & *iDCPDate,* OptimisationNotificationPtr_T *ioOptimisationNotificationPtr*)

Constructor for events corresponding to optimisation requests.

Definition at line 79 of file EventStruct.cpp.

References stdair::DEFAULT_EVENT_OLDEST_DATETIME.

34.56.2.5 stdair::EventStruct::EventStruct (const EventType::EN_EventType & *iEventType,* SnapshotPtr_T *ioSnapshotPtr*)

Constructor for events corresponding to snapshot requests.

Definition at line 104 of file EventStruct.cpp.

References stdair::DEFAULT_EVENT_OLDEST_DATETIME.

34.56.2.6 stdair::EventStruct::EventStruct (const EventType::EN_EventType & *iEventType,* RMEventPtr_T *ioRMEventPtr*)

Constructor for events corresponding to RM events.

Definition at line 129 of file EventStruct.cpp.

References stdair::DEFAULT_EVENT_OLDEST_DATETIME.

34.56.2.7 stdair::EventStruct::EventStruct (const EventStruct & *iEventStruct*)

Copy constructor.

Definition at line 154 of file EventStruct.cpp.

34.56.2.8 stdair::EventStruct::~EventStruct ( )

Destructor.

Definition at line 208 of file EventStruct.cpp.

34.56.3 Member Function Documentation

34.56.3.1 const EventType::EN_EventType& stdair::EventStruct::getEventType ( ) const [inline]

Get the event type

Definition at line 42 of file EventStruct.hpp.

Referenced by stdair::EventQueue::popEvent().

34.56.3.2 const BookingRequestStruct& stdair::EventStruct::getBookingRequest ( ) const [inline]

Get a reference on the booking request referred to by event.

Note

When that event is not of type booking request (EventType::BKG_REQ), an assertion fails.

Definition at line 52 of file EventStruct.hpp.

34.56.3.3 const CancellationStruct& stdair::EventStruct::getCancellation ( ) const [inline]

Get a reference on the cancellation referred to by event.

Note

When that event is not of type cancellation (EventType::CX), an assertion fails.

Definition at line 63 of file EventStruct.hpp.

34.56.3.4 const OptimisationNotificationStruct& stdair::EventStruct::getOptimisationNotificationStruct ( ) const [inline]

Get a reference on the optimisation notification referred to by event.

Note

When that event is not of type optimisation notification for optimisation notification (EventType::OPT_NOT_4_FD), an assertion fails.

Definition at line 76 of file EventStruct.hpp.

34.56.3.5 const SnapshotStruct& stdair::EventStruct::getSnapshotStruct ( ) const [inline]

Get a reference on the snapshot referred to by event.

Note

When that event is not of type snapshot for snapshot (EventType::OPT_NOT_4_FD), an assertion fails.

Definition at line 88 of file EventStruct.hpp.

34.56.3.6 const RMEventStruct& stdair::EventStruct::getRMEvent ( ) const [inline]

Get a reference on the RM event referred to by the generic event.

Note

When that event is not of type RM event for snapshot (EventType::OPT_NOT_4_FD), an assertion fails.

Definition at line 100 of file EventStruct.hpp.

34.56.3.7 void stdair::EventStruct::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::StructAbstract.

Definition at line 212 of file EventStruct.cpp.

34.56.3.8 const std::string stdair::EventStruct::describe ( ) const [virtual]

Display of the structure.

Implements stdair::StructAbstract.

Definition at line 216 of file EventStruct.cpp.

References stdair::EventType::BKG_REQ, stdair::EventType::CX, stdair::DEFAULT_EVENT_-OLDEST_DATETIME, stdair::EventType::OPT_NOT_4_FD, stdair::EventType::RM, and stdair::EventType::SNAPSHOT.

34.56.3.9 void stdair::StructAbstract::toStream (std::ostream & *ioOut*) const [inline, inherited]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented in stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 29 of file StructAbstract.hpp.

References stdair::StructAbstract::describe().

Referenced by operator<<().

34.56.4 Friends And Related Function Documentation

34.56.4.1 friend struct EventQueue [friend]

Definition at line 37 of file EventStruct.hpp.

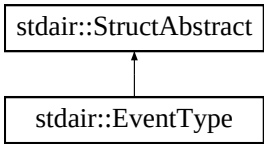
The documentation for this struct was generated from the following files:

- stdair/bom/EventStruct.hpp
- stdair/bom/EventStruct.cpp

34.57 stdair::EventType Struct Reference

`#include <stdair/basic/EventType.hpp>`

Inheritance diagram for stdair::EventType:



Public Types

- enum EN_EventType {
  BKG_REQ = 0, CX, OPT_NOT_4_FD, OPT_NOT_4_NET,
  SKD_CHG, SNAPSHOT, RM, BRK_PT,
  LAST_VALUE }

Public Member Functions

- EN_EventType getType () const
- std::string getTypeAsString () const
- const std::string describe () const
- bool operator== (const EN_EventType &) const
- EventType (const EN_EventType &)
- EventType (const char iType)
- EventType (const EventType &)
- void toStream (std::ostream &ioOut) const
- virtual void fromStream (std::istream &ioIn)

Static Public Member Functions

- static const std::string & getLabel (const EN_EventType &)
- static char getTypeLabel (const EN_EventType &)
- static std::string getTypeLabelAsString (const EN_EventType &)
- static std::string describeLabels ()

34.57.1 Detailed Description

Enumeration of event types.

Definition at line 15 of file EventType.hpp.

34.57.2 Member Enumeration Documentation

34.57.2.1 enum stdair::EventType::EN_EventType

Enumerator:

BKG_REQ

CX

OPT_NOT_4_FD

OPT_NOT_4_NET

SKD_CHG

SNAPSHOT

RM

BRK_PT

LAST_VALUE

Definition at line 17 of file EventType.hpp.

34.57.3 Constructor & Destructor Documentation

34.57.3.1 stdair::EventType::EventType (const EN_EventType & *iEventType*)

Constructor.

Definition at line 36 of file EventType.cpp.

34.57.3.2 stdair::EventType::EventType (const char *iType*)

Constructor.

Definition at line 41 of file EventType.cpp.

References BKG_REQ, BRK_PT, CX, describeLabels(), LAST_VALUE, OPT_NOT_4_FD, OPT_NOT_4_NET, RM, SKD_CHG, and SNAPSHOT.

34.57.3.3 stdair::EventType::EventType (const EventType & *iEventType*)

Default copy constructor.

Definition at line 31 of file EventType.cpp.

34.57.4 Member Function Documentation

34.57.4.1 const std::string & stdair::EventType::getLabel (const EN_EventType & *iType*) [static]

Get the label as a string (e.g., "BookingRequest" or "ScheduleChange").

Definition at line 64 of file EventType.cpp.

Referenced by stdair::EventQueue::updateStatus().

34.57.4.2 char stdair::EventType::getTypeLabel (const EN_EventType & *iType*) [static]

Get the label as a single char (e.g., 'B' or 'S').

Definition at line 69 of file EventType.cpp.

34.57.4.3 std::string stdair::EventType::getTypeLabelAsString (const EN_EventType & *iType*) [static]

Get the label as a string of a single char (e.g., "B" or "S").

Definition at line 74 of file EventType.cpp.

34.57.4.4 std::string stdair::EventType::describeLabels ( ) [static]

List the labels.

Definition at line 81 of file EventType.cpp.

References LAST_VALUE.

Referenced by EventType().

34.57.4.5 EventType::EN_EventType stdair::EventType::getType ( ) const

Get the enumerated value.

Definition at line 93 of file EventType.cpp.

34.57.4.6 std::string stdair::EventType::getTypeAsString ( ) const

Get the enumerated value as a short string (e.g., "B" or "S").

Definition at line 98 of file EventType.cpp.

34.57.4.7 const std::string stdair::EventType::describe ( ) const [virtual]

Give a description of the structure (e.g., "BookingRequest" or "ScheduleChange").

Implements stdair::StructAbstract.

Definition at line 105 of file EventType.cpp.

34.57.4.8 bool stdair::EventType::operator== (const EN_EventType & *iType*) const

Comparison operator.

Definition at line 112 of file EventType.cpp.

34.57.4.9 void stdair::StructAbstract::toStream (std::ostream & *ioOut*) const [inline, inherited]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented in stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 29 of file StructAbstract.hpp.

References stdair::StructAbstract::describe().

Referenced by operator<<().

34.57.4.10 virtual void stdair::StructAbstract::fromStream (std::istream & *ioIn*) [inline, virtual, inherited]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented in stdair::ProgressStatusSet, stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::EventStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 38 of file StructAbstract.hpp.

Referenced by operator>>().

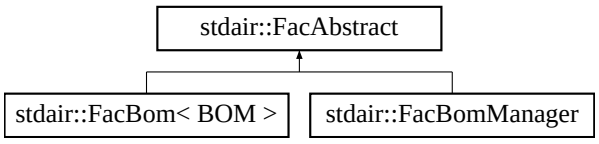
The documentation for this struct was generated from the following files:

- stdair/basic/EventType.hpp
- stdair/basic/EventType.cpp

34.58 stdair::FacAbstract Class Reference

`#include <stdair/factory/FacAbstract.hpp>`

Inheritance diagram for stdair::FacAbstract:



Public Member Functions

- virtual ~FacAbstract ()

Protected Member Functions

- FacAbstract ()

34.58.1 Detailed Description

Base class for Factory layer.

Definition at line 10 of file FacAbstract.hpp.

34.58.2 Constructor & Destructor Documentation

34.58.2.1 stdair::FacAbstract::~FacAbstract ( ) [virtual]

Destructor.

Definition at line 13 of file FacAbstract.cpp.

34.58.2.2 stdair::FacAbstract::FacAbstract ( ) [inline, protected]

Default Constructor.

This constructor is protected to ensure the class is abstract.

Definition at line 18 of file FacAbstract.hpp.

The documentation for this class was generated from the following files:

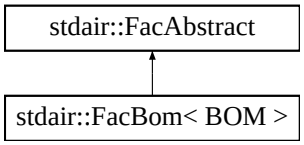
- stdair/factory/FacAbstract.hpp
- stdair/factory/FacAbstract.cpp

34.59 stdair::FacBom< BOM > Class Template Reference

Base class for Factory layer.

`#include <stdair/factory/FacBom.hpp>`

Inheritance diagram for stdair::FacBom< BOM >:



Public Member Functions

- BOM & create ()
- BOM & create (const Key_T &)
- ~FacBom ()
- void clean ()

Static Public Member Functions

- static FacBom & instance ()

Protected Member Functions

- FacBom ()

34.59.1 Detailed Description

template<typename BOM>class stdair::FacBom< BOM >

Base class for Factory layer.

Definition at line 22 of file FacBom.hpp.

34.59.2 Constructor & Destructor Documentation

34.59.2.1 template<typename BOM> stdair::FacBom< BOM >::FacBom ( ) [inline, protected]

Default Constructor.

Definition at line 49 of file FacBom.hpp.

34.59.2.2 template<typename BOM> stdair::FacBom< BOM >::~FacBom ( ) [inline]

Destructor.

Definition at line 55 of file FacBom.hpp.

References stdair::FacBom< BOM >::clean().

34.59.3 Member Function Documentation

34.59.3.1 template<typename BOM > FacBom< BOM > & stdair::FacBom< BOM >::instance ( ) [static]

Provide the unique instance.

The singleton is instantiated when first used.

Returns

FacBom&

Definition at line 83 of file FacBom.hpp.

References stdair::FacSupervisor::instance(), and stdair::FacSupervisor::registerBomFactory().

34.59.3.2 template<typename BOM > BOM & stdair::FacBom< BOM >::create ( )

Create a BOM object, given a key or not.

Definition at line 111 of file FacBom.hpp.

34.59.3.3 template<typename BOM > BOM & stdair::FacBom< BOM >::create (const Key_T & *iKey*)

Definition at line 117 of file FacBom.hpp.

34.59.3.4 template<typename BOM > void stdair::FacBom< BOM >::clean ( )

Destroyed all the object instantiated by this factory.

Definition at line 94 of file FacBom.hpp.

Referenced by stdair::FacBom< BOM >::~FacBom().

The documentation for this class was generated from the following file:

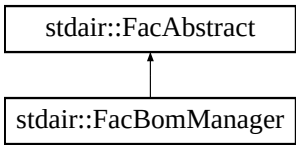
- stdair/factory/FacBom.hpp

34.60 stdair::FacBomManager Class Reference

Utility class for linking StdAir-based objects.

`#include <stdair/factory/FacBomManager.hpp>`

Inheritance diagram for stdair::FacBomManager:



Public Member Functions

- ~FacBomManager ()
- template<>
  void addToList (SegmentDate &ioSegmentDate, SegmentDate &ioMarketingSegmentDate)

Static Public Member Functions

- template<typename OBJECT2 , typename OBJECT1 >
  static BomHolder< OBJECT2 > * getBomHolderPtr (OBJECT1 &)
- template<typename OBJECT2 , typename OBJECT1 >
  static BomHolder< OBJECT2 > & addBomHolder (OBJECT1 &)

- template<typename OBJECT1 , typename OBJECT2 >
  static void addToList (OBJECT1 &, OBJECT2 &)
- template<typename OBJECT1 , typename OBJECT2 >
  static void addToMap (OBJECT1 &, OBJECT2 &, const MapKey_T &)
- template<typename OBJECT1 , typename OBJECT2 >
  static void addToMap (OBJECT1 &, OBJECT2 &)
- template<typename OBJECT1 , typename OBJECT2 >
  static void addToListAndMap (OBJECT1 &, OBJECT2 &)
- template<typename OBJECT1 , typename OBJECT2 >
  static void addToListAndMap (OBJECT1 &, OBJECT2 &, const MapKey_T &)
- template<typename PARENT , typename CHILD >
  static void linkWithParent (PARENT &, CHILD &)
- template<typename OBJECT2 , typename OBJECT1 >
  static void cloneHolder (OBJECT1 &, const OBJECT1 &)

Protected Member Functions

- FacBomManager ()

34.60.1 Detailed Description

Utility class for linking StdAir-based objects.

Definition at line 28 of file FacBomManager.hpp.

34.60.2 Constructor & Destructor Documentation

34.60.2.1 stdair::FacBomManager::FacBomManager ( ) [inline, protected]

Default Constructor.

This constructor is protected to comply with the singleton pattern.

Definition at line 200 of file FacBomManager.hpp.

34.60.2.2 stdair::FacBomManager::~FacBomManager ( ) [inline]

Destructor.

Definition at line 206 of file FacBomManager.hpp.

34.60.3 Member Function Documentation

34.60.3.1 template<typename OBJECT2 , typename OBJECT1 > BomHolder< OBJECT2 > * stdair::FacBomManager::getBomHolderPtr (OBJECT1 & *ioObject1*) [static]

Retrieve a pointer on the holder of children (OBJECT2 type) for the parent (OBJECT1 type). If the holder does not exist, return NULL.

Parameters

typename	OBJECT1& Parent object.

Returns

typename BomHolder<OBJECT2>* BomHolder for the children objects.

Definition at line 239 of file FacBomManager.hpp.

34.60.3.2 template<typename OBJECT2 , typename OBJECT1 > BomHolder< OBJECT2 > & stdair::FacBomManager::addBomHolder (OBJECT1 & *ioObject1*) [static]

Instantiate a BomHolder<OBJECT2> object, add it to the OBJECT1-typed object, given as parameter, and return a reference on that newly created BomHolder.

Parameters

typename	OBJECT1& Parent object.

Returns

typename BomHolder<OBJECT2>& Just created BomHolder (e.g., for the children objects).

Definition at line 213 of file FacBomManager.hpp.

34.60.3.3 template<typename OBJECT1 , typename OBJECT2 > void stdair::FacBomManager::addToList (OBJECT1 & *ioObject1,* OBJECT2 & *ioObject2*) [static]

Add an OBJECT2-typed object (typically, a child) to the dedicated list held by the OBJECT1-typed object (typically, a parent).

Note

The underlying list is actually stored within an object of type BomHolder<OBJECT2>.

Parameters

typename	OBJECT1& Parent object.
typename	OBJECT2& Child object.

Definition at line 299 of file FacBomManager.hpp.

34.60.3.4 template<typename OBJECT1 , typename OBJECT2 > void stdair::FacBomManager::addToMap (OBJECT1 & *ioObject1,* OBJECT2 & *ioObject2,* const MapKey_T & *iKey*) [static]

Add an OBJECT2-typed object (typically, a child) to the dedicated map held by the OBJECT1-typed object (typically, a parent).

Note

The underlying map is actually stored within an object of type BomHolder<OBJECT2>.

Parameters

typename	OBJECT1& Parent object.
typename	OBJECT2& Child object.
const	MapKey_T&

Definition at line 347 of file FacBomManager.hpp.

Referenced by addToMap().

34.60.3.5 template<typename OBJECT1 , typename OBJECT2 > void stdair::FacBomManager::addToMap (OBJECT1 & *ioObject1,* OBJECT2 & *ioObject2*) [static]

Add an OBJECT2-typed object (typically, a child) to the dedicated map held by the OBJECT1-typed object (typically, a parent).

Note

The underlying map is actually stored within an object of type BomHolder<OBJECT2>.

Parameters

typename	OBJECT1& Parent object.
typename	OBJECT2& Child object.

Definition at line 366 of file FacBomManager.hpp.

References addToMap().

34.60.3.6 template<typename OBJECT1 , typename OBJECT2 > void stdair::FacBomManager::addToListAndMap (OBJECT1 & *ioObject1,* OBJECT2 & *ioObject2*) [static]

Add an OBJECT2-typed object (typically, a child) to the dedicated containers (list and map) held by the OBJECT1-typed object (typically, a parent).

Note

The underlying containers are actually stored within an object of type BomHolder<OBJECT2>.

Parameters

typename	OBJECT1& Parent object.
typename	OBJECT2& Child object.

Definition at line 404 of file FacBomManager.hpp.

34.60.3.7 template<typename OBJECT1 , typename OBJECT2 > void stdair::FacBomManager::addToListAndMap (OBJECT1 & *ioObject1,* OBJECT2 & *ioObject2,* const MapKey_T & *iKey*) [static]

Add an OBJECT2-typed object (typically, a child) to the dedicated containers (list and map) held by the OBJECT1-typed object (typically, a parent).

Note

The underlying containers are actually stored within an object of type BomHolder<OBJECT2>.

Parameters

typename	OBJECT1& Parent object.
typename	OBJECT2& Child object.
const	MapKey_T&

Definition at line 384 of file FacBomManager.hpp.

34.60.3.8 template<typename PARENT , typename CHILD > void stdair::FacBomManager::linkWithParent (PARENT & *ioParent,* CHILD & *ioChild*) [static]

Allow the CHILD object to store a pointer on its PARENT object.

Parameters

typename	PARENT& Parent object.
typename	CHILD& Child object.

Definition at line 422 of file FacBomManager.hpp.

Referenced by stdair::serialiseHelper().

34.60.3.9 template<typename OBJECT2 , typename OBJECT1 > void stdair::FacBomManager::cloneHolder (OBJECT1 & *ioDest,* const OBJECT1 & *iOri*) [static]

Clone the underlying containers (held by the BomHolder<OBJECT2>-typed holder) of the OBJECT1-typed object.

Note

The underlying containers are actually stored within an object of type BomHolder<OBJECT2>.

Parameters

typename	OBJECT1& Parent object.
typename	OBJECT2& Child object.

Definition at line 430 of file FacBomManager.hpp.

References stdair::BomHolder< BOM >::_bomList, and stdair::BomHolder< BOM >::_bomMap.

34.60.3.10 template<> void stdair::FacBomManager::addToList (SegmentDate & *ioSegmentDate,* SegmentDate & *ioMarketingSegmentDate*) [inline]

Definition at line 450 of file FacBomManager.hpp.

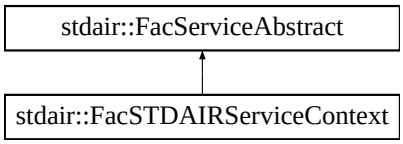
The documentation for this class was generated from the following file:

- stdair/factory/FacBomManager.hpp

34.61 stdair::FacServiceAbstract Class Reference

`#include <stdair/service/FacServiceAbstract.hpp>`

Inheritance diagram for stdair::FacServiceAbstract:



Public Types

- typedef std::vector< ServiceAbstract * > ServicePool_T

Public Member Functions

- virtual ~FacServiceAbstract ()
- void clean ()

Protected Member Functions

- FacServiceAbstract ()

Protected Attributes

- ServicePool_T _pool

34.61.1 Detailed Description

Base class for the (Service) Factory layer.

Definition at line 16 of file FacServiceAbstract.hpp.

34.61.2 Member Typedef Documentation

34.61.2.1 typedef std::vector<ServiceAbstract*> stdair::FacServiceAbstract::ServicePool_T

Define the list (pool) of Service objects.

Definition at line 20 of file FacServiceAbstract.hpp.

34.61.3 Constructor & Destructor Documentation

34.61.3.1 stdair::FacServiceAbstract::~FacServiceAbstract ( ) [virtual]

Destructor.

Definition at line 13 of file FacServiceAbstract.cpp.

References clean().

34.61.3.2 stdair::FacServiceAbstract::FacServiceAbstract ( ) [inline, protected]

Default Constructor.

This constructor is protected to ensure the class is abstract.

Definition at line 31 of file FacServiceAbstract.hpp.

34.61.4 Member Function Documentation

34.61.4.1 void stdair::FacServiceAbstract::clean ( )

Destroyed all the object instantiated by this factory.

Definition at line 18 of file FacServiceAbstract.cpp.

References _pool.

Referenced by ~FacServiceAbstract().

34.61.5 Member Data Documentation

34.61.5.1 ServicePool_T stdair::FacServiceAbstract::_pool [protected]

List of instantiated Business Objects

Definition at line 34 of file FacServiceAbstract.hpp.

Referenced by clean(), and stdair::FacSTDAIRServiceContext::create().

The documentation for this class was generated from the following files:

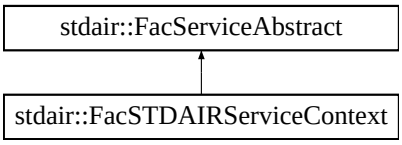
- stdair/service/FacServiceAbstract.hpp
- stdair/service/FacServiceAbstract.cpp

34.62 stdair::FacSTDAIRServiceContext Class Reference

Factory for Bucket.

`#include <stdair/service/FacSTDAIRServiceContext.hpp>`

Inheritance diagram for stdair::FacSTDAIRServiceContext:



Public Types

- typedef std::vector< ServiceAbstract * > ServicePool_T

Public Member Functions

- ~FacSTDAIRServiceContext ()
- STDAIR_ServiceContext & create ()
- void clean ()

Static Public Member Functions

- static FacSTDAIRServiceContext & instance ()

Protected Member Functions

- FacSTDAIRServiceContext ()

Protected Attributes

- ServicePool_T _pool

34.62.1 Detailed Description

Factory for Bucket.

Definition at line 18 of file FacSTDAIRServiceContext.hpp.

34.62.2 Member Typedef Documentation

34.62.2.1 typedef std::vector<ServiceAbstract*> stdair::FacServiceAbstract::ServicePool_T [inherited]

Define the list (pool) of Service objects.

Definition at line 20 of file FacServiceAbstract.hpp.

34.62.3 Constructor & Destructor Documentation

34.62.3.1 stdair::FacSTDAIRServiceContext::~FacSTDAIRServiceContext ( )

Destructor.

The Destruction put the _instance to NULL in order to be clean for the next FacSTDAIRServiceContext::instance().

Definition at line 16 of file FacSTDAIRServiceContext.cpp.

34.62.3.2 stdair::FacSTDAIRServiceContext::FacSTDAIRServiceContext ( ) [inline, protected]

Default Constructor.

This constructor is protected in order to ensure the singleton pattern.

Definition at line 54 of file FacSTDAIRServiceContext.hpp.

Referenced by instance().

34.62.4 Member Function Documentation

34.62.4.1 FacSTDAIRServiceContext & stdair::FacSTDAIRServiceContext::instance ( ) [static]

Provide the unique instance.

The singleton is instantiated when first used.

Returns

FacSTDAIRServiceContext&

Definition at line 21 of file FacSTDAIRServiceContext.cpp.

References FacSTDAIRServiceContext().

34.62.4.2 STDAIR_ServiceContext & stdair::FacSTDAIRServiceContext::create ( )

Create a new STDAIR_ServiceContext object.

This new object is added to the list of instantiated objects.

Returns

STDAIR_ServiceContext& The newly created object.

Definition at line 33 of file FacSTDAIRServiceContext.cpp.

References stdair::FacServiceAbstract::_pool.

34.62.4.3 void stdair::FacServiceAbstract::clean ( ) [inherited]

Destroyed all the object instantiated by this factory.

Definition at line 18 of file FacServiceAbstract.cpp.

References stdair::FacServiceAbstract::_pool.

Referenced by stdair::FacServiceAbstract::~FacServiceAbstract().

34.62.5 Member Data Documentation

34.62.5.1 ServicePool_T stdair::FacServiceAbstract::_pool [protected, inherited]

List of instantiated Business Objects

Definition at line 34 of file FacServiceAbstract.hpp.

Referenced by stdair::FacServiceAbstract::clean(), and create().

The documentation for this class was generated from the following files:

- stdair/service/FacSTDAIRServiceContext.hpp
- stdair/service/FacSTDAIRServiceContext.cpp

34.63 stdair::FacSupervisor Class Reference

`#include <stdair/service/FacSupervisor.hpp>`

Public Types

- typedef std::list< FacAbstract * > BomFactoryPool_T
- typedef std::list< FacServiceAbstract * > ServiceFactoryPool_T

Public Member Functions

- void registerBomFactory (FacAbstract *)
- void registerServiceFactory (FacServiceAbstract *)
- void cleanBomLayer ()
- void cleanServiceLayer ()
- ~FacSupervisor ()

Static Public Member Functions

- static FacSupervisor & instance ()
- static void cleanLoggerService ()
- static void cleanDBSessionManager ()
- static void cleanAll ()

Protected Member Functions

- FacSupervisor ()
- FacSupervisor (const FacSupervisor &)

34.63.1 Detailed Description

Singleton class to register and clean all Factories.

Definition at line 20 of file FacSupervisor.hpp.

34.63.2 Member Typedef Documentation

34.63.2.1 typedef std::list<FacAbstract*> stdair::FacSupervisor::BomFactoryPool_T

Define the pool (list) of factories.

Definition at line 25 of file FacSupervisor.hpp.

34.63.2.2 typedef std::list<FacServiceAbstract*> stdair::FacSupervisor::ServiceFactoryPool_T

Definition at line 26 of file FacSupervisor.hpp.

34.63.3 Constructor & Destructor Documentation

34.63.3.1 stdair::FacSupervisor::~FacSupervisor ( )

Destructor.

That destructors is applied on the static instance. It then deletes in turn all the other registered objects.

Definition at line 27 of file FacSupervisor.cpp.

References cleanBomLayer(), and cleanServiceLayer().

34.63.3.2 stdair::FacSupervisor::FacSupervisor ( ) [inline, protected]

Default Constructor.

This constructor is protected to ensure the singleton pattern.

Definition at line 102 of file FacSupervisor.hpp.

Referenced by instance().

34.63.3.3 stdair::FacSupervisor::FacSupervisor (const FacSupervisor &) [inline, protected]

Definition at line 103 of file FacSupervisor.hpp.

34.63.4 Member Function Documentation

34.63.4.1 FacSupervisor & stdair::FacSupervisor::instance ( ) [static]

Provide the unique (static) instance of the FacSupervisor object.

The singleton is instantiated when first used.

Returns

FacSupervisor&

Definition at line 18 of file FacSupervisor.cpp.

References FacSupervisor().

Referenced by stdair::FacBom< BOM >::instance().

34.63.4.2 void stdair::FacSupervisor::registerBomFactory (FacAbstract * *ioFac_ptr*)

Register a newly instantiated concrete factory for the Bom layer.

When a concrete Factory is firstly instantiated this factory have to register itself to the FacSupervisor

Parameters

*FacBom**	The concrete Factory to register.

Definition at line 33 of file FacSupervisor.cpp.

Referenced by stdair::FacBom< BOM >::instance().

34.63.4.3 void stdair::FacSupervisor::registerServiceFactory (FacServiceAbstract * *ioFac_ptr*)

Register a newly instantiated concrete factory for the Service layer.

When a concrete Factory is firstly instantiated this factory have to register itself to the FacSupervisor.

Parameters

FacService-Abstract&	the concrete Factory to register.

Definition at line 38 of file FacSupervisor.cpp.

34.63.4.4 void stdair::FacSupervisor::cleanBomLayer ( )

Clean all registered object.

Call the clean method of all the instantiated factories for the BomStructure layer.

Definition at line 43 of file FacSupervisor.cpp.

Referenced by ~FacSupervisor().

34.63.4.5 void stdair::FacSupervisor::cleanServiceLayer ( )

Clean all Service created object.

Call the clean method of all the instantiated factories for the Service layer.

Definition at line 57 of file FacSupervisor.cpp.

Referenced by ~FacSupervisor().

34.63.4.6 void stdair::FacSupervisor::cleanLoggerService ( ) [static]

Delete the static instance of the Logger object.

Definition at line 71 of file FacSupervisor.cpp.

Referenced by cleanAll().

34.63.4.7 void stdair::FacSupervisor::cleanDBSessionManager ( ) [static]

Delete the static instance of the DBSessionManager object.

Definition at line 77 of file FacSupervisor.cpp.

Referenced by cleanAll().

34.63.4.8 void stdair::FacSupervisor::cleanAll ( ) [static]

Clean the static instance. As the static instance (singleton) is deleted, all the other registered objects will be deleted in turn.

Definition at line 83 of file FacSupervisor.cpp.

References cleanDBSessionManager(), and cleanLoggerService().

The documentation for this class was generated from the following files:

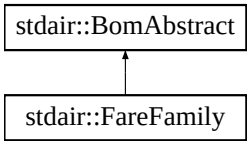
- stdair/service/FacSupervisor.hpp
- stdair/service/FacSupervisor.cpp

34.64 stdair::FareFamily Class Reference

Class representing the actual attributes for a family fare.

`#include <stdair/bom/FareFamily.hpp>`

Inheritance diagram for stdair::FareFamily:



Public Types

- typedef FareFamilyKey Key_T

Public Member Functions

- const Key_T & getKey () const
- BomAbstract *const getParent () const
- const FamilyCode_T & getFamilyCode () const
- const HolderMap_T & getHolderMap () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Public Attributes

- Key_T _key
- BomAbstract * _parent
- HolderMap_T _holderMap

Protected Member Functions

- FareFamily (const Key_T &)
- virtual ~FareFamily ()

Friends

- class FacBom
- class FacBomManager
- class boost::serialization::access

34.64.1 Detailed Description

Class representing the actual attributes for a family fare.

Definition at line 27 of file FareFamily.hpp.

34.64.2 Member Typedef Documentation

34.64.2.1 typedef FareFamilyKey stdair::FareFamily::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 37 of file FareFamily.hpp.

34.64.3 Constructor & Destructor Documentation

34.64.3.1 stdair::FareFamily::FareFamily (const Key_T & *iKey*) [protected]

Constructor.

Definition at line 29 of file FareFamily.cpp.

34.64.3.2 stdair::FareFamily::~FareFamily ( ) [protected, virtual]

Destructor.

Definition at line 33 of file FareFamily.cpp.

34.64.4 Member Function Documentation

34.64.4.1 const Key_T& stdair::FareFamily::getKey ( ) const [inline]

Get the family fare key.

Definition at line 43 of file FareFamily.hpp.

References _key.

34.64.4.2 BomAbstract* const stdair::FareFamily::getParent ( ) const [inline]

Get the parent object.

Definition at line 48 of file FareFamily.hpp.

References _parent.

34.64.4.3 const FamilyCode_T& stdair::FareFamily::getFamilyCode ( ) const [inline]

Get the family fare code (part of the primary key).

Definition at line 53 of file FareFamily.hpp.

References _key, and stdair::FareFamilyKey::getFamilyCode().

34.64.4.4 const HolderMap_T& stdair::FareFamily::getHolderMap ( ) const [inline]

Get the map of children holders.

Definition at line 58 of file FareFamily.hpp.

References _holderMap.

34.64.4.5 void stdair::FareFamily::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 70 of file FareFamily.hpp.

References toString().

34.64.4.6 void stdair::FareFamily::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 79 of file FareFamily.hpp.

34.64.4.7 std::string stdair::FareFamily::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 37 of file FareFamily.cpp.

References describeKey().

Referenced by toStream().

34.64.4.8 const std::string stdair::FareFamily::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 90 of file FareFamily.hpp.

References _key, and stdair::FareFamilyKey::toString().

Referenced by toString().

34.64.4.9 template<class Archive > void stdair::FareFamily::serialize (Archive & *ar,* const unsigned int *iFileVersion*)

Serialisation.

Definition at line 59 of file FareFamily.cpp.

References _key.

34.64.5 Friends And Related Function Documentation

34.64.5.1 friend class FacBom [friend]

Definition at line 28 of file FareFamily.hpp.

34.64.5.2 friend class FacBomManager [friend]

Definition at line 29 of file FareFamily.hpp.

34.64.5.3 friend class boost::serialization::access [friend]

Definition at line 30 of file FareFamily.hpp.

34.64.6 Member Data Documentation

34.64.6.1 Key_T stdair::FareFamily::_key

Primary key (fare family code).

Definition at line 141 of file FareFamily.hpp.

Referenced by describeKey(), getFamilyCode(), getKey(), and serialize().

34.64.6.2 BomAbstract* stdair::FareFamily::_parent

Pointer on the parent class (SegmentCabin).

Definition at line 146 of file FareFamily.hpp.

Referenced by getParent().

34.64.6.3 HolderMap_T stdair::FareFamily::_holderMap

Map holding the children (BookingClass objects).

Definition at line 151 of file FareFamily.hpp.

Referenced by getHolderMap().

The documentation for this class was generated from the following files:

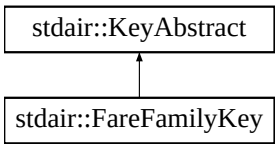
- stdair/bom/FareFamily.hpp
- stdair/bom/FareFamily.cpp

34.65 stdair::FareFamilyKey Struct Reference

Key of a given fare family, made of a fare family code.

`#include <stdair/bom/FareFamilyKey.hpp>`

Inheritance diagram for stdair::FareFamilyKey:



Public Member Functions

- FareFamilyKey (const FamilyCode_T &iFamilyCode)
- FareFamilyKey (const FareFamilyKey &)
- ~FareFamilyKey ()
- const FamilyCode_T & getFamilyCode () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Friends

- class boost::serialization::access

34.65.1 Detailed Description

Key of a given fare family, made of a fare family code.

Definition at line 26 of file FareFamilyKey.hpp.

34.65.2 Constructor & Destructor Documentation

34.65.2.1 stdair::FareFamilyKey::FareFamilyKey (const FamilyCode_T & *iFamilyCode*)

Constructor.

Definition at line 28 of file FareFamilyKey.cpp.

34.65.2.2 stdair::FareFamilyKey::FareFamilyKey (const FareFamilyKey & *iFareFamilyKey*)

Copy constructor.

Definition at line 23 of file FareFamilyKey.cpp.

34.65.2.3 stdair::FareFamilyKey::~FareFamilyKey ( )

Destructor.

Definition at line 33 of file FareFamilyKey.cpp.

34.65.3 Member Function Documentation

34.65.3.1 const FamilyCode_T& stdair::FareFamilyKey::getFamilyCode ( ) const [inline]

Get the family code.

Definition at line 56 of file FareFamilyKey.hpp.

Referenced by stdair::FareFamily::getFamilyCode().

34.65.3.2 void stdair::FareFamilyKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 37 of file FareFamilyKey.cpp.

References toString().

34.65.3.3 void stdair::FareFamilyKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 42 of file FareFamilyKey.cpp.

34.65.3.4 const std::string stdair::FareFamilyKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from stdair::KeyAbstract.

Definition at line 46 of file FareFamilyKey.cpp.

Referenced by stdair::FareFamily::describeKey(), and toStream().

34.65.3.5 template<class Archive > void stdair::FareFamilyKey::serialize (Archive & *ar*, const unsigned int *iFileVersion*)

Serialisation.

Definition at line 68 of file FareFamilyKey.cpp.

34.65.4 Friends And Related Function Documentation

34.65.4.1 friend class boost::serialization::access [friend]

Definition at line 27 of file FareFamilyKey.hpp.

The documentation for this struct was generated from the following files:

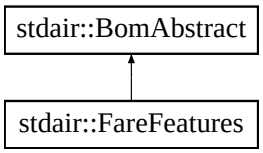
- stdair/bom/FareFamilyKey.hpp
- stdair/bom/FareFamilyKey.cpp

34.66 stdair::FareFeatures Class Reference

Class representing the actual attributes for a fare date-period.

`#include <stdair/bom/FareFeatures.hpp>`

Inheritance diagram for stdair::FareFeatures:



Public Types

- typedef FareFeaturesKey Key_T

Public Member Functions

- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const
- const Key_T & getKey () const
- BomAbstract *const getParent () const
- const HolderMap_T & getHolderMap () const
- const TripType_T & getTripType () const

- const DayDuration_T & getAdvancePurchase () const
- const SaturdayStay_T & getSaturdayStay () const
- const ChangeFees_T & getChangeFees () const
- const NonRefundable_T & getRefundableOption () const
- const DayDuration_T & getMinimumStay () const
- bool isTripTypeValid (const TripType_T &) const
- bool isStayDurationValid (const DayDuration_T &) const
- bool isAdvancePurchaseValid (const DateTime_T &iBookingRequestDateTime, const DateTime_T &iFlightDateTime) const

Protected Member Functions

- FareFeatures (const Key_T &)
- virtual ~FareFeatures ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent
- HolderMap_T _holderMap

Friends

- class FacBom
- class FacBomManager

34.66.1 Detailed Description

Class representing the actual attributes for a fare date-period.

Definition at line 18 of file FareFeatures.hpp.

34.66.2 Member Typedef Documentation

34.66.2.1 typedef FareFeaturesKey stdair::FareFeatures::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 27 of file FareFeatures.hpp.

34.66.3 Constructor & Destructor Documentation

34.66.3.1 stdair::FareFeatures::FareFeatures (const Key_T & *iKey*) [protected]

Main constructor.

Definition at line 34 of file FareFeatures.cpp.

34.66.3.2 stdair::FareFeatures::~FareFeatures ( ) [protected, virtual]

Destructor.

Definition at line 39 of file FareFeatures.cpp.

34.66.4 Member Function Documentation

34.66.4.1 void stdair::FareFeatures::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 36 of file FareFeatures.hpp.

References toString().

34.66.4.2 void stdair::FareFeatures::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 45 of file FareFeatures.hpp.

34.66.4.3 std::string stdair::FareFeatures::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 43 of file FareFeatures.cpp.

References describeKey().

Referenced by toStream().

34.66.4.4 const std::string stdair::FareFeatures::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 56 of file FareFeatures.hpp.

References _key, and stdair::FareFeaturesKey::toString().

Referenced by toString().

34.66.4.5 const Key_T& stdair::FareFeatures::getKey ( ) const [inline]

Get the primary key (trip type, advance purchase,... ,cabin code).

Definition at line 66 of file FareFeatures.hpp.

References _key.

34.66.4.6 BomAbstract* const stdair::FareFeatures::getParent ( ) const [inline]

Get a reference on the parent object instance.

Definition at line 73 of file FareFeatures.hpp.

References _parent.

34.66.4.7 const HolderMap_T& stdair::FareFeatures::getHolderMap ( ) const [inline]

Get a reference on the children holder.

Definition at line 80 of file FareFeatures.hpp.

References _holderMap.

34.66.4.8 const TripType_T& stdair::FareFeatures::getTripType ( ) const [inline]

Get the trip type.

Definition at line 87 of file FareFeatures.hpp.

References _key, and stdair::FareFeaturesKey::getTripType().

Referenced by isTripTypeValid().

34.66.4.9 const DayDuration_T& stdair::FareFeatures::getAdvancePurchase ( ) const [inline]

Get the fare day duration.

Definition at line 94 of file FareFeatures.hpp.

References _key, and stdair::FareFeaturesKey::getAdvancePurchase().

Referenced by isAdvancePurchaseValid().

34.66.4.10 const SaturdayStay_T& stdair::FareFeatures::getSaturdayStay ( ) const [inline]

Get the fare saturday stay option.

Definition at line 101 of file FareFeatures.hpp.

References _key, and stdair::FareFeaturesKey::getSaturdayStay().

34.66.4.11 const ChangeFees_T& stdair::FareFeatures::getChangeFees ( ) const [inline]

Get the change fees criterion.

Definition at line 108 of file FareFeatures.hpp.

References _key, and stdair::FareFeaturesKey::getChangeFees().

34.66.4.12 const NonRefundable_T& stdair::FareFeatures::getRefundableOption ( ) const [inline]

Get the refundable option.

Definition at line 115 of file FareFeatures.hpp.

References _key, and stdair::FareFeaturesKey::getRefundableOption().

34.66.4.13 const DayDuration_T& stdair::FareFeatures::getMinimumStay ( ) const [inline]

Get the minimum stay.

Definition at line 122 of file FareFeatures.hpp.

References _key, and stdair::FareFeaturesKey::getMinimumStay().

Referenced by isStayDurationValid().

34.66.4.14 bool stdair::FareFeatures::isTripTypeValid (const TripType_T & *iBookingRequestTripType*) const

Check whether the fare rule trip type corresponds to the booking request trip type.

Definition at line 51 of file FareFeatures.cpp.

References getTripType(), stdair::TRIP_TYPE_INBOUND, stdair::TRIP_TYPE_OUTBOUND, and stdair::TRIP_TYPE_ROUND_TRIP.

34.66.4.15 bool stdair::FareFeatures::isStayDurationValid (const DayDuration_T & *iStayDuration*) const

Check whether a given stay duration is greater or equal to the minimum stay of the fare rule.

Definition at line 76 of file FareFeatures.cpp.

References getMinimumStay().

34.66.4.16 bool stdair::FareFeatures::isAdvancePurchaseValid (const DateTime_T & *iBookingRequestDateTime,* const DateTime_T & *iFlightDateTime*) const

Check whether a booking request date is valid compared the required advance purchase number of days of the fare rule.

Definition at line 89 of file FareFeatures.cpp.

References getAdvancePurchase().

34.66.5 Friends And Related Function Documentation

34.66.5.1 friend class FacBom [friend]

Definition at line 19 of file FareFeatures.hpp.

34.66.5.2 friend class FacBomManager [friend]

Definition at line 20 of file FareFeatures.hpp.

34.66.6 Member Data Documentation

34.66.6.1 Key_T stdair::FareFeatures::_key [protected]

Primary key (flight number and departure date).

Definition at line 175 of file FareFeatures.hpp.

Referenced by describeKey(), getAdvancePurchase(), getChangeFees(), getKey(), getMinimumStay(), getRefundableOption(), getSaturdayStay(), and getTripType().

34.66.6.2 BomAbstract* stdair::FareFeatures::_parent [protected]

Pointer on the parent class.

Definition at line 180 of file FareFeatures.hpp.

Referenced by getParent().

34.66.6.3 HolderMap_T stdair::FareFeatures::_holderMap [protected]

Map holding the children.

Definition at line 185 of file FareFeatures.hpp.

Referenced by getHolderMap().

The documentation for this class was generated from the following files:

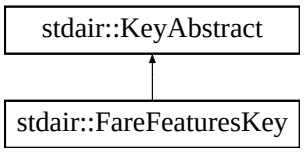
- stdair/bom/FareFeatures.hpp
- stdair/bom/FareFeatures.cpp

34.67 stdair::FareFeaturesKey Struct Reference

Key of date-period.

`#include <stdair/bom/FareFeaturesKey.hpp>`

Inheritance diagram for stdair::FareFeaturesKey:



Public Member Functions

- FareFeaturesKey (const TripType_T &, const DayDuration_T &, const SaturdayStay_T &, const ChangeFees_T &, const NonRefundable_T &, const DayDuration_T &)
- FareFeaturesKey (const FareFeaturesKey &)
- ~FareFeaturesKey ()
- const TripType_T & getTripType () const
- const DayDuration_T & getAdvancePurchase () const
- const SaturdayStay_T & getSaturdayStay () const
- const ChangeFees_T & getChangeFees () const
- const NonRefundable_T & getRefundableOption () const
- const DayDuration_T & getMinimumStay () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const

34.67.1 Detailed Description

Key of date-period.

Definition at line 18 of file FareFeaturesKey.hpp.

34.67.2 Constructor & Destructor Documentation

34.67.2.1 stdair::FareFeaturesKey::FareFeaturesKey (const TripType_T & *iTripType*, const DayDuration_T & *iAdvancePurchase*, const SaturdayStay_T & *iSaturdayStay*, const ChangeFees_T & *iChangeFees*, const NonRefundable_T & *iNonRefundable*, const DayDuration_T & *iMinimumStay*)

Main constructor.

Definition at line 26 of file FareFeaturesKey.cpp.

34.67.2.2 stdair::FareFeaturesKey::FareFeaturesKey (const FareFeaturesKey & *iKey*)

Copy constructor.

Definition at line 38 of file FareFeaturesKey.cpp.

34.67.2.3 stdair::FareFeaturesKey::~FareFeaturesKey ( )

Destructor.

Definition at line 48 of file FareFeaturesKey.cpp.

34.67.3 Member Function Documentation

34.67.3.1 const TripType_T& stdair::FareFeaturesKey::getTripType ( ) const [inline]

Get the fare trip type.

Definition at line 39 of file FareFeaturesKey.hpp.

Referenced by stdair::FareFeatures::getTripType().

34.67.3.2 const DayDuration_T& stdair::FareFeaturesKey::getAdvancePurchase ( ) const [inline]

Get the fare day duration.

Definition at line 46 of file FareFeaturesKey.hpp.

Referenced by stdair::FareFeatures::getAdvancePurchase().

34.67.3.3 const SaturdayStay_T& stdair::FareFeaturesKey::getSaturdayStay ( ) const [inline]

Get the fare saturday stay option.

Definition at line 53 of file FareFeaturesKey.hpp.

Referenced by stdair::FareFeatures::getSaturdayStay().

34.67.3.4 const ChangeFees_T& stdair::FareFeaturesKey::getChangeFees ( ) const [inline]

Get the change fees criterion.

Definition at line 60 of file FareFeaturesKey.hpp.

Referenced by stdair::FareFeatures::getChangeFees().

34.67.3.5 const NonRefundable_T& stdair::FareFeaturesKey::getRefundableOption ( ) const [inline]

Get the refundable option.

Definition at line 67 of file FareFeaturesKey.hpp.

Referenced by stdair::FareFeatures::getRefundableOption().

34.67.3.6 const DayDuration_T& stdair::FareFeaturesKey::getMinimumStay ( ) const [inline]

Get the minimum stay.

Definition at line 74 of file FareFeaturesKey.hpp.

Referenced by stdair::FareFeatures::getMinimumStay().

34.67.3.7 void stdair::FareFeaturesKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 52 of file FareFeaturesKey.cpp.

References toString().

34.67.3.8 void stdair::FareFeaturesKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 57 of file FareFeaturesKey.cpp.

34.67.3.9 const std::string stdair::FareFeaturesKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key. That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

Reimplemented from stdair::KeyAbstract.

Definition at line 61 of file FareFeaturesKey.cpp.

Referenced by stdair::FareFeatures::describeKey(), and toStream().

The documentation for this struct was generated from the following files:

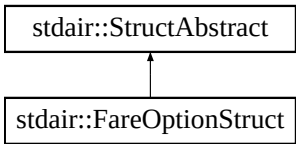
- stdair/bom/FareFeaturesKey.hpp
- stdair/bom/FareFeaturesKey.cpp

34.68 stdair::FareOptionStruct Struct Reference

Structure holding the elements of a fare option.

`#include <stdair/bom/FareOptionStruct.hpp>`

Inheritance diagram for stdair::FareOptionStruct:



Public Member Functions

- const ClassList_StringList_T & getClassPath () const
- const Fare_T & getFare () const
- const Availability_T & getAvailability () const
- const ChangeFees_T getChangeFees () const
- const NonRefundable_T getNonRefundable () const
- const SaturdayStay_T getSaturdayStay () const
- void addClassList (const std::string)
- void emptyClassList ()
- void setFare (const Fare_T &iFare)
- void setAvailability (const Availability_T &iAvl)
- void setChangeFees (const ChangeFees_T iRes)
- void setNonRefundable (const NonRefundable_T iRes)
- void setSaturdayStay (const SaturdayStay_T iRes)
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string describe () const
- const std::string display () const
- FareOptionStruct ()
- FareOptionStruct (const std::string &iClassPath, const Fare_T &, const ChangeFees_T &, const NonRefundable_T &, const SaturdayStay_T &)
- FareOptionStruct (const FareOptionStruct &)
- ~FareOptionStruct ()

34.68.1 Detailed Description

Structure holding the elements of a fare option.

Definition at line 20 of file FareOptionStruct.hpp.

34.68.2 Constructor & Destructor Documentation

34.68.2.1 stdair::FareOptionStruct::FareOptionStruct ( )

Default constructor.

Definition at line 14 of file FareOptionStruct.cpp.

34.68.2.2 stdair::FareOptionStruct::FareOptionStruct (const std::string & *iClassPath,* const Fare_T & *iFare,* const ChangeFees_T & *iChangeFee,* const NonRefundable_T & *iNonRefundable,* const SaturdayStay_T & *iSaturdayNightStay*)

Main constructor.

Definition at line 26 of file FareOptionStruct.cpp.

34.68.2.3 stdair::FareOptionStruct::FareOptionStruct (const FareOptionStruct & *iFO*)

Copy constructor.

Definition at line 19 of file FareOptionStruct.cpp.

34.68.2.4 stdair::FareOptionStruct::~FareOptionStruct ( )

Destructor.

Definition at line 38 of file FareOptionStruct.cpp.

34.68.3 Member Function Documentation

34.68.3.1 const ClassList_StringList_T& stdair::FareOptionStruct::getClassPath ( ) const [inline]

Get the class-path.

Definition at line 24 of file FareOptionStruct.hpp.

34.68.3.2 const Fare_T& stdair::FareOptionStruct::getFare ( ) const [inline]

Get the fare value.

Definition at line 29 of file FareOptionStruct.hpp.

34.68.3.3 const Availability_T& stdair::FareOptionStruct::getAvailability ( ) const [inline]

Get the availability.

Definition at line 34 of file FareOptionStruct.hpp.

34.68.3.4 const ChangeFees_T stdair::FareOptionStruct::getChangeFees ( ) const [inline]

Get the change fees.

Definition at line 39 of file FareOptionStruct.hpp.

34.68.3.5 const NonRefundable_T stdair::FareOptionStruct::getNonRefundable ( ) const [inline]

State whether the ticket is refundable.

Definition at line 44 of file FareOptionStruct.hpp.

34.68.3.6 const SaturdayStay_T stdair::FareOptionStruct::getSaturdayStay ( ) const [inline]

State whether there is a condition on the saturday night stay.

Definition at line 49 of file FareOptionStruct.hpp.

34.68.3.7 void stdair::FareOptionStruct::addClassList (const std::string *iClassCodeList*)

Set the class-path.

Definition at line 93 of file FareOptionStruct.cpp.

34.68.3.8 void stdair::FareOptionStruct::emptyClassList ( )

Empty the class-path.

Definition at line 98 of file FareOptionStruct.cpp.

34.68.3.9 void stdair::FareOptionStruct::setFare (const Fare_T & *iFare*) [inline]

Set the fare value.

Definition at line 63 of file FareOptionStruct.hpp.

34.68.3.10 void stdair::FareOptionStruct::setAvailability (const Availability_T & *iAvl*) [inline]

Set the availability.

Definition at line 68 of file FareOptionStruct.hpp.

34.68.3.11 void stdair::FareOptionStruct::setChangeFees (const ChangeFees_T *iRes*) [inline]

Set the change fees.

Definition at line 73 of file FareOptionStruct.hpp.

34.68.3.12 void stdair::FareOptionStruct::setNonRefundable (const NonRefundable_T *iRes*) [inline]

Set the flag for the ticket refundability.

Definition at line 78 of file FareOptionStruct.hpp.

34.68.3.13 void stdair::FareOptionStruct::setSaturdayStay (const SaturdayStay_T *iRes*) [inline]

Set the flag for the saturday night stay condition.

Definition at line 83 of file FareOptionStruct.hpp.

34.68.3.14 void stdair::FareOptionStruct::toStream (std::ostream & *ioOut*) const

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::StructAbstract.

Definition at line 42 of file FareOptionStruct.cpp.

References describe().

34.68.3.15 void stdair::FareOptionStruct::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::StructAbstract.

Definition at line 47 of file FareOptionStruct.cpp.

34.68.3.16 const std::string stdair::FareOptionStruct::describe ( ) const [virtual]

Display of the structure.

Implements stdair::StructAbstract.

Definition at line 51 of file FareOptionStruct.cpp.

Referenced by stdair::TravelSolutionStruct::describe(), and toStream().

34.68.3.17 const std::string stdair::FareOptionStruct::display ( ) const

Display of the structure.

Definition at line 73 of file FareOptionStruct.cpp.

Referenced by stdair::TravelSolutionStruct::display().

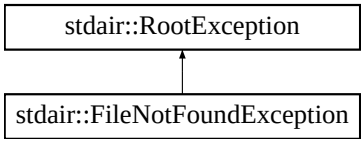
The documentation for this struct was generated from the following files:

- stdair/bom/FareOptionStruct.hpp
- stdair/bom/FareOptionStruct.cpp

34.69 stdair::FileNotFoundException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for stdair::FileNotFoundException:



Public Member Functions

- FileNotFoundException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.69.1 Detailed Description

File not found.

Definition at line 50 of file stdair_exceptions.hpp.

34.69.2 Constructor & Destructor Documentation

34.69.2.1 stdair::FileNotFoundException::FileNotFoundException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 53 of file stdair_exceptions.hpp.

34.69.3 Member Function Documentation

34.69.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.69.4 Member Data Documentation

34.69.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

The documentation for this class was generated from the following file:

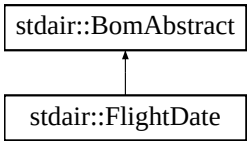
- stdair/stdair_exceptions.hpp

34.70 stdair::FlightDate Class Reference

Class representing the actual attributes for an airline flight-date.

`#include <stdair/bom/FlightDate.hpp>`

Inheritance diagram for stdair::FlightDate:



Public Types

- typedef FlightDateKey Key_T

Public Member Functions

- const Key_T & getKey () const
- BomAbstract *const getParent () const
- const FlightNumber_T & getFlightNumber () const
- const Date_T & getDepartureDate () const
- const AirlineCode_T & getAirlineCode () const
- const HolderMap_T & getHolderMap () const
- LegDate * getLegDate (const std::string &iLegDateKeyStr) const
- LegDate * getLegDate (const LegDateKey &) const
- SegmentDate * getSegmentDate (const std::string &iSegmentDateKeyStr) const
- SegmentDate * getSegmentDate (const SegmentDateKey &) const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Protected Member Functions

- FlightDate (const Key_T &)
- virtual ~FlightDate ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent
- HolderMap_T _holderMap

Friends

- class FacBom
- class FacBomManager
- class boost::serialization::access

34.70.1 Detailed Description

Class representing the actual attributes for an airline flight-date.

Definition at line 35 of file FlightDate.hpp.

34.70.2 Member Typedef Documentation

34.70.2.1 typedef FlightDateKey stdair::FlightDate::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 45 of file FlightDate.hpp.

34.70.3 Constructor & Destructor Documentation

34.70.3.1 stdair::FlightDate::FlightDate (const Key_T & *iKey*) [protected]

Main constructor.

Definition at line 30 of file FlightDate.cpp.

34.70.3.2 stdair::FlightDate::~FlightDate ( ) [protected, virtual]

Destructor.

Definition at line 34 of file FlightDate.cpp.

34.70.4 Member Function Documentation

34.70.4.1 const Key_T& stdair::FlightDate::getKey ( ) const [inline]

Get the flight-date key.

Definition at line 51 of file FlightDate.hpp.

References _key.

34.70.4.2 BomAbstract* const stdair::FlightDate::getParent ( ) const [inline]

Get the parent object.

Definition at line 56 of file FlightDate.hpp.

References _parent.

Referenced by getAirlineCode().

34.70.4.3 const FlightNumber_T& stdair::FlightDate::getFlightNumber ( ) const [inline]

Get the flight number (part of the primary key).

Definition at line 61 of file FlightDate.hpp.

References _key, and stdair::FlightDateKey::getFlightNumber().

Referenced by stdair::BomJSONExport::jsonExport().

34.70.4.4 const Date_T& stdair::FlightDate::getDepartureDate ( ) const [inline]

Get the flight date (part of the primary key).

Definition at line 66 of file FlightDate.hpp.

References _key, and stdair::FlightDateKey::getDepartureDate().

Referenced by stdair::BomJSONExport::jsonExport().

34.70.4.5 const AirlineCode_T & stdair::FlightDate::getAirlineCode ( ) const

Get the airline code (key of the parent object).

Note

That method assumes that the parent object derives from the Inventory class, as it needs to have access to the getAirlineCode() method.

Definition at line 38 of file FlightDate.cpp.

References stdair::Inventory::getAirlineCode(), and getParent().

Referenced by stdair::LegDate::getAirlineCode(), and stdair::BomJSONExport::jsonExport().

34.70.4.6 const HolderMap_T& stdair::FlightDate::getHolderMap ( ) const [inline]

Get the map of children holders.

Definition at line 82 of file FlightDate.hpp.

References _holderMap.

34.70.4.7 LegDate * stdair::FlightDate::getLegDate (const std::string & *iLegDateKeyStr*) const

Get a pointer on the LegDate object corresponding to the given key.

Note

The LegDate object can be inherited from, if needed. In that case, a dynamic_-cast<> may be needed.

Parameters

const	std::string& The leg-date key.

Returns

LegDate* Found LegDate object. NULL if not found.

Definition at line 53 of file FlightDate.cpp.

Referenced by getLegDate(), and stdair::BomRetriever::retrieveDummyLegCabin().

34.70.4.8 LegDate * stdair::FlightDate::getLegDate (const LegDateKey & *iLegDateKey*) const

Get a pointer on the LegDate object corresponding to the given key.

Note

The LegDate object can be inherited from, if needed. In that case, a dynamic_-cast<> may be needed.

Parameters

const	LegDateKey& The leg-date key

Returns

LegDate* Found LegDate object. NULL if not found.

Definition at line 60 of file FlightDate.cpp.

References getLegDate(), and stdair::LegDateKey::toString().

34.70.4.9 SegmentDate * stdair::FlightDate::getSegmentDate (const std::string & *iSegmentDateKeyStr*) const

Get a pointer on the SegmentDate object corresponding to the given key.

Note

The SegmentDate object can be inherited from, if needed. In that case, a dynamic_-

cast<> may be needed.

Parameters

const	std::string& The segment-date key.

Returns

SegmentDate* Found SegmentDate object. NULL if not found.

Definition at line 66 of file FlightDate.cpp.

Referenced by getSegmentDate(), stdair::BomRetriever::retrieveDummySegmentCabin(), stdair::BomRetriever::retrieveSegmentDateFromKey(), and stdair::BomRetriever::retrieveSegmentDateFromLongKey().

34.70.4.10 SegmentDate * stdair::FlightDate::getSegmentDate (const SegmentDateKey & *iSegmentDateKey*) const

Get a pointer on the SegmentDate object corresponding to the given key.

Note

The SegmentDate object can be inherited from, if needed. In that case, a dynamic_-cast<> may be needed.

Parameters

const	SegmentDateKey& The segment-date key

Returns

SegmentDate* Found SegmentDate object. NULL if not found.

Definition at line 74 of file FlightDate.cpp.

References getSegmentDate(), and stdair::SegmentDateKey::toString().

34.70.4.11 void stdair::FlightDate::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 141 of file FlightDate.hpp.

References toString().

34.70.4.12 void stdair::FlightDate::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 150 of file FlightDate.hpp.

34.70.4.13 std::string stdair::FlightDate::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 46 of file FlightDate.cpp.

References describeKey().

Referenced by toStream().

34.70.4.14 const std::string stdair::FlightDate::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 161 of file FlightDate.hpp.

References _key, and stdair::FlightDateKey::toString().

Referenced by toString().

34.70.4.15 template<class Archive > void stdair::FlightDate::serialize (Archive & *ar,* const unsigned int *iFileVersion*)

Serialisation.

Definition at line 187 of file CmdBomSerialiser.cpp.

References _key.

34.70.5 Friends And Related Function Documentation

34.70.5.1 friend class FacBom [friend]

Definition at line 36 of file FlightDate.hpp.

34.70.5.2 friend class FacBomManager [friend]

Definition at line 37 of file FlightDate.hpp.

34.70.5.3 friend class boost::serialization::access [friend]

Definition at line 38 of file FlightDate.hpp.

34.70.6 Member Data Documentation

34.70.6.1 Key_T stdair::FlightDate::_key [protected]

Primary key (flight number and departure date).

Definition at line 215 of file FlightDate.hpp.

Referenced by describeKey(), getDepartureDate(), getFlightNumber(), getKey(), and serialize().

34.70.6.2 BomAbstract* stdair::FlightDate::_parent [protected]

Pointer on the parent class (Inventory).

Definition at line 220 of file FlightDate.hpp.

Referenced by getParent().

34.70.6.3 HolderMap_T stdair::FlightDate::_holderMap [protected]

Map holding the children (SegmentDate and LegDate objects).

Definition at line 225 of file FlightDate.hpp.

Referenced by getHolderMap().

The documentation for this class was generated from the following files:

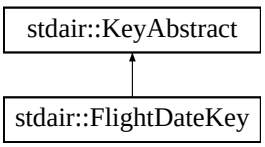
- stdair/bom/FlightDate.hpp
- stdair/bom/FlightDate.cpp
- stdair/command/CmdBomSerialiser.cpp

34.71 stdair::FlightDateKey Struct Reference

Key of a given flight-date, made of a flight number and a departure date.

`#include <stdair/bom/FlightDateKey.hpp>`

Inheritance diagram for stdair::FlightDateKey:



Public Member Functions

- FlightDateKey (const FlightNumber_T &, const Date_T &)
- FlightDateKey (const FlightDateKey &)
- ~FlightDateKey ()
- const FlightNumber_T & getFlightNumber () const
- const Date_T & getDepartureDate () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Friends

- class boost::serialization::access

34.71.1 Detailed Description

Key of a given flight-date, made of a flight number and a departure date.

Definition at line 28 of file FlightDateKey.hpp.

34.71.2 Constructor & Destructor Documentation

34.71.2.1 stdair::FlightDateKey::FlightDateKey (const FlightNumber_T & *iFlightNumber,* const Date_T & *iFlightDate*)

Constructor.

Definition at line 28 of file FlightDateKey.cpp.

34.71.2.2 stdair::FlightDateKey::FlightDateKey (const FlightDateKey & *iKey*)

Copy constructor.

Definition at line 34 of file FlightDateKey.cpp.

34.71.2.3 stdair::FlightDateKey::~FlightDateKey ( )

Destructor.

Definition at line 39 of file FlightDateKey.cpp.

34.71.3 Member Function Documentation

34.71.3.1 const FlightNumber_T& stdair::FlightDateKey::getFlightNumber ( ) const [inline]

Get the flight number.

Definition at line 58 of file FlightDateKey.hpp.

Referenced by stdair::FlightDate::getFlightNumber().

34.71.3.2 const Date_T& stdair::FlightDateKey::getDepartureDate ( ) const [inline]

Get the departure date of the (first leg of the) flight.

Definition at line 63 of file FlightDateKey.hpp.

Referenced by stdair::OnDDateKey::getDate(), and stdair::FlightDate::getDepartureDate().

34.71.3.3 void stdair::FlightDateKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 43 of file FlightDateKey.cpp.

References toString().

34.71.3.4 void stdair::FlightDateKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 48 of file FlightDateKey.cpp.

34.71.3.5 const std::string stdair::FlightDateKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from stdair::KeyAbstract.

Definition at line 52 of file FlightDateKey.cpp.

References stdair::DEFAULT_KEY_SUB_FLD_DELIMITER.

Referenced by stdair::FlightDate::describeKey(), stdair::Inventory::getFlightDate(), stdair::BomRetriever::retrieveSegmen
and toStream().

34.71.3.6 template<class Archive > void stdair::FlightDateKey::serialize (Archive & *ar,* const unsigned int *iFileVersion*)

Serialisation.

Definition at line 77 of file FlightDateKey.cpp.

34.71.4 Friends And Related Function Documentation

34.71.4.1 friend class boost::serialization::access [friend]

Definition at line 29 of file FlightDateKey.hpp.

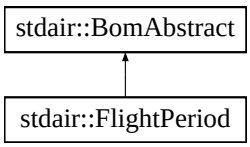
The documentation for this struct was generated from the following files:

- stdair/bom/FlightDateKey.hpp
- stdair/bom/FlightDateKey.cpp

34.72 stdair::FlightPeriod Class Reference

`#include <stdair/bom/FlightPeriod.hpp>`

Inheritance diagram for stdair::FlightPeriod:



Public Types

- typedef FlightPeriodKey Key_T

Public Member Functions

- const Key_T & getKey () const
- BomAbstract *const getParent () const
- const FlightNumber_T & getFlightNumber () const
- const PeriodStruct & getPeriod () const
- const HolderMap_T & getHolderMap () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const

Protected Member Functions

- FlightPeriod (const Key_T &)
- FlightPeriod (const FlightPeriod &)
- ~FlightPeriod ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent
- HolderMap_T _holderMap

Friends

- class FacBom
- class FacBomManager

34.72.1 Detailed Description

Class representing the actual attributes for an airline flight-period.

Definition at line 15 of file FlightPeriod.hpp.

34.72.2 Member Typedef Documentation

34.72.2.1 typedef FlightPeriodKey stdair::FlightPeriod::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 22 of file FlightPeriod.hpp.

34.72.3 Constructor & Destructor Documentation

34.72.3.1 stdair::FlightPeriod::FlightPeriod (const Key_T & *iKey*) [protected]

Default constructors.

Definition at line 12 of file FlightPeriod.cpp.

34.72.3.2 stdair::FlightPeriod::FlightPeriod (const FlightPeriod &) [protected]

34.72.3.3 stdair::FlightPeriod::~FlightPeriod ( ) [protected]

Destructor.

Definition at line 17 of file FlightPeriod.cpp.

34.72.4 Member Function Documentation

34.72.4.1 const Key_T& stdair::FlightPeriod::getKey ( ) const [inline]

Get the flight-period key.

Definition at line 27 of file FlightPeriod.hpp.

References _key.

34.72.4.2 BomAbstract* const stdair::FlightPeriod::getParent ( ) const [inline]

Get the parent object.

Definition at line 30 of file FlightPeriod.hpp.

References _parent.

34.72.4.3 const FlightNumber_T& stdair::FlightPeriod::getFlightNumber ( ) const [inline]

Get the flight number (part of the primary key).

Definition at line 33 of file FlightPeriod.hpp.

References _key, and stdair::FlightPeriodKey::getFlightNumber().

34.72.4.4 const PeriodStruct& stdair::FlightPeriod::getPeriod ( ) const [inline]

Get the departure period (part of the key).

Definition at line 38 of file FlightPeriod.hpp.

References _key, and stdair::FlightPeriodKey::getPeriod().

34.72.4.5 const HolderMap_T& stdair::FlightPeriod::getHolderMap ( ) const [inline]

Get the map of children holders.

Definition at line 41 of file FlightPeriod.hpp.

References _holderMap.

34.72.4.6 void stdair::FlightPeriod::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 48 of file FlightPeriod.hpp.

References toString().

34.72.4.7 void stdair::FlightPeriod::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 52 of file FlightPeriod.hpp.

34.72.4.8 std::string stdair::FlightPeriod::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 21 of file FlightPeriod.cpp.

References describeKey().

Referenced by toStream().

34.72.4.9 const std::string stdair::FlightPeriod::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 58 of file FlightPeriod.hpp.

References _key, and stdair::FlightPeriodKey::toString().

Referenced by toString().

34.72.5 Friends And Related Function Documentation

34.72.5.1 friend class FacBom [friend]

Definition at line 16 of file FlightPeriod.hpp.

34.72.5.2 friend class FacBomManager [friend]

Definition at line 17 of file FlightPeriod.hpp.

34.72.6 Member Data Documentation

34.72.6.1 Key_T stdair::FlightPeriod::_key [protected]

Definition at line 69 of file FlightPeriod.hpp.

Referenced by describeKey(), getFlightNumber(), getKey(), and getPeriod().

34.72.6.2 BomAbstract* stdair::FlightPeriod::_parent [protected]

Definition at line 70 of file FlightPeriod.hpp.

Referenced by getParent().

34.72.6.3 HolderMap_T stdair::FlightPeriod::_holderMap [protected]

Definition at line 71 of file FlightPeriod.hpp.

Referenced by getHolderMap().

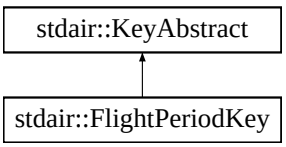
The documentation for this class was generated from the following files:

- stdair/bom/FlightPeriod.hpp
- stdair/bom/FlightPeriod.cpp

34.73 stdair::FlightPeriodKey Struct Reference

`#include <stdair/bom/FlightPeriodKey.hpp>`

Inheritance diagram for stdair::FlightPeriodKey:



Public Member Functions

- FlightPeriodKey (const FlightNumber_T &, const PeriodStruct &)
- FlightPeriodKey (const FlightPeriodKey &)
- ~FlightPeriodKey ()
- const FlightNumber_T & getFlightNumber () const
- const PeriodStruct & getPeriod () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const

34.73.1 Detailed Description

Key of flight-period.

Definition at line 13 of file FlightPeriodKey.hpp.

34.73.2 Constructor & Destructor Documentation

34.73.2.1 stdair::FlightPeriodKey::FlightPeriodKey (const FlightNumber_T & *iFlightNumber,* const PeriodStruct & *iPeriod*)

Constructors.

Definition at line 10 of file FlightPeriodKey.cpp.

34.73.2.2 stdair::FlightPeriodKey::FlightPeriodKey (const FlightPeriodKey & *iKey*)

Definition at line 16 of file FlightPeriodKey.cpp.

34.73.2.3 stdair::FlightPeriodKey::~FlightPeriodKey ( )

Destructor.

Definition at line 21 of file FlightPeriodKey.cpp.

34.73.3 Member Function Documentation

34.73.3.1 const FlightNumber_T& stdair::FlightPeriodKey::getFlightNumber ( ) const [inline]

Get the flight number.

Definition at line 28 of file FlightPeriodKey.hpp.

Referenced by stdair::FlightPeriod::getFlightNumber().

34.73.3.2 const PeriodStruct& stdair::FlightPeriodKey::getPeriod ( ) const [inline]

Get the active days-of-week.

Definition at line 33 of file FlightPeriodKey.hpp.

Referenced by stdair::FlightPeriod::getPeriod().

34.73.3.3 void stdair::FlightPeriodKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 25 of file FlightPeriodKey.cpp.

References toString().

34.73.3.4 void stdair::FlightPeriodKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 30 of file FlightPeriodKey.cpp.

34.73.3.5 const std::string stdair::FlightPeriodKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-period.

Reimplemented from stdair::KeyAbstract.

Definition at line 34 of file FlightPeriodKey.cpp.

References stdair::PeriodStruct::describeShort().

Referenced by stdair::FlightPeriod::describeKey(), and toStream().

The documentation for this struct was generated from the following files:

- stdair/bom/FlightPeriodKey.hpp
- stdair/bom/FlightPeriodKey.cpp

34.74 FloatingPoint< RawType > Class Template Reference

`#include <stdair/basic/float_utils_google.hpp>`

Public Types

- typedef TypeWithSize< sizeof(RawType)>::UInt Bits

Public Member Functions

- FloatingPoint (const RawType &x)
- const Bits & bits () const
- Bits exponent_bits () const
- Bits fraction_bits () const
- Bits sign_bit () const
- bool is_nan () const
- bool AlmostEquals (const FloatingPoint &rhs) const

Static Public Member Functions

- static RawType ReinterpretBits (const Bits bits)
- static RawType Infinity ()

Static Public Attributes

- static const size_t kBitCount = 8∗sizeof(RawType)
- static const size_t kFractionBitCount
- static const size_t kExponentBitCount = kBitCount - 1 - kFractionBitCount
- static const Bits kSignBitMask = static_cast<Bits>(1) << (kBitCount - 1)
- static const Bits kFractionBitMask
- static const Bits kExponentBitMask = ∼(kSignBitMask | kFractionBitMask)
- static const size_t kMaxUlps = 4

34.74.1 Detailed Description

template<typename RawType>class FloatingPoint< RawType >

Definition at line 117 of file float_utils_google.hpp.

34.74.2 Member Typedef Documentation

34.74.2.1 template<typename RawType> typedef TypeWithSize<sizeof(RawType)>::UInt FloatingPoint< RawType >::Bits

Definition at line 121 of file float_utils_google.hpp.

34.74.3 Constructor & Destructor Documentation

34.74.3.1 template<typename RawType> FloatingPoint< RawType >::FloatingPoint (const RawType & *x*) [inline, explicit]

Definition at line 165 of file float_utils_google.hpp.

34.74.4 Member Function Documentation

34.74.4.1 template<typename RawType> static RawType FloatingPoint< RawType >::ReinterpretBits (const Bits *bits*) [inline, static]

Definition at line 172 of file float_utils_google.hpp.

References FloatingPoint< RawType >::bits().

Referenced by FloatingPoint< RawType >::Infinity().

34.74.4.2 template<typename RawType> static RawType FloatingPoint< RawType >::Infinity ( ) [inline, static]

Definition at line 179 of file float_utils_google.hpp.

References FloatingPoint< RawType >::kExponentBitMask, and FloatingPoint< RawType >::ReinterpretBits().

34.74.4.3 template<typename RawType> const Bits& FloatingPoint< RawType >::bits ( ) const [inline]

Definition at line 186 of file float_utils_google.hpp.

Referenced by FloatingPoint< RawType >::ReinterpretBits().

34.74.4.4 template<typename RawType> Bits FloatingPoint< RawType >::exponent_bits ( ) const [inline]

Definition at line 189 of file float_utils_google.hpp.

References FloatingPoint< RawType >::kExponentBitMask.

Referenced by FloatingPoint< RawType >::is_nan().

34.74.4.5 template<typename RawType> Bits FloatingPoint< RawType >::fraction_bits ( ) const [inline]

Definition at line 192 of file float_utils_google.hpp.

References FloatingPoint< RawType >::kFractionBitMask.

Referenced by FloatingPoint< RawType >::is_nan().

34.74.4.6 template<typename RawType> Bits FloatingPoint< RawType >::sign_bit ( ) const [inline]

Definition at line 195 of file float_utils_google.hpp.

References FloatingPoint< RawType >::kSignBitMask.

34.74.4.7 template<typename RawType> bool FloatingPoint< RawType >::is_nan ( ) const [inline]

Definition at line 198 of file float_utils_google.hpp.

References FloatingPoint< RawType >::exponent_bits(), FloatingPoint< RawType >::fraction_bits(), and FloatingPoint< RawType >::kExponentBitMask.

Referenced by FloatingPoint< RawType >::AlmostEquals().

34.74.4.8 template<typename RawType> bool FloatingPoint< RawType >::AlmostEquals (const FloatingPoint< RawType > & *rhs*) const [inline]

Definition at line 210 of file float_utils_google.hpp.

References FloatingPoint< RawType >::is_nan(), and FloatingPoint< RawType >::kMaxUlps.

34.74.5 Member Data Documentation

34.74.5.1 template<typename RawType> const size_t FloatingPoint< RawType >::kBitCount = 8*sizeof(RawType) [static]

Definition at line 126 of file float_utils_google.hpp.

34.74.5.2 template<typename RawType> const size_t FloatingPoint< RawType >::kFractionBitCount [static]

Initial value:

```
std::numeric_limits<RawType>::digits - 1
```

Definition at line 129 of file float_utils_google.hpp.

34.74.5.3 template<typename RawType> const size_t FloatingPoint< RawType >::kExponentBitCount = kBitCount - 1 - kFractionBitCount [static]

Definition at line 133 of file float_utils_google.hpp.

34.74.5.4 template<typename RawType> const Bits FloatingPoint< RawType >::kSignBitMask = static_cast<Bits>(1) << (kBitCount - 1) [static]

Definition at line 136 of file float_utils_google.hpp.

Referenced by FloatingPoint< RawType >::sign_bit().

34.74.5.5 template<typename RawType> const Bits FloatingPoint< RawType >::kFractionBitMask [static]

Initial value:

```
~static_cast<Bits>(0) >> (kExponentBitCount + 1)
```

Definition at line 139 of file float_utils_google.hpp.

Referenced by FloatingPoint< RawType >::fraction_bits().

34.74.5.6 template<typename RawType> const Bits FloatingPoint< RawType >::kExponentBitMask = ~(kSignBitMask | kFractionBitMask) [static]

Definition at line 143 of file float_utils_google.hpp.

Referenced by FloatingPoint< RawType >::exponent_bits(), FloatingPoint< RawType >::Infinity(), and FloatingPoint< RawType >::is_nan().

34.74.5.7 template<typename RawType> const size_t FloatingPoint< RawType >::kMaxUlps = 4 [static]

Definition at line 157 of file float_utils_google.hpp.

Referenced by FloatingPoint< RawType >::AlmostEquals().

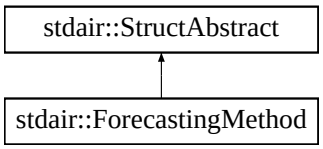
The documentation for this class was generated from the following file:

- stdair/basic/float_utils_google.hpp

34.75 stdair::ForecastingMethod Struct Reference

`#include <stdair/basic/ForecastingMethod.hpp>`

Inheritance diagram for stdair::ForecastingMethod:



Public Types

- enum EN_ForecastingMethod { ADD_PK = 0, MUL_PK, LAST_VALUE }

Public Member Functions

- EN_ForecastingMethod getMethod () const
- std::string getMethodAsString () const
- const std::string describe () const
- bool operator== (const EN_ForecastingMethod &) const
- ForecastingMethod (const EN_ForecastingMethod &)
- ForecastingMethod (const char iMethod)
- ForecastingMethod (const ForecastingMethod &)
- void toStream (std::ostream &ioOut) const
- virtual void fromStream (std::istream &ioIn)

Static Public Member Functions

- static const std::string & getLabel (const EN_ForecastingMethod &)
- static char getMethodLabel (const EN_ForecastingMethod &)
- static std::string getMethodLabelAsString (const EN_ForecastingMethod &)
- static std::string describeLabels ()

34.75.1 Detailed Description

Enumeration of forecasting methods.

Definition at line 15 of file ForecastingMethod.hpp.

34.75.2 Member Enumeration Documentation

34.75.2.1 enum stdair::ForecastingMethod::EN_ForecastingMethod

Enumerator:

ADD_PK

MUL_PK

LAST_VALUE

Definition at line 17 of file ForecastingMethod.hpp.

34.75.3 Constructor & Destructor Documentation

34.75.3.1 stdair::ForecastingMethod::ForecastingMethod (const EN_ForecastingMethod & *iForecastingMethod*)

Constructor.

Definition at line 36 of file ForecastingMethod.cpp.

34.75.3.2 stdair::ForecastingMethod::ForecastingMethod (const char *iMethod*)

Constructor.

Definition at line 41 of file ForecastingMethod.cpp.

References ADD_PK, describeLabels(), LAST_VALUE, and MUL_PK.

34.75.3.3 stdair::ForecastingMethod::ForecastingMethod (const ForecastingMethod & *iForecastingMethod*)

Default copy constructor.

Definition at line 30 of file ForecastingMethod.cpp.

34.75.4 Member Function Documentation

34.75.4.1 const std::string & stdair::ForecastingMethod::getLabel (const EN_ForecastingMethod & *iMethod*) [static]

Get the label as a string (e.g., "BookingRequest" or "ScheduleChange").

Definition at line 59 of file ForecastingMethod.cpp.

34.75.4.2 char stdair::ForecastingMethod::getMethodLabel (const EN_ForecastingMethod & *iMethod*) [static]

Get the label as a single char (e.g., 'B' or 'S').

Definition at line 64 of file ForecastingMethod.cpp.

34.75.4.3 std::string stdair::ForecastingMethod::getMethodLabelAsString (const EN_ForecastingMethod & *iMethod*) [static]

Get the label as a string of a single char (e.g., "B" or "S").

Definition at line 70 of file ForecastingMethod.cpp.

34.75.4.4 std::string stdair::ForecastingMethod::describeLabels ( ) [static]

List the labels.

Definition at line 77 of file ForecastingMethod.cpp.

References LAST_VALUE.

Referenced by ForecastingMethod().

34.75.4.5 ForecastingMethod::EN_ForecastingMethod stdair::ForecastingMethod::getMethod ( ) const

Get the enumerated value.

Definition at line 89 of file ForecastingMethod.cpp.

34.75.4.6 std::string stdair::ForecastingMethod::getMethodAsString ( ) const

Get the enumerated value as a short string (e.g., "B" or "S").

Definition at line 94 of file ForecastingMethod.cpp.

34.75.4.7 const std::string stdair::ForecastingMethod::describe ( ) const [virtual]

Give a description of the structure (e.g., "BookingRequest" or "ScheduleChange").

Implements stdair::StructAbstract.

Definition at line 101 of file ForecastingMethod.cpp.

34.75.4.8 bool stdair::ForecastingMethod::operator== (const EN_ForecastingMethod & *iMethod*) const

Comparison operator.

Definition at line 109 of file ForecastingMethod.cpp.

34.75.4.9 void stdair::StructAbstract::toStream (std::ostream & *ioOut*) const [inline, inherited]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented in stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 29 of file StructAbstract.hpp.

References stdair::StructAbstract::describe().

Referenced by operator<<().

34.75.4.10 virtual void stdair::StructAbstract::fromStream (std::istream & *ioIn*) [inline, virtual, inherited]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented in stdair::ProgressStatusSet, stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::EventStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 38 of file StructAbstract.hpp.

Referenced by operator>>().

The documentation for this struct was generated from the following files:

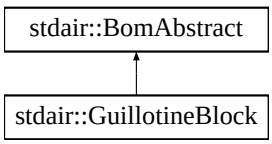
- stdair/basic/ForecastingMethod.hpp
- stdair/basic/ForecastingMethod.cpp

34.76 stdair::GuillotineBlock Class Reference

Class representing the actual attributes for an airline guillotine-block.

`#include <stdair/bom/GuillotineBlock.hpp>`

Inheritance diagram for stdair::GuillotineBlock:



Public Types

- typedef GuillotineBlockKey Key_T

Public Member Functions

- const Key_T & getKey () const
- BomAbstract *const getParent () const

- const GuillotineNumber_T & getGuillotineNumber () const
- const HolderMap_T & getHolderMap () const
- const SegmentCabinIndexMap_T & getSegmentCabinIndexMap () const
- const ValueTypeIndexMap_T & getValueTypeIndexMap () const
- const BlockIndex_T & getBlockIndex (const MapKey_T &) const
- const BlockNumber_T & getBlockNumber (const SegmentCabin &) const
- ConstSegmentCabinDTDSnapshotView_T getConstSegmentCabinDTDBookingSnapshotView (const BlockNumber_T, const BlockNumber_T, const DTD_T) const
- ConstSegmentCabinDTDRangeSnapshotView_T getConstSegmentCabinDTDRangeBookingSnapshotView (const BlockNumber_T, const BlockNumber_T, const DTD_T, const DTD_T) const
- SegmentCabinDTDSnapshotView_T getSegmentCabinDTDBookingSnapshotView (const BlockNumber_T, const BlockNumber_T, const DTD_T)
- SegmentCabinDTDRangeSnapshotView_T getSegmentCabinDTDRangeBookingSnapshotView (const BlockNumber_T, const BlockNumber_T, const DTD_T, const DTD_T)
- ConstSegmentCabinDTDSnapshotView_T getConstSegmentCabinDTDCancellationSnapshotView (const BlockNumber_T, const BlockNumber_T, const DTD_T) const
- ConstSegmentCabinDTDRangeSnapshotView_T getConstSegmentCabinDTDRangeCancellationSnapshotView (const BlockNumber_T, const BlockNumber_T, const DTD_T, const DTD_T) const
- SegmentCabinDTDSnapshotView_T getSegmentCabinDTDCancellationSnapshotView (const BlockNumber_T, const BlockNumber_T, const DTD_T)
- SegmentCabinDTDRangeSnapshotView_T getSegmentCabinDTDRangeCancellationSnapshotView (const BlockNumber_T, const BlockNumber_T, const DTD_T, const DTD_T)
- ConstSegmentCabinDTDSnapshotView_T getConstSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView (const BlockNumber_T, const BlockNumber_T, const DTD_T) const
- ConstSegmentCabinDTDRangeSnapshotView_T getConstSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView (const BlockNumber_T, const BlockNumber_T, const DTD_T, const DTD_T) const
- SegmentCabinDTDSnapshotView_T getSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView (const BlockNumber_T, const BlockNumber_T, const DTD_T)
- SegmentCabinDTDRangeSnapshotView_T getSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView (const BlockNumber_T, const BlockNumber_T, const DTD_T, const DTD_T)
- ConstSegmentCabinDTDSnapshotView_T getConstSegmentCabinDTDAvailabilitySnapshotView (const BlockNumber_T, const BlockNumber_T, const DTD_T) const
- ConstSegmentCabinDTDRangeSnapshotView_T getConstSegmentCabinDTDRangeAvailabilitySnapshotView (const BlockNumber_T, const BlockNumber_T, const DTD_T, const DTD_T) const
- SegmentCabinDTDSnapshotView_T getSegmentCabinDTDAvailabilitySnapshotView (const BlockNumber_T, const BlockNumber_T, const DTD_T)

- SegmentCabinDTDRangeSnapshotView_T getSegmentCabinDTDRangeAvailabilitySnapshotView (const BlockNumber_T, const BlockNumber_T, const DTD_T, const DTD_T)
- void initSnapshotBlocks (const SegmentCabinIndexMap_T &, const ValueTypeIndexMap_T &)
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Protected Member Functions

- GuillotineBlock (const Key_T &)
- virtual ~GuillotineBlock ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent
- HolderMap_T _holderMap
- SegmentCabinIndexMap_T _segmentCabinIndexMap
- ValueTypeIndexMap_T _valueTypesIndexMap
- SnapshotBlock_T _bookingSnapshotBlock
- SnapshotBlock_T _cancellationSnapshotBlock
- SnapshotBlock_T _productAndPriceOrientedBookingSnapshotBlock
- SnapshotBlock_T _availabilitySnapshotBlock

Friends

- class FacBom
- class FacBomManager
- class boost::serialization::access

34.76.1 Detailed Description

Class representing the actual attributes for an airline guillotine-block.

Definition at line 31 of file GuillotineBlock.hpp.

34.76.2 Member Typedef Documentation

34.76.2.1 typedef GuillotineBlockKey stdair::GuillotineBlock::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 41 of file GuillotineBlock.hpp.

34.76.3 Constructor & Destructor Documentation

34.76.3.1 stdair::GuillotineBlock::GuillotineBlock (const Key_T & *iKey*) [protected]

Main constructor.

Definition at line 34 of file GuillotineBlock.cpp.

34.76.3.2 stdair::GuillotineBlock::~GuillotineBlock ( ) [protected, virtual]

Destructor.

Definition at line 38 of file GuillotineBlock.cpp.

34.76.4 Member Function Documentation

34.76.4.1 const Key_T& stdair::GuillotineBlock::getKey ( ) const [inline]

Get the guillotine-block key.

Definition at line 47 of file GuillotineBlock.hpp.

References _key.

34.76.4.2 BomAbstract* const stdair::GuillotineBlock::getParent ( ) const [inline]

Get the parent object.

Definition at line 52 of file GuillotineBlock.hpp.

References _parent.

34.76.4.3 const GuillotineNumber_T& stdair::GuillotineBlock::getGuillotineNumber ( ) const [inline]

Get the guillotine number (part of the primary key).

Definition at line 57 of file GuillotineBlock.hpp.

References _key, and stdair::GuillotineBlockKey::getGuillotineNumber().

34.76.4.4 const HolderMap_T& stdair::GuillotineBlock::getHolderMap ( ) const [inline]

Get the map of children holders.

Definition at line 64 of file GuillotineBlock.hpp.

References _holderMap.

34.76.4.5 const SegmentCabinIndexMap_T& stdair::GuillotineBlock::getSegmentCabinIndexMap ( ) const [inline]

Get the segment-cabin index map.

Definition at line 69 of file GuillotineBlock.hpp.

References _segmentCabinIndexMap.

34.76.4.6 const ValueTypeIndexMap_T& stdair::GuillotineBlock::getValueTypeIndexMap ( ) const [inline]

Get the value type index map.

Definition at line 74 of file GuillotineBlock.hpp.

References _valueTypesIndexMap.

34.76.4.7 const BlockIndex_T & stdair::GuillotineBlock::getBlockIndex (const MapKey_T & *iKey*) const

Get the block index corresponding to the given value type.

Definition at line 79 of file GuillotineBlock.cpp.

References _valueTypesIndexMap.

34.76.4.8 const BlockNumber_T & stdair::GuillotineBlock::getBlockNumber (const SegmentCabin & *iSegmentCabin*) const

Get the block number corresponding to the givent segment-cabin.

Definition at line 88 of file GuillotineBlock.cpp.

References _segmentCabinIndexMap.

34.76.4.9 ConstSegmentCabinDTDSnapshotView_T stdair::GuillotineBlock::getConstSegmentCabinDTDBookingSnapshotView (const BlockNumber_T *iSCIdxBegin,* const BlockNumber_T *iSCIdxEnd,* const DTD_T *iDTD*) const

Get the const view of snapshots for a given DTD and a range of segment-cabins.

Definition at line 97 of file GuillotineBlock.cpp.

References _bookingSnapshotBlock, and _valueTypesIndexMap.

34.76.4.10 ConstSegmentCabinDTDRangeSnapshotView_T stdair::GuillotineBlock::getConstSegmentCabinDTDRangeBookingSnapshotView (const BlockNumber_T *iSCIdxBegin,* const BlockNumber_T *iSCIdxEnd,* const DTD_T *iDTDBegin,* const DTD_T *iDTDEnd*) const

Get the const view of snapshots for a given range of DTD and a range of segment-cabins.

Definition at line 110 of file GuillotineBlock.cpp.

34.76.4.11 **SegmentCabinDTDSnapshotView_T stdair::GuillotineBlock::getSegmentCabinDTDBookingSnapshotView (const BlockNumber_T *iSCIdxBegin,* const BlockNumber_T *iSCIdxEnd,* const DTD_T *iDTD*)**

Get the view of snapshots for a given DTD and a range of segment-cabins.

Definition at line 121 of file GuillotineBlock.cpp.

References _bookingSnapshotBlock, and _valueTypesIndexMap.

34.76.4.12 **SegmentCabinDTDRangeSnapshotView_T stdair::GuillotineBlock::getSegmentCabinDTDRangeBookingSnapshotView (const BlockNumber_T *iSCIdxBegin,* const BlockNumber_T *iSCIdxEnd,* const DTD_T *iDTDBegin,* const DTD_T *iDTDEnd*)**

Get the view of snapshots for a given range of DTD and a range of segment-cabins.

Definition at line 133 of file GuillotineBlock.cpp.

References _bookingSnapshotBlock, and _valueTypesIndexMap.

34.76.4.13 **ConstSegmentCabinDTDSnapshotView_T stdair::GuillotineBlock::getConstSegmentCabinDTDCancellationSnapshotView (const BlockNumber_T *iSCIdxBegin,* const BlockNumber_T *iSCIdxEnd,* const DTD_T *iDTD*) const**

Get the const view of snapshots for a given DTD and a range of segment-cabins.

Definition at line 146 of file GuillotineBlock.cpp.

References _cancellationSnapshotBlock, and _valueTypesIndexMap.

34.76.4.14 **ConstSegmentCabinDTDRangeSnapshotView_T stdair::GuillotineBlock::getConstSegmentCabinDTDRangeCancellationSnapshotView (const BlockNumber_T *iSCIdxBegin,* const BlockNumber_T *iSCIdxEnd,* const DTD_T *iDTDBegin,* const DTD_T *iDTDEnd*) const**

Get the const view of snapshots for a given range of DTD and a range of segment-cabins.

Definition at line 159 of file GuillotineBlock.cpp.

34.76.4.15 **SegmentCabinDTDSnapshotView_T stdair::GuillotineBlock::getSegmentCabinDTDCancellationSnapshotView (const BlockNumber_T *iSCIdxBegin,* const BlockNumber_T *iSCIdxEnd,* const DTD_T *iDTD*)**

Get the view of snapshots for a given DTD and a range of segment-cabins.

Definition at line 170 of file GuillotineBlock.cpp.

References _cancellationSnapshotBlock, and _valueTypesIndexMap.

34.76.4.16 SegmentCabinDTDRangeSnapshotView_T stdair::GuillotineBlock::getSegmentCabinDTDRangeCancellationSnapshotView (const BlockNumber_T *iSCIdxBegin,* const BlockNumber_T *iSCIdxEnd,* const DTD_T *iDTDBegin,* const DTD_T *iDTDEnd*)

Get the view of snapshots for a given range of DTD and a range of segment-cabins.

Definition at line 182 of file GuillotineBlock.cpp.

References _cancellationSnapshotBlock, and _valueTypesIndexMap.

34.76.4.17 ConstSegmentCabinDTDSnapshotView_T stdair::GuillotineBlock::getConstSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView (const BlockNumber_T *iSCIdxBegin,* const BlockNumber_T *iSCIdxEnd,* const DTD_T *iDTD*) const

Get the const view of snapshots for a given DTD and a range of segment-cabins.

Definition at line 195 of file GuillotineBlock.cpp.

References _productAndPriceOrientedBookingSnapshotBlock, and _valueTypesIndexMap.

34.76.4.18 ConstSegmentCabinDTDRangeSnapshotView_T stdair::GuillotineBlock::getConstSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView (const BlockNumber_T *iSCIdxBegin,* const BlockNumber_T *iSCIdxEnd,* const DTD_T *iDTDBegin,* const DTD_T *iDTDEnd*) const

Get the const view of snapshots for a given range of DTD and a range of segment-cabins.

Definition at line 208 of file GuillotineBlock.cpp.

34.76.4.19 SegmentCabinDTDSnapshotView_T stdair::GuillotineBlock::getSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView (const BlockNumber_T *iSCIdxBegin,* const BlockNumber_T *iSCIdxEnd,* const DTD_T *iDTD*)

Get the view of snapshots for a given DTD and a range of segment-cabins.

Definition at line 219 of file GuillotineBlock.cpp.

References _productAndPriceOrientedBookingSnapshotBlock, and _valueTypesIndexMap.

34.76.4.20 SegmentCabinDTDRangeSnapshotView_T stdair::GuillotineBlock::getSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView (const BlockNumber_T *iSCIdxBegin,* const BlockNumber_T *iSCIdxEnd,* const DTD_T *iDTDBegin,* const DTD_T *iDTDEnd*)

Get the view of snapshots for a given range of DTD and a range of segment-cabins.

Definition at line 231 of file GuillotineBlock.cpp.

References _productAndPriceOrientedBookingSnapshotBlock, and _valueTypesIndexMap.

34.76.4.21 **ConstSegmentCabinDTDSnapshotView_T stdair::GuillotineBlock::getConstSegmentCabinDTDAvailabilitySnapshotView (const BlockNumber_T *iSCIdxBegin,* const BlockNumber_T *iSCIdxEnd,* const DTD_T *iDTD*) const**

Get the const view of snapshots for a given DTD and a range of segment-cabins.

Definition at line 244 of file GuillotineBlock.cpp.

References _availabilitySnapshotBlock, and _valueTypesIndexMap.

34.76.4.22 **ConstSegmentCabinDTDRangeSnapshotView_T stdair::GuillotineBlock::getConstSegmentCabinDTDRangeAvailabilitySnapshotView (const BlockNumber_T *iSCIdxBegin,* const BlockNumber_T *iSCIdxEnd,* const DTD_T *iDTDBegin,* const DTD_T *iDTDEnd*) const**

Get the const view of snapshots for a given range of DTD and a range of segment-cabins.

Definition at line 257 of file GuillotineBlock.cpp.

34.76.4.23 **SegmentCabinDTDSnapshotView_T stdair::GuillotineBlock::getSegmentCabinDTDAvailabilitySnapshotView (const BlockNumber_T *iSCIdxBegin,* const BlockNumber_T *iSCIdxEnd,* const DTD_T *iDTD*)**

Get the view of snapshots for a given DTD and a range of segment-cabins.

Definition at line 268 of file GuillotineBlock.cpp.

References _availabilitySnapshotBlock, and _valueTypesIndexMap.

34.76.4.24 **SegmentCabinDTDRangeSnapshotView_T stdair::GuillotineBlock::getSegmentCabinDTDRangeAvailabilitySnapshotView (const BlockNumber_T *iSCIdxBegin,* const BlockNumber_T *iSCIdxEnd,* const DTD_T *iDTDBegin,* const DTD_T *iDTDEnd*)**

Get the view of snapshots for a given range of DTD and a range of segment-cabins.

Definition at line 280 of file GuillotineBlock.cpp.

References _availabilitySnapshotBlock, and _valueTypesIndexMap.

34.76.4.25 **void stdair::GuillotineBlock::initSnapshotBlocks (const SegmentCabinIndexMap_T & *iSegmentCabinIndexMap,* const ValueTypeIndexMap_T & *iValueTypeIndexMap*)**

Set the segment-cabin and value type index maps and initialise the snapshot blocks.

Definition at line 50 of file GuillotineBlock.cpp.

References _availabilitySnapshotBlock, _bookingSnapshotBlock, _cancellationSnapshotBlock, _productAndPriceOrientedBookingSnapshotBlock, _segmentCabinIndexMap, _valueTypesIndexMap, and stdair::DEFAULT_MAX_DTD.

34.76.4.26 void stdair::GuillotineBlock::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 209 of file GuillotineBlock.hpp.

References toString().

34.76.4.27 void stdair::GuillotineBlock::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 218 of file GuillotineBlock.hpp.

34.76.4.28 std::string stdair::GuillotineBlock::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 42 of file GuillotineBlock.cpp.

References describeKey().

Referenced by toStream().

34.76.4.29 const std::string stdair::GuillotineBlock::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 229 of file GuillotineBlock.hpp.

References _key, and stdair::GuillotineBlockKey::toString().

Referenced by toString().

34.76.4.30 template<class Archive > void stdair::GuillotineBlock::serialize (Archive & *ar*, const unsigned int *iFileVersion*)

Serialisation.

Definition at line 307 of file GuillotineBlock.cpp.

References _key.

34.76.5 Friends And Related Function Documentation

34.76.5.1 friend class FacBom [friend]

Definition at line 32 of file GuillotineBlock.hpp.

34.76.5.2 friend class FacBomManager [friend]

Definition at line 33 of file GuillotineBlock.hpp.

34.76.5.3 friend class boost::serialization::access [friend]

Definition at line 34 of file GuillotineBlock.hpp.

34.76.6 Member Data Documentation

34.76.6.1 Key_T stdair::GuillotineBlock::_key [protected]

Primary key (guillotine number and departure block).

Definition at line 278 of file GuillotineBlock.hpp.

Referenced by describeKey(), getGuillotineNumber(), getKey(), and serialize().

34.76.6.2 BomAbstract* stdair::GuillotineBlock::_parent [protected]

Pointer on the parent class (Inventory).

Definition at line 281 of file GuillotineBlock.hpp.

Referenced by getParent().

34.76.6.3 HolderMap_T stdair::GuillotineBlock::_holderMap [protected]

Map holding the children.

Definition at line 284 of file GuillotineBlock.hpp.

Referenced by getHolderMap().

34.76.6.4 SegmentCabinIndexMap_T stdair::GuillotineBlock::_segmentCabinIndexMap [protected]

Map holding the segment-cabin position within the snapshot blocks.

Definition at line 287 of file GuillotineBlock.hpp.

Referenced by getBlockNumber(), getSegmentCabinIndexMap(), and initSnapshotBlocks().

34.76.6.5 ValueTypeIndexMap_T stdair::GuillotineBlock::_valueTypesIndexMap [protected]

Map holding the value type (class, Q-equivalent, etc) within a a segment-cabin inside the snapshot blocks.

Definition at line 291 of file GuillotineBlock.hpp.

Referenced by getBlockIndex(), getConstSegmentCabinDTDAvailabilitySnapshotView(), getConstSegmentCabinDTDBookingSnapshotView(), getConstSegmentCabinDTDCancellationSnapshotView(), getConstSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView(), getSegmentCabinDTDAvailabilitySnapshotView(), getSegmentCabinDTDBookingSnapshotView(), getSegmentCabinDTDCancellationSnapshotView(), getSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView(), getSegmentCabinDTDRangeAvailabilitySnapshotView(), getSegmentCabinDTDRangeBookingSnapshotView(), getSegmentCabinDTDRangeCancellationSnapshotView(), getSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView(), getValueTypeIndexMap(), and initSnapshotBlocks().

34.76.6.6 SnapshotBlock_T stdair::GuillotineBlock::_bookingSnapshotBlock [protected]

Booking snapshot block.

Definition at line 294 of file GuillotineBlock.hpp.

Referenced by getConstSegmentCabinDTDBookingSnapshotView(), getSegmentCabinDTDBookingSnapshotView(), getSegmentCabinDTDRangeBookingSnapshotView(), and initSnapshotBlocks().

34.76.6.7 SnapshotBlock_T stdair::GuillotineBlock::_cancellationSnapshotBlock [protected]

Cancellation snapshot block.

Definition at line 297 of file GuillotineBlock.hpp.

Referenced by getConstSegmentCabinDTDCancellationSnapshotView(), getSegmentCabinDTDCancellationSnapshotView(), getSegmentCabinDTDRangeCancellationSnapshotView(), and initSnapshotBlocks().

34.76.6.8 SnapshotBlock_T stdair::GuillotineBlock::_productAndPriceOrientedBookingSnapshotBlock [protected]

Price & product oriented booking block.

Definition at line 300 of file GuillotineBlock.hpp.

Referenced by getConstSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView(), getSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView(), getSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView(), and initSnapshotBlocks().

34.76.6.9 SnapshotBlock_T stdair::GuillotineBlock::_availabilitySnapshotBlock [protected]

Availability block.

Definition at line 303 of file GuillotineBlock.hpp.

Referenced by getConstSegmentCabinDTDAvailabilitySnapshotView(), getSegmentCabinDTDAvailabilitySnapshotView(), getSegmentCabinDTDRangeAvailabilitySnapshotView(), and initSnapshotBlocks().

The documentation for this class was generated from the following files:

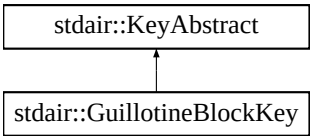
- stdair/bom/GuillotineBlock.hpp
- stdair/bom/GuillotineBlock.cpp

34.77 stdair::GuillotineBlockKey Struct Reference

Key of a given guillotine block, made of a guillotine number.

`#include <stdair/bom/GuillotineBlockKey.hpp>`

Inheritance diagram for stdair::GuillotineBlockKey:



Public Member Functions

- GuillotineBlockKey (const GuillotineNumber_T &)
- GuillotineBlockKey (const GuillotineBlockKey &)
- ~GuillotineBlockKey ()
- const GuillotineNumber_T & getGuillotineNumber () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Friends

- class boost::serialization::access

34.77.1 Detailed Description

Key of a given guillotine block, made of a guillotine number.

Definition at line 26 of file GuillotineBlockKey.hpp.

34.77.2 Constructor & Destructor Documentation

34.77.2.1 stdair::GuillotineBlockKey::GuillotineBlockKey (const GuillotineNumber_T & *iGuillotineNumber*)

Constructor.

Definition at line 26 of file GuillotineBlockKey.cpp.

34.77.2.2 stdair::GuillotineBlockKey::GuillotineBlockKey (const GuillotineBlockKey & *iKey*)

Copy constructor.

Definition at line 31 of file GuillotineBlockKey.cpp.

34.77.2.3 stdair::GuillotineBlockKey::~GuillotineBlockKey ( )

Destructor.

Definition at line 36 of file GuillotineBlockKey.cpp.

34.77.3 Member Function Documentation

34.77.3.1 const GuillotineNumber_T& stdair::GuillotineBlockKey::getGuillotineNumber ( ) const [inline]

Get the guillotine number.

Definition at line 56 of file GuillotineBlockKey.hpp.

Referenced by stdair::GuillotineBlock::getGuillotineNumber().

34.77.3.2 void stdair::GuillotineBlockKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 40 of file GuillotineBlockKey.cpp.

References toString().

34.77.3.3 void stdair::GuillotineBlockKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 45 of file GuillotineBlockKey.cpp.

34.77.3.4 const std::string stdair::GuillotineBlockKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-block.

Reimplemented from stdair::KeyAbstract.

Definition at line 49 of file GuillotineBlockKey.cpp.

Referenced by stdair::GuillotineBlock::describeKey(), and toStream().

34.77.3.5 template<class Archive > void stdair::GuillotineBlockKey::serialize (Archive & *ar,* const unsigned int *iFileVersion*)

Serialisation.

Definition at line 71 of file GuillotineBlockKey.cpp.

34.77.4 Friends And Related Function Documentation

34.77.4.1 friend class boost::serialization::access [friend]

Definition at line 27 of file GuillotineBlockKey.hpp.

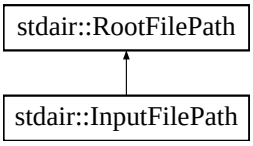
The documentation for this struct was generated from the following files:

- stdair/bom/GuillotineBlockKey.hpp
- stdair/bom/GuillotineBlockKey.cpp

34.78 stdair::InputFilePath Class Reference

`#include <stdair/stdair_file.hpp>`

Inheritance diagram for stdair::InputFilePath:



Public Member Functions

- InputFilePath (const Filename_T &iFilename)
- const char * name () const

Protected Attributes

- const Filename_T _filename

34.78.1 Detailed Description

Input File.

Definition at line 54 of file stdair_file.hpp.

34.78.2 Constructor & Destructor Documentation

34.78.2.1 stdair::InputFilePath::InputFilePath (const Filename_T & *iFilename*) [inline]

Constructor.

Definition at line 57 of file stdair_file.hpp.

34.78.3 Member Function Documentation

34.78.3.1 const char* stdair::RootFilePath::name ( ) const [inline, inherited]

Give the details of the exception.

Definition at line 42 of file stdair_file.hpp.

References stdair::RootFilePath::_filename.

34.78.4 Member Data Documentation

34.78.4.1 const Filename_T stdair::RootFilePath::_filename [protected, inherited]

Name of the file.

Definition at line 50 of file stdair_file.hpp.

Referenced by stdair::RootFilePath::name().

The documentation for this class was generated from the following file:

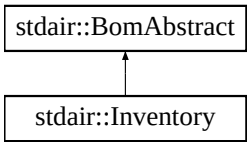
- stdair/stdair_file.hpp

34.79 stdair::Inventory Class Reference

Class representing the actual attributes for an airline inventory.

`#include <stdair/bom/Inventory.hpp>`

Inheritance diagram for stdair::Inventory:



Public Types

- typedef InventoryKey Key_T

Public Member Functions

- const Key_T & getKey () const
- const AirlineCode_T & getAirlineCode () const
- BomAbstract *const getParent () const
- const HolderMap_T & getHolderMap () const
- FlightDate * getFlightDate (const std::string &iFlightDateKeyStr) const
- FlightDate * getFlightDate (const FlightDateKey &) const
- void setAirlineFeature (const AirlineFeature *ioAirlineFeaturePtr)
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Protected Member Functions

- Inventory (const Key_T &)
- ~Inventory ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent
- const AirlineFeature * _airlineFeature
- HolderMap_T _holderMap

Friends

- class FacBom
- class FacBomManager
- class boost::serialization::access

34.79.1 Detailed Description

Class representing the actual attributes for an airline inventory.

Definition at line 33 of file Inventory.hpp.

34.79.2 Member Typedef Documentation

34.79.2.1 typedef InventoryKey stdair::Inventory::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 43 of file Inventory.hpp.

34.79.3 Constructor & Destructor Documentation

34.79.3.1 stdair::Inventory::Inventory (const Key_T & *iKey*) [protected]

Constructor.

Definition at line 27 of file Inventory.cpp.

34.79.3.2 stdair::Inventory::~Inventory ( ) [protected]

Destructor.

Definition at line 31 of file Inventory.cpp.

34.79.4 Member Function Documentation

34.79.4.1 const Key_T& stdair::Inventory::getKey ( ) const [inline]

Get the inventory key (airline code).

Definition at line 49 of file Inventory.hpp.

References _key.

34.79.4.2 const AirlineCode_T& stdair::Inventory::getAirlineCode ( ) const [inline]

Get the airline code (inventory/primary key).

Definition at line 54 of file Inventory.hpp.

References _key, and stdair::InventoryKey::getAirlineCode().

Referenced by stdair::OnDDate::getAirlineCode(), stdair::FlightDate::getAirlineCode(), and stdair::BomRetriever::retrieveSegmentDateFromLongKey().

34.79.4.3 BomAbstract* const stdair::Inventory::getParent ( ) const [inline]

Get the parent object.

Definition at line 59 of file Inventory.hpp.

References _parent.

34.79.4.4 const HolderMap_T& stdair::Inventory::getHolderMap ( ) const [inline]

Get the map of children.

Definition at line 64 of file Inventory.hpp.

References _holderMap.

34.79.4.5 FlightDate * stdair::Inventory::getFlightDate (const std::string & *iFlightDateKeyStr*) const

Get a pointer on the FlightDate object corresponding to the given key.

Note

The FlightDate object can be inherited from, if needed. In that case, a dynamic_-cast<> may be needed.

Parameters

const	std::string& The flight-date key.

Returns

FlightDate* Found FlightDate object. NULL if not found.

Definition at line 43 of file Inventory.cpp.

Referenced by getFlightDate(), stdair::BomRetriever::retrieveFlightDateFromKey(), and stdair::BomRetriever::retrieveFlightDateFromLongKey().

34.79.4.6 FlightDate * stdair::Inventory::getFlightDate (const FlightDateKey & *iFlightDateKey*) const

Get a pointer on the FlightDate object corresponding to the given key.

Note

The FlightDate object can be inherited from, if needed. In that case, a dynamic_-cast<> may be needed.

Parameters

const	FlightDateKey& The flight-date key

Returns

FlightDate* Found FlightDate object. NULL if not found.

Definition at line 51 of file Inventory.cpp.

References getFlightDate(), and stdair::FlightDateKey::toString().

34.79.4.7 void stdair::Inventory::setAirlineFeature (const AirlineFeature * *ioAirlineFeaturePtr*) [inline]

Set the airline feature.

Definition at line 96 of file Inventory.hpp.

References _airlineFeature.

34.79.4.8 void stdair::Inventory::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 108 of file Inventory.hpp.

References toString().

34.79.4.9 void stdair::Inventory::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 117 of file Inventory.hpp.

34.79.4.10 std::string stdair::Inventory::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 35 of file Inventory.cpp.

References describeKey().

Referenced by toStream().

34.79.4.11 const std::string stdair::Inventory::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 128 of file Inventory.hpp.

References _key, and stdair::InventoryKey::toString().

Referenced by toString().

34.79.4.12 template<class Archive > void stdair::Inventory::serialize (Archive & *ar,* const unsigned int *iFileVersion*)

Serialisation.

Definition at line 160 of file CmdBomSerialiser.cpp.

References _key.

34.79.5 Friends And Related Function Documentation

34.79.5.1 friend class FacBom [friend]

Definition at line 34 of file Inventory.hpp.

34.79.5.2 friend class FacBomManager [friend]

Definition at line 35 of file Inventory.hpp.

34.79.5.3 friend class boost::serialization::access [friend]

Definition at line 36 of file Inventory.hpp.

34.79.6 Member Data Documentation

34.79.6.1 Key_T stdair::Inventory::_key [protected]

Primary key (airline code).

Definition at line 180 of file Inventory.hpp.

Referenced by describeKey(), getAirlineCode(), getKey(), and serialize().

34.79.6.2 BomAbstract* stdair::Inventory::_parent [protected]

Pointer on the parent class (BomRoot).

Definition at line 185 of file Inventory.hpp.

Referenced by getParent().

34.79.6.3 const AirlineFeature* stdair::Inventory::_airlineFeature [protected]

Features specific to the airline.

Definition at line 190 of file Inventory.hpp.

Referenced by setAirlineFeature().

34.79.6.4 HolderMap_T stdair::Inventory::_holderMap [protected]

Map holding the children (FlightDate objects).

Definition at line 195 of file Inventory.hpp.

Referenced by getHolderMap().

The documentation for this class was generated from the following files:

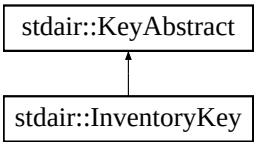
- stdair/bom/Inventory.hpp
- stdair/bom/Inventory.cpp
- stdair/command/CmdBomSerialiser.cpp

34.80 stdair::InventoryKey Struct Reference

Key of a given inventory, made of the airline code.

`#include <stdair/bom/InventoryKey.hpp>`

Inheritance diagram for stdair::InventoryKey:



Public Member Functions

- InventoryKey (const AirlineCode_T &iAirlineCode)
- InventoryKey (const InventoryKey &)
- ~InventoryKey ()
- const AirlineCode_T & getAirlineCode () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Friends

- class boost::serialization::access

34.80.1 Detailed Description

Key of a given inventory, made of the airline code.

Definition at line 26 of file InventoryKey.hpp.

34.80.2 Constructor & Destructor Documentation

34.80.2.1 stdair::InventoryKey::InventoryKey (const AirlineCode_T & *iAirlineCode*)

Constructor.

Definition at line 23 of file InventoryKey.cpp.

34.80.2.2 stdair::InventoryKey::InventoryKey (const InventoryKey & *iKey*)

Copy constructor.

Definition at line 28 of file InventoryKey.cpp.

34.80.2.3 stdair::InventoryKey::~InventoryKey ( )

Destructor.

Definition at line 33 of file InventoryKey.cpp.

34.80.3 Member Function Documentation

34.80.3.1 const AirlineCode_T& stdair::InventoryKey::getAirlineCode ( ) const [inline]

Get the airline code.

Definition at line 58 of file InventoryKey.hpp.

Referenced by stdair::Inventory::getAirlineCode().

34.80.3.2 void stdair::InventoryKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 37 of file InventoryKey.cpp.

References toString().

34.80.3.3 void stdair::InventoryKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 42 of file InventoryKey.cpp.

34.80.3.4 const std::string stdair::InventoryKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from stdair::KeyAbstract.

Definition at line 46 of file InventoryKey.cpp.

Referenced by stdair::Inventory::describeKey(), stdair::BomRoot::getInventory(), and toStream().

34.80.3.5 template<class Archive > void stdair::InventoryKey::serialize (Archive & *ar,* const unsigned int *iFileVersion*)

Serialisation.

Definition at line 68 of file InventoryKey.cpp.

34.80.4 Friends And Related Function Documentation

34.80.4.1 friend class boost::serialization::access [friend]

Definition at line 27 of file InventoryKey.hpp.

The documentation for this struct was generated from the following files:

- stdair/bom/InventoryKey.hpp
- stdair/bom/InventoryKey.cpp

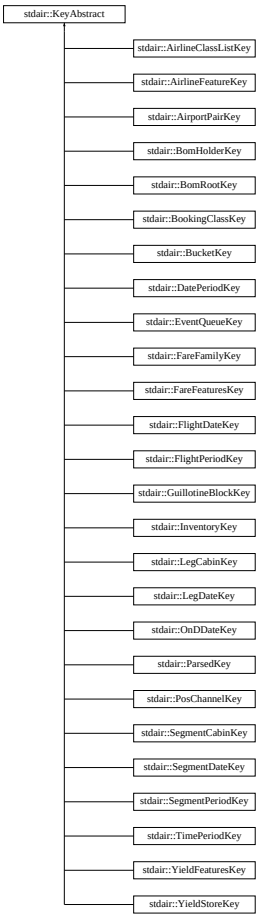
34.81 stdair::KeyAbstract Struct Reference

Base class for the keys of Business Object Model (BOM) layer.

Note that that key allows to differentiate two objects at the same level only. For instance, the segment-date key allows to differentiate two segment-dates under a given flight-date, but does not allow to differentiate two segemnt-dates in general.

`#include <stdair/bom/KeyAbstract.hpp>`

Inheritance diagram for stdair::KeyAbstract:



Public Member Functions

- virtual void toStream (std::ostream &ioOut) const

  Dump a Business Object Key into an output stream.
- virtual void fromStream (std::istream &ioIn)

  Read a Business Object Key from an input stream.
- virtual const std::string toString () const

  Get the serialised version of the Business Object Key.
  That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.
  For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.
- virtual ~KeyAbstract ()

  Default destructor.

34.81.1 Detailed Description

Base class for the keys of Business Object Model (BOM) layer.

Note that that key allows to differentiate two objects at the same level only. For instance, the segment-date key allows to differentiate two segment-dates under a given flight-date, but does not allow to differentiate two segemnt-dates in general.

Definition at line 26 of file KeyAbstract.hpp.

34.81.2 Constructor & Destructor Documentation

34.81.2.1 virtual stdair::KeyAbstract::~KeyAbstract ( ) [inline, virtual]

Default destructor.

Definition at line 56 of file KeyAbstract.hpp.

34.81.3 Member Function Documentation

34.81.3.1 virtual void stdair::KeyAbstract::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object Key into an output stream.

Parameters

inout]	ostream& the output stream.

Reimplemented in stdair::AirlineClassListKey, stdair::AirlineFeatureKey, stdair::AirportPairKey, stdair::BomHolderKey, stdair::BomRootKey, stdair::BookingClassKey, stdair::BucketKey, stdair::DatePeriodKey, stdair::EventQueueKey, stdair::FareFamilyKey, stdair::FareFeaturesKey, stdair::FlightDateKey, stdair::FlightPeriodKey, stdair::GuillotineBlockKey, stdair::InventoryKey, stdair::LegCabinKey, stdair::LegDateKey, stdair::OnDDateKey, stdair::ParsedKey, stdair::PosChannelKey, stdair::SegmentCabinKey, stdair::SegmentDateKey, stdair::SegmentPeriodKey, stdair::TimePeriodKey, stdair::YieldFeaturesKey, and stdair::YieldStoreKey.

Definition at line 34 of file KeyAbstract.hpp.

Referenced by operator<<().

34.81.3.2 virtual void stdair::KeyAbstract::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object Key from an input stream.

Parameters

inout]	istream& the input stream.

Reimplemented in stdair::AirlineClassListKey, stdair::AirlineFeatureKey, stdair::AirportPairKey, stdair::BomHolderKey, stdair::BomRootKey, stdair::BookingClassKey, stdair::BucketKey,

stdair::DatePeriodKey, stdair::EventQueueKey, stdair::FareFamilyKey, stdair::FareFeaturesKey, stdair::FlightDateKey, stdair::FlightPeriodKey, stdair::GuillotineBlockKey, stdair::InventoryKey, stdair::LegCabinKey, stdair::LegDateKey, stdair::OnDDateKey, stdair::ParsedKey, stdair::PosChannelKey, stdair::SegmentCabinKey, stdair::SegmentDateKey, stdair::SegmentPeriodKey, stdair::TimePeriodKey, stdair::YieldFeaturesKey, and stdair::YieldStoreKey.

Definition at line 40 of file KeyAbstract.hpp.

Referenced by operator>>().

34.81.3.3 virtual const std::string stdair::KeyAbstract::toString ( ) const [inline, virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Parameters

out	*const*	std::string The serialised version of the Business Object Key.

Reimplemented in stdair::AirlineClassListKey, stdair::AirlineFeatureKey, stdair::AirportPairKey, stdair::BomHolderKey, stdair::BomRootKey, stdair::BookingClassKey, stdair::BucketKey, stdair::DatePeriodKey, stdair::EventQueueKey, stdair::FareFamilyKey, stdair::FareFeaturesKey, stdair::FlightDateKey, stdair::FlightPeriodKey, stdair::GuillotineBlockKey, stdair::InventoryKey, stdair::LegCabinKey, stdair::LegDateKey, stdair::OnDDateKey, stdair::ParsedKey, stdair::PosChannelKey, stdair::SegmentCabinKey, stdair::SegmentDateKey, stdair::SegmentPeriodKey, stdair::TimePeriodKey, stdair::YieldFeaturesKey, and stdair::YieldStoreKey.

Definition at line 51 of file KeyAbstract.hpp.

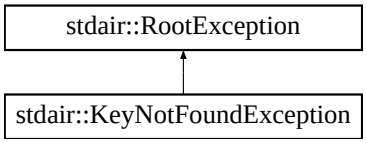
The documentation for this struct was generated from the following file:

- stdair/bom/KeyAbstract.hpp

34.82 stdair::KeyNotFoundException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::KeyNotFoundException:



Public Member Functions

- KeyNotFoundException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.82.1 Detailed Description

Not found key.

Definition at line 126 of file stdair_exceptions.hpp.

34.82.2 Constructor & Destructor Documentation

34.82.2.1 stdair::KeyNotFoundException::KeyNotFoundException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 129 of file stdair_exceptions.hpp.

34.82.3 Member Function Documentation

34.82.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.82.4 Member Data Documentation

34.82.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

The documentation for this class was generated from the following file:

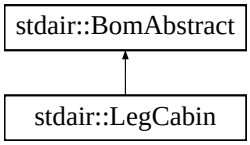
- stdair/stdair_exceptions.hpp

34.83 stdair::LegCabin Class Reference

Class representing the actual attributes for an airline leg-cabin.

`#include <stdair/bom/LegCabin.hpp>`

Inheritance diagram for stdair::LegCabin:



Public Types

- typedef LegCabinKey Key_T

Public Member Functions

- const Key_T & getKey () const
- BomAbstract *const getParent () const
- const CabinCode_T & getCabinCode () const
- const MapKey_T getFullerKey () const
- const HolderMap_T & getHolderMap () const
- const CabinCapacity_T & getOfferedCapacity () const
- const CabinCapacity_T & getPhysicalCapacity () const
- const NbOfSeats_T & getSoldSeat () const
- const CommittedSpace_T & getCommittedSpace () const
- const Availability_T & getAvailabilityPool () const
- const Availability_T & getAvailability () const
- const BidPrice_T & getCurrentBidPrice () const
- const BidPrice_T & getPreviousBidPrice () const
- const BidPriceVector_T & getBidPriceVector () const
- const CapacityAdjustment_T & getRegradeAdjustment () const
- const AuthorizationLevel_T & getAuthorizationLevel () const
- const UPR_T & getUPR () const
- const Availability_T & getNetAvailability () const
- const Availability_T & getGrossAvailability () const
- const OverbookingRate_T & getAvgCancellationPercentage () const
- const NbOfSeats_T & getETB () const
- const NbOfSeats_T & getStaffNbOfSeats () const
- const NbOfSeats_T & getWLNbOfSeats () const
- const NbOfSeats_T & getGroupNbOfSeats () const
- VirtualClassList_T & getVirtualClassList ()
- BidPriceVector_T & getBidPriceVector ()
- const YieldLevelDemandMap_T getYieldLevelDemandMap ()

- void setCapacities (const CabinCapacity_T &iCapacity)
- void setSoldSeat (const NbOfSeats_T &iSoldSeat)
- void setCommittedSpace (const CommittedSpace_T &iCommittedSpace)
- void setAvailabilityPool (const Availability_T &iAvailabilityPool)
- void setAvailability (const Availability_T &iAvailability)
- void setCurrentBidPrice (const BidPrice_T &iBidPrice)
- void setPreviousBidPrice (const BidPrice_T &iBidPrice)
- void updatePreviousBidPrice ()
- void setRegradeAdjustment (const CapacityAdjustment_T &iRegradeAdjustment)
- void setAuthorizationLevel (const AuthorizationLevel_T &iAU)
- void setUPR (const UPR_T &iUPR)
- void setNetAvailability (const Availability_T &iNAV)
- void setGrossAvailability (const Availability_T &iGAV)
- void setAvgCancellationPercentage (const OverbookingRate_T &iACP)
- void setETB (const NbOfSeats_T &iETB)
- void setStaffNbOfSeats (const NbOfSeats_T &iStaffSeats)
- void setWLNbOfSeats (const NbOfSeats_T &iWLSeats)
- void setGroupNbOfSeats (const NbOfSeats_T &iGroupSeats)
- void updateCurrentBidPrice ()
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const
- const std::string displayVirtualClassList () const
- void updateFromReservation (const NbOfBookings_T &)
- void addVirtualClass (const VirtualClassStruct &iVC)
- void emptyVirtualClassList ()
- void emptyBidPriceVector ()
- void addDemandInformation (const YieldValue_T &, const MeanValue_T &, const StdDevValue_T &)
- void emptyYieldLevelDemandMap ()

Public Attributes

- CapacityAdjustment_T _dcsRegrade
- AuthorizationLevel_T _au
- UPR_T _upr
- Availability_T _nav
- Availability_T _gav
- OverbookingRate_T _acp
- NbOfSeats_T _etb
- NbOfSeats_T _staffNbOfBookings
- NbOfSeats_T _wlNbOfBookings
- NbOfSeats_T _groupNbOfBookings

Protected Member Functions

- LegCabin (const Key_T &)
- ~LegCabin ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent
- HolderMap_T _holderMap
- CabinCapacity_T _offeredCapacity
- CabinCapacity_T _physicalCapacity
- NbOfSeats_T _soldSeat
- CommittedSpace_T _committedSpace
- Availability_T _availabilityPool
- Availability_T _availability
- BidPrice_T _currentBidPrice
- BidPrice_T _previousBidPrice
- BidPriceVector_T _bidPriceVector
- VirtualClassList_T _virtualClassList
- YieldLevelDemandMap_T _yieldLevelDemandMap

Friends

- class FacBom
- class FacBomManager

34.83.1 Detailed Description

Class representing the actual attributes for an airline leg-cabin.

Definition at line 24 of file LegCabin.hpp.

34.83.2 Member Typedef Documentation

34.83.2.1 typedef LegCabinKey stdair::LegCabin::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 33 of file LegCabin.hpp.

34.83.3 Constructor & Destructor Documentation

34.83.3.1 stdair::LegCabin::LegCabin (const Key_T & *iKey*) [protected]

Constructor.

Definition at line 30 of file LegCabin.cpp.

34.83.3.2 stdair::LegCabin::~LegCabin ( ) [protected]

Destructor.

Definition at line 43 of file LegCabin.cpp.

34.83.4 Member Function Documentation

34.83.4.1 const Key_T& stdair::LegCabin::getKey ( ) const [inline]

Get the leg-cabin key (cabin code).

Definition at line 40 of file LegCabin.hpp.

References _key.

34.83.4.2 BomAbstract* const stdair::LegCabin::getParent ( ) const [inline]

Get the parent object.

Definition at line 47 of file LegCabin.hpp.

References _parent.

34.83.4.3 const CabinCode_T& stdair::LegCabin::getCabinCode ( ) const [inline]

Get the cabin code (from key).

Definition at line 54 of file LegCabin.hpp.

References _key, and stdair::LegCabinKey::getCabinCode().

Referenced by getFullerKey().

34.83.4.4 const MapKey_T stdair::LegCabin::getFullerKey ( ) const

Get the (leg-date, leg-cabin) key (board point and cabin code).

Note

That method assumes that the parent object derives from the SegmentDate class, as it needs to have access to the describeKey() method.

Definition at line 54 of file LegCabin.cpp.

References stdair::DEFAULT_KEY_FLD_DELIMITER, stdair::LegDate::describeKey(), and getCabinCode().

34.83.4.5 const HolderMap_T& stdair::LegCabin::getHolderMap ( ) const [inline]

Get the map of children holders.

Definition at line 70 of file LegCabin.hpp.

References _holderMap.

34.83.4.6 const CabinCapacity_T& stdair::LegCabin::getOfferedCapacity ( ) const [inline]

Get the cabin offered capacity.

Definition at line 75 of file LegCabin.hpp.

References _offeredCapacity.

34.83.4.7 const CabinCapacity_T& stdair::LegCabin::getPhysicalCapacity ( ) const [inline]

Get the cabin physical capacity.

Definition at line 80 of file LegCabin.hpp.

References _physicalCapacity.

34.83.4.8 const NbOfSeats_T& stdair::LegCabin::getSoldSeat ( ) const [inline]

Get the number of sold seat.

Definition at line 85 of file LegCabin.hpp.

References _soldSeat.

34.83.4.9 const CommittedSpace_T& stdair::LegCabin::getCommittedSpace ( ) const [inline]

Get the value of committed space.

Definition at line 90 of file LegCabin.hpp.

References _committedSpace.

34.83.4.10 const Availability_T& stdair::LegCabin::getAvailabilityPool ( ) const [inline]

Get the value of the availability pool.

Definition at line 95 of file LegCabin.hpp.

References _availabilityPool.

34.83.4.11 const Availability_T& stdair::LegCabin::getAvailability ( ) const [inline]

Get the value of the availability.

Definition at line 100 of file LegCabin.hpp.

References _availability.

34.83.4.12 const BidPrice_T& stdair::LegCabin::getCurrentBidPrice ( ) const [inline]

Get the current Bid-Price.

Definition at line 105 of file LegCabin.hpp.

References _currentBidPrice.

34.83.4.13 const BidPrice_T& stdair::LegCabin::getPreviousBidPrice ( ) const [inline]

Get the previous Bid-Price.

Definition at line 110 of file LegCabin.hpp.

References _previousBidPrice.

34.83.4.14 const BidPriceVector_T& stdair::LegCabin::getBidPriceVector ( ) const [inline]

Get the Bid-Price Vector.

Definition at line 115 of file LegCabin.hpp.

References _bidPriceVector.

34.83.4.15 const CapacityAdjustment_T& stdair::LegCabin::getRegradeAdjustment ( ) const [inline]

Get the capacity adjustment due to check-in (DCS) regrade.

Definition at line 120 of file LegCabin.hpp.

References _dcsRegrade.

34.83.4.16 const AuthorizationLevel_T& stdair::LegCabin::getAuthorizationLevel ( ) const [inline]

Authorisation Level (AU).

Definition at line 125 of file LegCabin.hpp.

References _au.

34.83.4.17 const UPR_T& stdair::LegCabin::getUPR ( ) const [inline]

Unsold Protection (UPR).

Definition at line 130 of file LegCabin.hpp.

References _upr.

34.83.4.18 const Availability_T& stdair::LegCabin::getNetAvailability ( ) const [inline]

Net Availability (NAV).

Definition at line 135 of file LegCabin.hpp.

References _nav.

34.83.4.19 const Availability_T& stdair::LegCabin::getGrossAvailability ( ) const [inline]

Gross Availability (GAV).

Definition at line 140 of file LegCabin.hpp.

References _gav.

34.83.4.20 const OverbookingRate_T& stdair::LegCabin::getAvgCancellationPercentage ( ) const [inline]

Average Cancellation Percentage (ACP).

Definition at line 145 of file LegCabin.hpp.

References _acp.

34.83.4.21 const NbOfSeats_T& stdair::LegCabin::getETB ( ) const [inline]

Expected to Board (ETB).

Definition at line 150 of file LegCabin.hpp.

References _etb.

34.83.4.22 const NbOfSeats_T& stdair::LegCabin::getStaffNbOfSeats ( ) const [inline]

Number of staff bookings.

Definition at line 155 of file LegCabin.hpp.

References _staffNbOfBookings.

34.83.4.23 const NbOfSeats_T& stdair::LegCabin::getWLNbOfSeats ( ) const [inline]

Number of wait-listed bookings.

Definition at line 160 of file LegCabin.hpp.

References _wlNbOfBookings.

34.83.4.24 const NbOfSeats_T& stdair::LegCabin::getGroupNbOfSeats ( ) const [inline]

Number of group bookings.

Definition at line 165 of file LegCabin.hpp.

References _groupNbOfBookings.

34.83.4.25 VirtualClassList_T& stdair::LegCabin::getVirtualClassList ( ) [inline]

The virtual class list.

Definition at line 170 of file LegCabin.hpp.

References _virtualClassList.

34.83.4.26 BidPriceVector_T& stdair::LegCabin::getBidPriceVector ( ) [inline]

Reset the bid price vector and return it.

Definition at line 175 of file LegCabin.hpp.

References _bidPriceVector.

34.83.4.27 const YieldLevelDemandMap_T stdair::LegCabin::getYieldLevelDemandMap ( ) [inline]

Get the yield-demand map.

Definition at line 181 of file LegCabin.hpp.

References _yieldLevelDemandMap.

34.83.4.28 void stdair::LegCabin::setCapacities (const CabinCapacity_T & *iCapacity*)

Set the offered and physical capacities.

Definition at line 47 of file LegCabin.cpp.

References _committedSpace, _offeredCapacity, _physicalCapacity, and setAvailabilityPool().

34.83.4.29 void stdair::LegCabin::setSoldSeat (const NbOfSeats_T & *iSoldSeat*) [inline]

Set the number of sold seat.

Definition at line 192 of file LegCabin.hpp.

References _soldSeat.

34.83.4.30 void stdair::LegCabin::setCommittedSpace (const CommittedSpace_T & *iCommittedSpace*) [inline]

Set the value of committed space.

Definition at line 197 of file LegCabin.hpp.

References _committedSpace.

34.83.4.31 void stdair::LegCabin::setAvailabilityPool (const Availability_T & *iAvailabilityPool*) [inline]

Set the value of availability pool.

Definition at line 202 of file LegCabin.hpp.

References _availabilityPool.

Referenced by setCapacities().

34.83.4.32 void stdair::LegCabin::setAvailability (const Availability_T & *iAvailability*) [inline]

Set the value of availability.

Definition at line 207 of file LegCabin.hpp.

References _availability.

34.83.4.33 void stdair::LegCabin::setCurrentBidPrice (const BidPrice_T & *iBidPrice*) [inline]

Set the current Bid-Price.

Definition at line 212 of file LegCabin.hpp.

References _currentBidPrice.

34.83.4.34 void stdair::LegCabin::setPreviousBidPrice (const BidPrice_T & *iBidPrice*) [inline]

Set the previous Bid-Price.

Definition at line 217 of file LegCabin.hpp.

References _previousBidPrice.

34.83.4.35 void stdair::LegCabin::updatePreviousBidPrice ( ) [inline]

Update the previous bid price value with the current one.

Definition at line 222 of file LegCabin.hpp.

References _currentBidPrice, and _previousBidPrice.

34.83.4.36 void stdair::LegCabin::setRegradeAdjustment (const CapacityAdjustment_T & *iRegradeAdjustment*) [inline]

Get the capacity adjustment due to check-in (DCS) regrade.

Definition at line 227 of file LegCabin.hpp.

References _dcsRegrade.

34.83.4.37 void stdair::LegCabin::setAuthorizationLevel (const AuthorizationLevel_T & *iAU*) [inline]

Set the Authorisation Level (AU).

Definition at line 232 of file LegCabin.hpp.

References _au.

34.83.4.38 void stdair::LegCabin::setUPR (const UPR_T & *iUPR*) [inline]

Set the Unsold Protection (UPR).

Definition at line 237 of file LegCabin.hpp.

References _upr.

34.83.4.39 void stdair::LegCabin::setNetAvailability (const Availability_T & *iNAV*) [inline]

Set the Net Availability (NAV).

Definition at line 242 of file LegCabin.hpp.

References _nav.

34.83.4.40 void stdair::LegCabin::setGrossAvailability (const Availability_T & *iGAV*) [inline]

Set the Gross Availability (GAV).

Definition at line 247 of file LegCabin.hpp.

References _gav.

34.83.4.41 void stdair::LegCabin::setAvgCancellationPercentage (const OverbookingRate_T & *iACP*) [inline]

Set the Average Cancellation Percentage (ACP).

Definition at line 252 of file LegCabin.hpp.

References _acp.

34.83.4.42 void stdair::LegCabin::setETB (const NbOfSeats_T & *iETB*) [inline]

Set the Expected to Board (ETB).

Definition at line 257 of file LegCabin.hpp.

References _etb.

34.83.4.43 void stdair::LegCabin::setStaffNbOfSeats (const NbOfSeats_T & *iStaffSeats*) [inline]

Set the Number of staff sold seats.

Definition at line 262 of file LegCabin.hpp.

References _staffNbOfBookings.

34.83.4.44 void stdair::LegCabin::setWLNbOfSeats (const NbOfSeats_T & *iWLSeats*) [inline]

Set the Number of wait-listed sold seats.

Definition at line 267 of file LegCabin.hpp.

References _wlNbOfBookings.

34.83.4.45 void stdair::LegCabin::setGroupNbOfSeats (const NbOfSeats_T & *iGroupSeats*) [inline]

Set the Number of group sold seats.

Definition at line 272 of file LegCabin.hpp.

References _groupNbOfBookings.

34.83.4.46 void stdair::LegCabin::updateCurrentBidPrice ( )

Update the bid price (from bid price vector if not empty).

Definition at line 94 of file LegCabin.cpp.

References _availabilityPool, _bidPriceVector, and _currentBidPrice.

34.83.4.47 void stdair::LegCabin::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 286 of file LegCabin.hpp.

References toString().

34.83.4.48 void stdair::LegCabin::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 294 of file LegCabin.hpp.

34.83.4.49 std::string stdair::LegCabin::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 63 of file LegCabin.cpp.

References describeKey().

Referenced by toStream().

34.83.4.50 const std::string stdair::LegCabin::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 305 of file LegCabin.hpp.

References _key, and stdair::LegCabinKey::toString().

Referenced by toString().

34.83.4.51 const std::string stdair::LegCabin::displayVirtualClassList ( ) const

Display the virtual class list content.

Definition at line 70 of file LegCabin.cpp.

References _virtualClassList, stdair::VirtualClassStruct::getCumulatedBookingLimit(), stdair::VirtualClassStruct::getCum
and stdair::VirtualClassStruct::getYield().

34.83.4.52 void stdair::LegCabin::updateFromReservation (const NbOfBookings_T & *iNbOfBookings*)

Register a sale.

Definition at line 88 of file LegCabin.cpp.

References _availabilityPool, _committedSpace, and _offeredCapacity.

34.83.4.53 void stdair::LegCabin::addVirtualClass (const VirtualClassStruct & *iVC*) [inline]

Add a virtual class to the list.

Definition at line 325 of file LegCabin.hpp.

References _virtualClassList.

34.83.4.54 void stdair::LegCabin::emptyVirtualClassList ( ) [inline]

Empty the virtual class list.

Definition at line 332 of file LegCabin.hpp.

References _virtualClassList.

34.83.4.55 void stdair::LegCabin::emptyBidPriceVector ( ) [inline]

Empty the bid price vector.

Definition at line 339 of file LegCabin.hpp.

References _bidPriceVector.

34.83.4.56 void stdair::LegCabin::addDemandInformation (const YieldValue_T & *iYield,* const MeanValue_T & *iMeanValue,* const StdDevValue_T & *iStdDevValue*)

Add demand information.

Definition at line 107 of file LegCabin.cpp.

References _yieldLevelDemandMap.

34.83.4.57 void stdair::LegCabin::emptyYieldLevelDemandMap ( ) [inline]

Reset the (yield level,demand) map.

Definition at line 352 of file LegCabin.hpp.

References _yieldLevelDemandMap.

34.83.5 Friends And Related Function Documentation

34.83.5.1 friend class FacBom [friend]

Definition at line 25 of file LegCabin.hpp.

34.83.5.2 friend class FacBomManager [friend]

Definition at line 26 of file LegCabin.hpp.

34.83.6 Member Data Documentation

34.83.6.1 Key_T stdair::LegCabin::_key [protected]

Primary key (cabin code).

Definition at line 385 of file LegCabin.hpp.

Referenced by describeKey(), getCabinCode(), and getKey().

34.83.6.2 BomAbstract* stdair::LegCabin::_parent [protected]

Pointer on the parent class (LegDate).

Definition at line 390 of file LegCabin.hpp.

Referenced by getParent().

34.83.6.3 HolderMap_T stdair::LegCabin::_holderMap [protected]

Map holding the children (Bucket objects).

Definition at line 395 of file LegCabin.hpp.

Referenced by getHolderMap().

34.83.6.4 CabinCapacity_T stdair::LegCabin::_offeredCapacity [protected]

Saleable capacity of the cabin.

Definition at line 398 of file LegCabin.hpp.

Referenced by getOfferedCapacity(), setCapacities(), and updateFromReservation().

34.83.6.5 CabinCapacity_T stdair::LegCabin::_physicalCapacity [protected]

Physical capacity of the cabin.

Definition at line 401 of file LegCabin.hpp.

Referenced by getPhysicalCapacity(), and setCapacities().

34.83.6.6 NbOfSeats_T stdair::LegCabin::_soldSeat [protected]

Aggregated number of sold seats.

Definition at line 404 of file LegCabin.hpp.

Referenced by getSoldSeat(), and setSoldSeat().

34.83.6.7 CommittedSpace_T stdair::LegCabin::_committedSpace [protected]

Definition at line 407 of file LegCabin.hpp.

Referenced by getCommittedSpace(), setCapacities(), setCommittedSpace(), and updateFromReservation().

34.83.6.8 Availability_T stdair::LegCabin::_availabilityPool [protected]

Availability pool.

Definition at line 410 of file LegCabin.hpp.

Referenced by getAvailabilityPool(), setAvailabilityPool(), updateCurrentBidPrice(), and updateFromReservation().

34.83.6.9 Availability_T stdair::LegCabin::_availability [protected]

Availability.

Definition at line 413 of file LegCabin.hpp.

Referenced by getAvailability(), and setAvailability().

34.83.6.10 BidPrice_T stdair::LegCabin::_currentBidPrice [protected]

Current Bid-Price (BP).

Definition at line 416 of file LegCabin.hpp.

Referenced by getCurrentBidPrice(), setCurrentBidPrice(), updateCurrentBidPrice(), and updatePreviousBidPrice().

34.83.6.11 BidPrice_T stdair::LegCabin::_previousBidPrice [protected]

Previous Bid-Price (BP).

Definition at line 419 of file LegCabin.hpp.

Referenced by getPreviousBidPrice(), setPreviousBidPrice(), and updatePreviousBidPrice().

34.83.6.12 BidPriceVector_T stdair::LegCabin::_bidPriceVector [protected]

Bid-Price Vector (BPV).

Definition at line 422 of file LegCabin.hpp.

Referenced by emptyBidPriceVector(), getBidPriceVector(), and updateCurrentBidPrice().

34.83.6.13 VirtualClassList_T stdair::LegCabin::_virtualClassList [protected]

List of virtual classes (for revenue management optimisation).

Definition at line 425 of file LegCabin.hpp.

Referenced by addVirtualClass(), displayVirtualClassList(), emptyVirtualClassList(), and getVirtualClassList().

34.83.6.14 YieldLevelDemandMap_T stdair::LegCabin::_yieldLevelDemandMap [protected]

Map holding the demand information indexed by yield.

Definition at line 428 of file LegCabin.hpp.

Referenced by addDemandInformation(), emptyYieldLevelDemandMap(), and getYield-LevelDemandMap().

34.83.6.15 CapacityAdjustment_T stdair::LegCabin::_dcsRegrade

Capacity adjustment of the cabin, due to check-in (DCS) regrade.

Definition at line 433 of file LegCabin.hpp.

Referenced by getRegradeAdjustment(), and setRegradeAdjustment().

34.83.6.16 AuthorizationLevel_T stdair::LegCabin::_au

Authorisation Level (AU).

Definition at line 436 of file LegCabin.hpp.

Referenced by getAuthorizationLevel(), and setAuthorizationLevel().

34.83.6.17 UPR_T stdair::LegCabin::_upr

Unsold Protection (UPR).

Definition at line 439 of file LegCabin.hpp.

Referenced by getUPR(), and setUPR().

34.83.6.18 Availability_T stdair::LegCabin::_nav

Net Availability (NAV).

Definition at line 442 of file LegCabin.hpp.

Referenced by getNetAvailability(), and setNetAvailability().

34.83.6.19 Availability_T stdair::LegCabin::_gav

Gross Availability (GAV).

Definition at line 445 of file LegCabin.hpp.

Referenced by getGrossAvailability(), and setGrossAvailability().

34.83.6.20 OverbookingRate_T stdair::LegCabin::_acp

Average Cancellation Percentage (ACP).

Definition at line 448 of file LegCabin.hpp.

Referenced by getAvgCancellationPercentage(), and setAvgCancellationPercentage().

34.83.6.21 NbOfSeats_T stdair::LegCabin::_etb

Expected to Board (ETB).

Definition at line 451 of file LegCabin.hpp.

Referenced by getETB(), and setETB().

34.83.6.22 NbOfSeats_T stdair::LegCabin::_staffNbOfBookings

Number of staff bookings.

Definition at line 454 of file LegCabin.hpp.

Referenced by getStaffNbOfSeats(), and setStaffNbOfSeats().

34.83.6.23 NbOfSeats_T stdair::LegCabin::_wlNbOfBookings

Number of wait-listed bookings.

Definition at line 457 of file LegCabin.hpp.

Referenced by getWLNbOfSeats(), and setWLNbOfSeats().

34.83.6.24 NbOfSeats_T stdair::LegCabin::_groupNbOfBookings

Number of group bookings.

Definition at line 460 of file LegCabin.hpp.

Referenced by getGroupNbOfSeats(), and setGroupNbOfSeats().

The documentation for this class was generated from the following files:

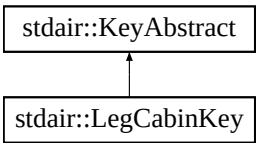
- stdair/bom/LegCabin.hpp
- stdair/bom/LegCabin.cpp

34.84 stdair::LegCabinKey Struct Reference

Key of a given leg-cabin, made of a cabin code (only).

`#include <stdair/bom/LegCabinKey.hpp>`

Inheritance diagram for stdair::LegCabinKey:



Public Member Functions

- LegCabinKey (const CabinCode_T &iCabinCode)
- LegCabinKey (const LegCabinKey &)
- ~LegCabinKey ()
- const CabinCode_T & getCabinCode () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Friends

- class boost::serialization::access

34.84.1 Detailed Description

Key of a given leg-cabin, made of a cabin code (only).

Definition at line 26 of file LegCabinKey.hpp.

34.84.2 Constructor & Destructor Documentation

34.84.2.1 stdair::LegCabinKey::LegCabinKey (const CabinCode_T & *iCabinCode*)

Constructor.

Definition at line 23 of file LegCabinKey.cpp.

34.84.2.2 stdair::LegCabinKey::LegCabinKey (const LegCabinKey & *iKey*)

Copy constructor.

Definition at line 28 of file LegCabinKey.cpp.

34.84.2.3 stdair::LegCabinKey::~LegCabinKey ( )

Destructor.

Definition at line 33 of file LegCabinKey.cpp.

34.84.3 Member Function Documentation

34.84.3.1 const CabinCode_T& stdair::LegCabinKey::getCabinCode ( ) const [inline]

Get the cabin code.

Definition at line 56 of file LegCabinKey.hpp.

Referenced by stdair::LegCabin::getCabinCode().

34.84.3.2 void stdair::LegCabinKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 37 of file LegCabinKey.cpp.

References toString().

34.84.3.3 void stdair::LegCabinKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 42 of file LegCabinKey.cpp.

34.84.3.4 const std::string stdair::LegCabinKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from stdair::KeyAbstract.

Definition at line 46 of file LegCabinKey.cpp.

Referenced by stdair::LegCabin::describeKey(), stdair::LegDate::getLegCabin(), and toStream().

34.84.3.5 template<class Archive > void stdair::LegCabinKey::serialize (Archive & *ar,* const unsigned int *iFileVersion*)

Serialisation.

Definition at line 68 of file LegCabinKey.cpp.

34.84.4 Friends And Related Function Documentation

34.84.4.1 friend class boost::serialization::access [friend]

Definition at line 27 of file LegCabinKey.hpp.

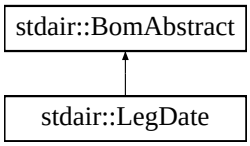
The documentation for this struct was generated from the following files:

- stdair/bom/LegCabinKey.hpp
- stdair/bom/LegCabinKey.cpp

34.85 stdair::LegDate Class Reference

`#include <stdair/bom/LegDate.hpp>`

Inheritance diagram for stdair::LegDate:



Public Types

- typedef LegDateKey Key_T

Public Member Functions

- const Key_T & getKey () const
- BomAbstract *const getParent () const
- const AirportCode_T & getBoardingPoint () const
- const AirlineCode_T & getAirlineCode () const
- const HolderMap_T & getHolderMap () const
- LegCabin * getLegCabin (const std::string &iLegCabinKeyStr) const
- LegCabin * getLegCabin (const LegCabinKey &) const
- const AirportCode_T & getOffPoint () const
- const Date_T & getBoardingDate () const
- const Duration_T & getBoardingTime () const
- const Date_T & getOffDate () const
- const Duration_T & getOffTime () const
- const Duration_T & getElapsedTime () const
- const Distance_T & getDistance () const
- const CabinCapacity_T & getCapacity () const

- const DateOffset_T getDateOffset () const
- const Duration_T getTimeOffset () const
- void setOffPoint (const AirportCode_T &iOffPoint)
- void setBoardingDate (const Date_T &iBoardingDate)
- void setBoardingTime (const Duration_T &iBoardingTime)
- void setOffDate (const Date_T &iOffDate)
- void setOffTime (const Duration_T &iOffTime)
- void setElapsedTime (const Duration_T &)
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const

Protected Member Functions

- LegDate (const Key_T &)
- virtual ~LegDate ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent
- HolderMap_T _holderMap
- AirportCode_T _offPoint
- Date_T _boardingDate
- Duration_T _boardingTime
- Date_T _offDate
- Duration_T _offTime
- Duration_T _elapsedTime
- Distance_T _distance
- CabinCapacity_T _capacity

Friends

- class FacBom
- class FacBomManager

34.85.1 Detailed Description

Class representing the actual attributes for an airline leg-date.

Definition at line 25 of file LegDate.hpp.

34.85.2 Member Typedef Documentation

34.85.2.1 typedef LegDateKey stdair::LegDate::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 32 of file LegDate.hpp.

34.85.3 Constructor & Destructor Documentation

34.85.3.1 stdair::LegDate::LegDate (const Key_T & *iKey*) [protected]

Constructor.

Definition at line 28 of file LegDate.cpp.

34.85.3.2 stdair::LegDate::~LegDate ( ) [protected, virtual]

Destructor.

Definition at line 34 of file LegDate.cpp.

34.85.4 Member Function Documentation

34.85.4.1 const Key_T& stdair::LegDate::getKey ( ) const [inline]

Get the leg-date key.

Definition at line 38 of file LegDate.hpp.

References _key.

34.85.4.2 BomAbstract* const stdair::LegDate::getParent ( ) const [inline]

Get the parent object.

Definition at line 43 of file LegDate.hpp.

References _parent.

Referenced by getAirlineCode().

34.85.4.3 const AirportCode_T& stdair::LegDate::getBoardingPoint ( ) const [inline]

Get the boarding point (part of the primary key).

Definition at line 48 of file LegDate.hpp.

References _key, and stdair::LegDateKey::getBoardingPoint().

34.85.4.4 const AirlineCode_T & stdair::LegDate::getAirlineCode ( ) const

Get the airline code (key of the parent object).

Note

That method assumes that the parent object derives from the Inventory class, as it needs to have access to the getAirlineCode() method.

Definition at line 38 of file LegDate.cpp.

References stdair::FlightDate::getAirlineCode(), and getParent().

34.85.4.5 const HolderMap_T& stdair::LegDate::getHolderMap ( ) const [inline]

Get the map of children holders.

Definition at line 64 of file LegDate.hpp.

References _holderMap.

34.85.4.6 LegCabin * stdair::LegDate::getLegCabin (const std::string & *iLegCabinKeyStr*) const

Get a pointer on the LegCabin object corresponding to the given key.

Note

The LegCabin object can be inherited from, if needed. In that case, a dynamic_-cast<> may be needed.

Parameters

const	std::string& The leg-cabin key.

Returns

LegCabin* Found LegCabin object. NULL if not found.

Definition at line 53 of file LegDate.cpp.

Referenced by getLegCabin(), and stdair::BomRetriever::retrieveDummyLegCabin().

34.85.4.7 LegCabin * stdair::LegDate::getLegCabin (const LegCabinKey & *iLegCabinKey*) const

Get a pointer on the LegCabin object corresponding to the given key.

Note

The LegCabin object can be inherited from, if needed. In that case, a dynamic_-cast<> may be needed.

Parameters

const	LegCabinKey& The leg-cabin key

Returns

LegCabin* Found LegCabin object. NULL if not found.

Definition at line 60 of file LegDate.cpp.

References getLegCabin(), and stdair::LegCabinKey::toString().

34.85.4.8 const AirportCode_T& stdair::LegDate::getOffPoint ( ) const [inline]

Get the off point.

Definition at line 93 of file LegDate.hpp.

References _offPoint.

34.85.4.9 const Date_T& stdair::LegDate::getBoardingDate ( ) const [inline]

Get the boarding date.

Definition at line 98 of file LegDate.hpp.

References _boardingDate.

34.85.4.10 const Duration_T& stdair::LegDate::getBoardingTime ( ) const [inline]

Get the boarding time.

Definition at line 103 of file LegDate.hpp.

References _boardingTime.

34.85.4.11 const Date_T& stdair::LegDate::getOffDate ( ) const [inline]

Get the off date.

Definition at line 108 of file LegDate.hpp.

References _offDate.

34.85.4.12 const Duration_T& stdair::LegDate::getOffTime ( ) const [inline]

Get the off time.

Definition at line 113 of file LegDate.hpp.

References _offTime.

34.85.4.13 const Duration_T& stdair::LegDate::getElapsedTime ( ) const [inline]

Get the elapsed time.

Definition at line 118 of file LegDate.hpp.

References _elapsedTime.

34.85.4.14 const Distance_T& stdair::LegDate::getDistance ( ) const [inline]

Get the distance.

Definition at line 123 of file LegDate.hpp.

References _distance.

34.85.4.15 const CabinCapacity_T& stdair::LegDate::getCapacity ( ) const [inline]

Get the leg capacity.

Definition at line 128 of file LegDate.hpp.

References _capacity.

34.85.4.16 const DateOffset_T stdair::LegDate::getDateOffset ( ) const [inline]

Get the date offset (off date - boarding date).

Definition at line 133 of file LegDate.hpp.

References _boardingDate, and _offDate.

Referenced by getTimeOffset().

34.85.4.17 const Duration_T stdair::LegDate::getTimeOffset ( ) const

Get the time off set between boarding and off points.

It is defined as being: TimeOffset = (OffTime - BoardingTime) + (OffDate - BoardingDate) $*$ 24

- ElapsedTime.

Definition at line 65 of file LegDate.cpp.

References _boardingTime, _elapsedTime, _offTime, and getDateOffset().

34.85.4.18 void stdair::LegDate::setOffPoint (const AirportCode_T & *iOffPoint*) [inline]

Set the off point.

Definition at line 147 of file LegDate.hpp.

References _offPoint.

34.85.4.19 void stdair::LegDate::setBoardingDate (const Date_T & *iBoardingDate*) [inline]

Set the boarding date.

Definition at line 152 of file LegDate.hpp.

References _boardingDate.

34.85.4.20 void stdair::LegDate::setBoardingTime (const Duration_T & *iBoardingTime*) [inline]

Set the boarding time.

Definition at line 157 of file LegDate.hpp.

References _boardingTime.

34.85.4.21 void stdair::LegDate::setOffDate (const Date_T & *iOffDate*) [inline]

Set the off date.

Definition at line 162 of file LegDate.hpp.

References _offDate.

34.85.4.22 void stdair::LegDate::setOffTime (const Duration_T & *iOffTime*) [inline]

Set the off time.

Definition at line 167 of file LegDate.hpp.

References _offTime.

34.85.4.23 void stdair::LegDate::setElapsedTime (const Duration_T & *iElapsedTime*)

Set the elapsed time.

Definition at line 80 of file LegDate.cpp.

References _elapsedTime.

34.85.4.24 void stdair::LegDate::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 183 of file LegDate.hpp.

References toString().

34.85.4.25 void stdair::LegDate::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 189 of file LegDate.hpp.

34.85.4.26 std::string stdair::LegDate::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 46 of file LegDate.cpp.

References describeKey().

Referenced by toStream().

34.85.4.27 const std::string stdair::LegDate::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 196 of file LegDate.hpp.

References _key, and stdair::LegDateKey::toString().

Referenced by stdair::LegCabin::getFullerKey(), and toString().

34.85.5 Friends And Related Function Documentation

34.85.5.1 friend class FacBom [friend]

Definition at line 26 of file LegDate.hpp.

34.85.5.2 friend class FacBomManager [friend]

Definition at line 27 of file LegDate.hpp.

34.85.6 Member Data Documentation

34.85.6.1 Key_T stdair::LegDate::_key [protected]

Primary key (origin airport).

Definition at line 218 of file LegDate.hpp.

Referenced by describeKey(), getBoardingPoint(), and getKey().

34.85.6.2 BomAbstract* stdair::LegDate::_parent [protected]

Pointer on the parent class (FlightDate).

Definition at line 221 of file LegDate.hpp.

Referenced by getParent().

34.85.6.3 HolderMap_T stdair::LegDate::_holderMap [protected]

Map holding the children (LegCabin objects).

Definition at line 224 of file LegDate.hpp.

Referenced by getHolderMap().

34.85.6.4 AirportCode_T stdair::LegDate::_offPoint [protected]

Landing airport.

Definition at line 227 of file LegDate.hpp.

Referenced by getOffPoint(), and setOffPoint().

34.85.6.5 Date_T stdair::LegDate::_boardingDate [protected]

Boarding date.

Definition at line 230 of file LegDate.hpp.

Referenced by getBoardingDate(), getDateOffset(), and setBoardingDate().

34.85.6.6 Duration_T stdair::LegDate::_boardingTime [protected]

Boarding time.

Definition at line 233 of file LegDate.hpp.

Referenced by getBoardingTime(), getTimeOffset(), and setBoardingTime().

34.85.6.7 Date_T stdair::LegDate::_offDate [protected]

Landing date.

Definition at line 236 of file LegDate.hpp.

Referenced by getDateOffset(), getOffDate(), and setOffDate().

34.85.6.8 Duration_T stdair::LegDate::_offTime [protected]

Landing time.

Definition at line 239 of file LegDate.hpp.

Referenced by getOffTime(), getTimeOffset(), and setOffTime().

34.85.6.9 Duration_T stdair::LegDate::_elapsedTime [protected]

Trip elapsed time.

Definition at line 242 of file LegDate.hpp.

Referenced by getElapsedTime(), getTimeOffset(), and setElapsedTime().

34.85.6.10 Distance_T stdair::LegDate::_distance [protected]

Trip distance.

Definition at line 245 of file LegDate.hpp.

Referenced by getDistance().

34.85.6.11 CabinCapacity_T stdair::LegDate::_capacity [protected]

Aggregated capacity for all the leg-cabins.

Definition at line 248 of file LegDate.hpp.

Referenced by getCapacity().

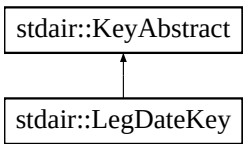
The documentation for this class was generated from the following files:

- stdair/bom/LegDate.hpp
- stdair/bom/LegDate.cpp

34.86 stdair::LegDateKey Struct Reference

`#include <stdair/bom/LegDateKey.hpp>`

Inheritance diagram for stdair::LegDateKey:



Public Member Functions

- LegDateKey (const AirportCode_T &iBoardingPoint)
- LegDateKey (const LegDateKey &)
- ~LegDateKey ()
- const AirportCode_T & getBoardingPoint () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const

34.86.1 Detailed Description

Key of a given leg-date, made of an origin airport.

Definition at line 16 of file LegDateKey.hpp.

34.86.2 Constructor & Destructor Documentation

34.86.2.1 stdair::LegDateKey::LegDateKey (const AirportCode_T & *iBoardingPoint*)

Constructor.

Definition at line 19 of file LegDateKey.cpp.

34.86.2.2 stdair::LegDateKey::LegDateKey (const LegDateKey & *iKey*)

Default copy constructor.

Definition at line 24 of file LegDateKey.cpp.

34.86.2.3 stdair::LegDateKey::~LegDateKey ( )

Destructor.

Definition at line 29 of file LegDateKey.cpp.

34.86.3 Member Function Documentation

34.86.3.1 const AirportCode_T& stdair::LegDateKey::getBoardingPoint ( ) const [inline]

Get the boarding point.

Definition at line 34 of file LegDateKey.hpp.

Referenced by stdair::LegDate::getBoardingPoint().

34.86.3.2 void stdair::LegDateKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 33 of file LegDateKey.cpp.

References toString().

34.86.3.3 void stdair::LegDateKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 38 of file LegDateKey.cpp.

34.86.3.4 const std::string stdair::LegDateKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same leg-date.

Reimplemented from stdair::KeyAbstract.

Definition at line 42 of file LegDateKey.cpp.

Referenced by stdair::LegDate::describeKey(), stdair::FlightDate::getLegDate(), and toStream().

The documentation for this struct was generated from the following files:

- stdair/bom/LegDateKey.hpp
- stdair/bom/LegDateKey.cpp

34.87 stdair::Logger Class Reference

`#include <stdair/service/Logger.hpp>`

Public Member Functions

- template<typename T >
  void log (const LOG::EN_LogLevel iLevel, const int iLineNumber, const std::string &iFileName, const T &iToBeLogged)

Static Public Member Functions

- static Logger & instance ()

Friends

- class FacSupervisor
  Friend classes.
- class STDAIR_Service

34.87.1 Detailed Description

Class holding the stream for logs.

Note that the error logs are seen as standard output logs, but with a higher level of visibility.

Definition at line 48 of file Logger.hpp.

34.87.2 Member Function Documentation

34.87.2.1 template<typename T > void stdair::Logger::log (const LOG::EN_LogLevel *iLevel,* const int *iLineNumber,* const std::string & *iFileName,* const T & *iToBeLogged*) [inline]

Main log entry.

Definition at line 59 of file Logger.hpp.

References stdair::LOG::_logLevels.

34.87.2.2 Logger & stdair::Logger::instance ( ) [static]

Return the static Logger instance.

Definition at line 48 of file Logger.cpp.

34.87.3 Friends And Related Function Documentation

34.87.3.1 friend class FacSupervisor [friend]

Friend classes.

Definition at line 50 of file Logger.hpp.

34.87.3.2 friend class STDAIR_Service [friend]

Definition at line 51 of file Logger.hpp.

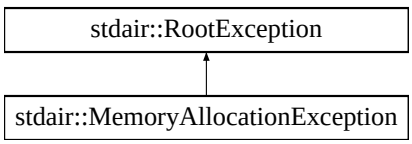
The documentation for this class was generated from the following files:

- stdair/service/Logger.hpp
- stdair/service/Logger.cpp

34.88 stdair::MemoryAllocationException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::MemoryAllocationException:



Public Member Functions

- MemoryAllocationException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.88.1 Detailed Description

Memory allocation.

Definition at line 89 of file stdair_exceptions.hpp.

34.88.2 Constructor & Destructor Documentation

34.88.2.1 stdair::MemoryAllocationException::MemoryAllocationException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 92 of file stdair_exceptions.hpp.

34.88.3 Member Function Documentation

34.88.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.88.4 Member Data Documentation

34.88.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

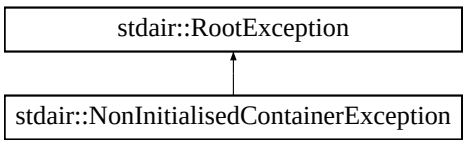
The documentation for this class was generated from the following file:

- stdair/stdair_exceptions.hpp

34.89 stdair::NonInitialisedContainerException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::NonInitialisedContainerException:



Public Member Functions

- NonInitialisedContainerException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.89.1 Detailed Description

Non initialised container.

Definition at line 73 of file stdair_exceptions.hpp.

34.89.2 Constructor & Destructor Documentation

34.89.2.1 stdair::NonInitialisedContainerException::NonInitialisedContainerException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 76 of file stdair_exceptions.hpp.

34.89.3 Member Function Documentation

34.89.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.89.4 Member Data Documentation

34.89.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

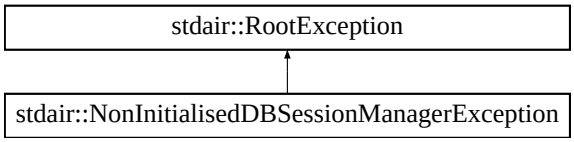
The documentation for this class was generated from the following file:

- stdair/stdair_exceptions.hpp

34.90 stdair::NonInitialisedDBSessionManagerException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::NonInitialisedDBSessionManagerException:



Public Member Functions

- NonInitialisedDBSessionManagerException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.90.1 Detailed Description

Non initialised database session.

Definition at line 180 of file stdair_exceptions.hpp.

34.90.2 Constructor & Destructor Documentation

34.90.2.1 stdair::NonInitialisedDBSessionManagerException::NonInitialisedDBSessionManagerException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 183 of file stdair_exceptions.hpp.

34.90.3 Member Function Documentation

34.90.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.90.4 Member Data Documentation

34.90.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

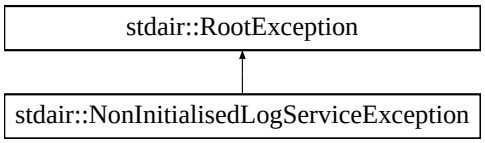
The documentation for this class was generated from the following file:

- stdair/stdair_exceptions.hpp

34.91 stdair::NonInitialisedLogServiceException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::NonInitialisedLogServiceException:



Public Member Functions

- NonInitialisedLogServiceException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.91.1 Detailed Description

Non initialised log service.

Definition at line 57 of file stdair_exceptions.hpp.

34.91.2 Constructor & Destructor Documentation

34.91.2.1 stdair::NonInitialisedLogServiceException::NonInitialisedLogServiceException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 60 of file stdair_exceptions.hpp.

34.91.3 Member Function Documentation

34.91.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.91.4 Member Data Documentation

34.91.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

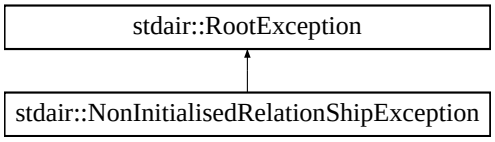
The documentation for this class was generated from the following file:

- stdair/stdair_exceptions.hpp

34.92 stdair::NonInitialisedRelationShipException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::NonInitialisedRelationShipException:



Public Member Functions

- NonInitialisedRelationShipException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.92.1 Detailed Description

Non initialised relationship.

Definition at line 81 of file stdair_exceptions.hpp.

34.92.2 Constructor & Destructor Documentation

34.92.2.1 stdair::NonInitialisedRelationShipException::NonInitialisedRelationShipException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 84 of file stdair_exceptions.hpp.

34.92.3 Member Function Documentation

34.92.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.92.4 Member Data Documentation

34.92.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

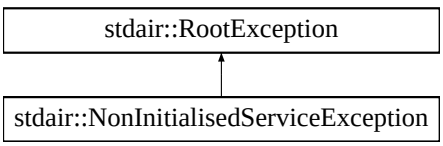
The documentation for this class was generated from the following file:

- stdair/stdair_exceptions.hpp

34.93 stdair::NonInitialisedServiceException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::NonInitialisedServiceException:



Public Member Functions

- NonInitialisedServiceException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.93.1 Detailed Description

Non initialised service.

Definition at line 65 of file stdair_exceptions.hpp.

34.93.2 Constructor & Destructor Documentation

34.93.2.1 stdair::NonInitialisedServiceException::NonInitialisedServiceException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 68 of file stdair_exceptions.hpp.

34.93.3 Member Function Documentation

34.93.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.93.4 Member Data Documentation

34.93.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

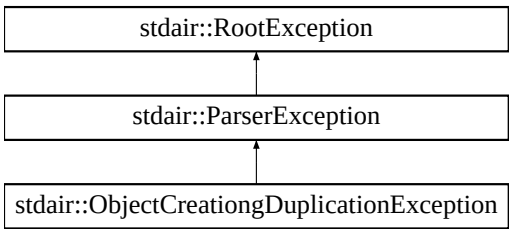
The documentation for this class was generated from the following file:

- stdair/stdair_exceptions.hpp

34.94 stdair::ObjectCreationgDuplicationException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::ObjectCreationgDuplicationException:



Public Member Functions

- ObjectCreationgDuplicationException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.94.1 Detailed Description

Duplicated object.

Definition at line 149 of file stdair_exceptions.hpp.

34.94.2 Constructor & Destructor Documentation

34.94.2.1 stdair::ObjectCreationgDuplicationException::ObjectCreationgDuplicationException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 152 of file stdair_exceptions.hpp.

34.94.3 Member Function Documentation

34.94.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.94.4 Member Data Documentation

34.94.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

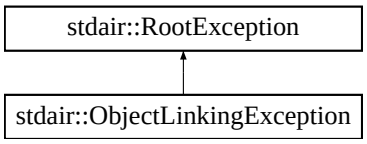
The documentation for this class was generated from the following file:

- stdair/stdair_exceptions.hpp

34.95 stdair::ObjectLinkingException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::ObjectLinkingException:



Public Member Functions

- ObjectLinkingException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.95.1 Detailed Description

Object link.

Definition at line 97 of file stdair_exceptions.hpp.

34.95.2 Constructor & Destructor Documentation

34.95.2.1 stdair::ObjectLinkingException::ObjectLinkingException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 100 of file stdair_exceptions.hpp.

34.95.3 Member Function Documentation

34.95.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.95.4 Member Data Documentation

34.95.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

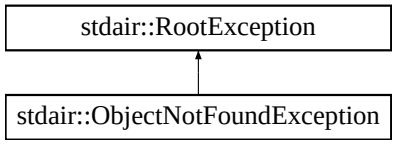
The documentation for this class was generated from the following file:

- stdair/stdair_exceptions.hpp

34.96 stdair::ObjectNotFoundException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::ObjectNotFoundException:



Public Member Functions

- ObjectNotFoundException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.96.1 Detailed Description

Not found object.

Definition at line 157 of file stdair_exceptions.hpp.

34.96.2 Constructor & Destructor Documentation

34.96.2.1 stdair::ObjectNotFoundException::ObjectNotFoundException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 160 of file stdair_exceptions.hpp.

34.96.3 Member Function Documentation

34.96.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.96.4 Member Data Documentation

34.96.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

The documentation for this class was generated from the following file:

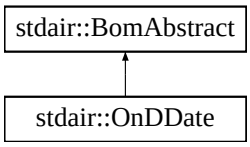
- stdair/stdair_exceptions.hpp

34.97 stdair::OnDDate Class Reference

Class representing the actual attributes for an airline flight-date.

`#include <stdair/bom/OnDDate.hpp>`

Inheritance diagram for stdair::OnDDate:



Public Types

- typedef OnDDateKey Key_T

Public Member Functions

- const Key_T & getKey () const
- BomAbstract *const getParent () const
- const AirlineCode_T & getAirlineCode () const
- const stdair::Date_T getDate () const
- const stdair::AirportCode_T getOrigin () const
- const stdair::AirportCode_T getDestination () const
- const HolderMap_T & getHolderMap () const
- const StringDemandStructMap_T & getDemandInfoMap () const
- const CabinForecastMap_T & getTotalForecastMap () const
- const WTPDemandPair_T & getTotalForecast (const CabinCode_T &iCC) const
- const CabinClassPairList_T & getCabinClassPairList (const std::string &iStr) const
- const short getNbOfSegments () const
- void setDemandInformation (const CabinClassPairList_T &, const YieldDemandPair_T &)
- void setTotalForecast (const CabinCode_T &, const WTPDemandPair_T &)
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Protected Member Functions

- OnDDate (const Key_T &)
- virtual ~OnDDate ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent
- HolderMap_T _holderMap
- StringDemandStructMap_T _classPathDemandMap
- StringCabinClassPairListMap_T _stringCabinClassPairListMap
- CabinForecastMap_T _cabinForecastMap

Friends

- class FacBom
- class FacBomManager
- class boost::serialization::access

34.97.1 Detailed Description

Class representing the actual attributes for an airline flight-date.

Definition at line 33 of file OnDDate.hpp.

34.97.2 Member Typedef Documentation

34.97.2.1 typedef OnDDateKey stdair::OnDDate::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 43 of file OnDDate.hpp.

34.97.3 Constructor & Destructor Documentation

34.97.3.1 stdair::OnDDate::OnDDate (const Key_T & *iKey*) [protected]

Main constructor.

Definition at line 29 of file OnDDate.cpp.

34.97.3.2 stdair::OnDDate::~OnDDate ( ) [protected, virtual]

Destructor.

Definition at line 34 of file OnDDate.cpp.

34.97.4 Member Function Documentation

34.97.4.1 const Key_T& stdair::OnDDate::getKey ( ) const [inline]

Get the O&D date key.

Definition at line 49 of file OnDDate.hpp.

References _key.

34.97.4.2 BomAbstract* const stdair::OnDDate::getParent ( ) const [inline]

Get the parent object.

Definition at line 54 of file OnDDate.hpp.

References _parent.

Referenced by getAirlineCode().

34.97.4.3 const AirlineCode_T & stdair::OnDDate::getAirlineCode ( ) const

Get the airline code (key of the parent object).

Note

That method assumes that the parent object derives from the Inventory class, as it needs to have access to the getAirlineCode() method.

Definition at line 45 of file OnDDate.cpp.

References stdair::Inventory::getAirlineCode(), and getParent().

34.97.4.4 const stdair::Date_T stdair::OnDDate::getDate ( ) const [inline]

Get the boarding date.

Definition at line 69 of file OnDDate.hpp.

References _key, and stdair::OnDDateKey::getDate().

34.97.4.5 const stdair::AirportCode_T stdair::OnDDate::getOrigin ( ) const [inline]

Get the origin.

Definition at line 74 of file OnDDate.hpp.

References _key, and stdair::OnDDateKey::getOrigin().

34.97.4.6 const stdair::AirportCode_T stdair::OnDDate::getDestination ( ) const [inline]

Get the destination.

Definition at line 79 of file OnDDate.hpp.

References _key, and stdair::OnDDateKey::getDestination().

34.97.4.7 const HolderMap_T& stdair::OnDDate::getHolderMap ( ) const [inline]

Get the map of children holders.

Definition at line 86 of file OnDDate.hpp.

References _holderMap.

34.97.4.8 const StringDemandStructMap_T& stdair::OnDDate::getDemandInfoMap ( ) const [inline]

Get the map of demand information.

Definition at line 93 of file OnDDate.hpp.

References _classPathDemandMap.

34.97.4.9 const CabinForecastMap_T& stdair::OnDDate::getTotalForecastMap ( ) const [inline]

Get the map of total forecast.

Definition at line 100 of file OnDDate.hpp.

References _cabinForecastMap.

34.97.4.10 const WTPDemandPair_T& stdair::OnDDate::getTotalForecast (const CabinCode_T & *iCC*) const [inline]

Get the total forecast for a given cabin.

Definition at line 107 of file OnDDate.hpp.

References _cabinForecastMap.

34.97.4.11 const CabinClassPairList_T& stdair::OnDDate::getCabinClassPairList (const std::string & *iStr*) const [inline]

Get the cabin-class pair out of a string.

Definition at line 115 of file OnDDate.hpp.

References _stringCabinClassPairListMap.

34.97.4.12 const short stdair::OnDDate::getNbOfSegments ( ) const [inline]

Get the number of segments of the O&D.

Definition at line 123 of file OnDDate.hpp.

References _key, and stdair::OnDDateKey::getNbOfSegments().

34.97.4.13 void stdair::OnDDate::setDemandInformation (const CabinClassPairList_T & *iCabinClassPairList,* const YieldDemandPair_T & *iYieldDemandPair*)

Set demand information.

Definition at line 54 of file OnDDate.cpp.

References _classPathDemandMap, and _stringCabinClassPairListMap.

34.97.4.14 void stdair::OnDDate::setTotalForecast (const CabinCode_T & *iCabinCode,* const WTPDemandPair_T & *iWTPDemandPair*)

Set forecast information per cabin.

Definition at line 77 of file OnDDate.cpp.

References _cabinForecastMap.

34.97.4.15 void stdair::OnDDate::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 146 of file OnDDate.hpp.

References toString().

34.97.4.16 void stdair::OnDDate::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 155 of file OnDDate.hpp.

34.97.4.17 std::string stdair::OnDDate::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 38 of file OnDDate.cpp.

References describeKey().

Referenced by toStream().

34.97.4.18 const std::string stdair::OnDDate::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 166 of file OnDDate.hpp.

References _key, and stdair::OnDDateKey::toString().

Referenced by toString().

34.97.4.19 template<class Archive > void stdair::OnDDate::serialize (Archive & *ar*, const unsigned int *iFileVersion*)

Serialisation.

34.97.5 Friends And Related Function Documentation

34.97.5.1 friend class FacBom [friend]

Definition at line 34 of file OnDDate.hpp.

34.97.5.2 friend class FacBomManager [friend]

Definition at line 35 of file OnDDate.hpp.

34.97.5.3 friend class boost::serialization::access [friend]

Definition at line 36 of file OnDDate.hpp.

34.97.6 Member Data Documentation

34.97.6.1 Key_T stdair::OnDDate::_key [protected]

Primary key (list of OnD string keys).

Definition at line 216 of file OnDDate.hpp.

Referenced by describeKey(), getDate(), getDestination(), getKey(), getNbOfSegments(), and getOrigin().

34.97.6.2 BomAbstract* stdair::OnDDate::_parent [protected]

Pointer on the parent class (Inventory).

Definition at line 221 of file OnDDate.hpp.

Referenced by getParent().

34.97.6.3 HolderMap_T stdair::OnDDate::_holderMap [protected]

Map holding the children (SegmentDate and LegDate objects).

Definition at line 226 of file OnDDate.hpp.

Referenced by getHolderMap().

34.97.6.4 StringDemandStructMap_T stdair::OnDDate::_classPathDemandMap [protected]

O&D demand information.

Definition at line 231 of file OnDDate.hpp.

Referenced by getDemandInfoMap(), and setDemandInformation().

34.97.6.5 StringCabinClassPairListMap_T stdair::OnDDate::_stringCabinClassPairListMap [protected]

O&D cabin and associated class map.

Definition at line 236 of file OnDDate.hpp.

Referenced by getCabinClassPairList(), and setDemandInformation().

34.97.6.6 CabinForecastMap_T stdair::OnDDate::_cabinForecastMap [protected]

O&D demand total forecast.

Definition at line 241 of file OnDDate.hpp.

Referenced by getTotalForecast(), getTotalForecastMap(), and setTotalForecast().

The documentation for this class was generated from the following files:

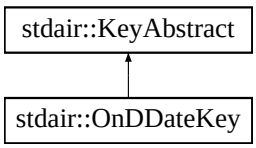
- stdair/bom/OnDDate.hpp
- stdair/bom/OnDDate.cpp

34.98 stdair::OnDDateKey Struct Reference

Key of a given O&D-date, made of a list of OnD strings. a OnD string contains the airline code, the flight number, the date and the segment (origin and destination).

`#include <stdair/bom/OnDDateKey.hpp>`

Inheritance diagram for stdair::OnDDateKey:



Public Member Functions

- OnDDateKey (const OnDStringList_T &)
- OnDDateKey (const OnDDateKey &)
- ~OnDDateKey ()
- const Date_T getDate () const
- const AirportCode_T getOrigin () const
- const AirportCode_T getDestination () const
- const short getNbOfSegments () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Friends

- class boost::serialization::access

34.98.1 Detailed Description

Key of a given O&D-date, made of a list of OnD strings. a OnD string contains the airline code, the flight number, the date and the segment (origin and destination).

Definition at line 23 of file OnDDateKey.hpp.

34.98.2 Constructor & Destructor Documentation

34.98.2.1 stdair::OnDDateKey::OnDDateKey (const OnDStringList_T & *iOnDStringList*)

Constructor.

Definition at line 33 of file OnDDateKey.cpp.

34.98.2.2 stdair::OnDDateKey::OnDDateKey (const OnDDateKey & *iKey*)

Copy constructor.

Definition at line 38 of file OnDDateKey.cpp.

34.98.2.3 stdair::OnDDateKey::~OnDDateKey ( )

Destructor.

Definition at line 43 of file OnDDateKey.cpp.

34.98.3 Member Function Documentation

34.98.3.1 const Date_T stdair::OnDDateKey::getDate ( ) const

Get the boarding date.

Definition at line 47 of file OnDDateKey.cpp.

References stdair::BomKeyManager::extractFlightDateKey(), and stdair::FlightDateKey::getDepartureDate().

Referenced by stdair::OnDDate::getDate().

34.98.3.2 const AirportCode_T stdair::OnDDateKey::getOrigin ( ) const

Get the origin.

Definition at line 54 of file OnDDateKey.cpp.

References stdair::BomKeyManager::extractSegmentDateKey(), and stdair::SegmentDateKey::getBoardingPoint().

Referenced by stdair::OnDDate::getOrigin().

34.98.3.3 const AirportCode_T stdair::OnDDateKey::getDestination ( ) const

Get the destination.

Definition at line 61 of file OnDDateKey.cpp.

References stdair::BomKeyManager::extractSegmentDateKey(), and stdair::SegmentDateKey::getOffPoint().

Referenced by stdair::OnDDate::getDestination().

34.98.3.4 const short stdair::OnDDateKey::getNbOfSegments ( ) const [inline]

Get the number of segments.

Definition at line 70 of file OnDDateKey.hpp.

Referenced by stdair::OnDDate::getNbOfSegments().

34.98.3.5 void stdair::OnDDateKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 68 of file OnDDateKey.cpp.

References toString().

34.98.3.6 void stdair::OnDDateKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 73 of file OnDDateKey.cpp.

34.98.3.7 const std::string stdair::OnDDateKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from stdair::KeyAbstract.

Definition at line 77 of file OnDDateKey.cpp.

Referenced by stdair::OnDDate::describeKey(), and toStream().

34.98.3.8 template<class Archive > void stdair::OnDDateKey::serialize (Archive & *ar,* const unsigned int *iFileVersion*)

Serialisation.

Definition at line 102 of file OnDDateKey.cpp.

34.98.4 Friends And Related Function Documentation

34.98.4.1 friend class boost::serialization::access [friend]

Definition at line 24 of file OnDDateKey.hpp.

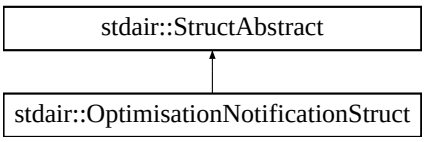
The documentation for this struct was generated from the following files:

- stdair/bom/OnDDateKey.hpp
- stdair/bom/OnDDateKey.cpp

34.99 stdair::OptimisationNotificationStruct Struct Reference

`#include <stdair/bom/OptimisationNotificationStruct.hpp>`

Inheritance diagram for stdair::OptimisationNotificationStruct:



Public Member Functions

- const AirportCode_T & getOrigin () const
- const AirportCode_T & getDestination () const
- const CityCode_T & getPOS () const
- const Date_T & getPreferedDepartureDate () const
- const DateTime_T & getNotificationDateTime () const
- const CabinCode_T & getPreferredCabin () const
- const NbOfSeats_T & getPartySize () const
- const ChannelLabel_T & getOptimisationChannel () const
- const TripType_T & getTripType () const
- const DayDuration_T & getStayDuration () const
- const FrequentFlyer_T & getFrequentFlyerType () const
- const Duration_T & getPreferredDepartureTime () const
- const WTP_T & getWTP () const
- const PriceValue_T & getValueOfTime () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string describe () const

- OptimisationNotificationStruct (const AirportCode_T &iOrigin, const AirportCode_T &iDestination, const CityCode_T &iPOS, const Date_T &iDepartureDate, const DateTime_T &iNotificationDateTime, const CabinCode_T &iPreferredCabin, const NbOfSeats_T &iPartySize, const ChannelLabel_T &iChannel, const TripType_T &iTripType, const DayDuration_T &iStayDuration, const FrequentFlyer_T &iFrequentFlyerType, const Duration_T &iPreferredDepartureTime, const WTP_T &iWTP, const PriceValue_T &iValueOfTime)
- OptimisationNotificationStruct (const OptimisationNotificationStruct &)
- ~OptimisationNotificationStruct ()

34.99.1 Detailed Description

Structure holding the elements of a optimisation notification.

Definition at line 19 of file OptimisationNotificationStruct.hpp.

34.99.2 Constructor & Destructor Documentation

34.99.2.1 stdair::OptimisationNotificationStruct::OptimisationNotificationStruct (const AirportCode_T & *iOrigin,* const AirportCode_T & *iDestination,* const CityCode_T & *iPOS,* const Date_T & *iDepartureDate,* const DateTime_T & *iNotificationDateTime,* const CabinCode_T & *iPreferredCabin,* const NbOfSeats_T & *iPartySize,* const ChannelLabel_T & *iChannel,* const TripType_T & *iTripType,* const DayDuration_T & *iStayDuration,* const FrequentFlyer_T & *iFrequentFlyerType,* const Duration_T & *iPreferredDepartureTime,* const WTP_T & *iWTP,* const PriceValue_T & *iValueOfTime*)

Constructor.

Definition at line 39 of file OptimisationNotificationStruct.cpp.

34.99.2.2 stdair::OptimisationNotificationStruct::OptimisationNotificationStruct (const OptimisationNotificationStruct & *iOptimisationNotification*)

Copy constructor.

Definition at line 20 of file OptimisationNotificationStruct.cpp.

34.99.2.3 stdair::OptimisationNotificationStruct::~OptimisationNotificationStruct ( )

Destructor.

Definition at line 64 of file OptimisationNotificationStruct.cpp.

34.99.3 Member Function Documentation

34.99.3.1 const AirportCode_T& stdair::OptimisationNotificationStruct::getOrigin ( ) const [inline]

Get the notificationed origin.

Definition at line 23 of file OptimisationNotificationStruct.hpp.

34.99.3.2 const AirportCode_T& stdair::OptimisationNotificationStruct::getDestination ( ) const [inline]

Get the notificationed destination.

Definition at line 28 of file OptimisationNotificationStruct.hpp.

34.99.3.3 const CityCode_T& stdair::OptimisationNotificationStruct::getPOS ( ) const [inline]

Get the point-of-sale.

Definition at line 33 of file OptimisationNotificationStruct.hpp.

34.99.3.4 const Date_T& stdair::OptimisationNotificationStruct::getPreferedDepartureDate ( ) const [inline]

Get the notificationed departure date.

Definition at line 38 of file OptimisationNotificationStruct.hpp.

34.99.3.5 const DateTime_T& stdair::OptimisationNotificationStruct::getNotificationDateTime ( ) const [inline]

Get the notification datetime.

Definition at line 43 of file OptimisationNotificationStruct.hpp.

34.99.3.6 const CabinCode_T& stdair::OptimisationNotificationStruct::getPreferredCabin ( ) const [inline]

Get the preferred cabin.

Definition at line 48 of file OptimisationNotificationStruct.hpp.

34.99.3.7 const NbOfSeats_T& stdair::OptimisationNotificationStruct::getPartySize ( ) const [inline]

Get the party size.

Definition at line 53 of file OptimisationNotificationStruct.hpp.

34.99.3.8 const ChannelLabel_T& stdair::OptimisationNotificationStruct::getOptimisationChannel ( ) const [inline]

Get the reservation channel.

Definition at line 58 of file OptimisationNotificationStruct.hpp.

34.99.3.9 const TripType_T& stdair::OptimisationNotificationStruct::getTripType ( ) const [inline]

Get the trip type.

Definition at line 63 of file OptimisationNotificationStruct.hpp.

34.99.3.10 const DayDuration_T& stdair::OptimisationNotificationStruct::getStayDuration ( ) const [inline]

Get the duration of stay.

Definition at line 68 of file OptimisationNotificationStruct.hpp.

34.99.3.11 const FrequentFlyer_T& stdair::OptimisationNotificationStruct::getFrequentFlyerType ( ) const [inline]

Get the frequent flyer type.

Definition at line 73 of file OptimisationNotificationStruct.hpp.

34.99.3.12 const Duration_T& stdair::OptimisationNotificationStruct::getPreferredDepartureTime ( ) const [inline]

Get the preferred departure time.

Definition at line 78 of file OptimisationNotificationStruct.hpp.

34.99.3.13 const WTP_T& stdair::OptimisationNotificationStruct::getWTP ( ) const [inline]

Get the willingness-to-pay.

Definition at line 83 of file OptimisationNotificationStruct.hpp.

34.99.3.14 const PriceValue_T& stdair::OptimisationNotificationStruct::getValueOfTime ( ) const [inline]

Get the value of time.

Definition at line 88 of file OptimisationNotificationStruct.hpp.

34.99.3.15 void stdair::OptimisationNotificationStruct::toStream (std::ostream & *ioOut*) const

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::StructAbstract.

Definition at line 68 of file OptimisationNotificationStruct.cpp.

References describe().

34.99.3.16 void stdair::OptimisationNotificationStruct::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::StructAbstract.

Definition at line 73 of file OptimisationNotificationStruct.cpp.

34.99.3.17 const std::string stdair::OptimisationNotificationStruct::describe ( ) const [virtual]

Display of the structure.

Implements stdair::StructAbstract.

Definition at line 77 of file OptimisationNotificationStruct.cpp.

Referenced by toStream().

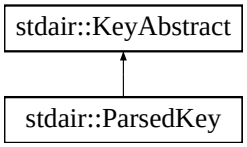
The documentation for this struct was generated from the following files:

- stdair/bom/OptimisationNotificationStruct.hpp
- stdair/bom/OptimisationNotificationStruct.cpp

34.100 stdair::ParsedKey Struct Reference

`#include <stdair/bom/ParsedKey.hpp>`

Inheritance diagram for stdair::ParsedKey:



Public Member Functions

- InventoryKey getInventoryKey () const
- FlightDateKey getFlightDateKey () const
- SegmentDateKey getSegmentKey () const
- const Duration_T getBoardingTime () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const
- ParsedKey ()
- ~ParsedKey ()

Public Attributes

- std::string _fullKey
- std::string _airlineCode
- std::string _flightNumber
- std::string _departureDate
- std::string _boardingPoint
- std::string _offPoint
- std::string _boardingTime

34.100.1 Detailed Description

Structure which holds the results/keys after the parsing.

Definition at line 21 of file ParsedKey.hpp.

34.100.2 Constructor & Destructor Documentation

34.100.2.1 stdair::ParsedKey::ParsedKey ( )

Definition at line 40 of file ParsedKey.cpp.

34.100.2.2 stdair::ParsedKey::~ParsedKey ( )

Definition at line 46 of file ParsedKey.cpp.

34.100.3 Member Function Documentation

34.100.3.1 InventoryKey stdair::ParsedKey::getInventoryKey ( ) const

Inventory key.

Definition at line 50 of file ParsedKey.cpp.

References _airlineCode, _fullKey, STDAIR_LOG_DEBUG, STDAIR_LOG_ERROR, and toString().

Referenced by stdair::BomKeyManager::extractInventoryKey().

34.100.3.2 FlightDateKey stdair::ParsedKey::getFlightDateKey ( ) const

Flight-date key.

Definition at line 61 of file ParsedKey.cpp.

References _departureDate, _flightNumber, _fullKey, STDAIR_LOG_DEBUG, STDAIR_LOG_ERROR, stdair::TokeniserDashSeparator(), and toString().

Referenced by stdair::BomKeyManager::extractFlightDateKey(), and stdair::BomRetriever::retrieveSegmentDateFromLo

34.100.3.3 SegmentDateKey stdair::ParsedKey::getSegmentKey ( ) const

Segment-date key.

Definition at line 83 of file ParsedKey.cpp.

References _boardingPoint, _fullKey, _offPoint, STDAIR_LOG_DEBUG, STDAIR_LOG_-ERROR, and toString().

Referenced by stdair::BomKeyManager::extractSegmentDateKey(), and stdair::BomRetriever::retrieveSegmentDateFror

34.100.3.4 const Duration_T stdair::ParsedKey::getBoardingTime ( ) const

Boarding time.

Definition at line 97 of file ParsedKey.cpp.

References _boardingTime, _fullKey, STDAIR_LOG_DEBUG, STDAIR_LOG_ERROR, stdair::TokeniserTimeSeparator(), and toString().

34.100.3.5 void stdair::ParsedKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 115 of file ParsedKey.cpp.

References toString().

34.100.3.6 void stdair::ParsedKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 120 of file ParsedKey.cpp.

34.100.3.7 const std::string stdair::ParsedKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from stdair::KeyAbstract.

Definition at line 124 of file ParsedKey.cpp.

References _airlineCode, _boardingPoint, _boardingTime, _departureDate, _flightNumber, _offPoint, stdair::DEFAULT_KEY_FLD_DELIMITER, and stdair::DEFAULT_KEY_SUB_-FLD_DELIMITER.

Referenced by stdair::TravelSolutionStruct::describe(), stdair::TravelSolutionStruct::display(), getBoardingTime(), getFlightDateKey(), getInventoryKey(), getSegmentKey(), and toStream().

34.100.4 Member Data Documentation

34.100.4.1 std::string stdair::ParsedKey::_fullKey

Definition at line 72 of file ParsedKey.hpp.

Referenced by stdair::BomKeyManager::extractKeys(), getBoardingTime(), getFlightDateKey(), getInventoryKey(), and getSegmentKey().

34.100.4.2 std::string stdair::ParsedKey::_airlineCode

Definition at line 73 of file ParsedKey.hpp.

Referenced by stdair::BomKeyManager::extractKeys(), getInventoryKey(), stdair::BomRetriever::retrieveSegmentDateFr and toString().

34.100.4.3 std::string stdair::ParsedKey::_flightNumber

Definition at line 74 of file ParsedKey.hpp.

Referenced by stdair::BomKeyManager::extractKeys(), getFlightDateKey(), and toString().

34.100.4.4 std::string stdair::ParsedKey::_departureDate

Definition at line 75 of file ParsedKey.hpp.

Referenced by stdair::BomKeyManager::extractKeys(), getFlightDateKey(), and toString().

34.100.4.5 std::string stdair::ParsedKey::_boardingPoint

Definition at line 76 of file ParsedKey.hpp.

Referenced by stdair::BomKeyManager::extractKeys(), getSegmentKey(), and toString().

34.100.4.6 std::string stdair::ParsedKey::_offPoint

Definition at line 77 of file ParsedKey.hpp.

Referenced by stdair::BomKeyManager::extractKeys(), getSegmentKey(), and toString().

34.100.4.7 std::string stdair::ParsedKey::_boardingTime

Definition at line 78 of file ParsedKey.hpp.

Referenced by stdair::BomKeyManager::extractKeys(), getBoardingTime(), and toString().

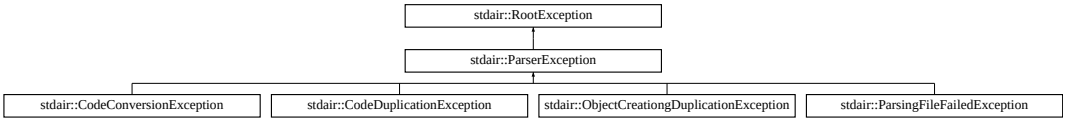
The documentation for this struct was generated from the following files:

- stdair/bom/ParsedKey.hpp
- stdair/bom/ParsedKey.cpp

34.101 stdair::ParserException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::ParserException:



Public Member Functions

- ParserException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.101.1 Detailed Description

Parser.

Definition at line 112 of file stdair_exceptions.hpp.

34.101.2 Constructor & Destructor Documentation

34.101.2.1 stdair::ParserException::ParserException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 115 of file stdair_exceptions.hpp.

34.101.3 Member Function Documentation

34.101.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.101.4 Member Data Documentation

34.101.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

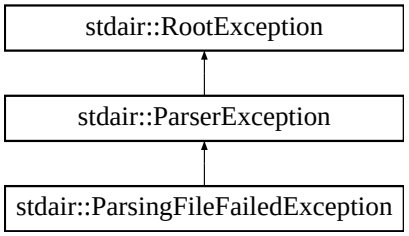
The documentation for this class was generated from the following file:

- stdair/stdair_exceptions.hpp

34.102 stdair::ParsingFileFailedException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::ParsingFileFailedException:



Public Member Functions

- ParsingFileFailedException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.102.1 Detailed Description

Input file parsing failure.

Definition at line 165 of file stdair_exceptions.hpp.

34.102.2 Constructor & Destructor Documentation

34.102.2.1 stdair::ParsingFileFailedException::ParsingFileFailedException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 168 of file stdair_exceptions.hpp.

34.102.3 Member Function Documentation

34.102.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.102.4 Member Data Documentation

34.102.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

The documentation for this class was generated from the following file:

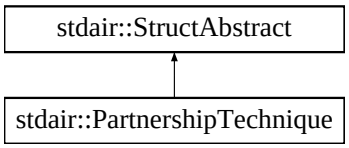
- stdair/stdair_exceptions.hpp

34.103 stdair::PartnershipTechnique Struct Reference

Enumeration of partnership techniques.

`#include <stdair/basic/PartnershipTechnique.hpp>`

Inheritance diagram for stdair::PartnershipTechnique:



Public Types

- enum EN_PartnershipTechnique {

NONE = 0, RAE_DA, RAE_YP, IBP_DA,
IBP_YP, IBP_YP_U, RMC, A_RMC,
LAST_VALUE }

Public Member Functions

- EN_PartnershipTechnique getTechnique () const
- char getTechniqueAsChar () const
- std::string getTechniqueAsString () const
- const std::string describe () const
- bool operator== (const EN_PartnershipTechnique &) const
- PartnershipTechnique (const EN_PartnershipTechnique &)
- PartnershipTechnique (const char iTechnique)
- PartnershipTechnique (const std::string &iTechnique)
- PartnershipTechnique (const PartnershipTechnique &)
- void toStream (std::ostream &ioOut) const
- virtual void fromStream (std::istream &ioIn)

Static Public Member Functions

- static const std::string & getLabel (const EN_PartnershipTechnique &)
- static EN_PartnershipTechnique getTechnique (const char)
- static char getTechniqueLabel (const EN_PartnershipTechnique &)
- static std::string getTechniqueLabelAsString (const EN_PartnershipTechnique &)
- static std::string describeLabels ()

34.103.1 Detailed Description

Enumeration of partnership techniques.

Definition at line 17 of file PartnershipTechnique.hpp.

34.103.2 Member Enumeration Documentation

34.103.2.1 enum stdair::PartnershipTechnique::EN_PartnershipTechnique

Enumerator:

NONE

RAE_DA

RAE_YP

IBP_DA

IBP_YP

IBP_YP_U

RMC

A_RMC

LAST_VALUE

Definition at line 19 of file PartnershipTechnique.hpp.

34.103.3 Constructor & Destructor Documentation

34.103.3.1 stdair::PartnershipTechnique::PartnershipTechnique (const EN_PartnershipTechnique & *iPartnershipTechnique*)

Main constructor.

Definition at line 48 of file PartnershipTechnique.cpp.

34.103.3.2 stdair::PartnershipTechnique::PartnershipTechnique (const char *iTechnique*)

Alternative constructor.

Definition at line 82 of file PartnershipTechnique.cpp.

34.103.3.3 stdair::PartnershipTechnique::PartnershipTechnique (const std::string & *iTechnique*)

Alternative constructor.

Definition at line 88 of file PartnershipTechnique.cpp.

References getTechnique().

34.103.3.4 stdair::PartnershipTechnique::PartnershipTechnique (const PartnershipTechnique & *iPartnershipTechnique*)

Default copy constructor.

Definition at line 42 of file PartnershipTechnique.cpp.

34.103.4 Member Function Documentation

34.103.4.1 const std::string & stdair::PartnershipTechnique::getLabel (const EN_PartnershipTechnique & *iTechnique*) [static]

Get the label as a string (e.g., "RevenueManagementCooperation").

Definition at line 98 of file PartnershipTechnique.cpp.

34.103.4.2 PartnershipTechnique::EN_PartnershipTechnique stdair::PartnershipTechnique::getTechnique (const char *iTechniqueChar*) [static]

Get the technique value from parsing a single char (e.g., 'r' or 'C').

Definition at line 54 of file PartnershipTechnique.cpp.

References A_RMC, describeLabels(), IBP_DA, IBP_YP, IBP_YP_U, LAST_VALUE, NONE, RAE_DA, RAE_YP, and RMC.

34.103.4.3 char stdair::PartnershipTechnique::getTechniqueLabel (const EN_PartnershipTechnique & *iTechnique*) [static]

Get the label as a single char (e.g., 'r' or 'C').

Definition at line 104 of file PartnershipTechnique.cpp.

34.103.4.4 std::string stdair::PartnershipTechnique::getTechniqueLabelAsString (const EN_PartnershipTechnique & *iTechnique*) [static]

Get the label as a string of a single char (e.g., "r" or "C").

Definition at line 110 of file PartnershipTechnique.cpp.

34.103.4.5 std::string stdair::PartnershipTechnique::describeLabels ( ) [static]

List the labels.

Definition at line 117 of file PartnershipTechnique.cpp.

References LAST_VALUE.

Referenced by getTechnique().

34.103.4.6 PartnershipTechnique::EN_PartnershipTechnique stdair::PartnershipTechnique::getTechnique ( ) const

Get the enumerated value.

Definition at line 130 of file PartnershipTechnique.cpp.

Referenced by PartnershipTechnique().

34.103.4.7 char stdair::PartnershipTechnique::getTechniqueAsChar ( ) const

Get the enumerated value as a short string (e.g., 'r' or 'C').

Definition at line 135 of file PartnershipTechnique.cpp.

34.103.4.8 std::string stdair::PartnershipTechnique::getTechniqueAsString ( ) const

Get the enumerated value as a short string (e.g., "r" or "C").

Definition at line 141 of file PartnershipTechnique.cpp.

34.103.4.9 const std::string stdair::PartnershipTechnique::describe ( ) const [virtual]

Give a description of the structure (e.g., "RevenueManagementCooperation" or "InterlineBidPriceYieldProration").

Implements stdair::StructAbstract.

Definition at line 148 of file PartnershipTechnique.cpp.

34.103.4.10 bool stdair::PartnershipTechnique::operator== (const EN_PartnershipTechnique & *iTechnique*) const

Comparison operator.

Definition at line 156 of file PartnershipTechnique.cpp.

34.103.4.11 void stdair::StructAbstract::toStream (std::ostream & *ioOut*) const [inline, inherited]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented in stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 29 of file StructAbstract.hpp.

References stdair::StructAbstract::describe().

Referenced by operator<<().

34.103.4.12 virtual void stdair::StructAbstract::fromStream (std::istream & *ioIn*) [inline, virtual, inherited]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented in stdair::ProgressStatusSet, stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::EventStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 38 of file StructAbstract.hpp.

Referenced by operator>>().

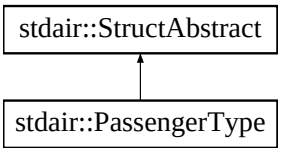
The documentation for this struct was generated from the following files:

- stdair/basic/PartnershipTechnique.hpp
- stdair/basic/PartnershipTechnique.cpp

34.104 stdair::PassengerType Struct Reference

`#include <stdair/basic/PassengerType.hpp>`

Inheritance diagram for stdair::PassengerType:



Public Types

- enum EN_PassengerType { LEISURE = 0, BUSINESS, FIRST, LAST_VALUE }

Public Member Functions

- EN_PassengerType getType () const
- std::string getTypeAsString () const
- const std::string describe () const
- bool operator== (const EN_PassengerType &) const
- PassengerType (const EN_PassengerType &)
- PassengerType (const char iType)
- void toStream (std::ostream &ioOut) const
- virtual void fromStream (std::istream &ioIn)

Static Public Member Functions

- static const std::string & getLabel (const EN_PassengerType &)
- static char getTypeLabel (const EN_PassengerType &)
- static std::string getTypeLabelAsString (const EN_PassengerType &)
- static std::string describeLabels ()

34.104.1 Detailed Description

Enumeration of Frequent Flyer types.

Definition at line 15 of file PassengerType.hpp.

34.104.2 Member Enumeration Documentation

34.104.2.1 enum stdair::PassengerType::EN_PassengerType

Enumerator:

LEISURE

BUSINESS

FIRST

LAST_VALUE

Definition at line 17 of file PassengerType.hpp.

34.104.3 Constructor & Destructor Documentation

34.104.3.1 stdair::PassengerType::PassengerType (const EN_PassengerType & *iPassengerType*)

Constructor.

Definition at line 21 of file PassengerType.cpp.

34.104.3.2 stdair::PassengerType::PassengerType (const char *iType*)

Constructor.

Definition at line 26 of file PassengerType.cpp.

References BUSINESS, describeLabels(), FIRST, LAST_VALUE, and LEISURE.

34.104.4 Member Function Documentation

34.104.4.1 const std::string & stdair::PassengerType::getLabel (const EN_PassengerType & *iType*) [static]

Get the label as a string (e.g., "Leisure" or "Business").

Definition at line 44 of file PassengerType.cpp.

34.104.4.2 char stdair::PassengerType::getTypeLabel (const EN_PassengerType & *iType*) [static]

Get the label as a single char (e.g., 'L' or 'B').

Definition at line 49 of file PassengerType.cpp.

34.104.4.3 std::string stdair::PassengerType::getTypeLabelAsString (const EN_PassengerType & *iType*) [static]

Get the label as a single char (e.g., 'L' or 'B').

Definition at line 55 of file PassengerType.cpp.

34.104.4.4 std::string stdair::PassengerType::describeLabels ( ) [static]

List the labels.

Definition at line 62 of file PassengerType.cpp.

References LAST_VALUE.

Referenced by PassengerType().

34.104.4.5 PassengerType::EN_PassengerType stdair::PassengerType::getType ( ) const

Get the enumerated value.

Definition at line 74 of file PassengerType.cpp.

34.104.4.6 std::string stdair::PassengerType::getTypeAsString ( ) const

Get the enumerated value as a short string (e.g., 'L' or 'B').

Definition at line 79 of file PassengerType.cpp.

34.104.4.7 const std::string stdair::PassengerType::describe ( ) const [virtual]

Give a description of the structure (e.g., "Leisure" or "Business").

Implements stdair::StructAbstract.

Definition at line 86 of file PassengerType.cpp.

34.104.4.8 bool stdair::PassengerType::operator== (const EN_PassengerType & *iType*) const

Comparison operator.

Definition at line 93 of file PassengerType.cpp.

34.104.4.9 void stdair::StructAbstract::toStream (std::ostream & *ioOut*) const [inline, inherited]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented in stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 29 of file StructAbstract.hpp.

References stdair::StructAbstract::describe().

Referenced by operator<<().

34.104.4.10 virtual void stdair::StructAbstract::fromStream (std::istream & *ioIn*) [inline, virtual, inherited]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented in stdair::ProgressStatusSet, stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::EventStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 38 of file StructAbstract.hpp.

Referenced by operator>>().

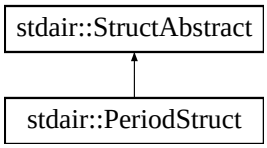
The documentation for this struct was generated from the following files:

- stdair/basic/PassengerType.hpp
- stdair/basic/PassengerType.cpp

34.105 stdair::PeriodStruct Struct Reference

`#include <stdair/bom/PeriodStruct.hpp>`

Inheritance diagram for stdair::PeriodStruct:



Public Member Functions

- const DatePeriod_T & getDateRange () const
- const DoWStruct & getDoW () const
- void setDateRange (const DatePeriod_T &iDateRange)
- void setDoW (const DoWStruct &iDoW)
- const std::string describe () const
- const std::string describeShort () const
- PeriodStruct addDateOffset (const DateOffset_T &) const
- PeriodStruct intersection (const PeriodStruct &) const
- const bool isValid () const
- PeriodStruct (const DatePeriod_T &, const DoWStruct &)
- PeriodStruct ()
- PeriodStruct (const PeriodStruct &)
- ~PeriodStruct ()
- void toStream (std::ostream &ioOut) const
- virtual void fromStream (std::istream &ioIn)

34.105.1 Detailed Description

Define a departure period

A period is defined by a date range and a day-of-week struct.

Definition at line 19 of file PeriodStruct.hpp.

34.105.2 Constructor & Destructor Documentation

34.105.2.1 stdair::PeriodStruct::PeriodStruct (const DatePeriod_T & *iDateRange,* const DoWStruct & *iDoW*)

Constructor.

Definition at line 19 of file PeriodStruct.cpp.

34.105.2.2 stdair::PeriodStruct::PeriodStruct ( )

Default constructors.

Definition at line 14 of file PeriodStruct.cpp.

Referenced by addDateOffset(), and intersection().

34.105.2.3 stdair::PeriodStruct::PeriodStruct (const PeriodStruct & *iPeriodStruct*)

Definition at line 25 of file PeriodStruct.cpp.

34.105.2.4 stdair::PeriodStruct::~PeriodStruct ( ) [inline]

Default destructor.

Definition at line 64 of file PeriodStruct.hpp.

34.105.3 Member Function Documentation

34.105.3.1 const DatePeriod_T& stdair::PeriodStruct::getDateRange ( ) const [inline]

Retrieve the attributes.

Definition at line 23 of file PeriodStruct.hpp.

Referenced by addDateOffset().

34.105.3.2 const DoWStruct& stdair::PeriodStruct::getDoW ( ) const [inline]

Definition at line 26 of file PeriodStruct.hpp.

Referenced by addDateOffset().

34.105.3.3 void stdair::PeriodStruct::setDateRange (const DatePeriod_T & *iDateRange*) [inline]

Set the new value for the attributes.

Definition at line 33 of file PeriodStruct.hpp.

34.105.3.4 void stdair::PeriodStruct::setDoW (const DoWStruct & *iDoW*) [inline]

Definition at line 36 of file PeriodStruct.hpp.

34.105.3.5 const std::string stdair::PeriodStruct::describe ( ) const [virtual]

Display explicitly (e.g., "Mon.Tue.Wed.Thu.Fri.").

Implements stdair::StructAbstract.

Definition at line 38 of file PeriodStruct.cpp.

References stdair::DoWStruct::describe().

34.105.3.6 const std::string stdair::PeriodStruct::describeShort ( ) const

Display as a bit set (e.g., "1111100").

Definition at line 31 of file PeriodStruct.cpp.

References stdair::DoWStruct::describeShort().

Referenced by stdair::FlightPeriodKey::toString().

34.105.3.7 PeriodStruct stdair::PeriodStruct::addDateOffset (const DateOffset_T & *iDateOffset*) const

Build a period struct from this period struct by adding a date offset.

Definition at line 46 of file PeriodStruct.cpp.

References getDateRange(), getDoW(), PeriodStruct(), and stdair::DoWStruct::shift().

34.105.3.8 PeriodStruct stdair::PeriodStruct::intersection (const PeriodStruct & *iPeriodStruct*) const

Build a new period struct which is the intersection of two period structs.

Definition at line 63 of file PeriodStruct.cpp.

References stdair::DoWStruct::intersection(), and PeriodStruct().

34.105.3.9 const bool stdair::PeriodStruct::isValid ( ) const

Return if the period is valid (i.e., valid date range and valid DoW).

Definition at line 72 of file PeriodStruct.cpp.

References stdair::DoWStruct::isValid().

34.105.3.10 void stdair::StructAbstract::toStream (std::ostream & *ioOut*) const [inline, inherited]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented in stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 29 of file StructAbstract.hpp.

References stdair::StructAbstract::describe().

Referenced by operator<<().

34.105.3.11 virtual void stdair::StructAbstract::fromStream (std::istream & *ioIn*) [inline, virtual, inherited]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented in stdair::ProgressStatusSet, stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::EventStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 38 of file StructAbstract.hpp.

Referenced by operator>>().

The documentation for this struct was generated from the following files:

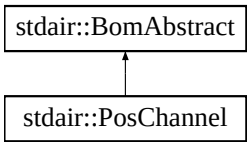
- stdair/bom/PeriodStruct.hpp
- stdair/bom/PeriodStruct.cpp

34.106 stdair::PosChannel Class Reference

Class representing the actual attributes for a fare point of sale.

`#include <stdair/bom/PosChannel.hpp>`

Inheritance diagram for stdair::PosChannel:



Public Types

- typedef PosChannelKey Key_T

Public Member Functions

- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)

- std::string toString () const
- const std::string describeKey () const
- const Key_T & getKey () const
- BomAbstract *const getParent () const
- const stdair::HolderMap_T & getHolderMap () const
- const CityCode_T & getPos () const
- const ChannelLabel_T & getChannel () const

Protected Member Functions

- PosChannel (const Key_T &)
- virtual ~PosChannel ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent
- HolderMap_T _holderMap

Friends

- class FacBom
- class FacBomManager

34.106.1 Detailed Description

Class representing the actual attributes for a fare point of sale.

Definition at line 19 of file PosChannel.hpp.

34.106.2 Member Typedef Documentation

34.106.2.1 typedef PosChannelKey stdair::PosChannel::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 28 of file PosChannel.hpp.

34.106.3 Constructor & Destructor Documentation

34.106.3.1 stdair::PosChannel::PosChannel (const Key_T & *iKey*) [protected]

Main constructor.

Definition at line 29 of file PosChannel.cpp.

34.106.3.2 stdair::PosChannel::~PosChannel ( ) [protected, virtual]

Destructor.

Definition at line 34 of file PosChannel.cpp.

34.106.4 Member Function Documentation

34.106.4.1 void stdair::PosChannel::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 37 of file PosChannel.hpp.

References toString().

34.106.4.2 void stdair::PosChannel::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 46 of file PosChannel.hpp.

34.106.4.3 std::string stdair::PosChannel::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 38 of file PosChannel.cpp.

References describeKey().

Referenced by toStream().

34.106.4.4 const std::string stdair::PosChannel::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 57 of file PosChannel.hpp.

References _key, and stdair::PosChannelKey::toString().

Referenced by toString().

34.106.4.5 const Key_T& stdair::PosChannel::getKey ( ) const [inline]

Get the primary key (pos, channel).

Definition at line 66 of file PosChannel.hpp.

References _key.

34.106.4.6 BomAbstract* const stdair::PosChannel::getParent ( ) const [inline]

Get a reference on the parent object instance.

Definition at line 73 of file PosChannel.hpp.

References _parent.

34.106.4.7 const stdair::HolderMap_T& stdair::PosChannel::getHolderMap ( ) const [inline]

Get a reference on the children holder.

Definition at line 80 of file PosChannel.hpp.

References _holderMap.

34.106.4.8 const CityCode_T& stdair::PosChannel::getPos ( ) const [inline]

Get the point-of-sale.

Definition at line 87 of file PosChannel.hpp.

References _key, and stdair::PosChannelKey::getPos().

34.106.4.9 const ChannelLabel_T& stdair::PosChannel::getChannel ( ) const [inline]

Get the channel.

Definition at line 94 of file PosChannel.hpp.

References _key, and stdair::PosChannelKey::getChannel().

34.106.5 Friends And Related Function Documentation

34.106.5.1 friend class FacBom [friend]

Definition at line 20 of file PosChannel.hpp.

34.106.5.2 friend class FacBomManager [friend]

Definition at line 21 of file PosChannel.hpp.

34.106.6 Member Data Documentation

34.106.6.1 Key_T stdair::PosChannel::_key [protected]

Primary key (flight number and departure date).

Definition at line 126 of file PosChannel.hpp.

Referenced by describeKey(), getChannel(), getKey(), and getPos().

34.106.6.2 BomAbstract* stdair::PosChannel::_parent [protected]

Pointer on the parent class.

Definition at line 131 of file PosChannel.hpp.

Referenced by getParent().

34.106.6.3 HolderMap_T stdair::PosChannel::_holderMap [protected]

Map holding the children.

Definition at line 136 of file PosChannel.hpp.

Referenced by getHolderMap().

The documentation for this class was generated from the following files:

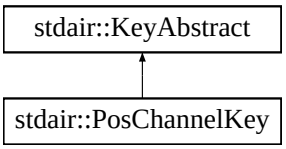
- stdair/bom/PosChannel.hpp
- stdair/bom/PosChannel.cpp

34.107 stdair::PosChannelKey Struct Reference

Key of point of sale and channel.

`#include <stdair/bom/PosChannelKey.hpp>`

Inheritance diagram for stdair::PosChannelKey:



Public Member Functions

- PosChannelKey (const stdair::CityCode_T &, const stdair::ChannelLabel_T &)
- PosChannelKey (const PosChannelKey &)
- ~PosChannelKey ()
- const stdair::CityCode_T & getPos () const
- const stdair::ChannelLabel_T & getChannel () const

- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const

34.107.1 Detailed Description

Key of point of sale and channel.

Definition at line 15 of file PosChannelKey.hpp.

34.107.2 Constructor & Destructor Documentation

34.107.2.1 stdair::PosChannelKey::PosChannelKey (const stdair::CityCode_T & *iPos*, const stdair::ChannelLabel_T & *iChannel*)

Main constructor.

Definition at line 22 of file PosChannelKey.cpp.

34.107.2.2 stdair::PosChannelKey::PosChannelKey (const PosChannelKey & *iKey*)

Copy constructor.

Definition at line 28 of file PosChannelKey.cpp.

34.107.2.3 stdair::PosChannelKey::~PosChannelKey ( )

Destructor.

Definition at line 33 of file PosChannelKey.cpp.

34.107.3 Member Function Documentation

34.107.3.1 const stdair::CityCode_T& stdair::PosChannelKey::getPos ( ) const [inline]

Get the point of sale.

Definition at line 43 of file PosChannelKey.hpp.

Referenced by stdair::PosChannel::getPos().

34.107.3.2 const stdair::ChannelLabel_T& stdair::PosChannelKey::getChannel ( ) const [inline]

Get the channel.

Definition at line 50 of file PosChannelKey.hpp.

Referenced by stdair::PosChannel::getChannel().

34.107.3.3 void stdair::PosChannelKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 37 of file PosChannelKey.cpp.

References toString().

34.107.3.4 void stdair::PosChannelKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 42 of file PosChannelKey.cpp.

34.107.3.5 const std::string stdair::PosChannelKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key. That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

Reimplemented from stdair::KeyAbstract.

Definition at line 46 of file PosChannelKey.cpp.

References stdair::DEFAULT_KEY_SUB_FLD_DELIMITER.

Referenced by stdair::PosChannel::describeKey(), and toStream().

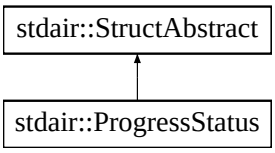
The documentation for this struct was generated from the following files:

- stdair/bom/PosChannelKey.hpp
- stdair/bom/PosChannelKey.cpp

34.108 stdair::ProgressStatus Struct Reference

`#include <stdair/basic/ProgressStatus.hpp>`

Inheritance diagram for stdair::ProgressStatus:



Public Member Functions

- const Count_T & count () const
- const Count_T & getCurrentNb () const
- const Count_T & getExpectedNb () const
- const Count_T & getActualNb () const
- const ProgressPercentage_T progress () const
- void setCurrentNb (const Count_T &iCurrentNb)
- void setExpectedNb (const Count_T &iExpectedNb)
- void setActualNb (const Count_T &iActualNb)
- void reset ()
- Count_T operator+= (Count_T iIncrement)
- Count_T operator++ ()
- const std::string describe () const
- ProgressStatus (const Count_T &iCurrentNb, const Count_T &iExpectedNb, const Count_T &iActualNb)
- ProgressStatus (const Count_T &iExpectedNb, const Count_T &iActualNb)
- ProgressStatus (const Count_T &iActualNb)
- ProgressStatus ()
- ProgressStatus (const ProgressStatus &)
- void toStream (std::ostream &ioOut) const
- virtual void fromStream (std::istream &ioIn)

34.108.1 Detailed Description

Structure holding the details of a progress status.

The progress status is given by the ratio between the "current" and the "expected" (or "actual") numbers. For instance, when the expected/actual number is 1000 and the current number is 200, then the progress status is 20% (= 200 / 1000).

Definition at line 25 of file ProgressStatus.hpp.

34.108.2 Constructor & Destructor Documentation

34.108.2.1 stdair::ProgressStatus::ProgressStatus (const Count_T & *iCurrentNb*, const Count_T & *iExpectedNb*, const Count_T & *iActualNb*)

Constructor.

Parameters

const	Count_T& The current number.
const	Count_T& The expected number.
const	Count_T& The actual number.

Definition at line 15 of file ProgressStatus.cpp.

34.108.2.2 stdair::ProgressStatus::ProgressStatus (const Count_T & *iExpectedNb,* const Count_T & *iActualNb*)

Constructor.

As no current number is given, it is set to 0.

Parameters

const	Count_T& The expected number.
const	Count_T& The actual number.

Definition at line 23 of file ProgressStatus.cpp.

34.108.2.3 stdair::ProgressStatus::ProgressStatus (const Count_T & *iActualNb*)

Constructor.

As no expected number is given, it is assumed to be equal to the actual one. The current number is set to 0.

Parameters

const	Count_T& The actual number.

Definition at line 30 of file ProgressStatus.cpp.

34.108.2.4 stdair::ProgressStatus::ProgressStatus ( )

Constructor.

All the numbers are set to 0.

Definition at line 36 of file ProgressStatus.cpp.

34.108.2.5 stdair::ProgressStatus::ProgressStatus (const ProgressStatus & *iProgressStatus*)

Copy Constructor.

Definition at line 43 of file ProgressStatus.cpp.

34.108.3 Member Function Documentation

34.108.3.1 const Count_T& stdair::ProgressStatus::count ( ) const [inline]

Get the current number.

Definition at line 29 of file ProgressStatus.hpp.

34.108.3.2 const Count_T& stdair::ProgressStatus::getCurrentNb ( ) const [inline]

Get the current number.

Definition at line 34 of file ProgressStatus.hpp.

Referenced by stdair::ProgressStatusSet::describe(), stdair::EventQueue::getCurrentNbOfEvents(), stdair::EventQueue::toString(), and stdair::EventQueue::updateStatus().

34.108.3.3 const Count_T& stdair::ProgressStatus::getExpectedNb ( ) const [inline]

Get the expected number.

Definition at line 39 of file ProgressStatus.hpp.

Referenced by stdair::EventQueue::addStatus(), stdair::ProgressStatusSet::describe(), stdair::EventQueue::getExpectedTotalNbOfEvents(), stdair::EventQueue::toString(), and stdair::EventQueue::updateStatus().

34.108.3.4 const Count_T& stdair::ProgressStatus::getActualNb ( ) const [inline]

Get the actual number.

Definition at line 44 of file ProgressStatus.hpp.

Referenced by stdair::EventQueue::addStatus(), stdair::ProgressStatusSet::describe(), stdair::EventQueue::getActualTotalNbOfEvents(), stdair::EventQueue::toString(), and stdair::EventQueue::updateStatus

34.108.3.5 const ProgressPercentage_T stdair::ProgressStatus::progress ( ) const [inline]

Get the progress as a percentage.

Definition at line 49 of file ProgressStatus.hpp.

Referenced by stdair::EventQueue::calculateProgress().

34.108.3.6 void stdair::ProgressStatus::setCurrentNb (const Count_T & *iCurrentNb*) [inline]

Set the current number.

Definition at line 60 of file ProgressStatus.hpp.

Referenced by stdair::EventQueue::setCurrentNbOfEvents(), stdair::EventQueue::setStatus(), and stdair::EventQueue::updateStatus().

34.108.3.7 void stdair::ProgressStatus::setExpectedNb (const Count_T & *iExpectedNb*) [inline]

Set the expected number.

Definition at line 65 of file ProgressStatus.hpp.

Referenced by stdair::EventQueue::addStatus(), stdair::EventQueue::setExpectedTotalNbOfEvents(), stdair::EventQueue::setStatus(), and stdair::EventQueue::updateStatus().

34.108.3.8 void stdair::ProgressStatus::setActualNb (const Count_T & *iActualNb*) [inline]

Set the actual number.

Definition at line 70 of file ProgressStatus.hpp.

Referenced by stdair::EventQueue::addStatus(), stdair::EventQueue::setActualTotalNbOfEvents(), stdair::EventQueue::setStatus(), and stdair::EventQueue::updateStatus().

34.108.3.9 void stdair::ProgressStatus::reset ( )

Reset the current number (to 0).

Definition at line 50 of file ProgressStatus.cpp.

References stdair::DEFAULT_PROGRESS_STATUS.

Referenced by stdair::EventQueue::reset().

34.108.3.10 Count_T stdair::ProgressStatus::operator+= (Count_T *iIncrement*) [inline]

Increment the current number.

Definition at line 78 of file ProgressStatus.hpp.

34.108.3.11 Count_T stdair::ProgressStatus::operator++ ( ) [inline]

Increment the current number.

Definition at line 84 of file ProgressStatus.hpp.

34.108.3.12 const std::string stdair::ProgressStatus::describe ( ) const [virtual]

Give a description of the structure (e.g., "4 / 100 / 101").

Implements stdair::StructAbstract.

Definition at line 56 of file ProgressStatus.cpp.

34.108.3.13 void stdair::StructAbstract::toStream (std::ostream & *ioOut*) const [inline, inherited]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented in stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct,

stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 29 of file StructAbstract.hpp.

References stdair::StructAbstract::describe().

Referenced by operator<<().

34.108.3.14 virtual void stdair::StructAbstract::fromStream (std::istream & *ioIn*) [inline, virtual, inherited]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented in stdair::ProgressStatusSet, stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::EventStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 38 of file StructAbstract.hpp.

Referenced by operator>>().

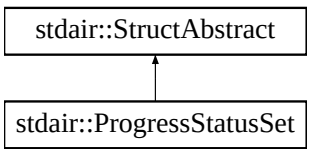
The documentation for this struct was generated from the following files:

- stdair/basic/ProgressStatus.hpp
- stdair/basic/ProgressStatus.cpp

34.109 stdair::ProgressStatusSet Struct Reference

`#include <stdair/basic/ProgressStatusSet.hpp>`

Inheritance diagram for stdair::ProgressStatusSet:



Public Member Functions

- const ProgressStatus & getTypeSpecificStatus () const
- const ProgressStatus & getSpecificGeneratorStatus () const
- const ProgressStatus & getOverallStatus () const
- void setTypeSpecificStatus (const ProgressStatus &iProgressStatus)
- void setSpecificGeneratorStatus (const ProgressStatus &iProgressStatus, const EventGeneratorKey_T &iKey)

- void setOverallStatus (const ProgressStatus &iProgressStatus)
- void fromStream (std::istream &ioIn)
- const std::string describe () const
- ProgressStatusSet (const EventType::EN_EventType &)
- ProgressStatusSet (const ProgressStatusSet &)
- ~ProgressStatusSet ()
- void toStream (std::ostream &ioOut) const

34.109.1 Detailed Description

Structrure holding a set of progress status.

Definition at line 22 of file ProgressStatusSet.hpp.

34.109.2 Constructor & Destructor Documentation

34.109.2.1 stdair::ProgressStatusSet::ProgressStatusSet (const EventType::EN_EventType & *iType*)

Constructor .

Definition at line 20 of file ProgressStatusSet.cpp.

34.109.2.2 stdair::ProgressStatusSet::ProgressStatusSet (const ProgressStatusSet & *iProgressStatusSet*)

Copy constructor.

Definition at line 27 of file ProgressStatusSet.cpp.

34.109.2.3 stdair::ProgressStatusSet::~ProgressStatusSet ( )

Destructor.

Definition at line 36 of file ProgressStatusSet.cpp.

34.109.3 Member Function Documentation

34.109.3.1 const ProgressStatus& stdair::ProgressStatusSet::getTypeSpecificStatus ( ) const [inline]

Get the progress status specific to that event type.

Note that that progress status may not be up-to-date. That attribute is up-to-date only after a call to the EventQueue::popEvent() method.

Definition at line 31 of file ProgressStatusSet.hpp.

34.109.3.2 const ProgressStatus& stdair::ProgressStatusSet::getSpecificGeneratorStatus ( ) const [inline]

Get the progress status specific to the content key for that event.

Note that that progress status may not be up-to-date. That attribute is up-to-date only after a call to the EventQueue::popEvent() method.

Definition at line 43 of file ProgressStatusSet.hpp.

34.109.3.3 const ProgressStatus& stdair::ProgressStatusSet::getOverallStatus ( ) const [inline]

Get the overall progress status (absolute, for all the events).

Note that that progress status may not be up-to-date. That attribute is up-to-date only after a call to the EventQueue::popEvent() method.

Definition at line 54 of file ProgressStatusSet.hpp.

34.109.3.4 void stdair::ProgressStatusSet::setTypeSpecificStatus (const ProgressStatus & *iProgressStatus*) [inline]

Set/update the progress status specific to that event type.

Definition at line 62 of file ProgressStatusSet.hpp.

Referenced by stdair::EventQueue::popEvent().

34.109.3.5 void stdair::ProgressStatusSet::setSpecificGeneratorStatus (const ProgressStatus & *iProgressStatus,* const EventGeneratorKey_T & *iKey*) [inline]

Set/update the progress status specific to the content key for that event.

Definition at line 68 of file ProgressStatusSet.hpp.

34.109.3.6 void stdair::ProgressStatusSet::setOverallStatus (const ProgressStatus & *iProgressStatus*) [inline]

Set/update the overall progress status (absolute, for all the events).

Definition at line 76 of file ProgressStatusSet.hpp.

Referenced by stdair::EventQueue::popEvent().

34.109.3.7 void stdair::ProgressStatusSet::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::StructAbstract.

Definition at line 40 of file ProgressStatusSet.cpp.

34.109.3.8 const std::string stdair::ProgressStatusSet::describe ( ) const [virtual]

Display of the structure.

Implements stdair::StructAbstract.

Definition at line 44 of file ProgressStatusSet.cpp.

References stdair::ProgressStatus::getActualNb(), stdair::ProgressStatus::getCurrentNb(), and stdair::ProgressStatus::getExpectedNb().

34.109.3.9 void stdair::StructAbstract::toStream (std::ostream & *ioOut*) const [inline, inherited]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented in stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 29 of file StructAbstract.hpp.

References stdair::StructAbstract::describe().

Referenced by operator<<().

The documentation for this struct was generated from the following files:

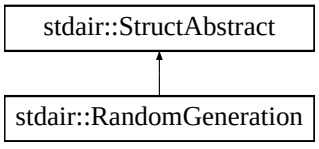
- stdair/basic/ProgressStatusSet.hpp
- stdair/basic/ProgressStatusSet.cpp

34.110 stdair::RandomGeneration Struct Reference

Class holding a random generator.

`#include <stdair/basic/RandomGeneration.hpp>`

Inheritance diagram for stdair::RandomGeneration:



Public Member Functions

- RealNumber_T generateUniform01 ()
- RealNumber_T operator() ()
- RealNumber_T generateUniform (const RealNumber_T &, const RealNumber_T &)

- RealNumber_T generateNormal (const RealNumber_T &, const RealNumber_T &)
- RealNumber_T generateExponential (const RealNumber_T &)
- BaseGenerator_T & getBaseGenerator ()
- const std::string describe () const
- RandomGeneration (const RandomSeed_T &)
- RandomGeneration ()
- ~RandomGeneration ()
- void init (const RandomSeed_T &)
- void toStream (std::ostream &ioOut) const
- virtual void fromStream (std::istream &ioIn)

Public Attributes

- BaseGenerator_T _generator

34.110.1 Detailed Description

Class holding a random generator.

Definition at line 17 of file RandomGeneration.hpp.

34.110.2 Constructor & Destructor Documentation

34.110.2.1 stdair::RandomGeneration::RandomGeneration (const RandomSeed_T & *iSeed*)

Main constructor.

Definition at line 27 of file RandomGeneration.cpp.

34.110.2.2 stdair::RandomGeneration::RandomGeneration ( )

Default constructor.

Note

As per Boost bug #3516 (https://svn.boost.org/trac/boost/ticket/3516) the seed should not be set to 0 (at least on versions of Boost lower than 1.44).

Definition at line 23 of file RandomGeneration.cpp.

34.110.2.3 stdair::RandomGeneration::~RandomGeneration ( )

Destructor.

Definition at line 37 of file RandomGeneration.cpp.

34.110.3 Member Function Documentation

34.110.3.1 RealNumber_T stdair::RandomGeneration::generateUniform01 ( )

Generate a randomised number following a uniform distribution between 0 (included) and 1 (excluded).

Definition at line 53 of file RandomGeneration.cpp.

References _generator.

Referenced by generateNormal(), generateUniform(), and operator()().

34.110.3.2 RealNumber_T stdair::RandomGeneration::operator() ( ) [inline]

Same as generateUniform01(). That operator is provided for convenient reasons.

Definition at line 30 of file RandomGeneration.hpp.

References generateUniform01().

34.110.3.3 RealNumber_T stdair::RandomGeneration::generateUniform (const RealNumber_T & *iMinValue,* const RealNumber_T & *iMaxValue*)

Generate a randomized number following a uniform distribution between a minimum (included) and a maximum (excluded) value.

Definition at line 59 of file RandomGeneration.cpp.

References generateUniform01().

34.110.3.4 RealNumber_T stdair::RandomGeneration::generateNormal (const RealNumber_T & *mu,* const RealNumber_T & *sigma*)

Generate a randomized number following a normal distribution specified by a mean and a standard deviation.

Definition at line 68 of file RandomGeneration.cpp.

References generateUniform01().

Referenced by stdair::BookingClass::generateDemandSamples().

34.110.3.5 RealNumber_T stdair::RandomGeneration::generateExponential (const RealNumber_T & *lambda*)

Generate a randomized number following an exponential distribution specified by a mean and a lambda parameter.

Definition at line 86 of file RandomGeneration.cpp.

References _generator.

34.110.3.6 BaseGenerator_T& stdair::RandomGeneration::getBaseGenerator ( ) [inline]

Retrieve the base generator for initialising other random generators.

Definition at line 56 of file RandomGeneration.hpp.

References _generator.

34.110.3.7 const std::string stdair::RandomGeneration::describe ( ) const [virtual]

Give a description of the structure (for display purposes).

Implements stdair::StructAbstract.

Definition at line 46 of file RandomGeneration.cpp.

References _generator.

34.110.3.8 void stdair::RandomGeneration::init (const RandomSeed_T & *iSeed*)

Initialise the random generator.

A uniform random number distribution is defined, which produces "real" values between 0 and 1 (0 inclusive, 1 exclusive).

Definition at line 41 of file RandomGeneration.cpp.

References _generator.

34.110.3.9 void stdair::StructAbstract::toStream (std::ostream & *ioOut*) const [inline, inherited]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented in stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 29 of file StructAbstract.hpp.

References stdair::StructAbstract::describe().

Referenced by operator<<().

34.110.3.10 virtual void stdair::StructAbstract::fromStream (std::istream & *ioIn*) [inline, virtual, inherited]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented in stdair::ProgressStatusSet, stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::EventStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct,

and stdair::VirtualClassStruct.

Definition at line 38 of file StructAbstract.hpp.

Referenced by operator>>().

34.110.4 Member Data Documentation

34.110.4.1 BaseGenerator_T stdair::RandomGeneration::_generator

Random number generator engine.

The random number generator is currently based on boost::minstd_rand. Alternates are boost::mt19937, boost::ecuyer1988.

Definition at line 112 of file RandomGeneration.hpp.

Referenced by describe(), generateExponential(), generateUniform01(), getBaseGenerator(), and init().

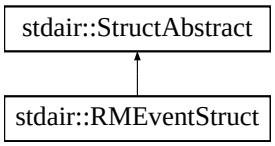
The documentation for this struct was generated from the following files:

- stdair/basic/RandomGeneration.hpp
- stdair/basic/RandomGeneration.cpp

34.111 stdair::RMEventStruct Struct Reference

`#include <stdair/bom/RMEventStruct.hpp>`

Inheritance diagram for stdair::RMEventStruct:



Public Member Functions

- const AirlineCode_T & getAirlineCode () const
- const KeyDescription_T & getFlightDateDescription () const
- const DateTime_T & getRMEventTime () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string describe () const
- RMEventStruct (const AirlineCode_T &, const KeyDescription_T &, const DateTime_T &)
- RMEventStruct (const RMEventStruct &)
- RMEventStruct ()
- ~RMEventStruct ()

34.111.1 Detailed Description

Structure holding the elements of a snapshot .

Definition at line 19 of file RMEventStruct.hpp.

34.111.2 Constructor & Destructor Documentation

34.111.2.1 stdair::RMEventStruct::RMEventStruct (const AirlineCode_T & *iAirlineCode*, const KeyDescription_T & *iFlightDateDescription*, const DateTime_T & *iRMEventTime*)

Constructor.

Definition at line 27 of file RMEventStruct.cpp.

34.111.2.2 stdair::RMEventStruct::RMEventStruct (const RMEventStruct & *iRMEvent*)

Copy constructor.

Definition at line 19 of file RMEventStruct.cpp.

34.111.2.3 stdair::RMEventStruct::RMEventStruct ( )

Default constructor.

It is private so that it can not be used.

Definition at line 13 of file RMEventStruct.cpp.

34.111.2.4 stdair::RMEventStruct::~RMEventStruct ( )

Destructor.

Definition at line 36 of file RMEventStruct.cpp.

34.111.3 Member Function Documentation

34.111.3.1 const AirlineCode_T& stdair::RMEventStruct::getAirlineCode ( ) const [inline]

Get the airline code.

Definition at line 23 of file RMEventStruct.hpp.

34.111.3.2 const KeyDescription_T& stdair::RMEventStruct::getFlightDateDescription ( ) const [inline]

Get the string describing the flight-date key.

Definition at line 28 of file RMEventStruct.hpp.

34.111.3.3 const DateTime_T& stdair::RMEventStruct::getRMEventTime ( ) const [inline]

Get the snapshot action time.

Definition at line 33 of file RMEventStruct.hpp.

34.111.3.4 void stdair::RMEventStruct::toStream (std::ostream & *ioOut*) const

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::StructAbstract.

Definition at line 40 of file RMEventStruct.cpp.

References describe().

34.111.3.5 void stdair::RMEventStruct::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::StructAbstract.

Definition at line 45 of file RMEventStruct.cpp.

34.111.3.6 const std::string stdair::RMEventStruct::describe ( ) const [virtual]

Display of the structure.

Implements stdair::StructAbstract.

Definition at line 49 of file RMEventStruct.cpp.

Referenced by toStream().

The documentation for this struct was generated from the following files:

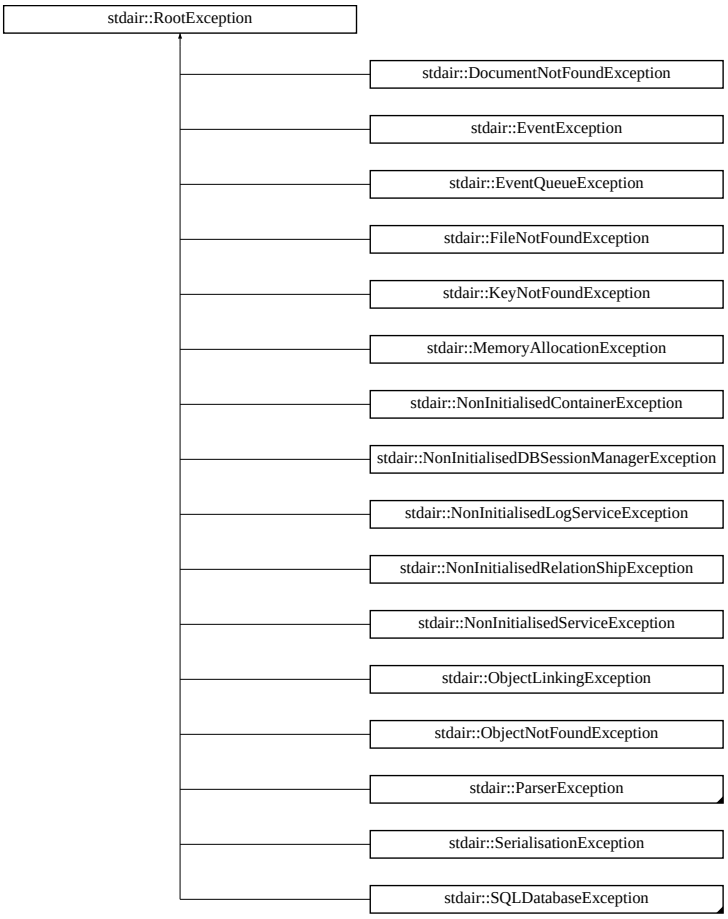
- stdair/bom/RMEventStruct.hpp
- stdair/bom/RMEventStruct.cpp

34.112 stdair::RootException Class Reference

Root of the stdair exceptions.

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::RootException:



Public Member Functions

- RootException (const std::string &iWhat)
- RootException ()
- virtual ~RootException () throw ()
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.112.1 Detailed Description

Root of the stdair exceptions.

All the stdair exceptions inherit from that root, allowing to catch them and to spot them easily when arising in code wrapping the stdair library.

Definition at line 19 of file stdair_exceptions.hpp.

34.112.2 Constructor & Destructor Documentation

34.112.2.1 stdair::RootException::RootException (const std::string & *iWhat*) [inline]

Main Constructor.

Definition at line 24 of file stdair_exceptions.hpp.

34.112.2.2 stdair::RootException::RootException ( ) [inline]

Default constructor.

Definition at line 28 of file stdair_exceptions.hpp.

34.112.2.3 virtual stdair::RootException::~RootException ( ) throw () [inline, virtual]

Destructor.

Definition at line 33 of file stdair_exceptions.hpp.

34.112.3 Member Function Documentation

34.112.3.1 const char* stdair::RootException::what ( ) const throw () [inline]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References _what.

34.112.4 Member Data Documentation

34.112.4.1 std::string stdair::RootException::_what [protected]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by what().

The documentation for this class was generated from the following file:

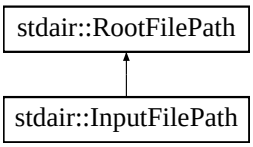
- stdair/stdair_exceptions.hpp

34.113 stdair::RootFilePath Class Reference

Root of the input and output files.

`#include <stdair/stdair_file.hpp>`

Inheritance diagram for stdair::RootFilePath:



Public Member Functions

- RootFilePath (const Filename_T &iFilename)
- RootFilePath ()
- virtual ~RootFilePath ()
- const char * name () const

Protected Attributes

- const Filename_T _filename

34.113.1 Detailed Description

Root of the input and output files.

All the files inherit from that root.

Definition at line 22 of file stdair_file.hpp.

34.113.2 Constructor & Destructor Documentation

34.113.2.1 stdair::RootFilePath::RootFilePath (const Filename_T & *iFilename*) [inline]

Main Constructor.

Definition at line 27 of file stdair_file.hpp.

34.113.2.2 stdair::RootFilePath::RootFilePath ( ) [inline]

Default constructor.

Definition at line 32 of file stdair_file.hpp.

34.113.2.3 virtual stdair::RootFilePath::~RootFilePath ( ) [inline, virtual]

Destructor.

Definition at line 37 of file stdair_file.hpp.

34.113.3 Member Function Documentation

34.113.3.1 const char* stdair::RootFilePath::name ( ) const [inline]

Give the details of the exception.

Definition at line 42 of file stdair_file.hpp.

References _filename.

34.113.4 Member Data Documentation

34.113.4.1 const Filename_T stdair::RootFilePath::_filename [protected]

Name of the file.

Definition at line 50 of file stdair_file.hpp.

Referenced by name().

The documentation for this class was generated from the following file:

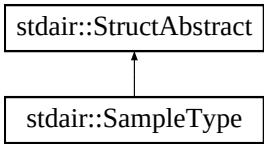
- stdair/stdair_file.hpp

34.114 stdair::SampleType Struct Reference

Enumeration of BOM sample types.

`#include <stdair/basic/SampleType.hpp>`

Inheritance diagram for stdair::SampleType:



Public Types

- enum EN_SampleType {
  ALL = 0, A4P, RMS, INV,
  SCH, RAC, FQT, CRS,
  DEM, EVT, CCM, LAST_VALUE }

Public Member Functions

- EN_SampleType getType () const
- std::string getTypeAsString () const

- const std::string describe () const
- bool operator== (const EN_SampleType &) const
- SampleType (const EN_SampleType &)
- SampleType (const char iType)
- SampleType (const SampleType &)
- void toStream (std::ostream &ioOut) const
- virtual void fromStream (std::istream &ioIn)

Static Public Member Functions

- static const std::string & getLabel (const EN_SampleType &)
- static char getTypeLabel (const EN_SampleType &)
- static std::string getTypeLabelAsString (const EN_SampleType &)
- static std::string describeLabels ()

34.114.1 Detailed Description

Enumeration of BOM sample types.

In order to test some components, it is often easier to fill the BOM tree with hard-coded structures than set up CSV input files and parsing them. That enumeration structure tells for which component(s) the sample BOM tree should be built. By default, a BOM sample tree is built for all the components, i.e., it contains StdAir objects for all the other components (AirInv, AirSched, etc).

Definition at line 25 of file SampleType.hpp.

34.114.2 Member Enumeration Documentation

34.114.2.1 enum stdair::SampleType::EN_SampleType

Enumerator:

ALL
A4P
RMS
INV
SCH
RAC
FQT
CRS
DEM
EVT
CCM
LAST_VALUE

Definition at line 27 of file SampleType.hpp.

34.114.3 Constructor & Destructor Documentation

34.114.3.1 stdair::SampleType::SampleType (const EN_SampleType & *iSampleType*)

Constructor.

Definition at line 36 of file SampleType.cpp.

34.114.3.2 stdair::SampleType::SampleType (const char *iType*)

Constructor.

Definition at line 41 of file SampleType.cpp.

References A4P, ALL, CCM, CRS, DEM, describeLabels(), EVT, FQT, INV, LAST_VALUE, RAC, RMS, and SCH.

34.114.3.3 stdair::SampleType::SampleType (const SampleType & *iSampleType*)

Default copy constructor.

Definition at line 31 of file SampleType.cpp.

34.114.4 Member Function Documentation

34.114.4.1 const std::string & stdair::SampleType::getLabel (const EN_SampleType & *iType*) [static]

Get the label as a string (e.g., "Inventory" or "Schedule").

Definition at line 67 of file SampleType.cpp.

34.114.4.2 char stdair::SampleType::getTypeLabel (const EN_SampleType & *iType*) [static]

Get the label as a single char (e.g., 'I' or 'S').

Definition at line 72 of file SampleType.cpp.

34.114.4.3 std::string stdair::SampleType::getTypeLabelAsString (const EN_SampleType & *iType*) [static]

Get the label as a string of a single char (e.g., "I" or "S").

Definition at line 77 of file SampleType.cpp.

34.114.4.4 std::string stdair::SampleType::describeLabels ( ) [static]

List the labels.

Definition at line 84 of file SampleType.cpp.

References LAST_VALUE.

Referenced by SampleType().

34.114.4.5 SampleType::EN_SampleType stdair::SampleType::getType ( ) const

Get the enumerated value.

Definition at line 96 of file SampleType.cpp.

34.114.4.6 std::string stdair::SampleType::getTypeAsString ( ) const

Get the enumerated value as a short string (e.g., "I" or "S").

Definition at line 101 of file SampleType.cpp.

34.114.4.7 const std::string stdair::SampleType::describe ( ) const [virtual]

Give a description of the structure (e.g., "Inventory" or "Schedule").

Implements stdair::StructAbstract.

Definition at line 108 of file SampleType.cpp.

34.114.4.8 bool stdair::SampleType::operator== (const EN_SampleType & *iType*) const

Comparison operator.

Definition at line 115 of file SampleType.cpp.

34.114.4.9 void stdair::StructAbstract::toStream (std::ostream & *ioOut*) const [inline, inherited]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented in stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 29 of file StructAbstract.hpp.

References stdair::StructAbstract::describe().

Referenced by operator<<().

34.114.4.10 virtual void stdair::StructAbstract::fromStream (std::istream & *ioIn*) [inline, virtual, inherited]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented in stdair::ProgressStatusSet, stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::EventStruct, stdair::FareOptionStruct,

stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 38 of file StructAbstract.hpp.

Referenced by operator>>().

The documentation for this struct was generated from the following files:

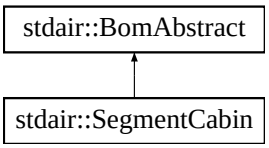
- stdair/basic/SampleType.hpp
- stdair/basic/SampleType.cpp

34.115 stdair::SegmentCabin Class Reference

Class representing the actual attributes for an airline segment-cabin.

`#include <stdair/bom/SegmentCabin.hpp>`

Inheritance diagram for stdair::SegmentCabin:



Public Types

- typedef SegmentCabinKey Key_T

Public Member Functions

- const Key_T & getKey () const
- BomAbstract *const getParent () const
- const HolderMap_T & getHolderMap () const
- const CabinCode_T & getCabinCode () const
- const MapKey_T getFullerKey () const
- const GuillotineBlock & getGuillotineBlock () const
- const CabinCapacity_T & getCapacity () const
- const BlockSpace_T & getBlockSpace () const
- const BlockSpace_T & getMIN () const
- const UPR_T & getUPR () const
- const NbOfBookings_T & getBookingCounter () const
- const CommittedSpace_T & getCommittedSpace () const
- const Availability_T & getAvailabilityPool () const
- const BidPrice_T & getCurrentBidPrice () const
- const BidPriceVector_T & getBidPriceVector () const
- const bool getFareFamilyStatus () const

- void setGuillotineBlock (GuillotineBlock &ioGuillotine)
- void setCapacity (const CabinCapacity_T &iCapacity)
- void setBlockSpace (const BlockSpace_T &iBlockSpace)
- void setMIN (const BlockSpace_T &iMIN)
- void setUPR (const UPR_T &iUPR)
- void setBookingCounter (const NbOfBookings_T &iBookingCounter)
- void setCommittedSpace (const CommittedSpace_T &iCommittedSpace)
- void setAvailabilityPool (const Availability_T &iAvailabilityPool)
- void setBidPriceVector (const BidPriceVector_T &iBPV)
- void activateFareFamily ()
- void updateFromReservation (const NbOfBookings_T &)
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Protected Member Functions

- SegmentCabin (const Key_T &)
- virtual ~SegmentCabin ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent
- HolderMap_T _holderMap
- GuillotineBlock * _guillotineBlock
- CabinCapacity_T _capacity
- BlockSpace_T _blockSpace
- BlockSpace_T _min
- UPR_T _upr
- NbOfBookings_T _bookingCounter
- CommittedSpace_T _committedSpace
- Availability_T _availabilityPool
- BidPriceVector_T _bidPriceVector
- BidPrice_T _currentBidPrice
- bool _fareFamilyActivation

Friends

- class FacBom
- class FacBomManager
- class boost::serialization::access

34.115.1 Detailed Description

Class representing the actual attributes for an airline segment-cabin.

Definition at line 31 of file SegmentCabin.hpp.

34.115.2 Member Typedef Documentation

34.115.2.1 typedef SegmentCabinKey stdair::SegmentCabin::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 41 of file SegmentCabin.hpp.

34.115.3 Constructor & Destructor Documentation

34.115.3.1 stdair::SegmentCabin::SegmentCabin (const Key_T & *iKey*) [protected]

Constructor.

Definition at line 29 of file SegmentCabin.cpp.

34.115.3.2 stdair::SegmentCabin::~SegmentCabin ( ) [protected, virtual]

Destructor.

Definition at line 42 of file SegmentCabin.cpp.

34.115.4 Member Function Documentation

34.115.4.1 const Key_T& stdair::SegmentCabin::getKey ( ) const [inline]

Get the segment-cabin key (cabin code).

Definition at line 49 of file SegmentCabin.hpp.

References _key.

34.115.4.2 BomAbstract* const stdair::SegmentCabin::getParent ( ) const [inline]

Get the parent object.

Definition at line 56 of file SegmentCabin.hpp.

References _parent.

34.115.4.3 const HolderMap_T& stdair::SegmentCabin::getHolderMap ( ) const [inline]

Get the map of children holders.

Definition at line 63 of file SegmentCabin.hpp.

References _holderMap.

34.115.4.4 const CabinCode_T& stdair::SegmentCabin::getCabinCode ( ) const [inline]

Get the cabin code (primary key).

Definition at line 70 of file SegmentCabin.hpp.

References _key, and stdair::SegmentCabinKey::getCabinCode().

Referenced by getFullerKey().

34.115.4.5 const MapKey_T stdair::SegmentCabin::getFullerKey ( ) const

Get the (segment-date, segment-cabin) key (board point, off point and cabin code).

Note

That method assumes that the parent object derives from the SegmentDate class, as it needs to have access to the describeKey() method.

Definition at line 46 of file SegmentCabin.cpp.

References stdair::DEFAULT_KEY_FLD_DELIMITER, stdair::SegmentDate::describeKey(), and getCabinCode().

34.115.4.6 const GuillotineBlock& stdair::SegmentCabin::getGuillotineBlock ( ) const [inline]

Get the guilltine block.

Definition at line 85 of file SegmentCabin.hpp.

References _guillotineBlock.

34.115.4.7 const CabinCapacity_T& stdair::SegmentCabin::getCapacity ( ) const [inline]

Get the cabin capacity.

Definition at line 91 of file SegmentCabin.hpp.

References _capacity.

34.115.4.8 const BlockSpace_T& stdair::SegmentCabin::getBlockSpace ( ) const [inline]

Get the blocked number of bookings.

Definition at line 96 of file SegmentCabin.hpp.

References _blockSpace.

34.115.4.9 const BlockSpace_T& stdair::SegmentCabin::getMIN ( ) const [inline]

Get the blocked number of bookings.

Definition at line 101 of file SegmentCabin.hpp.

References _min.

34.115.4.10 const UPR_T& stdair::SegmentCabin::getUPR ( ) const [inline]

Unsold Protection (UPR).

Definition at line 106 of file SegmentCabin.hpp.

References _upr.

34.115.4.11 const NbOfBookings_T& stdair::SegmentCabin::getBookingCounter ( ) const [inline]

Get the booking counter.

Definition at line 111 of file SegmentCabin.hpp.

References _bookingCounter.

34.115.4.12 const CommittedSpace_T& stdair::SegmentCabin::getCommittedSpace ( ) const [inline]

Get the committed Space value.

Definition at line 116 of file SegmentCabin.hpp.

References _committedSpace.

34.115.4.13 const Availability_T& stdair::SegmentCabin::getAvailabilityPool ( ) const [inline]

Get the availability pool value.

Definition at line 121 of file SegmentCabin.hpp.

References _availabilityPool.

34.115.4.14 const BidPrice_T& stdair::SegmentCabin::getCurrentBidPrice ( ) const [inline]

Retrieve the current Bid-Price.

Definition at line 126 of file SegmentCabin.hpp.

References _currentBidPrice.

34.115.4.15 const BidPriceVector_T& stdair::SegmentCabin::getBidPriceVector ( ) const [inline]

Retrieve the Bid-Price Vector.

Definition at line 131 of file SegmentCabin.hpp.

References _bidPriceVector.

34.115.4.16 const bool stdair::SegmentCabin::getFareFamilyStatus ( ) const [inline]

Retrieve the status of fare family.

Definition at line 136 of file SegmentCabin.hpp.

References _fareFamilyActivation.

34.115.4.17 void stdair::SegmentCabin::setGuillotineBlock (GuillotineBlock & *ioGuillotine*) [inline]

Set the guillotine block.

Definition at line 143 of file SegmentCabin.hpp.

References _guillotineBlock.

34.115.4.18 void stdair::SegmentCabin::setCapacity (const CabinCapacity_T & *iCapacity*) [inline]

Set the cabin capacity.

Definition at line 148 of file SegmentCabin.hpp.

References _capacity.

34.115.4.19 void stdair::SegmentCabin::setBlockSpace (const BlockSpace_T & *iBlockSpace*) [inline]

Set the blocked number of seats.

Definition at line 153 of file SegmentCabin.hpp.

References _blockSpace.

34.115.4.20 void stdair::SegmentCabin::setMIN (const BlockSpace_T & *iMIN*) [inline]

Set the blocked number of seats.

Definition at line 158 of file SegmentCabin.hpp.

References _min.

34.115.4.21 void stdair::SegmentCabin::setUPR (const UPR_T & *iUPR*) [inline]

Set the Unsold Protection (UPR).

Definition at line 163 of file SegmentCabin.hpp.

References _upr.

34.115.4.22 void stdair::SegmentCabin::setBookingCounter (const NbOfBookings_T & *iBookingCounter*) [inline]

Set the total number of bookings.

Definition at line 168 of file SegmentCabin.hpp.

References _bookingCounter.

34.115.4.23 void stdair::SegmentCabin::setCommittedSpace (const CommittedSpace_T & *iCommittedSpace*) [inline]

Set the value of committed space.

Definition at line 173 of file SegmentCabin.hpp.

References _committedSpace.

34.115.4.24 void stdair::SegmentCabin::setAvailabilityPool (const Availability_T & *iAvailabilityPool*) [inline]

Set the value of availability pool.

Definition at line 178 of file SegmentCabin.hpp.

References _availabilityPool.

34.115.4.25 void stdair::SegmentCabin::setBidPriceVector (const BidPriceVector_T & *iBPV*) [inline]

Set the Bid-Price Vector.

Definition at line 183 of file SegmentCabin.hpp.

References _bidPriceVector.

34.115.4.26 void stdair::SegmentCabin::activateFareFamily ( ) [inline]

Activate fare family.

Definition at line 188 of file SegmentCabin.hpp.

References _fareFamilyActivation.

34.115.4.27 void stdair::SegmentCabin::updateFromReservation (const NbOfBookings_T & *iNbOfBookings*)

Register a sale.

Definition at line 63 of file SegmentCabin.cpp.

References _committedSpace.

34.115.4.28 void stdair::SegmentCabin::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 205 of file SegmentCabin.hpp.

References toString().

34.115.4.29 void stdair::SegmentCabin::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 214 of file SegmentCabin.hpp.

34.115.4.30 std::string stdair::SegmentCabin::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 55 of file SegmentCabin.cpp.

References describeKey().

Referenced by toStream().

34.115.4.31 const std::string stdair::SegmentCabin::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 225 of file SegmentCabin.hpp.

References _key, and stdair::SegmentCabinKey::toString().

Referenced by toString().

34.115.4.32 template<class Archive > void stdair::SegmentCabin::serialize (Archive & *ar,* const unsigned int *iFileVersion*)

Serialisation.

Definition at line 229 of file CmdBomSerialiser.cpp.

References _key.

34.115.5 Friends And Related Function Documentation

34.115.5.1 friend class FacBom [friend]

Definition at line 32 of file SegmentCabin.hpp.

34.115.5.2 friend class FacBomManager [friend]

Definition at line 33 of file SegmentCabin.hpp.

34.115.5.3 friend class boost::serialization::access [friend]

Definition at line 34 of file SegmentCabin.hpp.

34.115.6 Member Data Documentation

34.115.6.1 Key_T stdair::SegmentCabin::_key [protected]

Primary key (cabin code).

Definition at line 279 of file SegmentCabin.hpp.

Referenced by describeKey(), getCabinCode(), getKey(), and serialize().

34.115.6.2 BomAbstract* stdair::SegmentCabin::_parent [protected]

Pointer on the parent class (SegmentDate).

Definition at line 284 of file SegmentCabin.hpp.

Referenced by getParent().

34.115.6.3 HolderMap_T stdair::SegmentCabin::_holderMap [protected]

Map holding the children (FareFamily or BookingClass objects).

Definition at line 289 of file SegmentCabin.hpp.

Referenced by getHolderMap().

34.115.6.4 GuillotineBlock* stdair::SegmentCabin::_guillotineBlock [protected]

The guillotine block used for Revenue Management activities.

Definition at line 294 of file SegmentCabin.hpp.

Referenced by getGuillotineBlock(), and setGuillotineBlock().

34.115.6.5 CabinCapacity_T stdair::SegmentCabin::_capacity [protected]

Capacity of the cabin.

Definition at line 297 of file SegmentCabin.hpp.

Referenced by getCapacity(), and setCapacity().

34.115.6.6 BlockSpace_T stdair::SegmentCabin::_blockSpace [protected]

Blocked capacity.

Definition at line 300 of file SegmentCabin.hpp.

Referenced by getBlockSpace(), and setBlockSpace().

34.115.6.7 BlockSpace_T stdair::SegmentCabin::_min [protected]

Blocked number of seats.

Definition at line 303 of file SegmentCabin.hpp.

Referenced by getMIN(), and setMIN().

34.115.6.8 UPR_T stdair::SegmentCabin::_upr [protected]

Unsold Protection (UPR).

Definition at line 306 of file SegmentCabin.hpp.

Referenced by getUPR(), and setUPR().

34.115.6.9 NbOfBookings_T stdair::SegmentCabin::_bookingCounter [protected]

Aggregated number of bookings.

Definition at line 309 of file SegmentCabin.hpp.

Referenced by getBookingCounter(), and setBookingCounter().

34.115.6.10 CommittedSpace_T stdair::SegmentCabin::_committedSpace [protected]

Aggreated committed space.

Definition at line 312 of file SegmentCabin.hpp.

Referenced by getCommittedSpace(), setCommittedSpace(), and updateFromReservation().

34.115.6.11 Availability_T stdair::SegmentCabin::_availabilityPool [protected]

Aggregated availability pool.

Definition at line 315 of file SegmentCabin.hpp.

Referenced by getAvailabilityPool(), and setAvailabilityPool().

34.115.6.12 BidPriceVector_T stdair::SegmentCabin::_bidPriceVector [protected]

Bid-Price Vector (BPV).

Definition at line 318 of file SegmentCabin.hpp.

Referenced by getBidPriceVector(), and setBidPriceVector().

34.115.6.13 BidPrice_T stdair::SegmentCabin::_currentBidPrice [protected]

Current Bid-Price (BP).

Definition at line 321 of file SegmentCabin.hpp.

Referenced by getCurrentBidPrice().

34.115.6.14 bool stdair::SegmentCabin::_fareFamilyActivation [protected]

Indicate if fare family is in use.

Definition at line 324 of file SegmentCabin.hpp.

Referenced by activateFareFamily(), and getFareFamilyStatus().

The documentation for this class was generated from the following files:

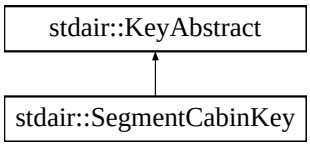
- stdair/bom/SegmentCabin.hpp
- stdair/bom/SegmentCabin.cpp
- stdair/command/CmdBomSerialiser.cpp

34.116 stdair::SegmentCabinKey Struct Reference

Key of a given segment-cabin, made of a cabin code (only).

`#include <stdair/bom/SegmentCabinKey.hpp>`

Inheritance diagram for stdair::SegmentCabinKey:



Public Member Functions

- SegmentCabinKey (const CabinCode_T &iCabinCode)
- SegmentCabinKey (const SegmentCabinKey &)
- ~SegmentCabinKey ()
- const CabinCode_T & getCabinCode () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Friends

- class boost::serialization::access

34.116.1 Detailed Description

Key of a given segment-cabin, made of a cabin code (only).

Definition at line 26 of file SegmentCabinKey.hpp.

34.116.2 Constructor & Destructor Documentation

34.116.2.1 stdair::SegmentCabinKey::SegmentCabinKey (const CabinCode_T & *iCabinCode*)

Constructor.

Definition at line 23 of file SegmentCabinKey.cpp.

34.116.2.2 stdair::SegmentCabinKey::SegmentCabinKey (const SegmentCabinKey & *iKey*)

Copy constructor.

Definition at line 28 of file SegmentCabinKey.cpp.

34.116.2.3 stdair::SegmentCabinKey::~SegmentCabinKey ( )

Destructor.

Definition at line 33 of file SegmentCabinKey.cpp.

34.116.3 Member Function Documentation

34.116.3.1 const CabinCode_T& stdair::SegmentCabinKey::getCabinCode ( ) const [inline]

Get the cabin code.

Definition at line 56 of file SegmentCabinKey.hpp.

Referenced by stdair::SegmentCabin::getCabinCode().

34.116.3.2 void stdair::SegmentCabinKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 37 of file SegmentCabinKey.cpp.

References toString().

34.116.3.3 void stdair::SegmentCabinKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 42 of file SegmentCabinKey.cpp.

34.116.3.4 const std::string stdair::SegmentCabinKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from stdair::KeyAbstract.

Definition at line 46 of file SegmentCabinKey.cpp.

Referenced by stdair::SegmentCabin::describeKey(), stdair::BomRetriever::retrieveDummySegmentCabin(), and toStream().

34.116.3.5 template<class Archive > void stdair::SegmentCabinKey::serialize (Archive & *ar,* const unsigned int *iFileVersion*)

Serialisation.

Definition at line 68 of file SegmentCabinKey.cpp.

34.116.4 Friends And Related Function Documentation

34.116.4.1 friend class boost::serialization::access [friend]

Definition at line 27 of file SegmentCabinKey.hpp.

The documentation for this struct was generated from the following files:

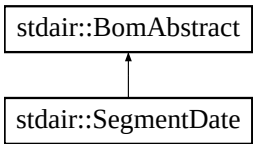
- stdair/bom/SegmentCabinKey.hpp
- stdair/bom/SegmentCabinKey.cpp

34.117 stdair::SegmentDate Class Reference

Class representing the actual attributes for an airline segment-date.

`#include <stdair/bom/SegmentDate.hpp>`

Inheritance diagram for stdair::SegmentDate:



Public Types

- typedef SegmentDateKey Key_T

Public Member Functions

- const Key_T & getKey () const
- BomAbstract *const getParent () const
- const AirportCode_T & getBoardingPoint () const
- const AirportCode_T & getOffPoint () const
- const HolderMap_T & getHolderMap () const
- const Date_T & getBoardingDate () const
- const Duration_T & getBoardingTime () const
- const Date_T & getOffDate () const
- const Duration_T & getOffTime () const
- const Duration_T & getElapsedTime () const
- const Distance_T & getDistance () const
- const DateOffset_T getDateOffset () const
- const Duration_T getTimeOffset () const
- SegmentDate * getOperatingSegmentDate () const
- const SegmentDateList_T & getMarketingSegmentDateList () const
- void setBoardingDate (const Date_T &iBoardingDate)
- void setBoardingTime (const Duration_T &iBoardingTime)
- void setOffDate (const Date_T &iOffDate)
- void setOffTime (const Duration_T &iOffTime)
- void setElapsedTime (const Duration_T &iElapsedTime)
- void setDistance (const Distance_T &iDistance)
- void linkWithOperating (SegmentDate &iSegmentDate)
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Protected Member Functions

- SegmentDate (const Key_T &)
- virtual ~SegmentDate ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent
- HolderMap_T _holderMap
- SegmentDate * _operatingSegmentDate
- SegmentDateList_T _marketingSegmentDateList
- Date_T _boardingDate
- Duration_T _boardingTime
- Date_T _offDate
- Duration_T _offTime
- Duration_T _elapsedTime
- Distance_T _distance

Friends

- class FacBom
- class FacBomManager
- class boost::serialization::access

34.117.1 Detailed Description

Class representing the actual attributes for an airline segment-date.

Definition at line 33 of file SegmentDate.hpp.

34.117.2 Member Typedef Documentation

34.117.2.1 typedef SegmentDateKey stdair::SegmentDate::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 43 of file SegmentDate.hpp.

34.117.3 Constructor & Destructor Documentation

34.117.3.1 stdair::SegmentDate::SegmentDate (const Key_T & *iKey*) [protected]

Constructor.

Definition at line 31 of file SegmentDate.cpp.

34.117.3.2 stdair::SegmentDate::~SegmentDate ( ) [protected, virtual]

Destructor.

Definition at line 37 of file SegmentDate.cpp.

34.117.4 Member Function Documentation

34.117.4.1 const Key_T& stdair::SegmentDate::getKey ( ) const [inline]

Get the segment-date key.

Definition at line 49 of file SegmentDate.hpp.

References _key.

34.117.4.2 BomAbstract* const stdair::SegmentDate::getParent ( ) const [inline]

Get the parent object.

Definition at line 54 of file SegmentDate.hpp.

References _parent.

34.117.4.3 const AirportCode_T& stdair::SegmentDate::getBoardingPoint ( ) const [inline]

Get the boarding point (part of the primary key).

Definition at line 59 of file SegmentDate.hpp.

References _key, and stdair::SegmentDateKey::getBoardingPoint().

34.117.4.4 const AirportCode_T& stdair::SegmentDate::getOffPoint ( ) const [inline]

Get the off point (part of the primary key).

Definition at line 64 of file SegmentDate.hpp.

References _key, and stdair::SegmentDateKey::getOffPoint().

34.117.4.5 const HolderMap_T& stdair::SegmentDate::getHolderMap ( ) const [inline]

Get the map of children holders.

Definition at line 69 of file SegmentDate.hpp.

References _holderMap.

34.117.4.6 const Date_T& stdair::SegmentDate::getBoardingDate ( ) const [inline]

Get the boarding date.

Definition at line 74 of file SegmentDate.hpp.

References _boardingDate.

34.117.4.7 const Duration_T& stdair::SegmentDate::getBoardingTime ( ) const [inline]

Get the boarding time.

Definition at line 79 of file SegmentDate.hpp.

References _boardingTime.

34.117.4.8 const Date_T& stdair::SegmentDate::getOffDate ( ) const [inline]

Get the off date.

Definition at line 84 of file SegmentDate.hpp.

References _offDate.

34.117.4.9 const Duration_T& stdair::SegmentDate::getOffTime ( ) const [inline]

Get the off time.

Definition at line 89 of file SegmentDate.hpp.

References _offTime.

34.117.4.10 const Duration_T& stdair::SegmentDate::getElapsedTime ( ) const [inline]

Get the elapsed time.

Definition at line 94 of file SegmentDate.hpp.

References _elapsedTime.

34.117.4.11 const Distance_T& stdair::SegmentDate::getDistance ( ) const [inline]

Get the distance.

Definition at line 99 of file SegmentDate.hpp.

References _distance.

34.117.4.12 const DateOffset_T stdair::SegmentDate::getDateOffset ( ) const [inline]

Get the date offset (off date - boarding date).

Definition at line 104 of file SegmentDate.hpp.

References _boardingDate, and _offDate.

Referenced by getTimeOffset().

34.117.4.13 const Duration_T stdair::SegmentDate::getTimeOffset ( ) const

Get the time offset between boarding and off points.

It is defined as being:

TimeOffset = (OffTime - BoardingTime) + (OffDate - BoardingDate) $*$ 24

- ElapsedTime.

Definition at line 48 of file SegmentDate.cpp.

References _boardingTime, _elapsedTime, _offTime, and getDateOffset().

34.117.4.14 SegmentDate* stdair::SegmentDate::getOperatingSegmentDate ( ) const [inline]

Get the "operating" segment date.

Definition at line 121 of file SegmentDate.hpp.

References _operatingSegmentDate.

34.117.4.15 const SegmentDateList_T& stdair::SegmentDate::getMarketingSegmentDateList ( ) const [inline]

Get the list of marketing segment dates.

Definition at line 128 of file SegmentDate.hpp.

References _marketingSegmentDateList.

34.117.4.16 void stdair::SegmentDate::setBoardingDate (const Date_T & *iBoardingDate*) [inline]

Set the boarding date.

Definition at line 135 of file SegmentDate.hpp.

References _boardingDate.

34.117.4.17 void stdair::SegmentDate::setBoardingTime (const Duration_T & *iBoardingTime*) [inline]

Set the boarding time.

Definition at line 140 of file SegmentDate.hpp.

References _boardingTime.

34.117.4.18 void stdair::SegmentDate::setOffDate (const Date_T & *iOffDate*) [inline]

Set the off date.

Definition at line 145 of file SegmentDate.hpp.

References _offDate.

34.117.4.19 void stdair::SegmentDate::setOffTime (const Duration_T & *iOffTime*) [inline]

Set the off time.

Definition at line 150 of file SegmentDate.hpp.

References _offTime.

34.117.4.20 void stdair::SegmentDate::setElapsedTime (const Duration_T & *iElapsedTime*) [inline]

Set the elapsed time.

Definition at line 155 of file SegmentDate.hpp.

References _elapsedTime.

34.117.4.21 void stdair::SegmentDate::setDistance (const Distance_T & *iDistance*) [inline]

Set the distance.

Definition at line 160 of file SegmentDate.hpp.

References _distance.

34.117.4.22 void stdair::SegmentDate::linkWithOperating (SegmentDate & *iSegmentDate*) [inline]

Set operating segment date.

Definition at line 165 of file SegmentDate.hpp.

References _operatingSegmentDate.

34.117.4.23 void stdair::SegmentDate::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 176 of file SegmentDate.hpp.

References toString().

34.117.4.24 void stdair::SegmentDate::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 185 of file SegmentDate.hpp.

34.117.4.25 std::string stdair::SegmentDate::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 41 of file SegmentDate.cpp.

References describeKey().

Referenced by toStream().

34.117.4.26 const std::string stdair::SegmentDate::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 196 of file SegmentDate.hpp.

References _key, and stdair::SegmentDateKey::toString().

Referenced by stdair::SegmentCabin::getFullerKey(), and toString().

34.117.4.27 template<class Archive > void stdair::SegmentDate::serialize (Archive & *ar,* const unsigned int *iFileVersion*)

Serialisation.

Definition at line 208 of file CmdBomSerialiser.cpp.

References _key.

34.117.5 Friends And Related Function Documentation

34.117.5.1 friend class FacBom [friend]

Definition at line 34 of file SegmentDate.hpp.

34.117.5.2 friend class FacBomManager [friend]

Definition at line 35 of file SegmentDate.hpp.

34.117.5.3 friend class boost::serialization::access [friend]

Definition at line 36 of file SegmentDate.hpp.

34.117.6 Member Data Documentation

34.117.6.1 Key_T stdair::SegmentDate::_key [protected]

Primary key (origin and destination).

Definition at line 250 of file SegmentDate.hpp.

Referenced by describeKey(), getBoardingPoint(), getKey(), getOffPoint(), and serialize().

34.117.6.2 BomAbstract* stdair::SegmentDate::_parent [protected]

Pointer on the parent class (FlightDate).

Definition at line 255 of file SegmentDate.hpp.

Referenced by getParent().

34.117.6.3 HolderMap_T stdair::SegmentDate::_holderMap [protected]

Map holding the children (SegmentCabin objects).

Definition at line 260 of file SegmentDate.hpp.

Referenced by getHolderMap().

34.117.6.4 SegmentDate* stdair::SegmentDate::_operatingSegmentDate [protected]

Pointer on the operating SegmentDate. Nota: 1. "operating" refers to the codeshare contract seller. 2. the pointer will be NULL if the segment date is itself the "operating" one.

Definition at line 268 of file SegmentDate.hpp.

Referenced by getOperatingSegmentDate(), and linkWithOperating().

34.117.6.5 SegmentDateList_T stdair::SegmentDate::_marketingSegmentDateList [protected]

List holding the marketing segment dates. Nota: 1. "marketing" refers to the codeshare contract seller. 2. the list will be empty if the segment date is itself the "marketing" one.

Definition at line 276 of file SegmentDate.hpp.

Referenced by getMarketingSegmentDateList().

34.117.6.6 Date_T stdair::SegmentDate::_boardingDate [protected]

Boarding date.

Definition at line 281 of file SegmentDate.hpp.

Referenced by getBoardingDate(), getDateOffset(), and setBoardingDate().

34.117.6.7 Duration_T stdair::SegmentDate::_boardingTime [protected]

Boarding time.

Definition at line 286 of file SegmentDate.hpp.

Referenced by getBoardingTime(), getTimeOffset(), and setBoardingTime().

34.117.6.8 Date_T stdair::SegmentDate::_offDate [protected]

Landing date.

Definition at line 291 of file SegmentDate.hpp.

Referenced by getDateOffset(), getOffDate(), and setOffDate().

34.117.6.9 Duration_T stdair::SegmentDate::_offTime [protected]

Landing time.

Definition at line 296 of file SegmentDate.hpp.

Referenced by getOffTime(), getTimeOffset(), and setOffTime().

34.117.6.10 Duration_T stdair::SegmentDate::_elapsedTime [protected]

Trip elapsed time.

Definition at line 301 of file SegmentDate.hpp.

Referenced by getElapsedTime(), getTimeOffset(), and setElapsedTime().

34.117.6.11 Distance_T stdair::SegmentDate::_distance [protected]

Trip distance.

Definition at line 306 of file SegmentDate.hpp.

Referenced by getDistance(), and setDistance().

The documentation for this class was generated from the following files:

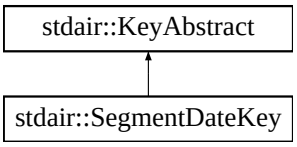
- stdair/bom/SegmentDate.hpp
- stdair/bom/SegmentDate.cpp
- stdair/command/CmdBomSerialiser.cpp

34.118 stdair::SegmentDateKey Struct Reference

Key of a given segment-date, made of an origin and a destination airports.

`#include <stdair/bom/SegmentDateKey.hpp>`

Inheritance diagram for stdair::SegmentDateKey:



Public Member Functions

- SegmentDateKey (const AirportCode_T &, const AirportCode_T &)
- SegmentDateKey (const SegmentDateKey &)
- ~SegmentDateKey ()
- const AirportCode_T & getBoardingPoint () const
- const AirportCode_T & getOffPoint () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const
- template<class Archive >
  void serialize (Archive &ar, const unsigned int iFileVersion)

Friends

- class boost::serialization::access

34.118.1 Detailed Description

Key of a given segment-date, made of an origin and a destination airports.

Definition at line 24 of file SegmentDateKey.hpp.

34.118.2 Constructor & Destructor Documentation

34.118.2.1 stdair::SegmentDateKey::SegmentDateKey (const AirportCode_T & *iBoardingPoint,* const AirportCode_T & *iOffPoint*)

Main constructor.

Definition at line 25 of file SegmentDateKey.cpp.

34.118.2.2 stdair::SegmentDateKey::SegmentDateKey (const SegmentDateKey & *iKey*)

Copy constructor.

Definition at line 31 of file SegmentDateKey.cpp.

34.118.2.3 stdair::SegmentDateKey::~SegmentDateKey ( )

Destructor.

Definition at line 36 of file SegmentDateKey.cpp.

34.118.3 Member Function Documentation

34.118.3.1 const AirportCode_T& stdair::SegmentDateKey::getBoardingPoint ( ) const [inline]

Get the boardinging point.

Definition at line 51 of file SegmentDateKey.hpp.

Referenced by stdair::SegmentDate::getBoardingPoint(), and stdair::OnDDateKey::getOrigin().

34.118.3.2 const AirportCode_T& stdair::SegmentDateKey::getOffPoint ( ) const [inline]

Get the arrival point.

Definition at line 56 of file SegmentDateKey.hpp.

Referenced by stdair::OnDDateKey::getDestination(), and stdair::SegmentDate::getOffPoint().

34.118.3.3 void stdair::SegmentDateKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 40 of file SegmentDateKey.cpp.

References toString().

34.118.3.4 void stdair::SegmentDateKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 45 of file SegmentDateKey.cpp.

34.118.3.5 const std::string stdair::SegmentDateKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from stdair::KeyAbstract.

Definition at line 49 of file SegmentDateKey.cpp.

References stdair::DEFAULT_KEY_SUB_FLD_DELIMITER.

Referenced by stdair::SegmentDate::describeKey(), stdair::FlightDate::getSegmentDate(), stdair::BomRetriever::retrieveSegmentDateFromLongKey(), and toStream().

34.118.3.6 template<class Archive > void stdair::SegmentDateKey::serialize (Archive & *ar,* const unsigned int *iFileVersion*)

Serialisation.

Definition at line 72 of file SegmentDateKey.cpp.

34.118.4 Friends And Related Function Documentation

34.118.4.1 friend class boost::serialization::access [friend]

Definition at line 25 of file SegmentDateKey.hpp.

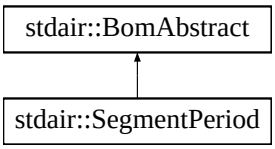
The documentation for this struct was generated from the following files:

- stdair/bom/SegmentDateKey.hpp
- stdair/bom/SegmentDateKey.cpp

34.119 stdair::SegmentPeriod Class Reference

`#include <stdair/bom/SegmentPeriod.hpp>`

Inheritance diagram for stdair::SegmentPeriod:



Public Types

- typedef SegmentPeriodKey Key_T

Public Member Functions

- const Key_T & getKey () const
- BomAbstract *const getParent () const
- const AirportCode_T & getBoardingPoint () const
- const AirportCode_T & getOffPoint () const
- const Duration_T & getBoardingTime () const
- const Duration_T & getOffTime () const
- const DateOffset_T & getBoardingDateOffset () const
- const DateOffset_T & getOffDateOffset () const
- const Duration_T & getElapsedTime () const
- const CabinBookingClassMap_T & getCabinBookingClassMap () const
- const HolderMap_T & getHolderMap () const
- void setBoardingTime (const Duration_T &iBoardingTime)
- void setOffTime (const Duration_T &iOffTime)
- void setBoardingDateOffset (const DateOffset_T &iDateOffset)
- void setOffDateOffset (const DateOffset_T &iDateOffset)
- void setElapsedTime (const Duration_T &iElapsedTime)
- void addCabinBookingClassList (const CabinCode_T &, const ClassList_String_T &)
- void toStream (std::ostream &ioOut) const

- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const

Protected Member Functions

- SegmentPeriod (const Key_T &)
- SegmentPeriod (const SegmentPeriod &)
- ~SegmentPeriod ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent
- Duration_T _boardingTime
- Duration_T _offTime
- DateOffset_T _boardingDateOffset
- DateOffset_T _offDateOffset
- Duration_T _elapsedTime
- CabinBookingClassMap_T _cabinBookingClassMap
- HolderMap_T _holderMap

Friends

- class FacBom
- class FacBomManager

34.119.1 Detailed Description

Class representing the actual attributes for an airline segment-period.

Definition at line 15 of file SegmentPeriod.hpp.

34.119.2 Member Typedef Documentation

34.119.2.1 typedef SegmentPeriodKey stdair::SegmentPeriod::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 22 of file SegmentPeriod.hpp.

34.119.3 Constructor & Destructor Documentation

34.119.3.1 stdair::SegmentPeriod::SegmentPeriod (const Key_T & *iKey*) [protected]

Default constructors.

Definition at line 13 of file SegmentPeriod.cpp.

34.119.3.2 stdair::SegmentPeriod::SegmentPeriod (const SegmentPeriod &) [protected]

34.119.3.3 stdair::SegmentPeriod::~SegmentPeriod ( ) [protected]

Destructor.

Definition at line 18 of file SegmentPeriod.cpp.

34.119.4 Member Function Documentation

34.119.4.1 const Key_T& stdair::SegmentPeriod::getKey ( ) const [inline]

Get the segment-period key.

Definition at line 27 of file SegmentPeriod.hpp.

References _key.

34.119.4.2 BomAbstract* const stdair::SegmentPeriod::getParent ( ) const [inline]

Get the parent object.

Definition at line 30 of file SegmentPeriod.hpp.

References _parent.

34.119.4.3 const AirportCode_T& stdair::SegmentPeriod::getBoardingPoint ( ) const [inline]

Get the boarding point (part of the primary key).

Definition at line 33 of file SegmentPeriod.hpp.

References _key, and stdair::SegmentPeriodKey::getBoardingPoint().

34.119.4.4 const AirportCode_T& stdair::SegmentPeriod::getOffPoint ( ) const [inline]

Get the off point (part of the primary key).

Definition at line 38 of file SegmentPeriod.hpp.

References _key, and stdair::SegmentPeriodKey::getOffPoint().

34.119.4.5 const Duration_T& stdair::SegmentPeriod::getBoardingTime ( ) const [inline]

Get the boarding time.

Definition at line 41 of file SegmentPeriod.hpp.

References _boardingTime.

34.119.4.6 const Duration_T& stdair::SegmentPeriod::getOffTime ( ) const [inline]

Get the off time.

Definition at line 44 of file SegmentPeriod.hpp.

References _offTime.

34.119.4.7 const DateOffset_T& stdair::SegmentPeriod::getBoardingDateOffset ( ) const [inline]

Get the boarding date offset.

Definition at line 47 of file SegmentPeriod.hpp.

References _boardingDateOffset.

34.119.4.8 const DateOffset_T& stdair::SegmentPeriod::getOffDateOffset ( ) const [inline]

Get the off date offset.

Definition at line 52 of file SegmentPeriod.hpp.

References _offDateOffset.

34.119.4.9 const Duration_T& stdair::SegmentPeriod::getElapsedTime ( ) const [inline]

Get the elapsed time.

Definition at line 55 of file SegmentPeriod.hpp.

References _elapsedTime.

34.119.4.10 const CabinBookingClassMap_T& stdair::SegmentPeriod::getCabinBookingClassMap ( ) const [inline]

Get the cabin booking class map.

Definition at line 58 of file SegmentPeriod.hpp.

References _cabinBookingClassMap.

34.119.4.11 const HolderMap_T& stdair::SegmentPeriod::getHolderMap ( ) const [inline]

Get the map of children holders.

Definition at line 63 of file SegmentPeriod.hpp.

References _holderMap.

34.119.4.12 void stdair::SegmentPeriod::setBoardingTime (const Duration_T & *iBoardingTime*) [inline]

Set the boarding time.

Definition at line 68 of file SegmentPeriod.hpp.

References _boardingTime.

34.119.4.13 void stdair::SegmentPeriod::setOffTime (const Duration_T & *iOffTime*) [inline]

Set the off time.

Definition at line 73 of file SegmentPeriod.hpp.

References _offTime.

34.119.4.14 void stdair::SegmentPeriod::setBoardingDateOffset (const DateOffset_T & *iDateOffset*) [inline]

Set the boarding date offset.

Definition at line 76 of file SegmentPeriod.hpp.

References _boardingDateOffset.

34.119.4.15 void stdair::SegmentPeriod::setOffDateOffset (const DateOffset_T & *iDateOffset*) [inline]

Set the off date offset.

Definition at line 81 of file SegmentPeriod.hpp.

References _offDateOffset.

34.119.4.16 void stdair::SegmentPeriod::setElapsedTime (const Duration_T & *iElapsedTime*) [inline]

Set the elapsed time.

Definition at line 86 of file SegmentPeriod.hpp.

References _elapsedTime.

34.119.4.17 void stdair::SegmentPeriod::addCabinBookingClassList (const CabinCode_T & *iCabinCode,* const ClassList_String_T & *iClassCodeList*)

Add a pair cabin code and list of class codes within the cabin to the cabin booking class map.

Definition at line 30 of file SegmentPeriod.cpp.

References _cabinBookingClassMap.

34.119.4.18 void stdair::SegmentPeriod::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 99 of file SegmentPeriod.hpp.

References toString().

34.119.4.19 void stdair::SegmentPeriod::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 103 of file SegmentPeriod.hpp.

34.119.4.20 std::string stdair::SegmentPeriod::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 22 of file SegmentPeriod.cpp.

References describeKey().

Referenced by toStream().

34.119.4.21 const std::string stdair::SegmentPeriod::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 109 of file SegmentPeriod.hpp.

References _key, and stdair::SegmentPeriodKey::toString().

Referenced by toString().

34.119.5 Friends And Related Function Documentation

34.119.5.1 friend class FacBom [friend]

Definition at line 16 of file SegmentPeriod.hpp.

34.119.5.2 friend class FacBomManager [friend]

Definition at line 17 of file SegmentPeriod.hpp.

34.119.6 Member Data Documentation

34.119.6.1 Key_T stdair::SegmentPeriod::_key [protected]

Definition at line 120 of file SegmentPeriod.hpp.

Referenced by describeKey(), getBoardingPoint(), getKey(), and getOffPoint().

34.119.6.2 BomAbstract* stdair::SegmentPeriod::_parent [protected]

Definition at line 121 of file SegmentPeriod.hpp.

Referenced by getParent().

34.119.6.3 Duration_T stdair::SegmentPeriod::_boardingTime [protected]

Definition at line 122 of file SegmentPeriod.hpp.

Referenced by getBoardingTime(), and setBoardingTime().

34.119.6.4 Duration_T stdair::SegmentPeriod::_offTime [protected]

Definition at line 123 of file SegmentPeriod.hpp.

Referenced by getOffTime(), and setOffTime().

34.119.6.5 DateOffset_T stdair::SegmentPeriod::_boardingDateOffset [protected]

Definition at line 124 of file SegmentPeriod.hpp.

Referenced by getBoardingDateOffset(), and setBoardingDateOffset().

34.119.6.6 DateOffset_T stdair::SegmentPeriod::_offDateOffset [protected]

Definition at line 125 of file SegmentPeriod.hpp.

Referenced by getOffDateOffset(), and setOffDateOffset().

34.119.6.7 Duration_T stdair::SegmentPeriod::_elapsedTime [protected]

Definition at line 126 of file SegmentPeriod.hpp.

Referenced by getElapsedTime(), and setElapsedTime().

34.119.6.8 CabinBookingClassMap_T stdair::SegmentPeriod::_cabinBookingClassMap [protected]

Definition at line 127 of file SegmentPeriod.hpp.

Referenced by addCabinBookingClassList(), and getCabinBookingClassMap().

34.119.6.9 HolderMap_T stdair::SegmentPeriod::_holderMap [protected]

Definition at line 128 of file SegmentPeriod.hpp.

Referenced by getHolderMap().

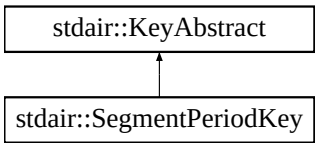
The documentation for this class was generated from the following files:

- stdair/bom/SegmentPeriod.hpp
- stdair/bom/SegmentPeriod.cpp

34.120 stdair::SegmentPeriodKey Struct Reference

`#include <stdair/bom/SegmentPeriodKey.hpp>`

Inheritance diagram for stdair::SegmentPeriodKey:



Public Member Functions

- SegmentPeriodKey (const AirportCode_T &, const AirportCode_T &)
- SegmentPeriodKey (const SegmentPeriodKey &)
- ~SegmentPeriodKey ()
- const AirportCode_T & getBoardingPoint () const
- const AirportCode_T & getOffPoint () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const

34.120.1 Detailed Description

Key of segment-period.

Definition at line 14 of file SegmentPeriodKey.hpp.

34.120.2 Constructor & Destructor Documentation

34.120.2.1 stdair::SegmentPeriodKey::SegmentPeriodKey (const AirportCode_T & *iBoardingPoint,* const AirportCode_T & *iOffPoint*)

Constructors.

Definition at line 12 of file SegmentPeriodKey.cpp.

34.120.2.2 stdair::SegmentPeriodKey::SegmentPeriodKey (const SegmentPeriodKey & *iKey*)

Definition at line 18 of file SegmentPeriodKey.cpp.

34.120.2.3 stdair::SegmentPeriodKey::~SegmentPeriodKey ( )

Destructor.

Definition at line 23 of file SegmentPeriodKey.cpp.

34.120.3 Member Function Documentation

34.120.3.1 const AirportCode_T& stdair::SegmentPeriodKey::getBoardingPoint ( ) const [inline]

Get the boardinging point.

Definition at line 29 of file SegmentPeriodKey.hpp.

Referenced by stdair::SegmentPeriod::getBoardingPoint().

34.120.3.2 const AirportCode_T& stdair::SegmentPeriodKey::getOffPoint ( ) const [inline]

Get the arrival point.

Definition at line 34 of file SegmentPeriodKey.hpp.

Referenced by stdair::SegmentPeriod::getOffPoint().

34.120.3.3 void stdair::SegmentPeriodKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 27 of file SegmentPeriodKey.cpp.

References toString().

34.120.3.4 void stdair::SegmentPeriodKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 32 of file SegmentPeriodKey.cpp.

34.120.3.5 const std::string stdair::SegmentPeriodKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-period.

Reimplemented from stdair::KeyAbstract.

Definition at line 36 of file SegmentPeriodKey.cpp.

Referenced by stdair::SegmentPeriod::describeKey(), and toStream().

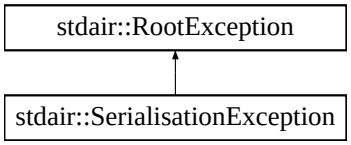
The documentation for this struct was generated from the following files:

- stdair/bom/SegmentPeriodKey.hpp
- stdair/bom/SegmentPeriodKey.cpp

34.121 stdair::SerialisationException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::SerialisationException:



Public Member Functions

- SerialisationException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.121.1 Detailed Description

Serialisation.

Definition at line 119 of file stdair_exceptions.hpp.

34.121.2 Constructor & Destructor Documentation

34.121.2.1 stdair::SerialisationException::SerialisationException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 122 of file stdair_exceptions.hpp.

34.121.3 Member Function Documentation

34.121.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.121.4 Member Data Documentation

34.121.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

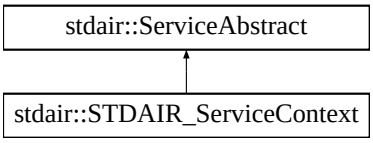
The documentation for this class was generated from the following file:

- stdair/stdair_exceptions.hpp

34.122 stdair::ServiceAbstract Class Reference

`#include <stdair/service/ServiceAbstract.hpp>`

Inheritance diagram for stdair::ServiceAbstract:



Public Member Functions

- virtual ~ServiceAbstract ()

- virtual void toStream (std::ostream &ioOut) const
- virtual void fromStream (std::istream &ioIn)

Protected Member Functions

- ServiceAbstract ()

34.122.1 Detailed Description

Base class for the Service layer.

Definition at line 15 of file ServiceAbstract.hpp.

34.122.2 Constructor & Destructor Documentation

34.122.2.1 virtual stdair::ServiceAbstract::~ServiceAbstract ( ) [inline, virtual]

Destructor.

Definition at line 21 of file ServiceAbstract.hpp.

34.122.2.2 stdair::ServiceAbstract::ServiceAbstract ( ) [inline, protected]

Display of the structure. Protected Default Constructor to ensure this class is abtract.

Definition at line 46 of file ServiceAbstract.hpp.

34.122.3 Member Function Documentation

34.122.3.1 virtual void stdair::ServiceAbstract::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Definition at line 28 of file ServiceAbstract.hpp.

Referenced by operator<<().

34.122.3.2 virtual void stdair::ServiceAbstract::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Definition at line 35 of file ServiceAbstract.hpp.

Referenced by operator>>().

The documentation for this class was generated from the following file:

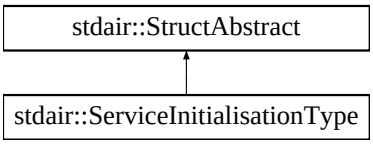
- stdair/service/ServiceAbstract.hpp

34.123 stdair::ServiceInitialisationType Struct Reference

Enumeration of service initialisation types.

`#include <stdair/basic/ServiceInitialisationType.hpp>`

Inheritance diagram for stdair::ServiceInitialisationType:



Public Types

- enum EN_ServiceInitialisationType { NOT_YET_INITIALISED = 0, FILE_PARSING, BUILTIN_SAMPLE, LAST_VALUE }

Public Member Functions

- EN_ServiceInitialisationType getType () const
- char getTypeAsChar () const
- std::string getTypeAsString () const
- const std::string describe () const
- bool operator== (const EN_ServiceInitialisationType &) const
- ServiceInitialisationType (const EN_ServiceInitialisationType &)
- ServiceInitialisationType (const char iType)
- ServiceInitialisationType (const std::string &iType)
- ServiceInitialisationType (const ServiceInitialisationType &)
- void toStream (std::ostream &ioOut) const
- virtual void fromStream (std::istream &ioIn)

Static Public Member Functions

- static const std::string & getLabel (const EN_ServiceInitialisationType &)
- static EN_ServiceInitialisationType getType (const char)
- static char getTypeLabel (const EN_ServiceInitialisationType &)
- static std::string getTypeLabelAsString (const EN_ServiceInitialisationType &)
- static std::string describeLabels ()

34.123.1 Detailed Description

Enumeration of service initialisation types.

Definition at line 17 of file ServiceInitialisationType.hpp.

34.123.2 Member Enumeration Documentation

34.123.2.1 enum stdair::ServiceInitialisationType::EN_ServiceInitialisationType

Enumerator:

NOT_YET_INITIALISED

FILE_PARSING

BUILTIN_SAMPLE

LAST_VALUE

Definition at line 19 of file ServiceInitialisationType.hpp.

34.123.3 Constructor & Destructor Documentation

34.123.3.1 stdair::ServiceInitialisationType::ServiceInitialisationType (const EN_ServiceInitialisationType & *iServiceInitialisationType*)

Main constructor.

Definition at line 36 of file ServiceInitialisationType.cpp.

34.123.3.2 stdair::ServiceInitialisationType::ServiceInitialisationType (const char *iType*)

Alternative constructor.

Definition at line 65 of file ServiceInitialisationType.cpp.

34.123.3.3 stdair::ServiceInitialisationType::ServiceInitialisationType (const std::string & *iType*)

Alternative constructor.

Definition at line 71 of file ServiceInitialisationType.cpp.

References getType().

34.123.3.4 stdair::ServiceInitialisationType::ServiceInitialisationType (const ServiceInitialisationType & *iServiceInitialisationType*)

Default copy constructor.

Definition at line 30 of file ServiceInitialisationType.cpp.

34.123.4 Member Function Documentation

34.123.4.1 const std::string & stdair::ServiceInitialisationType::getLabel (const EN_ServiceInitialisationType & *iType*) [static]

Get the label as a string (e.g., "Not yet initialised", "File parsing" or "Built-in sample BOM").

Definition at line 81 of file ServiceInitialisationType.cpp.

34.123.4.2 ServiceInitialisationType::EN_ServiceInitialisationType stdair::ServiceInitialisationType::getType (const char *iTypeChar*) [static]

Get the type value from parsing a single char (e.g., 'N', 'F', 'B').

Definition at line 42 of file ServiceInitialisationType.cpp.

References BUILTIN_SAMPLE, describeLabels(), FILE_PARSING, LAST_VALUE, and NOT_YET_INITIALISED.

34.123.4.3 char stdair::ServiceInitialisationType::getTypeLabel (const EN_ServiceInitialisationType & *iType*) [static]

Get the label as a single char (e.g., 'N', 'F', 'B').

Definition at line 87 of file ServiceInitialisationType.cpp.

34.123.4.4 std::string stdair::ServiceInitialisationType::getTypeLabelAsString (const EN_ServiceInitialisationType & *iType*) [static]

Get the label as a string of a single char (e.g., "N", "F", "B").

Definition at line 93 of file ServiceInitialisationType.cpp.

34.123.4.5 std::string stdair::ServiceInitialisationType::describeLabels ( ) [static]

List the labels.

Definition at line 100 of file ServiceInitialisationType.cpp.

References LAST_VALUE.

Referenced by getType().

34.123.4.6 ServiceInitialisationType::EN_ServiceInitialisationType stdair::ServiceInitialisationType::getType ( ) const

Get the enumerated value.

Definition at line 113 of file ServiceInitialisationType.cpp.

Referenced by ServiceInitialisationType().

34.123.4.7 char stdair::ServiceInitialisationType::getTypeAsChar ( ) const

Get the enumerated value as a short string (e.g., 'N', 'F', 'B').

Definition at line 118 of file ServiceInitialisationType.cpp.

34.123.4.8 std::string stdair::ServiceInitialisationType::getTypeAsString ( ) const

Get the enumerated value as a short string (e.g., "N", "F", "B").

Definition at line 124 of file ServiceInitialisationType.cpp.

34.123.4.9 const std::string stdair::ServiceInitialisationType::describe ( ) const [virtual]

Give a description of the structure (e.g., "Not yet initialised", "File parsing" or "Built-in sample BOM").

Implements stdair::StructAbstract.

Definition at line 131 of file ServiceInitialisationType.cpp.

34.123.4.10 bool stdair::ServiceInitialisationType::operator== (const EN_ServiceInitialisationType & *iType*) const

Comparison operator.

Definition at line 139 of file ServiceInitialisationType.cpp.

34.123.4.11 void stdair::StructAbstract::toStream (std::ostream & *ioOut*) const [inline, inherited]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented in stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 29 of file StructAbstract.hpp.

References stdair::StructAbstract::describe().

Referenced by operator<<().

34.123.4.12 virtual void stdair::StructAbstract::fromStream (std::istream & *ioIn*) [inline, virtual, inherited]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented in stdair::ProgressStatusSet, stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::EventStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 38 of file StructAbstract.hpp.

Referenced by operator>>().

The documentation for this struct was generated from the following files:

- stdair/basic/ServiceInitialisationType.hpp
- stdair/basic/ServiceInitialisationType.cpp

34.124 swift::SKeymap Class Reference

The readline keymap wrapper.

`#include <stdair/ui/cmdline/SReadline.hpp>`

Public Member Functions

- SKeymap (bool PrintableBound=false)

  Creates a new keymap.
- SKeymap (Keymap Pattern)

  Creates a new keymap which is a copy of Pattern.
- ~SKeymap ()

  Frees the allocated keymap.
- void Bind (int Key, KeyCallback Callback)

  Binds the given key to a function.
- void Unbind (int Key)

  Unbinds the given key.
- SKeymap (const SKeymap &rhs)

  Copy constructor.
- SKeymap & operator= (const SKeymap &rhs)

  operator=

Friends

- class SReadline

34.124.1 Detailed Description

The readline keymap wrapper.

Attention: It is not thread safe! Supports: key binding, key unbinding

Definition at line 307 of file SReadline.hpp.

34.124.2 Constructor & Destructor Documentation

34.124.2.1 swift::SKeymap::SKeymap (bool *PrintableBound* = `false`) [inline, explicit]

Creates a new keymap.

Parameters

Printable-Bound	if true - the printable characters are bound if false - the keymap is empty

Definition at line 319 of file SReadline.hpp.

34.124.2.2 swift::SKeymap::SKeymap (Keymap *Pattern*) [inline, explicit]

Creates a new keymap which is a copy of Pattern.

Parameters

Pattern	A keymap to be copied.

Definition at line 342 of file SReadline.hpp.

34.124.2.3 swift::SKeymap::~SKeymap ( ) [inline]

Frees the allocated keymap.

Definition at line 354 of file SReadline.hpp.

34.124.2.4 swift::SKeymap::SKeymap (const SKeymap & *rhs*) [inline]

Copy constructor.

Parameters

rhs	Right hand side object of SKeymap

Definition at line 395 of file SReadline.hpp.

34.124.3 Member Function Documentation

34.124.3.1 void swift::SKeymap::Bind (int *Key*, KeyCallback *Callback*) [inline]

Binds the given key to a function.

Parameters

Key	A key to be bound
Callback	A function to be called when the Key is pressed

Definition at line 366 of file SReadline.hpp.

34.124.3.2 void swift::SKeymap::Unbind (int *Key*) [inline]

Unbinds the given key.

Parameters

Key	A key to be unbound

Definition at line 381 of file SReadline.hpp.

34.124.3.3 SKeymap& swift::SKeymap::operator= (const SKeymap & *rhs*) [inline]

operator=

Parameters

rhs	Right hand side object of SKeymap

Definition at line 407 of file SReadline.hpp.

34.124.4 Friends And Related Function Documentation

34.124.4.1 friend class SReadline [friend]

Definition at line 415 of file SReadline.hpp.

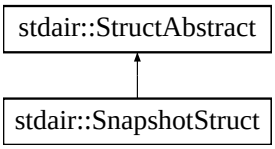
The documentation for this class was generated from the following file:

- stdair/ui/cmdline/SReadline.hpp

34.125 stdair::SnapshotStruct Struct Reference

`#include <stdair/bom/SnapshotStruct.hpp>`

Inheritance diagram for stdair::SnapshotStruct:



Public Member Functions

- const AirlineCode_T & getAirlineCode () const
- const DateTime_T & getSnapshotTime () const

- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string describe () const
- SnapshotStruct (const AirlineCode_T &, const DateTime_T &)
- SnapshotStruct (const SnapshotStruct &)
- ~SnapshotStruct ()

34.125.1 Detailed Description

Structure holding the elements of a snapshot .

Definition at line 19 of file SnapshotStruct.hpp.

34.125.2 Constructor & Destructor Documentation

34.125.2.1 stdair::SnapshotStruct::SnapshotStruct (const AirlineCode_T & *iAirlineCode*, const DateTime_T & *iSnapshotTime*)

Constructor.

Definition at line 26 of file SnapshotStruct.cpp.

34.125.2.2 stdair::SnapshotStruct::SnapshotStruct (const SnapshotStruct & *iSnapshot*)

Copy constructor.

Definition at line 19 of file SnapshotStruct.cpp.

34.125.2.3 stdair::SnapshotStruct::~SnapshotStruct ( )

Destructor.

Definition at line 32 of file SnapshotStruct.cpp.

34.125.3 Member Function Documentation

34.125.3.1 const AirlineCode_T& stdair::SnapshotStruct::getAirlineCode ( ) const [inline]

Get the airline code.

Definition at line 23 of file SnapshotStruct.hpp.

34.125.3.2 const DateTime_T& stdair::SnapshotStruct::getSnapshotTime ( ) const [inline]

Get the snapshot action time.

Definition at line 28 of file SnapshotStruct.hpp.

34.125.3.3 void stdair::SnapshotStruct::toStream (std::ostream & *ioOut*) const

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::StructAbstract.

Definition at line 36 of file SnapshotStruct.cpp.

References describe().

34.125.3.4 void stdair::SnapshotStruct::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::StructAbstract.

Definition at line 41 of file SnapshotStruct.cpp.

34.125.3.5 const std::string stdair::SnapshotStruct::describe ( ) const [virtual]

Display of the structure.

Implements stdair::StructAbstract.

Definition at line 45 of file SnapshotStruct.cpp.

Referenced by toStream().

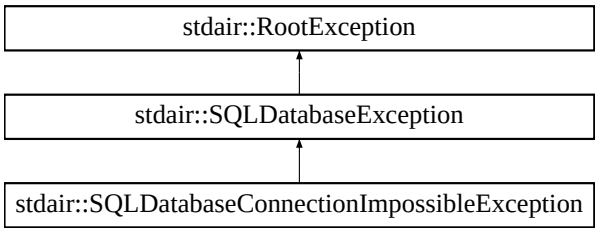
The documentation for this struct was generated from the following files:

- stdair/bom/SnapshotStruct.hpp
- stdair/bom/SnapshotStruct.cpp

34.126 stdair::SQLDatabaseConnectionImpossibleException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::SQLDatabaseConnectionImpossibleException:



Public Member Functions

- SQLDatabaseConnectionImpossibleException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.126.1 Detailed Description

Database connection.

Definition at line 188 of file stdair_exceptions.hpp.

34.126.2 Constructor & Destructor Documentation

34.126.2.1 stdair::SQLDatabaseConnectionImpossibleException::SQLDatabaseConnectionImpossibleException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 191 of file stdair_exceptions.hpp.

34.126.3 Member Function Documentation

34.126.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.126.4 Member Data Documentation

34.126.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

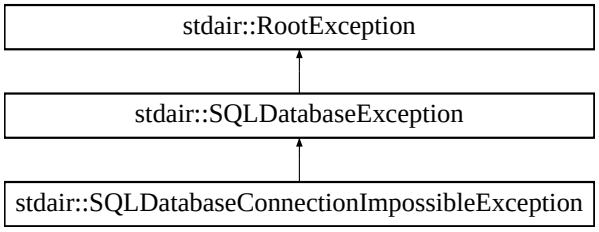
The documentation for this class was generated from the following file:

- stdair/stdair_exceptions.hpp

34.127 stdair::SQLDatabaseException Class Reference

`#include <stdair/stdair_exceptions.hpp>`

Inheritance diagram for stdair::SQLDatabaseException:



Public Member Functions

- SQLDatabaseException (const std::string &iWhat)
- const char * what () const throw ()

Protected Attributes

- std::string _what

34.127.1 Detailed Description

Database.

Definition at line 173 of file stdair_exceptions.hpp.

34.127.2 Constructor & Destructor Documentation

34.127.2.1 stdair::SQLDatabaseException::SQLDatabaseException (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 176 of file stdair_exceptions.hpp.

34.127.3 Member Function Documentation

34.127.3.1 const char* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file stdair_exceptions.hpp.

References stdair::RootException::_what.

34.127.4 Member Data Documentation

34.127.4.1 std::string stdair::RootException::_what [protected, inherited]

Details for the exception.

Definition at line 46 of file stdair_exceptions.hpp.

Referenced by stdair::RootException::what().

The documentation for this class was generated from the following file:

- stdair/stdair_exceptions.hpp

34.128 swift::SReadline Class Reference

The readline library wrapper.

`#include <stdair/ui/cmdline/SReadline.hpp>`

Public Member Functions

- SReadline (const size_t Limit=DefaultHistoryLimit)

  Constructs the object, sets the completion function.
- SReadline (const std::string &historyFileName, const size_t Limit=DefaultHistoryLimit)

  Constructs the object, sets the completion function, loads history.
- ~SReadline ()

  Saves the session history (if the file name was provided) and destroys the object.
- std::string GetLine (const std::string &Prompt)

  Gets a single line from a user.
- template<typename Container >
  std::string GetLine (const std::string &Prompt, Container &ReadTokens)

  Gets a single line from a user.
- template<typename Container >
  std::string GetLine (const std::string &Prompt, Container &ReadTokens, bool &BreakOut)

  Gets a single line from a user.
- std::string GetLine (const std::string &Prompt, bool &BreakOut)

  Gets a single line from a user.
- template<typename ContainerType >
  void GetHistory (ContainerType &Container)

  Fills the given container with the current history list.
- bool SaveHistory (std::ostream &OS)

  Saves the history to the given file stream.
- bool SaveHistory (const std::string &FileName)

Saves the history to the given file.

- void ClearHistory ()

  Clears the history. Does not affect the file where the previous session history is saved.
- bool LoadHistory (std::istream &IS)

  Loads a history from a file stream.
- bool LoadHistory (const std::string &FileName)

  Loads a history from the given file.
- template<typename ContainerType >
  void RegisterCompletions (const ContainerType &Container)

  Allows to register custom completers.
- void SetKeymap (SKeymap &NewKeymap)

  Sets the given keymap.

34.128.1 Detailed Description

The readline library wrapper.

Attention: It is not thread safe! Supports: editing, history, custom completers

Definition at line 424 of file SReadline.hpp.

34.128.2 Constructor & Destructor Documentation

34.128.2.1 swift::SReadline::SReadline (const size_t *Limit* = DefaultHistoryLimit) [inline]

Constructs the object, sets the completion function.

Parameters

Limit	History size

Definition at line 431 of file SReadline.hpp.

34.128.2.2 swift::SReadline::SReadline (const std::string & *historyFileName*, const size_t *Limit* = DefaultHistoryLimit) [inline]

Constructs the object, sets the completion function, loads history.

Parameters

historyFile-Name	File name to load history from
Limit	History size

Definition at line 446 of file SReadline.hpp.

References LoadHistory().

34.128.2.3 swift::SReadline::~SReadline ( ) [inline]

Saves the session history (if the file name was provided) and destroys the object.

Definition at line 462 of file SReadline.hpp.

References SaveHistory().

34.128.3 Member Function Documentation

34.128.3.1 std::string swift::SReadline::GetLine (const std::string & *Prompt*) [inline]

Gets a single line from a user.

Parameters

Prompt	A printed prompt

Returns

A string which was actually inputed

Definition at line 473 of file SReadline.hpp.

Referenced by GetLine().

34.128.3.2 template<typename Container > std::string swift::SReadline::GetLine (const std::string & *Prompt,* Container & *ReadTokens*) [inline]

Gets a single line from a user.

Parameters

Prompt	A printed prompt
ReadTokens	A user inputed string splitted into tokens. The container is cleared first

Returns

A string which was actually inputed

Definition at line 487 of file SReadline.hpp.

References GetLine().

34.128.3.3 template<typename Container > std::string swift::SReadline::GetLine (const std::string & *Prompt,* Container & *ReadTokens,* bool & *BreakOut*) [inline]

Gets a single line from a user.

Parameters

Prompt	A printed prompt
BreakOut	it is set to true if the EOF found
ReadTokens	A user inputed string splitted into tokens. The container is cleared first

Returns

A string which was actually inputed

Definition at line 502 of file SReadline.hpp.

References GetLine().

34.128.3.4 std::string swift::SReadline::GetLine (const std::string & *Prompt*, bool & *BreakOut*) [inline]

Gets a single line from a user.

Parameters

Prompt	A printed prompt
BreakOut	it is set to true if the EOF found

Returns

A string which was actually inputed

Definition at line 517 of file SReadline.hpp.

34.128.3.5 template<typename ContainerType > void swift::SReadline::GetHistory (ContainerType & *Container*) [inline]

Fills the given container with the current history list.

Does not clear the given container

Definition at line 552 of file SReadline.hpp.

34.128.3.6 bool swift::SReadline::SaveHistory (std::ostream & *OS*) [inline]

Saves the history to the given file stream.

Parameters

OS	output file stream

Returns

true if success

Definition at line 564 of file SReadline.hpp.

Referenced by SaveHistory(), and ~SReadline().

34.128.3.7 bool swift::SReadline::SaveHistory (const std::string & *FileName*) [inline]

Saves the history to the given file.

Parameters

FileName	File name to save the history to

Returns

true if success

Definition at line 581 of file SReadline.hpp.

References SaveHistory().

34.128.3.8 void swift::SReadline::ClearHistory ( ) [inline]

Clears the history. Does not affect the file where the previous session history is saved.

Definition at line 594 of file SReadline.hpp.

Referenced by LoadHistory().

34.128.3.9 bool swift::SReadline::LoadHistory (std::istream & *IS*) [inline]

Loads a history from a file stream.

Parameters

IS	Input file stream

Returns

true if success

Definition at line 604 of file SReadline.hpp.

References ClearHistory().

Referenced by LoadHistory(), and SReadline().

34.128.3.10 bool swift::SReadline::LoadHistory (const std::string & *FileName*) [inline]

Loads a history from the given file.

Parameters

FileName	File name to be load from

Returns

true if success

Definition at line 629 of file SReadline.hpp.

References LoadHistory().

34.128.3.11 template<typename ContainerType > void swift::SReadline::RegisterCompletions (const ContainerType & *Container*) [inline]

Allows to register custom completers.

Supports a special keyword: file. It means to use the standard file name completer.

For example the given container elements could be as follows:

- command1 opt1
- command1 opt2 file
- command2
- command2 opt1

Each container element must describe a single possible command line. The container element must have a conversion to std::string operator.

Parameters

Container	A container which has all the user possible commands.

Definition at line 658 of file SReadline.hpp.

34.128.3.12 void swift::SReadline::SetKeymap (SKeymap & *NewKeymap*) [inline]

Sets the given keymap.

Parameters

NewKeymap	The keymap that should be used from now.

Definition at line 675 of file SReadline.hpp.

The documentation for this class was generated from the following file:

- stdair/ui/cmdline/SReadline.hpp

34.129 stdair::STDAIR_Service Class Reference

Interface for the STDAIR Services.

`#include <stdair/STDAIR_Service.hpp>`

Public Member Functions

- STDAIR_Service ()
  Default constructor.
- STDAIR_Service (const BasLogParams &)
  Constructor.
- STDAIR_Service (const BasLogParams &, const BasDBParams &)
  Constructor.
- ~STDAIR_Service ()
  Destructor.

- void buildSampleBom ()
- void buildDummyInventory (const CabinCapacity_T &iCabinCapacity)
- void buildSampleTravelSolutionForPricing (TravelSolutionList_T &)
- void buildSampleTravelSolutions (TravelSolutionList_T &)
- BookingRequestStruct buildSampleBookingRequest (const bool isForCRS=false)
- const Count_T & getExpectedTotalNumberOfEventsToBeGenerated () const
- const Count_T & getExpectedTotalNumberOfEventsToBeGenerated (const EventType::EN_EventType &) const
- const Count_T & getActualTotalNumberOfEventsToBeGenerated () const
- const Count_T & getActualTotalNumberOfEventsToBeGenerated (const EventType::EN_EventType &) const
- ProgressStatusSet popEvent (EventStruct &) const
- bool isQueueDone () const
- void reset () const
- std::string jsonExport (const AirlineCode_T &, const FlightNumber_T &, const Date_T &iDepartureDate) const
- std::string list (const AirlineCode_T &iAirlineCode="all", const FlightNumber_T &iFlightNumber=0) const
- std::string listAirportPairDateRange () const
- bool check (const AirlineCode_T &, const FlightNumber_T &, const Date_T &iDepartureDate) const
- bool check (const AirportCode_T &, const AirportCode_T &, const Date_T &iDepartureDate) const
- std::string csvDisplay () const
- std::string csvDisplay (const AirlineCode_T &, const FlightNumber_T &, const Date_T &iDepartureDate) const
- std::string csvDisplay (const TravelSolutionList_T &) const
- std::string csvDisplay (const AirportCode_T &, const AirportCode_T &, const Date_T &iDepartureDate) const
- BomRoot & getBomRoot () const

  Get a reference on the BomRoot object.
- EventQueue & getEventQueue () const

  Get a reference on the EventQueue object.
- BasLogParams getLogParams () const
- const BasDBParams & getDBParams () const
- const ServiceInitialisationType & getServiceInitialisationType () const

34.129.1 Detailed Description

Interface for the STDAIR Services.

Definition at line 43 of file STDAIR_Service.hpp.

34.129.2 Constructor & Destructor Documentation

34.129.2.1 stdair::STDAIR_Service::STDAIR_Service ( )

Default constructor.

Definition at line 43 of file STDAIR_Service.cpp.

34.129.2.2 stdair::STDAIR_Service::STDAIR_Service (const **BasLogParams** & *iLogParams*)

Constructor.

The init() method is called; see the corresponding documentation for more details.

Moreover, a reference on an output stream is given, so that log outputs can be directed onto that stream.

Parameters

in	*const*	BasLogParams& Parameters for the output log stream.

Definition at line 59 of file STDAIR_Service.cpp.

34.129.2.3 stdair::STDAIR_Service::STDAIR_Service (const **BasLogParams** & *iLogParams,* const **BasDBParams** & *iDBParams*)

Constructor.

The init() method is called; see the corresponding documentation for more details.

A reference on an output stream is given, so that log outputs can be directed onto that stream.

Moreover, database connection parameters are given, so that database events can use the corresponding access.

Parameters

in	*const*	BasLogParams& Parameters for the output log stream.
in	*const*	BasDBParams& Parameters for the database session.

Definition at line 73 of file STDAIR_Service.cpp.

34.129.2.4 stdair::STDAIR_Service::~STDAIR_Service ( )

Destructor.

Definition at line 91 of file STDAIR_Service.cpp.

34.129.3 Member Function Documentation

34.129.3.1 void stdair::STDAIR_Service::buildSampleBom ( )

Build a sample BOM tree, and attach it to the BomRoot instance.

As for now, a single sample BOM tree is built, with objects for all the simulator-related components, i.e.:

- schedule (e.g., AirSched),
- inventory (e.g., AirInv),
- revenue management (e.g., RMOL),
- pricing (e.g., SimFQT),
- revenue accounting (e.g., AirRAC),
- demand generation (e.g., TraDemGen),
- customer choice (e.g., TravelCCM),
- event manager (e.g., SEvMgr)

Most of the inventories just contain one flight. One of those flights has two legs (and therefore three segments).

Definition at line 164 of file STDAIR_Service.cpp.

34.129.3.2 void stdair::STDAIR_Service::buildDummyInventory (const CabinCapacity_T & *iCabinCapacity*)

Build a dummy inventory, containing a dummy flight-date with a single leg-cabin and some virtual booking classes. That structure is the bare minimum required to perform an optimisation on a leg-cabin.

As for now, that method is called only by RMOL. Indeed, the revenue management component (RMOL) needs very basic set up in order to perform optimisation at leg-level. Hence, there are:

- a dedicated inventory ('XX'),
- the corresponding flight-date (#9999, departing 01/01/1900),
- a leg-date (departing and arriving from/to 'XXX' airport),
-
- a leg-cabin ('X').
-

Most of the data is dummy because RMOL uses only the cabin capacity from that part of the BOM tree.

Parameters

const	CabinCapacity_T& Cabin capacity for revenue management optimisation.

Definition at line 178 of file STDAIR_Service.cpp.

34.129.3.3 void stdair::STDAIR_Service::buildSampleTravelSolutionForPricing (TravelSolutionList_T & *ioTravelSolutionList*)

Build a sample list of travel solutions.

As of now (March 2011), that list is made of the following travel solutions:

- BA9
- LHR-SYD
- 2011-06-10

Parameters

TravelSolution T&	Sample list of travel solution structures. It should be given empty. It is altered with the returned sample.

Definition at line 192 of file STDAIR_Service.cpp.

34.129.3.4 void stdair::STDAIR_Service::buildSampleTravelSolutions (TravelSolutionList_T & *ioTravelSolutionList*)

Build a sample list of travel solutions.

As of now (March 2011), that list is made of the following travel solutions:

- BA9
- LHR-SYD
- 2011-06-10
- Q
- WTP: 900
- Change fee: 20; Non refundable; Saturday night stay

Parameters

TravelSolution T&	Sample list of travel solution structures. It should be given empty. It is altered with the returned sample.

Definition at line 199 of file STDAIR_Service.cpp.

34.129.3.5 BookingRequestStruct stdair::STDAIR_Service::buildSampleBookingRequest (const bool *isForCRS* = `false`)

Build a sample booking request structure.

As of now (March 2011), the sample booking request is made of the following parameters:

- Return trip (inbound): LHR-SYD (POS: LHR, Channel: DN),
- Departing 10-JUN-2011 around 8:00, staying 7 days
- Requested on 15-MAY-2011 at 10:00
- Economy cabin, 3 persons, FF member
- WTP: 1000.0 EUR
- Dis-utility: 100.0 EUR/hour

As of now (March 2011), the CRS-related booking request is made of the following parameters:

- Return trip (inbound): SIN-BKK (POS: SIN, Channel: IN),
- Departing 30-JAN-2010 around 10:00, staying 7 days
- Requested on 22-JAN-2010 at 10:00
- Economy cabin, 3 persons, FF member
- WTP: 1000.0 EUR
- Dis-utility: 100.0 EUR/hour

Parameters

const	bool isForCRS Whether the sample booking request is for CRS.

Returns

BookingRequestStruct& Sample booking request structure.

Definition at line 206 of file STDAIR_Service.cpp.

34.129.3.6 const Count_T & stdair::STDAIR_Service::getExpectedTotalNumberOfEventsToBeGenerated ( ) const

Get the expected number of events to be generated.

The getExpectedTotalNbOfEvents() method is called on the underlying EventQueue object, which keeps track of that number.

Note

That number usually corresponds to an expectation (i.e., the mean value of a random distribution), and may not be accurate. The actual number will be known after calling the generateFirstEvents() method for each event type (e.g., booking request, optimisation notification, etc).

Returns

const Count_T& Expected number of events to be generated.

Definition at line 442 of file STDAIR_Service.cpp.

References stdair::EventQueue::getExpectedTotalNbOfEvents().

34.129.3.7 const Count_T & stdair::STDAIR_Service::getExpectedTotalNumberOfEventsToBeGenerated (const EventType::EN_EventType & *iType*) const

Get the expected number of events to be generated for the given event type.

The getExpectedTotalNbOfEvents() method is called on the underlying EventQueue object, which keeps track of that number.

Note

That number usually corresponds to an expectation (i.e., the mean value of a random distribution), and may not be accurate. The actual number will be known after calling the generateFirstEvents() method for each event type (e.g., booking request, optimisation notification, etc).

Parameters

const	EventType_T& Event type for which the number is calculated.

Returns

const Count_T& Expected number of events to be generated.

Definition at line 461 of file STDAIR_Service.cpp.

References stdair::EventQueue::getExpectedTotalNbOfEvents().

34.129.3.8 const Count_T & stdair::STDAIR_Service::getActualTotalNumberOfEventsToBeGenerated ( ) const

Get the actual number of events to be generated for all the demand streams.

The getActualTotalNbOfEvents() method is called on the underlying EventQueue object, which keeps track of that number.

Note

That number is being known after calling the generateFirstEvents() method.

Returns

const Count_T& Expected number of events to be generated.

Definition at line 480 of file STDAIR_Service.cpp.

References stdair::EventQueue::getActualTotalNbOfEvents().

34.129.3.9 const Count_T & stdair::STDAIR_Service::getActualTotalNumberOfEventsToBeGenerated (const EventType::EN_EventType & *iType*) const

Get the actual number of events to be generated for the given event type.

The getActualTotalNbOfEvents() method is called on the underlying EventQueue object, which keeps track of that number.

Note

That number is being known after calling the generateFirstEvents() method.

Parameters

const	EventType_T& Event type for which the number is calculated.

Returns

const Count_T& Expected number of events to be generated.

Definition at line 499 of file STDAIR_Service.cpp.

References stdair::EventQueue::getActualTotalNbOfEvents().

34.129.3.10 ProgressStatusSet stdair::STDAIR_Service::popEvent (EventStruct & *ioEventStruct*) const

Pop the next coming (in time) event, and remove it from the event queue.

- The next coming (in time) event corresponds to the event having the earliest date-time stamp. In other words, it is the first/front element of the event queue.
- That (first) event/element is then removed from the event queue
- The progress status is updated for the corresponding event type.

Returns

EventStruct A copy of the event structure, which comes first in time from within the event queue.

Definition at line 517 of file STDAIR_Service.cpp.

References stdair::EventQueue::popEvent().

34.129.3.11 bool stdair::STDAIR_Service::isQueueDone ( ) const

States whether the event queue has reached the end.

For now, that method states whether or not the event queue is empty.

Definition at line 531 of file STDAIR_Service.cpp.

References stdair::EventQueue::isQueueDone().

34.129.3.12 void stdair::STDAIR_Service::reset ( ) const

Reset the context of the demand streams for another demand generation without having to reparse the demand input file.

Definition at line 548 of file STDAIR_Service.cpp.

References stdair::EventQueue::reset().

34.129.3.13 std::string stdair::STDAIR_Service::jsonExport (const AirlineCode_T & *iAirlineCode,* const FlightNumber_T & *iFlightNumber,* const Date_T & *iDepartureDate*) const

Recursively dump, in the returned string and in JSON format, the flight-date corresponding to the parameters given as input.

Parameters

const	AirlineCode_T& Airline code of the flight to dump.
const	FlightNumber_T& Flight number of the flight to dump.
const	Date_T& Departure date of the flight to dump.

Returns

std::string Output string in which the BOM tree is JSON-ified.

Definition at line 218 of file STDAIR_Service.cpp.

References stdair::BomRetriever::retrieveFlightDateFromKeySet().

34.129.3.14 std::string stdair::STDAIR_Service::list (const AirlineCode_T & *iAirlineCode* = "all", const FlightNumber_T & *iFlightNumber* = 0) const

Display the list of flight-dates (contained within the BOM tree) corresponding to the parameters given as input.

Parameters

const	AirlineCode& Airline for which the flight-dates should be displayed. If set to "all" (the default), all the inventories will be displayed.
const	FlightNumber_T& Flight number for which all the departure dates should be displayed. If set to 0 (the default), all the flight numbers will be displayed.

Returns

std::string Output string in which the BOM tree is logged/dumped.

Definition at line 265 of file STDAIR_Service.cpp.

34.129.3.15 std::string stdair::STDAIR_Service::listAirportPairDateRange ( ) const

Display the list of aiports pairs and date ranges (contained within the BOM tree)

Parameters

std::ostream&	Output stream in which the airport pairs and date ranges are logged/-dumped.

Definition at line 283 of file STDAIR_Service.cpp.

34.129.3.16 bool stdair::STDAIR_Service::check (const AirlineCode_T & *iAirlineCode,* const FlightNumber_T & *iFlightNumber,* const Date_T & *iDepartureDate*) const

Check whether the given flight-date is a valid one.

Parameters

const	stdair::AirlineCode_T& Airline code of the flight to check.
const	stdair::FlightNumber_T& Flight number of the flight to check.
const	stdair::Date_T& Departure date of the flight to check.

Returns

bool Whether or not the given flight date is valid.

Definition at line 300 of file STDAIR_Service.cpp.

References stdair::BomRetriever::retrieveFlightDateFromKeySet().

34.129.3.17 bool stdair::STDAIR_Service::check (const AirportCode_T & *ioOrigin,* const AirportCode_T & *ioDestination,* const Date_T & *iDepartureDate*) const

Check whether the given couple airportpair-date is a valid one.

Parameters

const	stdair::AirportCode_T& Origin airport of the fare rule to check.
const	stdair::AirportCode_T& Destination airport of the fare rule to check.
const	stdair::Date_T& Departure date of the fare rule to check.

Returns

bool Whether or not the given airportpair-date couple is a valid one.

Definition at line 322 of file STDAIR_Service.cpp.

References stdair::BomRetriever::retrieveDatePeriodListFromKeySet().

34.129.3.18 std::string stdair::STDAIR_Service::csvDisplay ( ) const

Recursively display (dump in the returned string) the objects of the BOM tree.

Returns

std::string Output string in which the BOM tree is logged/dumped.

Definition at line 345 of file STDAIR_Service.cpp.

Referenced by csvDisplay().

34.129.3.19 std::string stdair::STDAIR_Service::csvDisplay (const AirlineCode_T & *iAirlineCode,* const FlightNumber_T & *iFlightNumber,* const Date_T & *iDepartureDate*) const

Recursively display (dump in the returned string) the flight-date corresponding to the parameters given as input.

Parameters

const	AirlineCode_T& Airline code of the flight to display.
const	FlightNumber_T& Flight number of the flight to display.
const	Date_T& Departure date of the flight to display.

Returns

std::string Output string in which the BOM tree is logged/dumped.

Definition at line 363 of file STDAIR_Service.cpp.

References csvDisplay(), and stdair::BomRetriever::retrieveFlightDateFromKeySet().

34.129.3.20 std::string stdair::STDAIR_Service::csvDisplay (const TravelSolutionList_T & *iTravelSolutionList*) const

Display (dump in the returned string) the full list of travel solution structures.

Returns

std::string Output string in which the list of travel solutions is logged/dumped.

Definition at line 394 of file STDAIR_Service.cpp.

References csvDisplay().

34.129.3.21 std::string stdair::STDAIR_Service::csvDisplay (const AirportCode_T & *iOrigin,* const AirportCode_T & *iDestination,* const Date_T & *iDepartureDate*) const

Recursively display (dump in the returned string) the fare-rules corresponding to the parameters given as input.

Parameters

const	AirportCode_T& Origin airport of the fare-rules to display
const	AirportCode_T& Destination airport of the fare-rules to display.
const	Date_T& Departure date of the fare-rules to display.

Returns

std::string Output string in which the BOM tree is logged/dumped.

Definition at line 405 of file STDAIR_Service.cpp.

References csvDisplay(), and stdair::BomRetriever::retrieveDatePeriodListFromKeySet().

34.129.3.22 BomRoot & stdair::STDAIR_Service::getBomRoot ( ) const

Get a reference on the BomRoot object.

If the service context has not been initialised, that method throws an exception (failing assertion).

Returns

BomRoot& Reference on the BomRoot.

Definition at line 126 of file STDAIR_Service.cpp.

34.129.3.23 EventQueue & stdair::STDAIR_Service::getEventQueue ( ) const

Get a reference on the EventQueue object.

If the service context has not been initialised, that method throws an exception (failing assertion).

Returns

EventQueue& Reference on the EventQueue.

Definition at line 134 of file STDAIR_Service.cpp.

34.129.3.24 BasLogParams stdair::STDAIR_Service::getLogParams ( ) const

Get the log parameters.

Returns

BasLogParams Copy of the structure holding the log parameters.

Definition at line 142 of file STDAIR_Service.cpp.

34.129.3.25 const BasDBParams & stdair::STDAIR_Service::getDBParams ( ) const

Get the database parameters.

Returns

const BasDBParams& Reference on the structure holding the database parameters.

Definition at line 147 of file STDAIR_Service.cpp.

34.129.3.26 const ServiceInitialisationType & stdair::STDAIR_Service::getServiceInitialisationType ( ) const

Get the type of initialisation (e.g., not yet, file parsing, sample BOM) which the component (owner of the current STDAIR_Service instance) has gone through.

Returns

const ServiceInitialisationType& Reference on the type of initialisation (enumeration structure).

Definition at line 156 of file STDAIR_Service.cpp.

The documentation for this class was generated from the following files:

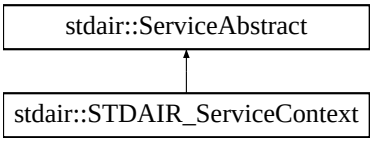
- stdair/STDAIR_Service.hpp
- stdair/service/STDAIR_Service.cpp

34.130 stdair::STDAIR_ServiceContext Class Reference

Class holding the context of the Stdair services.

`#include <stdair/service/STDAIR_ServiceContext.hpp>`

Inheritance diagram for stdair::STDAIR_ServiceContext:



Public Member Functions

- virtual void toStream (std::ostream &ioOut) const
- virtual void fromStream (std::istream &ioIn)

Friends

- class STDAIR_Service
- class FacSTDAIRServiceContext

34.130.1 Detailed Description

Class holding the context of the Stdair services.

Definition at line 25 of file STDAIR_ServiceContext.hpp.

34.130.2 Member Function Documentation

34.130.2.1 virtual void stdair::ServiceAbstract::toStream (std::ostream & *ioOut*) const [inline, virtual, inherited]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Definition at line 28 of file ServiceAbstract.hpp.

Referenced by operator<<().

34.130.2.2 virtual void stdair::ServiceAbstract::fromStream (std::istream & *ioIn*) [inline, virtual, inherited]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Definition at line 35 of file ServiceAbstract.hpp.

Referenced by operator>>().

34.130.3 Friends And Related Function Documentation

34.130.3.1 friend class STDAIR_Service [friend]

The STDAIR_Service class should be the sole class to get access to ServiceContext content: general users do not want to bother with a context interface.

Definition at line 29 of file STDAIR_ServiceContext.hpp.

34.130.3.2 friend class FacSTDAIRServiceContext [friend]

Definition at line 30 of file STDAIR_ServiceContext.hpp.

The documentation for this class was generated from the following file:

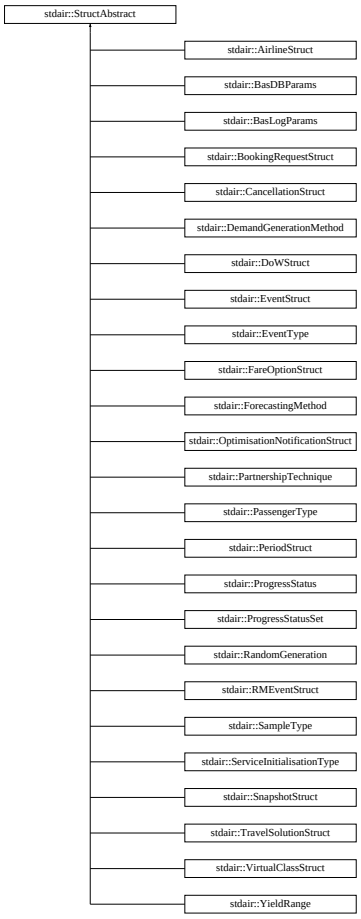
- stdair/service/STDAIR_ServiceContext.hpp

34.131 stdair::StructAbstract Struct Reference

Base class for the light structures.

`#include <stdair/basic/StructAbstract.hpp>`

Inheritance diagram for stdair::StructAbstract:



Public Member Functions

- virtual ~StructAbstract ()
- void toStream (std::ostream &ioOut) const
- virtual void fromStream (std::istream &ioIn)
- virtual const std::string describe () const =0

Protected Member Functions

- StructAbstract ()

34.131.1 Detailed Description

Base class for the light structures.

Definition at line 16 of file StructAbstract.hpp.

34.131.2 Constructor & Destructor Documentation

34.131.2.1 virtual stdair::StructAbstract::~StructAbstract ( ) [inline, virtual]

Destructor.

Definition at line 22 of file StructAbstract.hpp.

34.131.2.2 stdair::StructAbstract::StructAbstract ( ) [inline, protected]

Protected Default Constructor to ensure this class is abtract.

Definition at line 49 of file StructAbstract.hpp.

34.131.3 Member Function Documentation

34.131.3.1 void stdair::StructAbstract::toStream (std::ostream & *ioOut*) const [inline]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented in stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 29 of file StructAbstract.hpp.

References describe().

Referenced by operator<<().

34.131.3.2 virtual void stdair::StructAbstract::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented in stdair::ProgressStatusSet, stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::EventStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Definition at line 38 of file StructAbstract.hpp.

Referenced by operator>>().

34.131.3.3 virtual const std::string stdair::StructAbstract::describe ( ) const [pure virtual]

Display of the structure.

Implemented in stdair::BasDBParams, stdair::BasLogParams, stdair::DemandGenerationMethod, stdair::EventType, stdair::ForecastingMethod, stdair::PartnershipTechnique, stdair::PassengerType, stdair::ProgressStatus, stdair::ProgressStatusSet, stdair::RandomGeneration, stdair::SampleType, stdair::ServiceInitialisationType, stdair::YieldRange, stdair::AirlineStruct, stdair::BookingRequestStruct, stdair::CancellationStruct, stdair::DoWStruct, stdair::EventStruct, stdair::FareOptionStruct, stdair::OptimisationNotificationStruct, stdair::PeriodStruct, stdair::RMEventStruct, stdair::SnapshotStruct, stdair::TravelSolutionStruct, and stdair::VirtualClassStruct.

Referenced by toStream().

The documentation for this struct was generated from the following file:

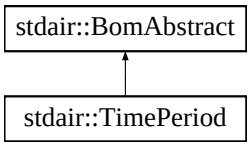
- stdair/basic/StructAbstract.hpp

34.132 stdair::TimePeriod Class Reference

Class representing the actual attributes for a fare time-period.

`#include <stdair/bom/TimePeriod.hpp>`

Inheritance diagram for stdair::TimePeriod:



Public Types

- typedef TimePeriodKey Key_T

Public Member Functions

- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const
- const Key_T & getKey () const
- BomAbstract *const getParent () const
- const HolderMap_T & getHolderMap () const
- const Time_T & getTimeRangeStart () const
- const Time_T & getTimeRangeEnd () const
- bool isDepartureTimeValid (const Time_T &) const

Protected Member Functions

- TimePeriod (const Key_T &)
- virtual ~TimePeriod ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent
- HolderMap_T _holderMap

Friends

- class FacBom
- class FacBomManager

34.132.1 Detailed Description

Class representing the actual attributes for a fare time-period.

Definition at line 18 of file TimePeriod.hpp.

34.132.2 Member Typedef Documentation

34.132.2.1 typedef TimePeriodKey stdair::TimePeriod::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 27 of file TimePeriod.hpp.

34.132.3 Constructor & Destructor Documentation

34.132.3.1 stdair::TimePeriod::TimePeriod (const Key_T & *iKey*) [protected]

Main constructor.

Definition at line 28 of file TimePeriod.cpp.

34.132.3.2 stdair::TimePeriod::~TimePeriod ( ) [protected, virtual]

Destructor.

Definition at line 33 of file TimePeriod.cpp.

34.132.4 Member Function Documentation

34.132.4.1 void stdair::TimePeriod::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 37 of file TimePeriod.hpp.

References toString().

34.132.4.2 void stdair::TimePeriod::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 46 of file TimePeriod.hpp.

34.132.4.3 std::string stdair::TimePeriod::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 37 of file TimePeriod.cpp.

References describeKey().

Referenced by toStream().

34.132.4.4 const std::string stdair::TimePeriod::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 57 of file TimePeriod.hpp.

References _key, and stdair::TimePeriodKey::toString().

Referenced by toString().

34.132.4.5 const Key_T& stdair::TimePeriod::getKey ( ) const [inline]

Get the primary key (time range start, time range end).

Definition at line 66 of file TimePeriod.hpp.

References _key.

34.132.4.6 BomAbstract* const stdair::TimePeriod::getParent ( ) const [inline]

Get a reference on the parent object instance.

Definition at line 73 of file TimePeriod.hpp.

References _parent.

34.132.4.7 const HolderMap_T& stdair::TimePeriod::getHolderMap ( ) const [inline]

Get a reference on the children holder.

Definition at line 80 of file TimePeriod.hpp.

References _holderMap.

34.132.4.8 const Time_T& stdair::TimePeriod::getTimeRangeStart ( ) const [inline]

Get the time range start.

Definition at line 87 of file TimePeriod.hpp.

References _key, and stdair::TimePeriodKey::getTimeRangeStart().

Referenced by isDepartureTimeValid().

34.132.4.9 const Time_T& stdair::TimePeriod::getTimeRangeEnd ( ) const [inline]

Get the time range end

Definition at line 94 of file TimePeriod.hpp.

References _key, and stdair::TimePeriodKey::getTimeRangeEnd().

Referenced by isDepartureTimeValid().

34.132.4.10 bool stdair::TimePeriod::isDepartureTimeValid (const Time_T & *iFlightTime*) const

Check if the given departure time is included in the departure period of the segment path.

Definition at line 45 of file TimePeriod.cpp.

References getTimeRangeEnd(), getTimeRangeStart(), and STDAIR_LOG_DEBUG.

34.132.5 Friends And Related Function Documentation

34.132.5.1 friend class FacBom [friend]

Definition at line 19 of file TimePeriod.hpp.

34.132.5.2 friend class FacBomManager [friend]

Definition at line 20 of file TimePeriod.hpp.

34.132.6 Member Data Documentation

34.132.6.1 Key_T stdair::TimePeriod::_key [protected]

Primary key (flight number and departure date).

Definition at line 132 of file TimePeriod.hpp.

Referenced by describeKey(), getKey(), getTimeRangeEnd(), and getTimeRangeStart().

34.132.6.2 BomAbstract* stdair::TimePeriod::_parent [protected]

Pointer on the parent class (Inventory).

Definition at line 137 of file TimePeriod.hpp.

Referenced by getParent().

34.132.6.3 HolderMap_T stdair::TimePeriod::_holderMap [protected]

Map holding the children.

Definition at line 142 of file TimePeriod.hpp.

Referenced by getHolderMap().

The documentation for this class was generated from the following files:

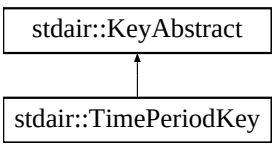
- stdair/bom/TimePeriod.hpp
- stdair/bom/TimePeriod.cpp

34.133 stdair::TimePeriodKey Struct Reference

Key of time-period.

`#include <stdair/bom/TimePeriodKey.hpp>`

Inheritance diagram for stdair::TimePeriodKey:



Public Member Functions

- TimePeriodKey (const Time_T &, const Time_T &)
- TimePeriodKey (const TimePeriodKey &)
- ~TimePeriodKey ()
- const Time_T & getTimeRangeStart () const
- const Time_T & getTimeRangeEnd () const

- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const

34.133.1 Detailed Description

Key of time-period.

Definition at line 15 of file TimePeriodKey.hpp.

34.133.2 Constructor & Destructor Documentation

34.133.2.1 stdair::TimePeriodKey::TimePeriodKey (const Time_T & *iTimeRangeStart*, const Time_T & *iTimeRangeEnd*)

Main constructor.

Definition at line 21 of file TimePeriodKey.cpp.

34.133.2.2 stdair::TimePeriodKey::TimePeriodKey (const TimePeriodKey & *iKey*)

Copy constructor.

Definition at line 28 of file TimePeriodKey.cpp.

34.133.2.3 stdair::TimePeriodKey::~TimePeriodKey ( )

Destructor.

Definition at line 34 of file TimePeriodKey.cpp.

34.133.3 Member Function Documentation

34.133.3.1 const Time_T& stdair::TimePeriodKey::getTimeRangeStart ( ) const [inline]

Get the time period start.

Definition at line 35 of file TimePeriodKey.hpp.

Referenced by stdair::TimePeriod::getTimeRangeStart().

34.133.3.2 const Time_T& stdair::TimePeriodKey::getTimeRangeEnd ( ) const [inline]

Get the time period end.

Definition at line 42 of file TimePeriodKey.hpp.

Referenced by stdair::TimePeriod::getTimeRangeEnd().

34.133.3.3 void stdair::TimePeriodKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 38 of file TimePeriodKey.cpp.

References toString().

34.133.3.4 void stdair::TimePeriodKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 43 of file TimePeriodKey.cpp.

34.133.3.5 const std::string stdair::TimePeriodKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key. That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

Reimplemented from stdair::KeyAbstract.

Definition at line 47 of file TimePeriodKey.cpp.

Referenced by stdair::TimePeriod::describeKey(), and toStream().

The documentation for this struct was generated from the following files:

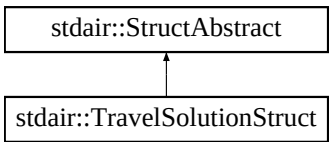
- stdair/bom/TimePeriodKey.hpp
- stdair/bom/TimePeriodKey.cpp

34.134 stdair::TravelSolutionStruct Struct Reference

Structure holding the elements of a travel solution.

`#include <stdair/bom/TravelSolutionStruct.hpp>`

Inheritance diagram for stdair::TravelSolutionStruct:



Public Member Functions

- const SegmentPath_T & getSegmentPath () const
- const ClassAvailabilityMapHolder_T & getClassAvailabilityMapHolder () const
- const ClassYieldMapHolder_T & getClassYieldMapHolder () const
- const BidPriceVectorHolder_T & getBidPriceVectorHolder () const
- const ClassBpvMapHolder_T & getClassBpvMapHolder () const
- const FareOptionList_T & getFareOptionList () const
- FareOptionList_T & getFareOptionListRef ()
- const FareOptionStruct & getChosenFareOption () const
- void addSegment (const std::string &)
- void addClassAvailabilityMap (const ClassAvailabilityMap_T &)
- void addClassYieldMap (const ClassYieldMap_T &)
- void addBidPriceVector (const BidPriceVector_T &)
- void addClassBpvMap (const ClassBpvMap_T &)
- void addFareOption (const FareOptionStruct &)
- void setChosenFareOption (const FareOptionStruct &iChosenFO)
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string describe () const
- const std::string display () const
- TravelSolutionStruct ()
- ~TravelSolutionStruct ()

34.134.1 Detailed Description

Structure holding the elements of a travel solution.

Definition at line 24 of file TravelSolutionStruct.hpp.

34.134.2 Constructor & Destructor Documentation

34.134.2.1 stdair::TravelSolutionStruct::TravelSolutionStruct ( )

Default constructor.

Definition at line 15 of file TravelSolutionStruct.cpp.

34.134.2.2 stdair::TravelSolutionStruct::~TravelSolutionStruct ( )

Destructor.

Definition at line 19 of file TravelSolutionStruct.cpp.

34.134.3 Member Function Documentation

34.134.3.1 const SegmentPath_T& stdair::TravelSolutionStruct::getSegmentPath ( ) const [inline]

Get the segment path.

Definition at line 28 of file TravelSolutionStruct.hpp.

34.134.3.2 const ClassAvailabilityMapHolder_T& stdair::TravelSolutionStruct::getClassAvailabilityMapHolder ( ) const [inline]

Get the holder of avalabilities.

Definition at line 33 of file TravelSolutionStruct.hpp.

34.134.3.3 const ClassYieldMapHolder_T& stdair::TravelSolutionStruct::getClassYieldMapHolder ( ) const [inline]

Get the holder of yields.

Definition at line 38 of file TravelSolutionStruct.hpp.

34.134.3.4 const BidPriceVectorHolder_T& stdair::TravelSolutionStruct::getBidPriceVectorHolder ( ) const [inline]

Get the holder of bid price vectors.

Definition at line 43 of file TravelSolutionStruct.hpp.

34.134.3.5 const ClassBpvMapHolder_T& stdair::TravelSolutionStruct::getClassBpvMapHolder ( ) const [inline]

Get the holder of class - bid price reference.

Definition at line 48 of file TravelSolutionStruct.hpp.

34.134.3.6 const FareOptionList_T& stdair::TravelSolutionStruct::getFareOptionList ( ) const [inline]

Get the list of fare options.

Definition at line 53 of file TravelSolutionStruct.hpp.

34.134.3.7 FareOptionList_T& stdair::TravelSolutionStruct::getFareOptionListRef ( ) [inline]

Get the non-const list of fare options.

Definition at line 58 of file TravelSolutionStruct.hpp.

34.134.3.8 const FareOptionStruct& stdair::TravelSolutionStruct::getChosenFareOption ( ) const [inline]

Get the chosen fare option.

Definition at line 63 of file TravelSolutionStruct.hpp.

34.134.3.9 void stdair::TravelSolutionStruct::addSegment (const std::string & *iKey*)

Add a segment key to the segment path.

Definition at line 133 of file TravelSolutionStruct.cpp.

34.134.3.10 void stdair::TravelSolutionStruct::addClassAvailabilityMap (const ClassAvailabilityMap_T & *iMap*)

Add a class availability map.

Definition at line 139 of file TravelSolutionStruct.cpp.

34.134.3.11 void stdair::TravelSolutionStruct::addClassYieldMap (const ClassYieldMap_T & *iMap*)

Add a class yield map.

Definition at line 145 of file TravelSolutionStruct.cpp.

34.134.3.12 void stdair::TravelSolutionStruct::addBidPriceVector (const BidPriceVector_T & *iBpv*)

Add a bid price vector.

Definition at line 151 of file TravelSolutionStruct.cpp.

34.134.3.13 void stdair::TravelSolutionStruct::addClassBpvMap (const ClassBpvMap_T & *iMap*)

Add a class bpv reference map.

Definition at line 157 of file TravelSolutionStruct.cpp.

34.134.3.14 void stdair::TravelSolutionStruct::addFareOption (const FareOptionStruct & *iFareOption*)

Add a fare option.

Definition at line 163 of file TravelSolutionStruct.cpp.

34.134.3.15 void stdair::TravelSolutionStruct::setChosenFareOption (const FareOptionStruct & *iChosenFO*) [inline]

Set the chosen fare option.

Definition at line 89 of file TravelSolutionStruct.hpp.

34.134.3.16 void stdair::TravelSolutionStruct::toStream (std::ostream & *ioOut*) const

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::StructAbstract.

Definition at line 23 of file TravelSolutionStruct.cpp.

References describe().

34.134.3.17 void stdair::TravelSolutionStruct::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::StructAbstract.

Definition at line 28 of file TravelSolutionStruct.cpp.

34.134.3.18 const std::string stdair::TravelSolutionStruct::describe ( ) const [virtual]

Display of the structure.

Implements stdair::StructAbstract.

Definition at line 32 of file TravelSolutionStruct.cpp.

References stdair::FareOptionStruct::describe(), stdair::BomKeyManager::extractKeys(), and stdair::ParsedKey::toString().

Referenced by toStream().

34.134.3.19 const std::string stdair::TravelSolutionStruct::display ( ) const

Display of the structure.

Definition at line 74 of file TravelSolutionStruct.cpp.

References stdair::FareOptionStruct::display(), stdair::BomKeyManager::extractKeys(), and stdair::ParsedKey::toString().

The documentation for this struct was generated from the following files:

- stdair/bom/TravelSolutionStruct.hpp
- stdair/bom/TravelSolutionStruct.cpp

34.135 soci::type_conversion< stdair::AirlineStruct > Struct Template Reference

`#include <stdair/dbadaptor/DbaAirline.hpp>`

Public Types

- typedef values base_type

Static Public Member Functions

- static void from_base (values const &iAirlineValues, indicator, stdair::AirlineStruct &ioAirline)
- static void to_base (const stdair::AirlineStruct &iAirline, values &ioAirlineValues, indicator &ioIndicator)

34.135.1 Detailed Description

template<>struct soci::type_conversion< stdair::AirlineStruct >

Specify how the AirlineStruct struct can be converted to (resp. from) values stored into (resp. retrieved from) database, using the SOCI framework.

Definition at line 25 of file DbaAirline.hpp.

34.135.2 Member Typedef Documentation

34.135.2.1 typedef values soci::type_conversion< stdair::AirlineStruct >::base_type

Definition at line 27 of file DbaAirline.hpp.

34.135.3 Member Function Documentation

34.135.3.1 void soci::type_conversion< stdair::AirlineStruct >::from_base (values const & *iAirlineValues,* indicator , stdair::AirlineStruct & *ioAirline*) [static]

Fill an Airline object from the database values.

Definition at line 17 of file DbaAirline.cpp.

References stdair::AirlineStruct::setAirlineCode(), and stdair::AirlineStruct::setAirlineName().

34.135.3.2 void soci::type_conversion< stdair::AirlineStruct >::to_base (const stdair::AirlineStruct & *iAirline,* values & *ioAirlineValues,* indicator & *ioIndicator*) [static]

Fill the database values from an Airline object.

Definition at line 30 of file DbaAirline.cpp.

References stdair::AirlineStruct::getAirlineCode(), and stdair::AirlineStruct::getAirlineName().

The documentation for this struct was generated from the following files:

- stdair/dbadaptor/DbaAirline.hpp
- stdair/dbadaptor/DbaAirline.cpp

34.136 TypeWithSize< size > Class Template Reference

`#include <stdair/basic/float_utils_google.hpp>`

Public Types

- typedef void UInt

34.136.1 Detailed Description

template<size_t size>class TypeWithSize< size >

Definition at line 54 of file float_utils_google.hpp.

34.136.2 Member Typedef Documentation

34.136.2.1 template<size_t size> typedef void TypeWithSize< size >::UInt

Definition at line 58 of file float_utils_google.hpp.

The documentation for this class was generated from the following file:

- stdair/basic/float_utils_google.hpp

34.137 TypeWithSize< 4 > Class Template Reference

`#include <stdair/basic/float_utils_google.hpp>`

Public Types

- typedef int Int
- typedef unsigned int UInt

34.137.1 Detailed Description

template<>class TypeWithSize< 4 >

Definition at line 63 of file float_utils_google.hpp.

34.137.2 Member Typedef Documentation

34.137.2.1 typedef int TypeWithSize< 4 >::Int

Definition at line 69 of file float_utils_google.hpp.

34.137.2.2 typedef unsigned int TypeWithSize< 4 >::UInt

Definition at line 70 of file float_utils_google.hpp.

The documentation for this class was generated from the following file:

- stdair/basic/float_utils_google.hpp

34.138 TypeWithSize< 8 > Class Template Reference

`#include <stdair/basic/float_utils_google.hpp>`

Public Types

- typedef long long Int
- typedef unsigned long long UInt

34.138.1 Detailed Description

template<>class TypeWithSize< 8 >

Definition at line 75 of file float_utils_google.hpp.

34.138.2 Member Typedef Documentation

34.138.2.1 typedef long long TypeWithSize< 8 >::Int

Definition at line 81 of file float_utils_google.hpp.

34.138.2.2 typedef unsigned long long TypeWithSize< 8 >::UInt

Definition at line 82 of file float_utils_google.hpp.

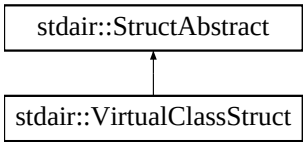
The documentation for this class was generated from the following file:

- stdair/basic/float_utils_google.hpp

34.139 stdair::VirtualClassStruct Struct Reference

`#include <stdair/bom/VirtualClassStruct.hpp>`

Inheritance diagram for stdair::VirtualClassStruct:



Public Member Functions

- const Yield_T & getYield () const
- const MeanValue_T & getMean () const
- const StdDevValue_T & getStdDev () const
- const BookingLimit_T & getCumulatedBookingLimit () const
- const ProtectionLevel_T & getCumulatedProtection () const
- const GeneratedDemandVector_T & getGeneratedDemandVector () const
- void setYield (const Yield_T &iYield)
- void setMean (const MeanValue_T &iMean)
- void setStdDev (const StdDevValue_T &iStdDev)
- void setCumulatedBookingLimit (const BookingLimit_T &iBL)
- void setCumulatedProtection (const ProtectionLevel_T &iP)
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string describe () const
- VirtualClassStruct (const VirtualClassStruct &)
- VirtualClassStruct (BookingClass &)
- ~VirtualClassStruct ()

34.139.1 Detailed Description

Structure holding the elements of a virtual class.

Definition at line 23 of file VirtualClassStruct.hpp.

34.139.2 Constructor & Destructor Documentation

34.139.2.1 stdair::VirtualClassStruct::VirtualClassStruct (const VirtualClassStruct & *iVC*)

Constructor.

Definition at line 19 of file VirtualClassStruct.cpp.

34.139.2.2 stdair::VirtualClassStruct::VirtualClassStruct (BookingClass & *ioBookingClass*)

Default copy constructor.

Definition at line 25 of file VirtualClassStruct.cpp.

34.139.2.3 stdair::VirtualClassStruct::~VirtualClassStruct ( )

Destructor.

Definition at line 30 of file VirtualClassStruct.cpp.

34.139.3 Member Function Documentation

34.139.3.1 const Yield_T& stdair::VirtualClassStruct::getYield ( ) const [inline]

Get the yield (average price paid for that virtual class).

Definition at line 27 of file VirtualClassStruct.hpp.

Referenced by stdair::LegCabin::displayVirtualClassList().

34.139.3.2 const MeanValue_T& stdair::VirtualClassStruct::getMean ( ) const [inline]

Get the mean value of the demand distribution.

Definition at line 32 of file VirtualClassStruct.hpp.

34.139.3.3 const StdDevValue_T& stdair::VirtualClassStruct::getStdDev ( ) const [inline]

Get the standard deviation of the demand distribution.

Definition at line 37 of file VirtualClassStruct.hpp.

34.139.3.4 const BookingLimit_T& stdair::VirtualClassStruct::getCumulatedBookingLimit ( ) const [inline]

Get the booking limit of the class.

Definition at line 42 of file VirtualClassStruct.hpp.

Referenced by stdair::LegCabin::displayVirtualClassList().

34.139.3.5 const ProtectionLevel_T& stdair::VirtualClassStruct::getCumulatedProtection ( ) const [inline]

Get the protection level of the class.

Definition at line 47 of file VirtualClassStruct.hpp.

Referenced by stdair::LegCabin::displayVirtualClassList().

34.139.3.6 const GeneratedDemandVector_T & stdair::VirtualClassStruct::getGeneratedDemandVector ( ) const

Get the generated demand sample vector for Monte-Carlo method.

Definition at line 53 of file VirtualClassStruct.cpp.

References stdair::BookingClass::getGeneratedDemandVector().

34.139.3.7 void stdair::VirtualClassStruct::setYield (const Yield_T & *iYield*) [inline]

Set the yield (average price paid for that virtual class).

Definition at line 57 of file VirtualClassStruct.hpp.

34.139.3.8 void stdair::VirtualClassStruct::setMean (const MeanValue_T & *iMean*) [inline]

Set the mean value of the demand distribution.

Definition at line 62 of file VirtualClassStruct.hpp.

34.139.3.9 void stdair::VirtualClassStruct::setStdDev (const StdDevValue_T & *iStdDev*) [inline]

Set the standard deviation of the demand distribution.

Definition at line 67 of file VirtualClassStruct.hpp.

34.139.3.10 void stdair::VirtualClassStruct::setCumulatedBookingLimit (const BookingLimit_T & *iBL*) [inline]

Set the booking limit of the class.

Definition at line 72 of file VirtualClassStruct.hpp.

34.139.3.11 void stdair::VirtualClassStruct::setCumulatedProtection (const ProtectionLevel_T & *iP*) [inline]

Set the protection level of the class.

Definition at line 77 of file VirtualClassStruct.hpp.

34.139.3.12 void stdair::VirtualClassStruct::toStream (std::ostream & *ioOut*) const

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::StructAbstract.

Definition at line 35 of file VirtualClassStruct.cpp.

References describe().

34.139.3.13 void stdair::VirtualClassStruct::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::StructAbstract.

Definition at line 40 of file VirtualClassStruct.cpp.

34.139.3.14 const std::string stdair::VirtualClassStruct::describe ( ) const [virtual]

Display of the structure.

Implements stdair::StructAbstract.

Definition at line 44 of file VirtualClassStruct.cpp.

Referenced by toStream().

The documentation for this struct was generated from the following files:

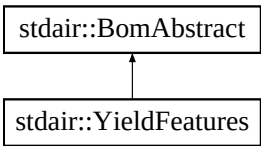
- stdair/bom/VirtualClassStruct.hpp
- stdair/bom/VirtualClassStruct.cpp

34.140 stdair::YieldFeatures Class Reference

Class representing the actual attributes for a yield date-period.

`#include <stdair/bom/YieldFeatures.hpp>`

Inheritance diagram for stdair::YieldFeatures:



Public Types

- typedef YieldFeaturesKey Key_T

Public Member Functions

- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const

- const Key_T & getKey () const
- BomAbstract *const getParent () const
- const HolderMap_T & getHolderMap () const
- const CabinCode_T & getCabinCode () const
- const TripType_T & getTripType () const
- bool isTripTypeValid (const TripType_T &) const

Protected Member Functions

- YieldFeatures (const Key_T &)
- virtual ~YieldFeatures ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent
- HolderMap_T _holderMap

Friends

- class FacBom
- class FacBomManager

34.140.1 Detailed Description

Class representing the actual attributes for a yield date-period.

Definition at line 19 of file YieldFeatures.hpp.

34.140.2 Member Typedef Documentation

34.140.2.1 typedef YieldFeaturesKey stdair::YieldFeatures::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 28 of file YieldFeatures.hpp.

34.140.3 Constructor & Destructor Documentation

34.140.3.1 stdair::YieldFeatures::YieldFeatures (const Key_T & *iKey*) [protected]

Main constructor.

Definition at line 29 of file YieldFeatures.cpp.

34.140.3.2 stdair::YieldFeatures::~YieldFeatures ( ) [protected, virtual]

Destructor.

Definition at line 34 of file YieldFeatures.cpp.

34.140.4 Member Function Documentation

34.140.4.1 void stdair::YieldFeatures::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 37 of file YieldFeatures.hpp.

References toString().

34.140.4.2 void stdair::YieldFeatures::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 46 of file YieldFeatures.hpp.

34.140.4.3 std::string stdair::YieldFeatures::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 38 of file YieldFeatures.cpp.

References describeKey().

Referenced by toStream().

34.140.4.4 const std::string stdair::YieldFeatures::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 57 of file YieldFeatures.hpp.

References _key, and stdair::YieldFeaturesKey::toString().

Referenced by toString().

34.140.4.5 const Key_T& stdair::YieldFeatures::getKey ( ) const [inline]

Get the primary key (trip type, cabin code).

Definition at line 66 of file YieldFeatures.hpp.

References _key.

34.140.4.6 BomAbstract* const stdair::YieldFeatures::getParent ( ) const [inline]

Get a reference on the parent object instance.

Definition at line 73 of file YieldFeatures.hpp.

References _parent.

34.140.4.7 const HolderMap_T& stdair::YieldFeatures::getHolderMap ( ) const [inline]

Get a reference on the children holder.

Definition at line 80 of file YieldFeatures.hpp.

References _holderMap.

34.140.4.8 const CabinCode_T& stdair::YieldFeatures::getCabinCode ( ) const [inline]

Get the cabin code.

Definition at line 87 of file YieldFeatures.hpp.

References _key, and stdair::YieldFeaturesKey::getCabinCode().

34.140.4.9 const TripType_T& stdair::YieldFeatures::getTripType ( ) const [inline]

Get the trip type.

Definition at line 94 of file YieldFeatures.hpp.

References _key, and stdair::YieldFeaturesKey::getTripType().

Referenced by isTripTypeValid().

34.140.4.10 bool stdair::YieldFeatures::isTripTypeValid (const TripType_T & *iBookingRequestTripType*) const

Check whether the fare rule trip type corresponds to the booking request trip type.

Definition at line 46 of file YieldFeatures.cpp.

References getTripType(), stdair::TRIP_TYPE_INBOUND, stdair::TRIP_TYPE_OUTBOUND, and stdair::TRIP_TYPE_ROUND_TRIP.

34.140.5 Friends And Related Function Documentation

34.140.5.1 friend class FacBom [friend]

Definition at line 20 of file YieldFeatures.hpp.

34.140.5.2 friend class FacBomManager [friend]

Definition at line 21 of file YieldFeatures.hpp.

34.140.6 Member Data Documentation

34.140.6.1 Key_T stdair::YieldFeatures::_key [protected]

Primary key (flight number and departure date).

Definition at line 137 of file YieldFeatures.hpp.

Referenced by describeKey(), getCabinCode(), getKey(), and getTripType().

34.140.6.2 BomAbstract* stdair::YieldFeatures::_parent [protected]

Pointer on the parent class.

Definition at line 142 of file YieldFeatures.hpp.

Referenced by getParent().

34.140.6.3 HolderMap_T stdair::YieldFeatures::_holderMap [protected]

Map holding the children.

Definition at line 147 of file YieldFeatures.hpp.

Referenced by getHolderMap().

The documentation for this class was generated from the following files:

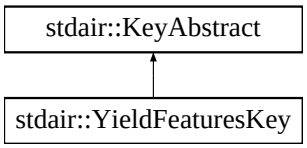
- stdair/bom/YieldFeatures.hpp
- stdair/bom/YieldFeatures.cpp

34.141 stdair::YieldFeaturesKey Struct Reference

Key of date-period.

`#include <stdair/bom/YieldFeaturesKey.hpp>`

Inheritance diagram for stdair::YieldFeaturesKey:



Public Member Functions

- YieldFeaturesKey (const TripType_T &, const CabinCode_T &)
- YieldFeaturesKey (const YieldFeaturesKey &)
- ~YieldFeaturesKey ()
- const TripType_T & getTripType () const
- const CabinCode_T & getCabinCode () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const

34.141.1 Detailed Description

Key of date-period.

Definition at line 18 of file YieldFeaturesKey.hpp.

34.141.2 Constructor & Destructor Documentation

34.141.2.1 stdair::YieldFeaturesKey::YieldFeaturesKey (const TripType_T & *iTripType*, const CabinCode_T & *iCabin*)

Main constructor.

Definition at line 21 of file YieldFeaturesKey.cpp.

34.141.2.2 stdair::YieldFeaturesKey::YieldFeaturesKey (const YieldFeaturesKey & *iKey*)

Copy constructor.

Definition at line 27 of file YieldFeaturesKey.cpp.

34.141.2.3 stdair::YieldFeaturesKey::~YieldFeaturesKey ( )

Destructor.

Definition at line 32 of file YieldFeaturesKey.cpp.

34.141.3 Member Function Documentation

34.141.3.1 const TripType_T& stdair::YieldFeaturesKey::getTripType ( ) const [inline]

Get the fare trip type.

Definition at line 44 of file YieldFeaturesKey.hpp.

Referenced by stdair::YieldFeatures::getTripType().

34.141.3.2 const CabinCode_T& stdair::YieldFeaturesKey::getCabinCode ( ) const [inline]

Get the cabin.

Definition at line 51 of file YieldFeaturesKey.hpp.

Referenced by stdair::YieldFeatures::getCabinCode().

34.141.3.3 void stdair::YieldFeaturesKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 36 of file YieldFeaturesKey.cpp.

References toString().

34.141.3.4 void stdair::YieldFeaturesKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 41 of file YieldFeaturesKey.cpp.

34.141.3.5 const std::string stdair::YieldFeaturesKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key. That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

Reimplemented from stdair::KeyAbstract.

Definition at line 45 of file YieldFeaturesKey.cpp.

Referenced by stdair::YieldFeatures::describeKey(), and toStream().

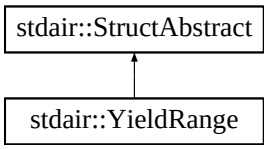
The documentation for this struct was generated from the following files:

- stdair/bom/YieldFeaturesKey.hpp
- stdair/bom/YieldFeaturesKey.cpp

34.142 stdair::YieldRange Class Reference

```
#include <stdair/basic/YieldRange.hpp>
```

Inheritance diagram for stdair::YieldRange:



Public Member Functions

- YieldRange ()
- YieldRange (const YieldRange &)
- YieldRange (const Yield_T iUpperYield)
- YieldRange (const Yield_T iUpperYield, const Yield_T iAverageYield)
- YieldRange (const Yield_T iUpperYield, const Yield_T iAverageYield, const Yield_T iLowerYield)
- virtual ~YieldRange ()
- Yield_T getUpperYield () const
- Yield_T getAverageYield () const
- Yield_T getLowerYield () const
- void setUpperYield (const Yield_T iUpperYield)
- void setAverageYield (const Yield_T iAverageYield)
- void setLowerYield (const Yield_T iLowerYield)
- void toStream (std::ostream &) const
- void fromStream (std::istream &)
- const std::string describe () const

34.142.1 Detailed Description

Class representing a range of yields.

Typically, bookings are priced according to rules (e.g., fare rules), leading to slight variations of revenues for a given product. The "yield range" captures the extent of revenues earned for a given product.

When no average and lower yields are defined, they are assumed to be equal to the upper yield.

Note that the lower yield is generally not defined, as it corresponds to the upper yield of the lower yield range.

Definition at line 23 of file YieldRange.hpp.

34.142.2 Constructor & Destructor Documentation

34.142.2.1 stdair::YieldRange::YieldRange ( )

Constructors.

Definition at line 13 of file YieldRange.cpp.

34.142.2.2 stdair::YieldRange::YieldRange (const YieldRange & *iYieldRange*)

Definition at line 20 of file YieldRange.cpp.

34.142.2.3 stdair::YieldRange::YieldRange (const Yield_T *iUpperYield*)

Definition at line 27 of file YieldRange.cpp.

34.142.2.4 stdair::YieldRange::YieldRange (const Yield_T *iUpperYield,* const Yield_T *iAverageYield*)

Definition at line 33 of file YieldRange.cpp.

34.142.2.5 stdair::YieldRange::YieldRange (const Yield_T *iUpperYield,* const Yield_T *iAverageYield,* const Yield_T *iLowerYield*)

Definition at line 40 of file YieldRange.cpp.

34.142.2.6 stdair::YieldRange::~YieldRange ( ) [virtual]

Constructors.

Definition at line 48 of file YieldRange.cpp.

34.142.3 Member Function Documentation

34.142.3.1 Yield_T stdair::YieldRange::getUpperYield ( ) const [inline]

Getter for the upper yield of the range.

Definition at line 39 of file YieldRange.hpp.

34.142.3.2 Yield_T stdair::YieldRange::getAverageYield ( ) const [inline]

Getter for the average yield of the range.

Definition at line 43 of file YieldRange.hpp.

34.142.3.3 Yield_T stdair::YieldRange::getLowerYield ( ) const [inline]

Getter for the lower yield of the range.

Definition at line 47 of file YieldRange.hpp.

34.142.3.4 void stdair::YieldRange::setUpperYield (const Yield_T *iUpperYield*) [inline]

Setter for the upper yield of the range.

Definition at line 53 of file YieldRange.hpp.

34.142.3.5 void stdair::YieldRange::setAverageYield (const Yield_T *iAverageYield*) [inline]

Setter for the average yield of the range.

Definition at line 57 of file YieldRange.hpp.

34.142.3.6 void stdair::YieldRange::setLowerYield (const Yield_T *iLowerYield*) [inline]

Setter for the lower yield of the range.

Definition at line 61 of file YieldRange.hpp.

34.142.3.7 void stdair::YieldRange::toStream (std::ostream & *ioOut*) const

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::StructAbstract.

Definition at line 52 of file YieldRange.cpp.

34.142.3.8 void stdair::YieldRange::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::StructAbstract.

Definition at line 58 of file YieldRange.cpp.

34.142.3.9 const std::string stdair::YieldRange::describe ( ) const [virtual]

Display of the structure.

Implements stdair::StructAbstract.

Definition at line 62 of file YieldRange.cpp.

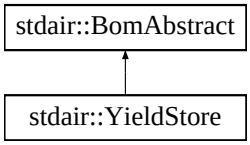
The documentation for this class was generated from the following files:

- stdair/basic/YieldRange.hpp
- stdair/basic/YieldRange.cpp

34.143 stdair::YieldStore Class Reference

```
#include <stdair/bom/YieldStore.hpp>
```

Inheritance diagram for stdair::YieldStore:



Public Types

- typedef YieldStoreKey Key_T

Public Member Functions

- void toStream (std::ostream &ioOut) const
- BomAbstract *const getParent () const
- void fromStream (std::istream &ioIn)
- std::string toString () const
- const std::string describeKey () const
- const Key_T & getKey () const
- const AirlineCode_T & getAirlineCode () const

Protected Member Functions

- YieldStore (const Key_T &)
- YieldStore (const YieldStore &)
- ~YieldStore ()

Protected Attributes

- Key_T _key
- BomAbstract * _parent

Friends

- class FacBom
- class FacBomManager

34.143.1 Detailed Description

Class representing the actual attributes for an airline YieldStore.

Definition at line 18 of file YieldStore.hpp.

34.143.2 Member Typedef Documentation

34.143.2.1 typedef YieldStoreKey stdair::YieldStore::Key_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 25 of file YieldStore.hpp.

34.143.3 Constructor & Destructor Documentation

34.143.3.1 stdair::YieldStore::YieldStore (const Key_T & *iKey*) [protected]

Default constructors.

Definition at line 13 of file YieldStore.cpp.

34.143.3.2 stdair::YieldStore::YieldStore (const YieldStore &) [protected]

34.143.3.3 stdair::YieldStore::~YieldStore ( ) [protected]

Destructor.

Definition at line 17 of file YieldStore.cpp.

34.143.4 Member Function Documentation

34.143.4.1 void stdair::YieldStore::toStream (std::ostream & *ioOut*) const [inline, virtual]

Dump a Business Object into an output stream.

Parameters

ostream&	the output stream.

Implements stdair::BomAbstract.

Definition at line 31 of file YieldStore.hpp.

References toString().

34.143.4.2 BomAbstract* const stdair::YieldStore::getParent ( ) const [inline]

Get the parent object.

Definition at line 34 of file YieldStore.hpp.

References _parent.

34.143.4.3 void stdair::YieldStore::fromStream (std::istream & *ioIn*) [inline, virtual]

Read a Business Object from an input stream.

Parameters

istream&	the input stream.

Implements stdair::BomAbstract.

Definition at line 38 of file YieldStore.hpp.

34.143.4.4 std::string stdair::YieldStore::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements stdair::BomAbstract.

Definition at line 21 of file YieldStore.cpp.

References _key, and stdair::YieldStoreKey::toString().

Referenced by toStream().

34.143.4.5 const std::string stdair::YieldStore::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 44 of file YieldStore.hpp.

References _key, and stdair::YieldStoreKey::toString().

34.143.4.6 const Key_T& stdair::YieldStore::getKey ( ) const [inline]

Get the YieldStore key.

Definition at line 49 of file YieldStore.hpp.

References _key.

34.143.4.7 const AirlineCode_T& stdair::YieldStore::getAirlineCode ( ) const [inline]

Get the airline code.

Definition at line 52 of file YieldStore.hpp.

References _key, and stdair::YieldStoreKey::getAirlineCode().

34.143.5 Friends And Related Function Documentation

34.143.5.1 friend class FacBom [friend]

Definition at line 19 of file YieldStore.hpp.

34.143.5.2 friend class FacBomManager [friend]

Definition at line 20 of file YieldStore.hpp.

34.143.6 Member Data Documentation

34.143.6.1 Key_T stdair::YieldStore::_key [protected]

The key of both structure and objects.

Definition at line 66 of file YieldStore.hpp.

Referenced by describeKey(), getAirlineCode(), getKey(), and toString().

34.143.6.2 BomAbstract* stdair::YieldStore::_parent [protected]

Definition at line 67 of file YieldStore.hpp.

Referenced by getParent().

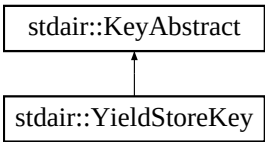
The documentation for this class was generated from the following files:

- stdair/bom/YieldStore.hpp
- stdair/bom/YieldStore.cpp

34.144 stdair::YieldStoreKey Struct Reference

`#include <stdair/bom/YieldStoreKey.hpp>`

Inheritance diagram for stdair::YieldStoreKey:



Public Member Functions

- YieldStoreKey (const AirlineCode_T &iAirlineCode)
- YieldStoreKey (const YieldStoreKey &)
- ~YieldStoreKey ()
- const AirlineCode_T & getAirlineCode () const
- void toStream (std::ostream &ioOut) const
- void fromStream (std::istream &ioIn)
- const std::string toString () const

34.144.1 Detailed Description

Key of YieldStore.

Definition at line 14 of file YieldStoreKey.hpp.

34.144.2 Constructor & Destructor Documentation

34.144.2.1 stdair::YieldStoreKey::YieldStoreKey (const AirlineCode_T & *iAirlineCode*)

Constructors.

Definition at line 10 of file YieldStoreKey.cpp.

34.144.2.2 stdair::YieldStoreKey::YieldStoreKey (const YieldStoreKey & *iKey*)

Definition at line 14 of file YieldStoreKey.cpp.

34.144.2.3 stdair::YieldStoreKey::~YieldStoreKey ( )

Destructor.

Definition at line 19 of file YieldStoreKey.cpp.

34.144.3 Member Function Documentation

34.144.3.1 const AirlineCode_T& stdair::YieldStoreKey::getAirlineCode ( ) const [inline]

Get the airline code.

Definition at line 30 of file YieldStoreKey.hpp.

Referenced by stdair::YieldStore::getAirlineCode().

34.144.3.2 void stdair::YieldStoreKey::toStream (std::ostream & *ioOut*) const [virtual]

Dump a Business Object Key into an output stream.

Parameters

ostream&	the output stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 23 of file YieldStoreKey.cpp.

References toString().

34.144.3.3 void stdair::YieldStoreKey::fromStream (std::istream & *ioIn*) [virtual]

Read a Business Object Key from an input stream.

Parameters

istream&	the input stream.

Reimplemented from stdair::KeyAbstract.

Definition at line 28 of file YieldStoreKey.cpp.

34.144.3.4 const std::string stdair::YieldStoreKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from stdair::KeyAbstract.

Definition at line 32 of file YieldStoreKey.cpp.

Referenced by stdair::YieldStore::describeKey(), toStream(), and stdair::YieldStore::toString().

The documentation for this struct was generated from the following files:

- stdair/bom/YieldStoreKey.hpp
- stdair/bom/YieldStoreKey.cpp

35 File Documentation

35.1 batches/stdair.cpp File Reference

35.2 stdair.cpp

```
00001
00005 // STL
00006 #include <cassert>
00007 #include <iostream>
00008 #include <sstream>
00009 #include <fstream>
00010 #include <string>
00011 // Boost (Extended STL)
00012 #include <boost/date_time/posix_time/posix_time.hpp>
00013 #include <boost/date_time/gregorian/gregorian.hpp>
00014 #include <boost/program_options.hpp>
00015 #include <boost/tokenizer.hpp>
00016 #include <boost/lexical_cast.hpp>
00017 // StdAir
00018 #include <stdair/stdair_types.hpp>
00019 #include <stdair/bom/BomArchive.hpp>
00020 #include <stdair/bom/BookingRequestStruct.hpp>
00021 #include <stdair/bom/TravelSolutionStruct.hpp>
00022 #include <stdair/service/Logger.hpp>
00023 #include <stdair/STDAIR_Service.hpp>
00024 #include <stdair/config/stdair-paths.hpp>
00025
00026 // //////// Constants //////
00030 const std::string K_STDAIR_DEFAULT_LOG_FILENAME ("stdair.log");
00031
00035 const std::string K_STDAIR_DEFAULT_INPUT_FILENAME (STDAIR_SAMPLE_DIR
00036                                                    "/schedule01.csv");
00037
00042 const bool K_STDAIR_DEFAULT_BUILT_IN_INPUT = false;
00043
```

```
00049 const bool K_STDAIR_DEFAULT_BUILT_FOR_RMOL = false;
00050
00056 const bool K_STDAIR_DEFAULT_BUILT_FOR_CRS = false;
00057
00062 const int K_STDAIR_EARLY_RETURN_STATUS = 99;
00063
00064 // ///////// Parsing of Options & Configuration /////////
00065 // A helper function to simplify the main part.
00066 template<class T> std::ostream& operator<< (std::ostream& os,
00067                                             const std::vector<T>& v) {
00068   std::copy (v.begin(), v.end(), std::ostream_iterator<T> (std::cout, " "));
00069   return os;
00070 }
00071
00073 int readConfiguration (int argc, char* argv[], bool& ioIsBuiltin,
00074                        bool& ioIsForRMOL, bool& ioIsForCRS,
00075                        stdair::Filename_T& ioInputFilename,
00076                        std::string& ioLogFilename) {
00077   // Default for the built-in input
00078   ioIsBuiltin = K_STDAIR_DEFAULT_BUILT_IN_INPUT;
00079
00080   // Default for the RMOL input
00081   ioIsForRMOL = K_STDAIR_DEFAULT_BUILT_FOR_RMOL;
00082
00083   // Default for the CRS input
00084   ioIsForCRS = K_STDAIR_DEFAULT_BUILT_FOR_CRS;
00085
00086   // Declare a group of options that will be allowed only on command line
00087   boost::program_options::options_description generic ("Generic options");
00088   generic.add_options()
00089     ("prefix", "print installation prefix")
00090     ("version,v", "print version string")
00091     ("help,h", "produce help message");
00092
00093   // Declare a group of options that will be allowed both on command
00094   // line and in config file
00095
00096   boost::program_options::options_description config ("Configuration");
00097   config.add_options()
00098     ("builtin,b",
00099      "The sample BOM tree can be either built-in or parsed from an input file. Th
      at latter must then be given with the -i/--input option")
00100     ("rmol,r",
00101      "Build a sample BOM tree for RMOL (i.e., a dummy flight-date with a single l
      eg-cabin)")
00102     ("crs,c",
00103      "Build a sample BOM tree for CRS")
00104     ("input,i",
00105      boost::program_options::value< std::string >(&ioInputFilename)->default_valu
      e(K_STDAIR_DEFAULT_INPUT_FILENAME),
00106      "(CVS) input file for the demand distributions")
00107     ("log,l",
00108      boost::program_options::value< std::string >(&ioLogFilename)->default_value(
      K_STDAIR_DEFAULT_LOG_FILENAME),
00109      "Filename for the logs")
00110     ;
00111
00112   // Hidden options, will be allowed both on command line and
00113   // in config file, but will not be shown to the user.
00114   boost::program_options::options_description hidden ("Hidden options");
00115   hidden.add_options()
00116     ("copyright",
```

```
00117      boost::program_options::value< std::vector<std::string> >(),
00118      "Show the copyright (license)");
00119
00120    boost::program_options::options_description cmdline_options;
00121    cmdline_options.add(generic).add(config).add(hidden);
00122
00123    boost::program_options::options_description config_file_options;
00124    config_file_options.add(config).add(hidden);
00125    boost::program_options::options_description visible ("Allowed options");
00126    visible.add(generic).add(config);
00127
00128    boost::program_options::positional_options_description p;
00129    p.add ("copyright", -1);
00130
00131    boost::program_options::variables_map vm;
00132    boost::program_options::
00133      store (boost::program_options::command_line_parser (argc, argv).
00134             options (cmdline_options).positional(p).run(), vm);
00135
00136    std::ifstream ifs ("stdair.cfg");
00137    boost::program_options::store (parse_config_file (ifs, config_file_options),
00138                                   vm);
00139    boost::program_options::notify (vm);
00140
00141    if (vm.count ("help")) {
00142      std::cout << visible << std::endl;
00143      return K_STDAIR_EARLY_RETURN_STATUS;
00144    }
00145
00146    if (vm.count ("version")) {
00147      std::cout << PACKAGE_NAME << ", version " << PACKAGE_VERSION << std::endl;
00148      return K_STDAIR_EARLY_RETURN_STATUS;
00149    }
00150
00151    if (vm.count ("prefix")) {
00152      std::cout << "Installation prefix: " << PREFIXDIR << std::endl;
00153      return K_STDAIR_EARLY_RETURN_STATUS;
00154    }
00155
00156    if (vm.count ("builtin")) {
00157      ioIsBuiltin = true;
00158    }
00159
00160    if (vm.count ("rmol")) {
00161      ioIsForRMOL = true;
00162
00163      // The RMOL sample tree takes precedence over the default built-in BOM tree
00164      ioIsBuiltin = false;
00165    }
00166
00167    if (vm.count ("crs")) {
00168      ioIsForCRS = true;
00169
00170      // The RMOL sample tree takes precedence over the default built-in BOM tree
00171      ioIsBuiltin = false;
00172    }
00173
00174    const std::string isBuiltinStr = (ioIsBuiltin == true)?"yes":"no";
00175    std::cout << "The BOM should be built-in? " << isBuiltinStr << std::endl;
00176
00177    const std::string isForRMOLStr = (ioIsForRMOL == true)?"yes":"no";
00178    std::cout << "The BOM should be built-in for RMOL? " << isForRMOLStr
```

```
00179             << std::endl;
00180
00181   const std::string isForCRSStr = (ioIsForCRS == true)?"yes":"no";
00182   std::cout << "The BOM should be built-in for CRS? " << isForCRSStr
00183             << std::endl;
00184
00185   if (ioIsBuiltin == false && ioIsForRMOL == false && ioIsForCRS == false) {
00186     if (vm.count ("input")) {
00187       ioInputFilename = vm["input"].as< std::string >();
00188       std::cout << "Input filename is: " << ioInputFilename << std::endl;
00189
00190     } else {
00191       std::cerr << "Either one among the -b/--builtin, -r/--rmol, -c/--crs "
00192                 << "or -i/--input options must be specified" << std::endl;
00193     }
00194   }
00195
00196   if (vm.count ("log")) {
00197     ioLogFilename = vm["log"].as< std::string >();
00198     std::cout << "Log filename is: " << ioLogFilename << std::endl;
00199   }
00200
00201   return 0;
00202 }
00203
00204
00205 // ///////////////// M A I N ////////////////////
00206 int main (int argc, char* argv[]) {
00207
00208   // State whether the BOM tree should be built-in or parsed from an
00209   // input file
00210   bool isBuiltin;
00211
00212   // State whether a sample BOM tree should be built for RMOL.
00213   bool isForRMOL;
00214
00215   // State whether a sample BOM tree should be built for the CRS.
00216   bool isForCRS;
00217
00218   // Input file name
00219   stdair::Filename_T lInputFilename;
00220
00221   // Output log File
00222   std::string lLogFilename;
00223
00224   // Call the command-line option parser
00225   const int lOptionParserStatus =
00226     readConfiguration (argc, argv, isBuiltin, isForRMOL, isForCRS,
00227                        lInputFilename, lLogFilename);
00228
00229   if (lOptionParserStatus == K_STDAIR_EARLY_RETURN_STATUS) {
00230     return 0;
00231   }
00232
00233   // Set the log parameters
00234   std::ofstream logOutputFile;
00235   // Open and clean the log outputfile
00236   logOutputFile.open (lLogFilename.c_str());
00237   logOutputFile.clear();
00238
00239   const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
00240   stdair::STDAIR_Service stdairService (lLogParams);
```

```
00241
00242   // DEBUG
00243   STDAIR_LOG_DEBUG ("Welcome to stdair");
00244
00245   // Check wether or not a (CSV) input file should be read
00246   if (isBuiltin == true || isForRMOL == true || isForCRS == true) {
00247
00248     if (isForRMOL == true) {
00249       // Build the sample BOM tree for RMOL
00250       stdairService.buildDummyInventory (300);
00251
00252     } else if (isForCRS == true) {
00253       //
00254       stdair::TravelSolutionList_T lTravelSolutionList;
00255       stdairService.buildSampleTravelSolutions (lTravelSolutionList);
00256
00257       // Build the sample BOM tree for CRS
00258       const stdair::BookingRequestStruct& lBookingRequest =
00259         stdairService.buildSampleBookingRequest();
00260
00261       // DEBUG: Display the travel solution and booking request
00262       STDAIR_LOG_DEBUG ("Booking request: " << lBookingRequest.display());
00263
00264       const std::string& lCSVDump =
00265         stdairService.csvDisplay (lTravelSolutionList);
00266       STDAIR_LOG_DEBUG (lCSVDump);
00267
00268     } else {
00269       assert (isBuiltin == true);
00270
00271       // Build a sample BOM tree
00272       stdairService.buildSampleBom();
00273     }
00274
00275   } else {
00276     // Read the input file
00277     //stdairService.readFromInputFile (lInputFilename);
00278
00279     // DEBUG
00280     STDAIR_LOG_DEBUG ("StdAir will parse " << lInputFilename
00281                       << " and build the corresponding BOM tree.");
00282   }
00283
00284   // DEBUG: Display the whole BOM tree
00285   const std::string& lCSVDump = stdairService.csvDisplay();
00286   STDAIR_LOG_DEBUG (lCSVDump);
00287
00288   // Close the Log outputFile
00289   logOutputFile.close();
00290
00291   /*
00292     Note: as that program is not intended to be run on a server in
00293     production, it is better not to catch the exceptions. When it
00294     happens (that an exception is throwned), that way we get the
00295     call stack.
00296   */
00297
00298   return 0;
00299 }
00300
```

35.3 doc/local/authors.doc File Reference

35.4 doc/local/codingrules.doc File Reference

35.5 doc/local/copyright.doc File Reference

35.6 doc/local/documentation.doc File Reference

35.7 doc/local/features.doc File Reference

35.8 doc/local/help_wanted.doc File Reference

35.9 doc/local/howto_release.doc File Reference

35.10 doc/local/index.doc File Reference

35.11 doc/local/installation.doc File Reference

35.12 doc/local/linking.doc File Reference

35.13 doc/local/test.doc File Reference

35.14 doc/local/users_guide.doc File Reference

35.15 doc/local/verification.doc File Reference

35.16 doc/tutorial/tutorial.doc File Reference

35.17 stdair/basic/BasChronometer.cpp File Reference

```
#include <cassert>
#include <stdair/basic/BasChronometer.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.18 BasChronometer.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
```

```
00006 // Stdair
00007 #include <stdair/basic/BasChronometer.hpp>
00008
00009 namespace stdair {
00010
00011   // ////////////////////////////////////////////////////////////////////
00012   BasChronometer::BasChronometer () : _startTimeLaunched (false) {
00013   }
00014
00015   // ////////////////////////////////////////////////////////////////////
00016   void BasChronometer::start () {
00017     // Get the time-stamp of now, and store it for later use
00018     _startTime = boost::posix_time::microsec_clock::local_time();
00019
00020     // Update the boolean which states whether the chronometer
00021     // is launched
00022     _startTimeLaunched = true;
00023   }
00024
00025   // ////////////////////////////////////////////////////////////////////
00026   double BasChronometer::elapsed () const {
00027     assert (_startTimeLaunched == true);
00028
00029     // Get the time-stamp of now
00030     const boost::posix_time::ptime lStopTime =
00031       boost::posix_time::microsec_clock::local_time();
00032
00033     // Calculate the time elapsed since the last time-stamp
00034     const boost::posix_time::time_duration lElapsedTime =
00035       lStopTime - _startTime;
00036
00037     // Derived the corresponding number of milliseconds
00038     const double lElapsedTimeInMicroSeconds =
00039       static_cast<const double> (lElapsedTime.total_microseconds());
00040
00041     // The elapsed time given in return is expressed in seconds
00042     return (lElapsedTimeInMicroSeconds / 1e6);
00043   }
00044
00045 }
```

35.19 stdair/basic/BasChronometer.hpp File Reference

`#include <boost/date_time/posix_time/posix_time.hpp>`

Classes

- struct stdair::BasChronometer

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.20 BasChronometer.hpp

```
00001 #ifndef __STDAIR_BAS_BASCHRONOMETER_HPP
00002 #define __STDAIR_BAS_BASCHRONOMETER_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // Boost (STL Extension)
00008 // Boost Date-Time (http://boost.org/doc/html/date_time/posix_time.html)
00009 #include <boost/date_time/posix_time/posix_time.hpp>
00010
00011 namespace stdair {
00012
00014   struct BasChronometer {
00016     BasChronometer();
00017
00021     void start ();
00022
00024     std::string getStart () const {
00025       return boost::posix_time::to_simple_string (_startTime);
00026     }
00027
00030     double elapsed () const;
00031
00032   private:
00034     boost::posix_time::ptime _startTime;
00035
00037     bool _startTimeLaunched;
00038   };
00039
00040 }
00041 #endif // __STDAIR_BAS_BASCHRONOMETER_HPP
```

35.21 stdair/basic/BasConst.cpp File Reference

```
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/basic/BasConst_Event.hpp>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_BookingClass.hpp>
#include <stdair/basic/BasConst_Yield.hpp>
#include <stdair/basic/BasConst_DefaultObject.hpp>
#include <stdair/basic/BasConst_Period_BOM.hpp>
#include <stdair/basic/BasConst_TravelSolution.hpp>
```

Namespaces

- namespace stdair

Handle on the StdAir library context.

Functions

- const std::string stdair::DEFAULT_BOM_ROOT_KEY (" -- ROOT -- ")
- const double stdair::DEFAULT_EPSILON_VALUE (0.0001)
- const unsigned int stdair::DEFAULT_FLIGHT_SPEED (900)
- const NbOfFlightDates_T stdair::DEFAULT_NB_OF_FLIGHTDATES (0.0)
- const Duration_T stdair::NULL_BOOST_TIME_DURATION (-1,-1,-1)
- const unsigned int stdair::DEFAULT_NB_OF_DAYS_IN_A_YEAR (365)
- const unsigned int stdair::DEFAULT_NUMBER_OF_SUBDIVISIONS (1000)
- const DayDuration_T stdair::DEFAULT_DAY_DURATION (0)
- const DatePeriod_T stdair::BOOST_DEFAULT_DATE_PERIOD (Date_T(2007, 1, 1), Date_T(2007, 1, 1))
- const DOW_String_T stdair::DEFAULT_DOW_STRING ("0000000")
- const DateOffset_T stdair::DEFAULT_DATE_OFFSET (0)
- const Date_T stdair::DEFAULT_DATE (2010, boost::gregorian::Jan, 1)
- const DateTime_T stdair::DEFAULT_DATETIME (DEFAULT_DATE, NULL_BOOST_-TIME_DURATION)
- const Duration_T stdair::DEFAULT_EPSILON_DURATION (0, 0, 0, 1)
- const Count_T stdair::SECONDS_IN_ONE_DAY (86400)
- const Count_T stdair::MILLISECONDS_IN_ONE_SECOND (1000)
- const RandomSeed_T stdair::DEFAULT_RANDOM_SEED (120765987)
- const AirportCode_T stdair::AIRPORT_LHR ("LHR")
- const AirportCode_T stdair::AIRPORT_SYD ("SYD")
- const CityCode_T stdair::POS_LHR ("LHR")
- const Date_T stdair::DATE_20110115 (2011, boost::gregorian::Jan, 15)
- const Date_T stdair::DATE_20111231 (2011, boost::gregorian::Dec, 31)
- const DayDuration_T stdair::NO_ADVANCE_PURCHASE (0)
- const SaturdayStay_T stdair::SATURDAY_STAY (true)
- const SaturdayStay_T stdair::NO_SATURDAY_STAY (false)
- const ChangeFees_T stdair::CHANGE_FEES (true)
- const ChangeFees_T stdair::NO_CHANGE_FEES (false)
- const NonRefundable_T stdair::NON_REFUNDABLE (true)
- const NonRefundable_T stdair::No_NON_REFUNDABLE (false)
- const SaturdayStay_T stdair::DEFAULT_BOM_TREE_SATURDAY_STAY (true)
- const ChangeFees_T stdair::DEFAULT_BOM_TREE_CHANGE_FEES (true)
- const NonRefundable_T stdair::DEFAULT_BOM_TREE_NON_REFUNDABLE (true)
- const DayDuration_T stdair::NO_STAY_DURATION (0)
- const AirlineCode_T stdair::AIRLINE_CODE_BA ("BA")
- const CabinCode_T stdair::CABIN_Y ("Y")
- const ClassCode_T stdair::CLASS_CODE_Y ("Y")
- const ClassCode_T stdair::CLASS_CODE_Q ("Q")
- const AirportCode_T stdair::AIRPORT_SIN ("SIN")
- const AirportCode_T stdair::AIRPORT_BKK ("BKK")
- const CityCode_T stdair::POS_SIN ("SIN")

- const CabinCode_T stdair::CABIN_ECO ("Eco")
- const FrequentFlyer_T stdair::FREQUENT_FLYER_MEMBER ("M")
- const ClassCode_T stdair::DEFAULT_FAMILY_CODE ("0")
- const NbOfAirlines_T stdair::DEFAULT_NBOFAIRLINES (0)
- const FlightPathCode_T stdair::DEFAULT_FLIGHTPATH_CODE ("")
- const Distance_T stdair::DEFAULT_DISTANCE_VALUE (0)
- const ClassCode_T stdair::DEFAULT_CLOSED_CLASS_CODE ("CC")
- const NbOfBookings_T stdair::DEFAULT_CLASS_NB_OF_BOOKINGS (0)
- const NbOfBookings_T stdair::DEFAULT_CLASS_TOTAL_NB_OF_BOOKINGS (0)
- const NbOfBookings_T stdair::DEFAULT_CLASS_UNCONSTRAINED_DEMAND (0)
- const NbOfBookings_T stdair::DEFAULT_CLASS_REMAINING_DEMAND_MEAN (0)
- const NbOfBookings_T stdair::DEFAULT_CLASS_REMAINING_DEMAND_STANDARD_-DEVIATION (0)
- const NbOfCancellations_T stdair::DEFAULT_CLASS_NB_OF_CANCELLATIONS (0)
- const NbOfNoShows_T stdair::DEFAULT_CLASS_NB_OF_NOSHOWS (0)
- const CabinCapacity_T stdair::DEFAULT_CABIN_CAPACITY (100.0)
- const CommittedSpace_T stdair::DEFAULT_COMMITTED_SPACE (0.0)
- const BlockSpace_T stdair::DEFAULT_BLOCK_SPACE (0.0)
- const Availability_T stdair::DEFAULT_NULL_AVAILABILITY (0.0)
- const Availability_T stdair::DEFAULT_AVAILABILITY (9.0)
- const Availability_T stdair::MAXIMAL_AVAILABILITY (9999.0)
- const CensorshipFlag_T stdair::DEFAULT_CLASS_CENSORSHIPFLAG (false)
- const BookingLimit_T stdair::DEFAULT_CLASS_BOOKING_LIMIT (9999.0)
- const AuthorizationLevel_T stdair::DEFAULT_CLASS_AUTHORIZATION_LEVEL (9999.0)
- const AuthorizationLevel_T stdair::DEFAULT_CLASS_MAX_AUTHORIZATION_-LEVEL (9999.0)
- const AuthorizationLevel_T stdair::DEFAULT_CLASS_MIN_AUTHORIZATION_-LEVEL (0.0)
- const OverbookingRate_T stdair::DEFAULT_CLASS_OVERBOOKING_RATE (0.0)
- const BookingRatio_T stdair::DEFAULT_OND_BOOKING_RATE (0.0)
- const Fare_T stdair::DEFAULT_FARE_VALUE (0.0)
- const Yield_T stdair::DEFAULT_CLASS_YIELD_VALUE (0.0)
- const Revenue_T stdair::DEFAULT_REVENUE_VALUE (0.0)
- const Percentage_T stdair::DEFAULT_LOAD_FACTOR_VALUE (100.0)
- const Yield_T stdair::DEFAULT_YIELD_VALUE (0.0)
- const Yield_T stdair::DEFAULT_YIELD_MAX_VALUE (std::numeric_limits< double >::max())
- const NbOfBookings_T stdair::DEFAULT_YIELD_NB_OF_BOOKINGS (0.0)
- const Identity_T stdair::DEFAULT_BOOKING_NUMBER (0)
- const NbOfCancellations_T stdair::DEFAULT_YIELD_NB_OF_CANCELLATIONS (0.0)
- const NbOfNoShows_T stdair::DEFAULT_YIELD_NB_OF_NOSHOWS (0.0)
- const Availability_T stdair::DEFAULT_YIELD_AVAILABILITY (0.0)

- const CensorshipFlag_T stdair::DEFAULT_YIELD_CENSORSHIPFLAG (false)
- const BookingLimit_T stdair::DEFAULT_YIELD_BOOKING_LIMIT (0.0)
- const OverbookingRate_T stdair::DEFAULT_YIELD_OVERBOOKING_RATE (0.0)
- const Fare_T stdair::DEFAULT_OND_FARE_VALUE (0.0)
- const EventQueueID_T stdair::DEFAULT_EVENT_QUEUE_ID ("EQ01")
- const Count_T stdair::DEFAULT_PROGRESS_STATUS (0)
- const Date_T stdair::DEFAULT_EVENT_OLDEST_DATE (2008, boost::gregorian::Jan, 1)
- const DateTime_T stdair::DEFAULT_EVENT_OLDEST_DATETIME (DEFAULT_-EVENT_OLDEST_DATE, NULL_BOOST_TIME_DURATION)
- const PartySize_T stdair::DEFAULT_PARTY_SIZE (1)
- const DayDuration_T stdair::DEFAULT_STAY_DURATION (7)
- const WTP_T stdair::DEFAULT_WTP (1000.0)
- const Date_T stdair::DEFAULT_PREFERRED_DEPARTURE_DATE (DEFAULT_-DEPARTURE_DATE)
- const Duration_T stdair::DEFAULT_PREFERRED_DEPARTURE_TIME (8, 0, 0)
- const DateOffset_T stdair::DEFAULT_ADVANCE_PURCHASE (22)
- const Date_T stdair::DEFAULT_REQUEST_DATE (DEFAULT_PREFERRED_DEPARTURE_-DATE-DEFAULT_ADVANCE_PURCHASE)
- const Duration_T stdair::DEFAULT_REQUEST_TIME (8, 0, 0)
- const DateTime_T stdair::DEFAULT_REQUEST_DATE_TIME (DEFAULT_REQUEST_-DATE, DEFAULT_REQUEST_TIME)
- const CabinCode_T stdair::DEFAULT_PREFERRED_CABIN ("M")
- const CityCode_T stdair::DEFAULT_POS ("ALL")
- const ChannelLabel_T stdair::DEFAULT_CHANNEL ("DC")
- const ChannelLabel_T stdair::CHANNEL_DN ("DN")
- const ChannelLabel_T stdair::CHANNEL_IN ("IN")
- const TripType_T stdair::TRIP_TYPE_ONE_WAY ("OW")
- const TripType_T stdair::TRIP_TYPE_ROUND_TRIP ("RT")
- const TripType_T stdair::TRIP_TYPE_INBOUND ("RI")
- const TripType_T stdair::TRIP_TYPE_OUTBOUND ("RO")
- const FrequentFlyer_T stdair::DEFAULT_FF_TIER ("N")
- const PriceValue_T stdair::DEFAULT_VALUE_OF_TIME (100.0)
- const Duration_T stdair::DEFAULT_MINIMAL_CONNECTION_TIME (0, 30, 0)
- const Duration_T stdair::DEFAULT_MAXIMAL_CONNECTION_TIME (24, 0, 0)
- const MatchingIndicator_T stdair::DEFAULT_MATCHING_INDICATOR (0.0)
- const PriceCurrency_T stdair::DEFAULT_CURRENCY ("EUR")
- const AvailabilityStatus_T stdair::DEFAULT_AVAILABILITY_STATUS (false)
- const AirlineCode_T stdair::DEFAULT_AIRLINE_CODE ("XX")
- const AirlineCode_T stdair::DEFAULT_NULL_AIRLINE_CODE ("")
- const FlightNumber_T stdair::DEFAULT_FLIGHT_NUMBER (9999)
- const GuillotineNumber_T stdair::DEFAULT_GUILLOTINE_NUMBER (9999)
- const Date_T stdair::DEFAULT_DEPARTURE_DATE (1900, boost::gregorian::Jan, 1)
- const AirportCode_T stdair::DEFAULT_AIRPORT_CODE ("XXX")
- const AirportCode_T stdair::DEFAULT_NULL_AIRPORT_CODE ("")
- const AirportCode_T stdair::DEFAULT_ORIGIN ("XXX")

- const AirportCode_T stdair::DEFAULT_DESTINATION ("XXX")
- const CabinCode_T stdair::DEFAULT_CABIN_CODE ("X")
- const FamilyCode_T stdair::DEFAULT_FARE_FAMILY_CODE ("EcoSaver")
- const FamilyCode_T stdair::DEFAULT_NULL_FARE_FAMILY_CODE ("NoFF")
- const ClassCode_T stdair::DEFAULT_CLASS_CODE ("X")
- const ClassCode_T stdair::DEFAULT_NULL_CLASS_CODE ("")
- const BidPrice_T stdair::DEFAULT_BID_PRICE (0.0)
- const unsigned short stdair::MAXIMAL_NUMBER_OF_LEGS_IN_FLIGHT (7)
- const unsigned short stdair::MAXIMAL_NUMBER_OF_SEGMENTS_IN_OND (3)
- const SeatIndex_T stdair::DEFAULT_SEAT_INDEX (1)
- const std::string stdair::DEFAULT_FARE_FAMILY_VALUE_TYPE ("FF")
- const std::string stdair::DEFAULT_SEGMENT_CABIN_VALUE_TYPE ("SC")
- const std::string stdair::DEFAULT_KEY_FLD_DELIMITER (";")
- const std::string stdair::DEFAULT_KEY_SUB_FLD_DELIMITER (",")
- const boost::char_separator< char > stdair::DEFAULT_KEY_TOKEN_DELIMITER (";, ")

Variables

- const std::string stdair::DOW_STR []
- const CensorshipFlagList_T stdair::DEFAULT_CLASS_CENSORSHIPFLAG_LIST
- const Date_T stdair::DEFAULT_DICO_STUDIED_DATE
- const AirlineCodeList_T stdair::DEFAULT_AIRLINE_CODE_LIST
- const ClassList_StringList_T stdair::DEFAULT_CLASS_CODE_LIST
- const BidPriceVector_T stdair::DEFAULT_BID_PRICE_VECTOR = std::vector<BidPrice_T>()
- const int stdair::DEFAULT_MAX_DTD = 365
- const DCPList_T stdair::DEFAULT_DCP_LIST = DefaultDCPList::init()
- const DTDFratMap_T stdair::DEFAULT_DTD_FRAT5COEF_MAP
- const DTDProbMap_T stdair::DEFAULT_DTD_PROB_MAP
- const OnDStringList_T stdair::DEFAULT_OND_STRING_LIST
- const std::string stdair::DISPLAY_LEVEL_STRING_ARRAY [51]

35.22 BasConst.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // StdAir
00005 #include <stdair/basic/BasConst_General.hpp>
00006 #include <stdair/basic/BasConst_BomDisplay.hpp>
00007 #include <stdair/basic/BasConst_Event.hpp>
00008 #include <stdair/basic/BasConst_Request.hpp>
00009 #include <stdair/basic/BasConst_Inventory.hpp>
00010 #include <stdair/basic/BasConst_BookingClass.hpp>
00011 #include <stdair/basic/BasConst_Yield.hpp>
00012 #include <stdair/basic/BasConst_DefaultObject.hpp>
00013 #include <stdair/basic/BasConst_Period_BOM.hpp>
00014 #include <stdair/basic/BasConst_TravelSolution.hpp>
```

```
00015
00016 namespace stdair {
00017
00018   // ********* General *********
00020   const std::string DEFAULT_BOM_ROOT_KEY (" -- ROOT -- ");
00021
00023   const double DEFAULT_EPSILON_VALUE (0.0001);
00024
00026   const unsigned int DEFAULT_FLIGHT_SPEED (900);
00027
00029   const NbOfFlightDates_T DEFAULT_NB_OF_FLIGHTDATES (0.0);
00030
00032   const Duration_T NULL_BOOST_TIME_DURATION (-1, -1, -1);
00033
00035   const unsigned int DEFAULT_NB_OF_DAYS_IN_A_YEAR (365);
00036
00038   const unsigned int DEFAULT_NUMBER_OF_SUBDIVISIONS (1000);
00039
00040   // ******** (Flight-)Period-related BOM *******
00042   const DayDuration_T DEFAULT_DAY_DURATION (0);
00043
00045   const DatePeriod_T BOOST_DEFAULT_DATE_PERIOD (Date_T (2007, 1, 1),
00046                                                 Date_T (2007, 1, 1));
00047
00049   const std::string DOW_STR[] =
00050     {"Mon", "Tue", "Wed", "Thu", "Fri", "Sat", "Sun"};
00051
00053   const DOW_String_T DEFAULT_DOW_STRING ("0000000");
00054
00056   const DateOffset_T DEFAULT_DATE_OFFSET (0);
00057
00058
00059   //  // ******** General *******
00061   const Date_T DEFAULT_DATE (2010, boost::gregorian::Jan, 1);
00062
00064   const DateTime_T DEFAULT_DATETIME (DEFAULT_DATE, NULL_BOOST_TIME_DURATION);
00065
00067   const Duration_T DEFAULT_EPSILON_DURATION (0, 0, 0, 1);
00068
00070   const Count_T SECONDS_IN_ONE_DAY (86400);
00071
00073   const Count_T MILLISECONDS_IN_ONE_SECOND (1000);
00074
00076   const RandomSeed_T DEFAULT_RANDOM_SEED (120765987);
00077
00078   // ******** Default BOM tree objects ******* *******
00080   const AirportCode_T AIRPORT_LHR ("LHR");
00081
00083   const AirportCode_T AIRPORT_SYD ("SYD");
00084
00086   const CityCode_T POS_LHR ("LHR");
00087
00089   const Date_T DATE_20110115 (2011, boost::gregorian::Jan, 15);
00090   const Date_T DATE_20111231 (2011, boost::gregorian::Dec, 31);
00091
00093   const DayDuration_T NO_ADVANCE_PURCHASE (0);
00094
00096   const SaturdayStay_T SATURDAY_STAY (true);
00097
00099   const SaturdayStay_T NO_SATURDAY_STAY (false);
00100
00102   const ChangeFees_T CHANGE_FEES (true);
```

```
00103
00105   const ChangeFees_T NO_CHANGE_FEES (false);
00106
00108   const NonRefundable_T NON_REFUNDABLE (true);
00109
00111   const NonRefundable_T No_NON_REFUNDABLE (false);
00112
00114   const SaturdayStay_T DEFAULT_BOM_TREE_SATURDAY_STAY (true);
00115
00117   const ChangeFees_T DEFAULT_BOM_TREE_CHANGE_FEES (true);
00118
00120   const NonRefundable_T DEFAULT_BOM_TREE_NON_REFUNDABLE (true);
00121
00123   const DayDuration_T NO_STAY_DURATION (0);
00124
00126   const AirlineCode_T AIRLINE_CODE_BA ("BA");
00127
00129   const CabinCode_T  CABIN_Y ("Y");
00130
00132   const ClassCode_T  CLASS_CODE_Y ("Y");
00133
00134   // //////// Travel solutions related objects///////
00136   const ClassCode_T CLASS_CODE_Q ("Q");
00137
00138   // //////// Booking request related objects///////
00140   const AirportCode_T AIRPORT_SIN ("SIN");
00141
00143   const AirportCode_T AIRPORT_BKK ("BKK");
00144
00146   const CityCode_T POS_SIN ("SIN");
00147
00149   const CabinCode_T CABIN_ECO ("Eco");
00150
00152   const FrequentFlyer_T FREQUENT_FLYER_MEMBER ("M");
00153
00154   // //////// Default ///////
00156   const ClassCode_T DEFAULT_FAMILY_CODE ("0");
00157
00159   const NbOfAirlines_T DEFAULT_NBOFAIRLINES (0);
00160
00162   const FlightPathCode_T DEFAULT_FLIGHTPATH_CODE ("");
00163
00164   // //////// Booking-class-related BOM ///////
00166   const Distance_T DEFAULT_DISTANCE_VALUE (0);
00167
00169   const ClassCode_T DEFAULT_CLOSED_CLASS_CODE ("CC");
00170
00173   const NbOfBookings_T DEFAULT_CLASS_NB_OF_BOOKINGS (0);
00174
00177   const NbOfBookings_T DEFAULT_CLASS_TOTAL_NB_OF_BOOKINGS (0);
00178
00180   const NbOfBookings_T DEFAULT_CLASS_UNCONSTRAINED_DEMAND (0);
00181
00183   const NbOfBookings_T DEFAULT_CLASS_REMAINING_DEMAND_MEAN (0);
00184
00186   const NbOfBookings_T DEFAULT_CLASS_REMAINING_DEMAND_STANDARD_DEVIATION (0);
00187
00189   const NbOfCancellations_T DEFAULT_CLASS_NB_OF_CANCELLATIONS (0);
00190
00192   const NbOfNoShows_T DEFAULT_CLASS_NB_OF_NOSHOWS (0);
00193
00195   const CabinCapacity_T DEFAULT_CABIN_CAPACITY (100.0);
```

```
00196
00198   const CommittedSpace_T DEFAULT_COMMITTED_SPACE (0.0);
00199
00201   const BlockSpace_T DEFAULT_BLOCK_SPACE (0.0);
00202
00204   const Availability_T DEFAULT_NULL_AVAILABILITY (0.0);
00205
00207   const Availability_T DEFAULT_AVAILABILITY (9.0);
00208
00210   const Availability_T MAXIMAL_AVAILABILITY (9999.0);
00211
00212
00213   // //////// (Segment-)Class-related BOM ///////
00216   const CensorshipFlag_T DEFAULT_CLASS_CENSORSHIPFLAG (false);
00217
00220   const CensorshipFlagList_T DEFAULT_CLASS_CENSORSHIPFLAG_LIST =
00221     std::vector<CensorshipFlag_T>();
00222
00224   const BookingLimit_T DEFAULT_CLASS_BOOKING_LIMIT (9999.0);
00225
00227   const AuthorizationLevel_T DEFAULT_CLASS_AUTHORIZATION_LEVEL (9999.0);
00228
00230   const AuthorizationLevel_T DEFAULT_CLASS_MAX_AUTHORIZATION_LEVEL (9999.0);
00231
00233   const AuthorizationLevel_T DEFAULT_CLASS_MIN_AUTHORIZATION_LEVEL (0.0);
00234
00236   const OverbookingRate_T DEFAULT_CLASS_OVERBOOKING_RATE (0.0);
00237
00239   const BookingRatio_T DEFAULT_OND_BOOKING_RATE (0.0);
00240
00242   const Fare_T DEFAULT_FARE_VALUE (0.0);
00243
00245   const Yield_T DEFAULT_CLASS_YIELD_VALUE (0.0);
00246
00248   const Revenue_T DEFAULT_REVENUE_VALUE (0.0);
00249
00251   const Percentage_T DEFAULT_LOAD_FACTOR_VALUE (100.0);
00252
00253
00254   // //////// (Leg-)YieldRange-related BOM ///////
00256   const Yield_T DEFAULT_YIELD_VALUE (0.0);
00257
00259   const Yield_T DEFAULT_YIELD_MAX_VALUE (std::numeric_limits<double>::max());
00260
00262   const NbOfBookings_T DEFAULT_YIELD_NB_OF_BOOKINGS (0.0);
00263
00265   const Identity_T DEFAULT_BOOKING_NUMBER (0);
00266
00268   const NbOfCancellations_T DEFAULT_YIELD_NB_OF_CANCELLATIONS (0.0);
00269
00271   const NbOfNoShows_T DEFAULT_YIELD_NB_OF_NOSHOWS (0.0);
00272
00274   const Availability_T DEFAULT_YIELD_AVAILABILITY (0.0);
00275
00278   const CensorshipFlag_T DEFAULT_YIELD_CENSORSHIPFLAG (false);
00279
00281   const BookingLimit_T DEFAULT_YIELD_BOOKING_LIMIT (0.0);
00282
00284   const OverbookingRate_T DEFAULT_YIELD_OVERBOOKING_RATE (0.0);
00285
00286
00287   // //////// OnD-related BOM ///////
```

```
00289   const Fare_T DEFAULT_OND_FARE_VALUE (0.0);
00290
00291
00292   // //////// Event Generation /////////
00294   const EventQueueID_T DEFAULT_EVENT_QUEUE_ID ("EQ01");
00295
00297   const Count_T DEFAULT_PROGRESS_STATUS (0);
00298
00301   const Date_T DEFAULT_EVENT_OLDEST_DATE (2008, boost::gregorian::Jan, 1);
00302
00305   const DateTime_T DEFAULT_EVENT_OLDEST_DATETIME (DEFAULT_EVENT_OLDEST_DATE,
00306                                                   NULL_BOOST_TIME_DURATION);
00307
00308
00309   // //////// Booking Request /////////
00311   const PartySize_T DEFAULT_PARTY_SIZE (1);
00312
00314   const DayDuration_T DEFAULT_STAY_DURATION (7);
00315
00317   const WTP_T DEFAULT_WTP (1000.0);
00318
00320   const Date_T DEFAULT_PREFERRED_DEPARTURE_DATE (DEFAULT_DEPARTURE_DATE);
00321
00323   const Duration_T DEFAULT_PREFERRED_DEPARTURE_TIME (8, 0, 0);
00324
00326   const DateOffset_T DEFAULT_ADVANCE_PURCHASE (22);
00327
00329   const Date_T DEFAULT_REQUEST_DATE (DEFAULT_PREFERRED_DEPARTURE_DATE
00330                                      - DEFAULT_ADVANCE_PURCHASE);
00331
00333   const Duration_T DEFAULT_REQUEST_TIME (8, 0, 0);
00334
00336   const DateTime_T DEFAULT_REQUEST_DATE_TIME (DEFAULT_REQUEST_DATE,
00337                                               DEFAULT_REQUEST_TIME);
00338
00340   const CabinCode_T DEFAULT_PREFERRED_CABIN ("M");
00341
00343   const CityCode_T DEFAULT_POS ("ALL");
00344
00346   const ChannelLabel_T DEFAULT_CHANNEL ("DC");
00347
00349   const ChannelLabel_T CHANNEL_DN ("DN");
00350
00352   const ChannelLabel_T CHANNEL_IN ("IN");
00353
00355   const TripType_T TRIP_TYPE_ONE_WAY ("OW");
00356
00358   const TripType_T TRIP_TYPE_ROUND_TRIP ("RT");
00359
00361   const TripType_T TRIP_TYPE_INBOUND ("RI");
00362
00364   const TripType_T TRIP_TYPE_OUTBOUND ("RO");
00365
00367   const FrequentFlyer_T DEFAULT_FF_TIER ("N");
00368
00370   const PriceValue_T DEFAULT_VALUE_OF_TIME (100.0);
00371
00372
00373   // //////// Travel Solutions ///////
00375   const Duration_T DEFAULT_MINIMAL_CONNECTION_TIME (0, 30, 0);
00376
00378   const Duration_T DEFAULT_MAXIMAL_CONNECTION_TIME (24, 0, 0);
```

```
00379
00381   const MatchingIndicator_T DEFAULT_MATCHING_INDICATOR (0.0);
00382
00384   const PriceCurrency_T DEFAULT_CURRENCY ("EUR");
00385
00387   const AvailabilityStatus_T DEFAULT_AVAILABILITY_STATUS (false);
00388
00390   const Date_T DEFAULT_DICO_STUDIED_DATE;
00391
00392   // //////// Inventory-related BOM ///////
00394   const AirlineCode_T DEFAULT_AIRLINE_CODE ("XX");
00395
00397   const AirlineCode_T DEFAULT_NULL_AIRLINE_CODE ("");
00398
00400   const AirlineCodeList_T DEFAULT_AIRLINE_CODE_LIST;
00401
00403   const FlightNumber_T DEFAULT_FLIGHT_NUMBER (9999);
00404
00406   const GuillotineNumber_T DEFAULT_GUILLOTINE_NUMBER (9999);
00407
00409   const Date_T DEFAULT_DEPARTURE_DATE (1900, boost::gregorian::Jan, 1);
00410
00412   const AirportCode_T DEFAULT_AIRPORT_CODE ("XXX");
00413
00415   const AirportCode_T DEFAULT_NULL_AIRPORT_CODE ("");
00416
00418   const AirportCode_T DEFAULT_ORIGIN ("XXX");
00419
00421   const AirportCode_T DEFAULT_DESTINATION ("XXX");
00422
00424   const CabinCode_T DEFAULT_CABIN_CODE ("X");
00425
00427   const FamilyCode_T DEFAULT_FARE_FAMILY_CODE ("EcoSaver");
00428
00430   const FamilyCode_T DEFAULT_NULL_FARE_FAMILY_CODE ("NoFF");
00431
00433   const ClassCode_T DEFAULT_CLASS_CODE ("X");
00434
00436   const ClassCode_T DEFAULT_NULL_CLASS_CODE ("");
00437
00439   const ClassList_StringList_T DEFAULT_CLASS_CODE_LIST;
00440
00442   const BidPrice_T DEFAULT_BID_PRICE (0.0);
00443
00445   const BidPriceVector_T DEFAULT_BID_PRICE_VECTOR = std::vector<BidPrice_T>();
00446
00450   const unsigned short MAXIMAL_NUMBER_OF_LEGS_IN_FLIGHT (7);
00451
00454   const unsigned short MAXIMAL_NUMBER_OF_SEGMENTS_IN_OND (3);
00455
00457   const SeatIndex_T DEFAULT_SEAT_INDEX (1);
00458
00460   const std::string DEFAULT_FARE_FAMILY_VALUE_TYPE ("FF");
00461
00463   const std::string DEFAULT_SEGMENT_CABIN_VALUE_TYPE ("SC");
00464
00466   const int DEFAULT_MAX_DTD = 365;
00467
00469   const DCPList_T DEFAULT_DCP_LIST = DefaultDCPList::init();
00470   DCPList_T DefaultDCPList::init() {
00471     DCPList_T oDCPList;
00472     //oDCPList.push_back (72);
```

```
00473     oDCPList.push_back (63);oDCPList.push_back (56);oDCPList.push_back (49);
00474     oDCPList.push_back (42);oDCPList.push_back (35);oDCPList.push_back (31);
00475     oDCPList.push_back (27);oDCPList.push_back (23);oDCPList.push_back (19);
00476     oDCPList.push_back (16);oDCPList.push_back (13);oDCPList.push_back (10);
00477     oDCPList.push_back (7); oDCPList.push_back (5); oDCPList.push_back (3);
00478     oDCPList.push_back (1); oDCPList.push_back (0);
00479     // oDCPList.push_back (63); oDCPList.push_back (49);
00480     // oDCPList.push_back (35); oDCPList.push_back (23);
00481     // oDCPList.push_back (16); oDCPList.push_back (10);
00482     // oDCPList.push_back (5);  oDCPList.push_back (1);
00483     // oDCPList.push_back (0);
00484     return oDCPList;
00485   }
00487   const DTDFratMap_T DEFAULT_DTD_FRAT5COEF_MAP =
00488     DefaultDtdFratMap::init();
00489   DTDFratMap_T DefaultDtdFratMap::init() {
00490     DTDFratMap_T oDFCMap;
00491     oDFCMap[71] = 2.50583571429; oDFCMap[63] = 2.55994571429;
00492     oDFCMap[56] = 2.60841857143; oDFCMap[49] = 2.68888;
00493     oDFCMap[42] = 2.78583714286; oDFCMap[35] = 2.89091428571;
00494     oDFCMap[31] = 2.97871428571; oDFCMap[28] = 3.05521428571;
00495     oDFCMap[24] = 3.15177142857; oDFCMap[21] = 3.22164285714;
00496     oDFCMap[17] = 3.32237142857; oDFCMap[14] = 3.38697142857;
00497     oDFCMap[10] = 3.44204285714; oDFCMap[7] = 3.46202857143;
00498     oDFCMap[5] = 3.47177142857;  oDFCMap[3] = 3.4792;
00499     oDFCMap[1] = 3.48947142857; // oDFCMap[0] = 3.49111428571;
00500     return oDFCMap;
00501   }
00502
00504   const DTDProbMap_T DEFAULT_DTD_PROB_MAP =
00505     DefaultDtdProbMap::init();
00506   DTDProbMap_T DefaultDtdProbMap::init() {
00507     DTDProbMap_T oDPMap;
00508     oDPMap[-330] = 0; oDPMap[-150] = 0.1; oDPMap[-92] = 0.2;
00509     oDPMap[-55] = 0.3; oDPMap[-34] = 0.4; oDPMap[-21] = 0.5;
00510     oDPMap[-12] = 0.6; oDPMap[-6] = 0.7; oDPMap[-3] = 0.8;
00511     oDPMap[-1] = 0.9; oDPMap[0] = 1.0;
00512     return oDPMap;
00513   }
00514
00515
00516   // ////////// Key and display related /////////////
00519   const std::string DEFAULT_KEY_FLD_DELIMITER (";");
00520
00523   const std::string DEFAULT_KEY_SUB_FLD_DELIMITER (",");
00524
00526   const boost::char_separator<char> DEFAULT_KEY_TOKEN_DELIMITER (";, ");
00527
00529   const OnDStringList_T DEFAULT_OND_STRING_LIST;
00530
00531
00532   // ////////// BomManager-related constants ///////////
00535   const std::string DISPLAY_LEVEL_STRING_ARRAY[51] =
00536   { "", "  ", "    ", "      ",
00537     "        ", "          ", "            ", "              ",
00538     "                ", "                  ", "                    ",
00539     "                      ", "                          ",
00540     "                          ", "                              ",
00541     "                              ", "                                  ",
00542     "                                  ",
00543     "                                    ",
00544     "                                      ",
```

```
00545     "                                                                ",
00546     "                                                                  ",
00547     "                                                                    ",
00548     "                                                                      ",
00549     "                                                                        ",
00550     "                                                                          ",
00551     "                                                                            ",
00552     "                                                                              ",
00553     "                                                                                ",
00554     "                                                                                  ",
00555     "                                                                                    ",
00556     "                                                                                      ",
00557     "                                                                                        ",
00558     "                                                                                          ",
00559     "                                                                                            ",
00560     "                                                                                              ",
00561     "                                                                                                ",

00562     "
      ",
00563     "
        ",
00564     "
          ",
00565     "
            ",
00566     "
              ",
00567     "
                ",
00568     "
                  ",
00569     "
                    ",
00570     "
                      ",
00571     "
                        ",
00572     "
                          ",
00573     "
                            ",
00574     "
                              ",
00575     "
                                " };
00576
00577
00578 }
```

35.23 stdair/basic/BasConst_BomDisplay.hpp File Reference

```
#include <string>
#include <boost/tokenizer.hpp>
```

Namespaces

- namespace stdair

Handle on the StdAir library context.

Variables

- const std::string stdair::DEFAULT_KEY_FLD_DELIMITER
- const std::string stdair::DEFAULT_KEY_SUB_FLD_DELIMITER
- const boost::char_separator< char > stdair::DEFAULT_KEY_TOKEN_DELIMITER

35.24 BasConst_BomDisplay.hpp

```
00001 #ifndef __STDAIR_BAS_BASCONST_BOMMANAGER_HPP
00002 #define __STDAIR_BAS_BASCONST_BOMMANAGER_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // Boost
00010 #include <boost/tokenizer.hpp>
00011
00012 namespace stdair {
00013
00016   extern const std::string DISPLAY_LEVEL_STRING_ARRAY[51];
00017
00020   extern const std::string DEFAULT_KEY_FLD_DELIMITER;
00021
00024   extern const std::string DEFAULT_KEY_SUB_FLD_DELIMITER;
00025
00027   extern const boost::char_separator<char> DEFAULT_KEY_TOKEN_DELIMITER;
00028
00029 }
00030 #endif // __STDAIR_BAS_BASCONST_BOMMANAGER_HPP
```

35.25 stdair/basic/BasConst_BookingClass.hpp File Reference

```
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/stdair_fare_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Variables

- const Distance_T stdair::DEFAULT_DISTANCE_VALUE

- const ClassCode_T stdair::DEFAULT_CLOSED_CLASS_CODE
- const NbOfBookings_T stdair::DEFAULT_CLASS_NB_OF_BOOKINGS
- const NbOfBookings_T stdair::DEFAULT_CLASS_TOTAL_NB_OF_BOOKINGS
- const NbOfBookings_T stdair::DEFAULT_CLASS_UNCONSTRAINED_DEMAND
- const NbOfBookings_T stdair::DEFAULT_CLASS_REMAINING_DEMAND_MEAN
- const NbOfBookings_T stdair::DEFAULT_CLASS_REMAINING_DEMAND_STANDARD_-DEVIATION
- const NbOfCancellations_T stdair::DEFAULT_CLASS_NB_OF_CANCELLATIONS
- const NbOfNoShows_T stdair::DEFAULT_CLASS_NB_OF_NOSHOWS
- const CabinCapacity_T stdair::DEFAULT_CABIN_CAPACITY
- const CommittedSpace_T stdair::DEFAULT_COMMITTED_SPACE
- const BlockSpace_T stdair::DEFAULT_BLOCK_SPACE
- const Availability_T stdair::DEFAULT_NULL_AVAILABILITY
- const Availability_T stdair::DEFAULT_AVAILABILITY
- const CensorshipFlag_T stdair::DEFAULT_CLASS_CENSORSHIPFLAG
- const BookingLimit_T stdair::DEFAULT_CLASS_BOOKING_LIMIT
- const AuthorizationLevel_T stdair::DEFAULT_CLASS_AUTHORIZATION_LEVEL
- const AuthorizationLevel_T stdair::DEFAULT_CLASS_MAX_AUTHORIZATION_-LEVEL
- const AuthorizationLevel_T stdair::DEFAULT_CLASS_MIN_AUTHORIZATION_-LEVEL
- const OverbookingRate_T stdair::DEFAULT_CLASS_OVERBOOKING_RATE
- const Fare_T stdair::DEFAULT_FARE_VALUE
- const Revenue_T stdair::DEFAULT_REVENUE_VALUE
- const PriceCurrency_T stdair::DEFAULT_CURRENCY
- const Percentage_T stdair::DEFAULT_LOAD_FACTOR_VALUE
- const DayDuration_T stdair::DEFAULT_DAY_DURATION
- const double stdair::DEFAULT_EPSILON_VALUE

35.26 BasConst_BookingClass.hpp

```
00001 #ifndef __STDAIR_BAS_BASCONST_BOOKINGCLASS_HPP
00002 #define __STDAIR_BAS_BASCONST_BOOKINGCLASS_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/stdair_inventory_types.hpp>
00010 #include <stdair/stdair_demand_types.hpp>
00011 #include <stdair/stdair_fare_types.hpp>
00012
00013 namespace stdair {
00014
00015   // //////// (Segment-)Class-related BOM ///////
00017   extern const Distance_T DEFAULT_DISTANCE_VALUE;
00018
00020   extern const ClassCode_T DEFAULT_CLOSED_CLASS_CODE;
00021
00024   extern const NbOfBookings_T DEFAULT_CLASS_NB_OF_BOOKINGS;
```

```
00025
00028   extern const NbOfBookings_T DEFAULT_CLASS_TOTAL_NB_OF_BOOKINGS;
00029
00031   extern const NbOfBookings_T DEFAULT_CLASS_UNCONSTRAINED_DEMAND;
00032
00034   extern const NbOfBookings_T DEFAULT_CLASS_REMAINING_DEMAND_MEAN;
00035
00038   extern const NbOfBookings_T DEFAULT_CLASS_REMAINING_DEMAND_STANDARD_DEVIATION;
00039
00041   extern const NbOfCancellations_T DEFAULT_CLASS_NB_OF_CANCELLATIONS;
00042
00044   extern const NbOfNoShows_T DEFAULT_CLASS_NB_OF_NOSHOWS;
00045
00047   extern const CabinCapacity_T DEFAULT_CABIN_CAPACITY;
00048
00050   extern const CommittedSpace_T DEFAULT_COMMITTED_SPACE;
00051
00053   extern const BlockSpace_T DEFAULT_BLOCK_SPACE;
00054
00056   extern const Availability_T DEFAULT_NULL_AVAILABILITY;
00057
00059   extern const Availability_T DEFAULT_AVAILABILITY;
00060
00063   extern const CensorshipFlag_T DEFAULT_CLASS_CENSORSHIPFLAG;
00064
00067   extern const CensorshipFlagList_T DEFAULT_CLASS_CENSORSHIPFLAG_LIST;
00068
00070   extern const BookingLimit_T DEFAULT_CLASS_BOOKING_LIMIT;
00071
00073   extern const AuthorizationLevel_T DEFAULT_CLASS_AUTHORIZATION_LEVEL;
00074
00076   extern const AuthorizationLevel_T DEFAULT_CLASS_MAX_AUTHORIZATION_LEVEL;
00077
00079   extern const AuthorizationLevel_T DEFAULT_CLASS_MIN_AUTHORIZATION_LEVEL;
00080
00082   extern const OverbookingRate_T DEFAULT_CLASS_OVERBOOKING_RATE;
00083
00085   extern const Fare_T DEFAULT_FARE_VALUE;
00086
00088   extern const Revenue_T DEFAULT_REVENUE_VALUE;
00089
00091   extern const PriceCurrency_T DEFAULT_CURRENCY;
00092
00094   extern const Percentage_T DEFAULT_LOAD_FACTOR_VALUE;
00095
00097   extern const DayDuration_T DEFAULT_DAY_DURATION;
00098
00101   extern const double DEFAULT_EPSILON_VALUE;
00102
00103 }
00104 #endif // __STDAIR_BAS_BASCONST_BOOKINGCLASS_HPP
```

35.27 stdair/basic/BasConst_DefaultObject.hpp File Reference

```
#include <stdair/stdair_types.hpp>
```

Namespaces

- namespace stdair

Handle on the StdAir library context.

Variables

- const AirportCode_T stdair::AIRPORT_LHR
- const AirportCode_T stdair::AIRPORT_SYD
- const CityCode_T stdair::POS_LHR
- const DayDuration_T stdair::NO_ADVANCE_PURCHASE
- const SaturdayStay_T stdair::SATURDAY_STAY
- const SaturdayStay_T stdair::NO_SATURDAY_STAY
- const ChangeFees_T stdair::CHANGE_FEES
- const ChangeFees_T stdair::NO_CHANGE_FEES
- const NonRefundable_T stdair::NON_REFUNDABLE
- const NonRefundable_T stdair::NO_NON_REFUNDABLE
- const DayDuration_T stdair::NO_STAY_DURATION
- const CabinCode_T stdair::CABIN_Y
- const AirlineCode_T stdair::AIRLINE_CODE_BA
- const ClassCode_T stdair::CLASS_CODE_Y
- const ClassCode_T stdair::CLASS_CODE_Q
- const AirportCode_T stdair::AIRPORT_SIN
- const AirportCode_T stdair::AIRPORT_BKK
- const CityCode_T stdair::POS_SIN
- const CabinCode_T stdair::CABIN_ECO
- const FrequentFlyer_T stdair::FREQUENT_FLYER_MEMBER

35.28 BasConst_DefaultObject.hpp

```
00001 #ifndef __STDAIR_BAS_BASCONST_DEFAULTOBJECT_HPP
00002 #define __STDAIR_BAS_BASCONST_DEFAULTOBJECT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_types.hpp>
00009
00010 namespace stdair {
00011
00012   // //////// Fare and Yield related BOM Tree///////
00014   extern const AirportCode_T AIRPORT_LHR;
00015
00017   extern const AirportCode_T AIRPORT_SYD;
00018
00020   extern const CityCode_T POS_LHR;
00021
00023   extern const DayDuration_T NO_ADVANCE_PURCHASE;
00024
00026   extern const SaturdayStay_T SATURDAY_STAY;
00027
00029   extern const SaturdayStay_T NO_SATURDAY_STAY;
00030
00032   extern const ChangeFees_T CHANGE_FEES;
```

```
00033
00035   extern const ChangeFees_T NO_CHANGE_FEES;
00036
00038   extern const NonRefundable_T NON_REFUNDABLE;
00039
00041   extern const NonRefundable_T NO_NON_REFUNDABLE;
00042
00044   extern const DayDuration_T NO_STAY_DURATION;
00045
00047   extern const CabinCode_T CABIN_Y;
00048
00050   extern const AirlineCode_T AIRLINE_CODE_BA;
00051
00053   extern const ClassCode_T CLASS_CODE_Y;
00054
00055   // //////// Travel Solution related objects///////
00057   extern const ClassCode_T CLASS_CODE_Q;
00058
00059   // //////// Booking request related objects///////
00061   extern const AirportCode_T AIRPORT_SIN;
00062
00064   extern const AirportCode_T AIRPORT_BKK;
00065
00067   extern const CityCode_T POS_SIN;
00068
00070   extern const CabinCode_T CABIN_ECO;
00071
00073   extern const FrequentFlyer_T FREQUENT_FLYER_MEMBER;
00074
00075 }
00076 #endif // __STDAIR_BAS_BASCONST_DEFAULTOBJECT_HPP
```

35.29 stdair/basic/BasConst_Event.hpp File Reference

```
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/stdair_event_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Variables

- const EventQueueID_T stdair::DEFAULT_EVENT_QUEUE_ID
- const Count_T stdair::DEFAULT_PROGRESS_STATUS
- const Date_T stdair::DEFAULT_EVENT_OLDEST_DATE
- const DateTime_T stdair::DEFAULT_EVENT_OLDEST_DATETIME

35.30 BasConst_Event.hpp

```
00001 #ifndef __STDAIR_BAS_BASCONST_EVENT_HPP
00002 #define __STDAIR_BAS_BASCONST_EVENT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/stdair_date_time_types.hpp>
00010 #include <stdair/stdair_event_types.hpp>
00011
00012 namespace stdair {
00013
00015   extern const EventQueueID_T DEFAULT_EVENT_QUEUE_ID;
00016
00018   extern const Count_T DEFAULT_PROGRESS_STATUS;
00019
00022   extern const Date_T DEFAULT_EVENT_OLDEST_DATE;
00023
00026   extern const DateTime_T DEFAULT_EVENT_OLDEST_DATETIME;
00027
00028 }
00029 #endif // __STDAIR_BAS_BASCONST_EVENT_HPP
```

35.31 stdair/basic/BasConst_General.hpp File Reference

```
#include <string>
#include <stdair/stdair_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Variables

- const std::string stdair::DEFAULT_BOM_ROOT_KEY
- const NbOfFlightDates_T stdair::DEFAULT_NB_OF_FLIGHTDATES
- const unsigned int stdair::DEFAULT_FLIGHT_SPEED
- const BookingRatio_T stdair::DEFAULT_OND_BOOKING_RATE
- const Count_T stdair::SECONDS_IN_ONE_DAY
- const Count_T stdair::MILLISECONDS_IN_ONE_SECOND
- const Date_T stdair::DEFAULT_DATE
- const DateTime_T stdair::DEFAULT_DATETIME
- const Duration_T stdair::DEFAULT_EPSILON_DURATION
- const RandomSeed_T stdair::DEFAULT_RANDOM_SEED
- const Duration_T stdair::NULL_BOOST_TIME_DURATION
- const Fare_T stdair::DEFAULT_CLASS_FARE_VALUE
- const NbOfAirlines_T stdair::DEFAULT_NBOFAIRLINES

- const unsigned int stdair::DEFAULT_NB_OF_DAYS_IN_A_YEAR
- const ChannelLabel_T stdair::DEFAULT_CHANNEL
- const unsigned int stdair::DEFAULT_NUMBER_OF_SUBDIVISIONS

35.32 BasConst_General.hpp

```
00001 #ifndef __STDAIR_BAS_BASCONST_GENERAL_HPP
00002 #define __STDAIR_BAS_BASCONST_GENERAL_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_types.hpp>
00011
00012 namespace stdair {
00013
00015   extern const std::string DEFAULT_BOM_ROOT_KEY;
00016
00018   extern const double DEFAULT_EPSILON_VALUE;
00019
00021   extern const CabinCapacity_T DEFAULT_CABIN_CAPACITY;
00022
00024   extern const NbOfFlightDates_T DEFAULT_NB_OF_FLIGHTDATES;
00025
00027   extern const NbOfBookings_T DEFAULT_CLASS_NB_OF_BOOKINGS;
00028
00030   extern const Distance_T DEFAULT_DISTANCE_VALUE;
00031
00033   extern const unsigned int DEFAULT_FLIGHT_SPEED;
00034
00036   extern const Fare_T DEFAULT_FARE_VALUE;
00037
00039   extern const PriceCurrency_T DEFAULT_CURRENCY;
00040
00042   extern const Revenue_T DEFAULT_REVENUE_VALUE;
00043
00045   extern const BookingRatio_T DEFAULT_OND_BOOKING_RATE;
00046
00048   extern const Count_T SECONDS_IN_ONE_DAY;
00049
00051   extern const Count_T MILLISECONDS_IN_ONE_SECOND;
00052
00054   extern const Date_T DEFAULT_DATE;
00055
00057   extern const DateTime_T DEFAULT_DATETIME;
00058
00060   extern const Duration_T DEFAULT_EPSILON_DURATION;
00061
00063   extern const RandomSeed_T DEFAULT_RANDOM_SEED;
00064
00066   extern const Duration_T NULL_BOOST_TIME_DURATION;
00067
00069   extern const Fare_T DEFAULT_CLASS_FARE_VALUE;
00070
00072   extern const NbOfAirlines_T DEFAULT_NBOFAIRLINES;
00073
00075   extern const unsigned int DEFAULT_NB_OF_DAYS_IN_A_YEAR;
```

```
00076
00078   extern const NbOfBookings_T DEFAULT_CLASS_NB_OF_BOOKINGS;
00079
00081   extern const ChannelLabel_T DEFAULT_CHANNEL;
00082
00084   extern const OnDStringList_T DEFAULT_OND_STRING_LIST;
00085
00087   extern const unsigned int DEFAULT_NUMBER_OF_SUBDIVISIONS;
00088
00089 }
00090 #endif // __STDAIR_BAS_BASCONST_GENERAL_HPP
```

35.33 stdair/basic/BasConst_Inventory.hpp File Reference

```
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
```

Classes

- struct stdair::DefaultDCPList
- struct stdair::DefaultDtdFratMap
- struct stdair::DefaultDtdProbMap

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Variables

- const AirlineCode_T stdair::DEFAULT_AIRLINE_CODE
- const AirlineCode_T stdair::DEFAULT_NULL_AIRLINE_CODE
- const FlightNumber_T stdair::DEFAULT_FLIGHT_NUMBER
- const GuillotineNumber_T stdair::DEFAULT_GUILLOTINE_NUMBER
- const Date_T stdair::DEFAULT_DEPARTURE_DATE
- const AirportCode_T stdair::DEFAULT_AIRPORT_CODE
- const AirportCode_T stdair::DEFAULT_NULL_AIRPORT_CODE
- const AirportCode_T stdair::DEFAULT_ORIGIN
- const AirportCode_T stdair::DEFAULT_DESTINATION
- const CabinCode_T stdair::DEFAULT_CABIN_CODE
- const FamilyCode_T stdair::DEFAULT_FARE_FAMILY_CODE
- const FamilyCode_T stdair::DEFAULT_NULL_FARE_FAMILY_CODE
- const ClassCode_T stdair::DEFAULT_CLASS_CODE
- const ClassCode_T stdair::DEFAULT_NULL_CLASS_CODE
- const BidPrice_T stdair::DEFAULT_BID_PRICE
- const unsigned short stdair::MAXIMAL_NUMBER_OF_LEGS_IN_FLIGHT
- const unsigned short stdair::MAXIMAL_NUMBER_OF_SEGMENTS_IN_OND

- const Availability_T stdair::MAXIMAL_AVAILABILITY
- const SeatIndex_T stdair::DEFAULT_SEAT_INDEX
- const std::string stdair::DEFAULT_FARE_FAMILY_VALUE_TYPE
- const std::string stdair::DEFAULT_SEGMENT_CABIN_VALUE_TYPE

35.34 BasConst_Inventory.hpp

```
00001 #ifndef __STDAIR_BAS_BASCONST_INVENTORY_HPP
00002 #define __STDAIR_BAS_BASCONST_INVENTORY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_inventory_types.hpp>
00009 #include <stdair/stdair_date_time_types.hpp>
00010
00011 namespace stdair {
00012
00013   // //////// Inventory-related BOM ///////
00015   extern const AirlineCode_T DEFAULT_AIRLINE_CODE;
00016
00018   extern const AirlineCode_T DEFAULT_NULL_AIRLINE_CODE;
00019
00021   extern const AirlineCodeList_T DEFAULT_AIRLINE_CODE_LIST;
00022
00024   extern const FlightNumber_T DEFAULT_FLIGHT_NUMBER;
00025
00027   extern const GuillotineNumber_T DEFAULT_GUILLOTINE_NUMBER;
00028
00030   extern const Date_T DEFAULT_DEPARTURE_DATE;
00031
00033   extern const AirportCode_T DEFAULT_AIRPORT_CODE;
00034
00036   extern const AirportCode_T DEFAULT_NULL_AIRPORT_CODE;
00037
00039   extern const AirportCode_T DEFAULT_ORIGIN;
00040
00042   extern const AirportCode_T DEFAULT_DESTINATION;
00043
00045   extern const CabinCode_T DEFAULT_CABIN_CODE;
00046
00048   extern const FamilyCode_T DEFAULT_FARE_FAMILY_CODE;
00049
00051   extern const FamilyCode_T DEFAULT_NULL_FARE_FAMILY_CODE;
00052
00054   extern const ClassCode_T DEFAULT_CLASS_CODE;
00055
00057   extern const ClassCode_T DEFAULT_NULL_CLASS_CODE;
00058
00060   extern const ClassList_StringList_T DEFAULT_CLASS_CODE_LIST;
00061
00063   extern const BidPrice_T DEFAULT_BID_PRICE;
00064
00066   extern const BidPriceVector_T DEFAULT_BID_PRICE_VECTOR;
00067
00071   extern const unsigned short MAXIMAL_NUMBER_OF_LEGS_IN_FLIGHT;
00072
00075   extern const unsigned short MAXIMAL_NUMBER_OF_SEGMENTS_IN_OND;
00076
```

```
00078   extern const Availability_T MAXIMAL_AVAILABILITY;
00079
00081   extern const SeatIndex_T DEFAULT_SEAT_INDEX;
00082
00084   extern const std::string DEFAULT_FARE_FAMILY_VALUE_TYPE;
00085
00087   extern const std::string DEFAULT_SEGMENT_CABIN_VALUE_TYPE;
00088
00090   extern const int DEFAULT_MAX_DTD;
00091
00093   extern const DCPList_T DEFAULT_DCP_LIST;
00094   struct DefaultDCPList { static DCPList_T init(); };
00095
00097   extern const DTDFratMap_T DEFAULT_DTD_FRAT5COEF_MAP;
00098   struct DefaultDtdFratMap { static DTDFratMap_T init();};
00099
00101   extern const DTDProbMap_T DEFAULT_DTD_PROB_MAP;
00102   struct DefaultDtdProbMap { static DTDProbMap_T init();};
00103
00104
00105 }
00106 #endif // __STDAIR_BAS_BASCONST_INVENTORY_HPP
```

35.35 stdair/basic/BasConst_Period_BOM.hpp File Reference

```
#include <stdair/stdair_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Variables

- const DatePeriod_T stdair::BOOST_DEFAULT_DATE_PERIOD
- const DOW_String_T stdair::DEFAULT_DOW_STRING
- const DateOffset_T stdair::DEFAULT_DATE_OFFSET

35.36 BasConst_Period_BOM.hpp

```
00001 #ifndef __STDAIR_BAS_BASCONST_PERIOD_BOM_HPP
00002 #define __STDAIR_BAS_BASCONST_PERIOD_BOM_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_types.hpp>
00009
00010 namespace stdair {
00011
00012   // //////// (Flight-)Period-related BOM ///////
00014   extern const DatePeriod_T BOOST_DEFAULT_DATE_PERIOD;
```

```
00015
00017   extern const std::string DOW_STR[];
00018
00020   extern const DOW_String_T DEFAULT_DOW_STRING;
00021
00023   extern const DateOffset_T DEFAULT_DATE_OFFSET;
00024
00026   extern const DayDuration_T DEFAULT_DAY_DURATION;
00027
00028 }
00029 #endif // __STDAIR_BAS_BASCONST_PERIOD_BOM_HPP
```

35.37 stdair/basic/BasConst_Request.hpp File Reference

```
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Variables

- const PartySize_T stdair::DEFAULT_PARTY_SIZE
- const DayDuration_T stdair::DEFAULT_STAY_DURATION
- const WTP_T stdair::DEFAULT_WTP
- const CityCode_T stdair::DEFAULT_POS
- const Date_T stdair::DEFAULT_PREFERRED_DEPARTURE_DATE
- const Duration_T stdair::DEFAULT_PREFERRED_DEPARTURE_TIME
- const DateOffset_T stdair::DEFAULT_ADVANCE_PURCHASE
- const Date_T stdair::DEFAULT_REQUEST_DATE
- const Duration_T stdair::DEFAULT_REQUEST_TIME
- const DateTime_T stdair::DEFAULT_REQUEST_DATE_TIME
- const CabinCode_T stdair::DEFAULT_PREFERRED_CABIN
- const ChannelLabel_T stdair::CHANNEL_DN
- const ChannelLabel_T stdair::CHANNEL_IN
- const TripType_T stdair::TRIP_TYPE_ONE_WAY
- const TripType_T stdair::TRIP_TYPE_ROUND_TRIP
- const TripType_T stdair::TRIP_TYPE_INBOUND
- const TripType_T stdair::TRIP_TYPE_OUTBOUND
- const FrequentFlyer_T stdair::DEFAULT_FF_TIER
- const PriceValue_T stdair::DEFAULT_VALUE_OF_TIME

35.38 BasConst_Request.hpp

```
00001 #ifndef __STDAIR_BAS_BASCONST_REQUEST_HPP
00002 #define __STDAIR_BAS_BASCONST_REQUEST_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/stdair_demand_types.hpp>
00010 #include <stdair/stdair_date_time_types.hpp>
00011
00012 namespace stdair {
00013
00015   extern const PartySize_T DEFAULT_PARTY_SIZE;
00016
00018   extern const DayDuration_T DEFAULT_STAY_DURATION;
00019
00021   extern const WTP_T DEFAULT_WTP;
00022
00024   extern const CityCode_T DEFAULT_POS;
00025
00027   extern const Date_T DEFAULT_PREFERRED_DEPARTURE_DATE;
00028
00030   extern const Duration_T DEFAULT_PREFERRED_DEPARTURE_TIME;
00031
00033   extern const DateOffset_T DEFAULT_ADVANCE_PURCHASE;
00034
00036   extern const Date_T DEFAULT_REQUEST_DATE;
00037
00039   extern const Duration_T DEFAULT_REQUEST_TIME;
00040
00042   extern const DateTime_T DEFAULT_REQUEST_DATE_TIME;
00043
00045   extern const CabinCode_T DEFAULT_PREFERRED_CABIN;
00046
00048   extern const ChannelLabel_T DEFAULT_CHANNEL;
00049
00051   extern const ChannelLabel_T CHANNEL_DN;
00052
00054   extern const ChannelLabel_T CHANNEL_IN;
00055
00057   extern const TripType_T TRIP_TYPE_ONE_WAY;
00058
00060   extern const TripType_T TRIP_TYPE_ROUND_TRIP;
00061
00063   extern const TripType_T TRIP_TYPE_INBOUND;
00064
00066   extern const TripType_T TRIP_TYPE_OUTBOUND;
00067
00069   extern const FrequentFlyer_T DEFAULT_FF_TIER;
00070
00072   extern const PriceValue_T DEFAULT_VALUE_OF_TIME;
00073
00074 }
00075 #endif // __STDAIR_BAS_BASCONST_REQUEST_HPP
```

35.39 stdair/basic/BasConst_TravelSolution.hpp File Reference

```
#include <stdair/stdair_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Variables

- const Duration_T stdair::DEFAULT_MINIMAL_CONNECTION_TIME
- const Duration_T stdair::DEFAULT_MAXIMAL_CONNECTION_TIME
- const FlightPathCode_T stdair::DEFAULT_FLIGHTPATH_CODE
- const Availability_T stdair::DEFAULT_CLASS_AVAILABILITY
- const AvailabilityStatus_T stdair::DEFAULT_AVAILABILITY_STATUS
- const unsigned short stdair::DEFAULT_NUMBER_OF_REQUIRED_SEATS
- const MatchingIndicator_T stdair::DEFAULT_MATCHING_INDICATOR
- const AirlineCode_T stdair::DEFAULT_DICO_STUDIED_AIRLINE

35.40 BasConst_TravelSolution.hpp

```
00001 #ifndef __STDAIR_BAS_BASCONST_TRAVELSOLUTION_HPP
00002 #define __STDAIR_BAS_BASCONST_TRAVELSOLUTION_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_types.hpp>
00009
00010 namespace stdair {
00011
00012   // //////// Travel Solutions ///////
00014   extern const Distance_T DEFAULT_DISTANCE_VALUE;
00015
00017   extern const Duration_T DEFAULT_MINIMAL_CONNECTION_TIME;
00018
00020   extern const Duration_T DEFAULT_MAXIMAL_CONNECTION_TIME;
00021
00023   extern const Duration_T NULL_BOOST_TIME_DURATION;
00024
00026   extern const FlightPathCode_T DEFAULT_FLIGHTPATH_CODE;
00027
00029   extern const Availability_T DEFAULT_CLASS_AVAILABILITY;
00030
00032   extern const AvailabilityStatus_T DEFAULT_AVAILABILITY_STATUS;
00033
00035   extern const unsigned short DEFAULT_NUMBER_OF_REQUIRED_SEATS;
00036
00039   extern const MatchingIndicator_T DEFAULT_MATCHING_INDICATOR;
00040
00042   extern const Revenue_T DEFAULT_REVENUE_VALUE;
```

```
00043
00045   extern const AirlineCode_T DEFAULT_DICO_STUDIED_AIRLINE;
00046
00048   extern const Date_T DEFAULT_DICO_STUDIED_DATE;
00049
00050 }
00051 #endif // __STDAIR_BAS_BASCONST_TRAVELSOLUTION_HPP
```

35.41 stdair/basic/BasConst_Yield.hpp File Reference

```
#include <stdair/stdair_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Variables

- const Yield_T stdair::DEFAULT_YIELD_VALUE
- const Yield_T stdair::DEFAULT_YIELD_MAX_VALUE

35.42 BasConst_Yield.hpp

```
00001 #ifndef __STDAIR_BAS_BASCONST_YIELD_HPP
00002 #define __STDAIR_BAS_BASCONST_YIELD_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_types.hpp>
00009
00010 namespace stdair {
00011
00012   // //////// (Leg-)Yield-related BOM ///////
00014   extern const Yield_T DEFAULT_YIELD_VALUE;
00015
00017   extern const Yield_T DEFAULT_YIELD_MAX_VALUE;
00018
00019 }
00020 #endif // __STDAIR_BAS_BASCONST_YIELD_HPP
```

35.43 stdair/basic/BasDBParams.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasDBParams.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.44 BasDBParams.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasDBParams.hpp>
00009
00010 namespace stdair {
00011
00012   // //////////////////////////////////////////////////////////////////
00013   BasDBParams::BasDBParams() {
00014   }
00015
00016   // //////////////////////////////////////////////////////////////////
00017   BasDBParams::BasDBParams (const BasDBParams& iDBParams)
00018     : _user (iDBParams._user), _passwd (iDBParams._passwd),
00019       _host (iDBParams._host), _port (iDBParams._port),
00020       _dbname (iDBParams._dbname) {
00021   }
00022
00023   // //////////////////////////////////////////////////////////////////
00024   BasDBParams::BasDBParams (const std::string& iDBUser,
00025                             const std::string& iDBPasswd,
00026                             const std::string& iDBHost,
00027                             const std::string& iDBPort,
00028                             const std::string& iDBName)
00029     : _user (iDBUser), _passwd (iDBPasswd), _host (iDBHost), _port (iDBPort),
00030       _dbname (iDBName) {
00031   }
00032
00033   // //////////////////////////////////////////////////////////////////
00034   BasDBParams::~BasDBParams() {
00035   }
00036
00037   // //////////////////////////////////////////////////////////////////
00038   const std::string BasDBParams::describe() const {
00039     return toString();
00040   }
00041
00042   // //////////////////////////////////////////////////////////////////
00043   std::string BasDBParams::toShortString() const {
00044     std::ostringstream oStr;
00045     oStr << _dbname << "." << _user << "@" << _host << ":" << _port;
00046     return oStr.str();
00047   }
00048
00049   // //////////////////////////////////////////////////////////////////
00050   std::string BasDBParams::toString() const {
00051     std::ostringstream oStr;
00052     oStr << _dbname << "." << _user << "@" << _host << ":" << _port;
00053     return oStr.str();
```

```
00054   }
00055
00056   // ////////////////////////////////////////////////////////////////////
00057   bool BasDBParams::check() const {
00058     if (_user.empty() == true || _passwd.empty() == true
00059         || _host.empty() == true || _port.empty()
00060         || _dbname.empty() == true) {
00061       return false;
00062     }
00063     return true;
00064   }
00065
00066 }
```

35.45 stdair/basic/BasDBParams.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_db.hpp>
#include <stdair/basic/StructAbstract.hpp>
```

Classes

- struct stdair::BasDBParams

  Structure holding the parameters for connection to a database.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.46 BasDBParams.hpp

```
00001 #ifndef __STDAIR_BAS_BASDBPARAMS_HPP
00002 #define __STDAIR_BAS_BASDBPARAMS_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // Stdair
00011 #include <stdair/stdair_db.hpp>
00012 #include <stdair/basic/StructAbstract.hpp>
00013
00014 namespace stdair {
00015
00019   struct BasDBParams : public StructAbstract {
00020   public:
00021     // ///////// Getters ////////
```

```
00023     const std::string& getUser() const {
00024       return _user;
00025     }
00026
00028     const std::string& getPassword() const {
00029       return _passwd;
00030     }
00031
00033     const std::string& getHost() const {
00034       return _host;
00035     }
00036
00038     const std::string& getPort() const {
00039       return _port;
00040     }
00041
00043     const std::string& getDBName() const {
00044       return _dbname;
00045     }
00046
00047
00048     // ********* Setters **********
00050     void setUser (const std::string& iUser) {
00051       _user = iUser;
00052     }
00053
00055     void setPassword (const std::string& iPasswd) {
00056       _passwd = iPasswd;
00057     }
00058
00060     void setHost (const std::string& iHost) {
00061       _host = iHost;
00062     }
00063
00065     void setPort (const std::string& iPort) {
00066       _port = iPort;
00067     }
00068
00070     void setDBName (const std::string& iDBName) {
00071       _dbname = iDBName;
00072     }
00073
00074
00075   public:
00076     // ********* Busines methods ********
00080     bool check() const;
00081
00082
00083   public:
00084     // ********* Display methods ********
00088     const std::string describe() const;
00089
00093     std::string toShortString() const;
00094
00098     std::string toString() const;
00099
00100
00101   public:
00105     BasDBParams (const std::string& iDBUser, const std::string& iDBPasswd,
00106                  const std::string& iDBHost, const std::string& iDBPort,
00107                  const std::string& iDBName);
00108
```

```
00112     BasDBParams();
00113
00117     BasDBParams (const BasDBParams&);
00118
00122     ~BasDBParams();
00123
00124
00125   private:
00126     // /////// Attributes /////////
00128     std::string _user;
00130     std::string _passwd;
00132     std::string _host;
00134     std::string _port;
00136     std::string _dbname;
00137   };
00138
00139 }
00140 #endif // __STDAIR_BAS_BASDBPARAMS_HPP
```

35.47 stdair/basic/BasFileMgr.cpp File Reference

```
#include <cassert>
#include <boost/version.hpp>
#include <boost/filesystem/path.hpp>
#include <boost/filesystem/operations.hpp>
#include <stdair/basic/BasFileMgr.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.48 BasFileMgr.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // Boost (STL Extension)
00007 // Boost Filesystem (http://www.boost.org/doc/libs/1_41_0/libs/filesystem/doc/ind
      ex.htm)
00008 #include <boost/version.hpp>
00009 #if BOOST_VERSION >= 103500
00010 #include <boost/filesystem.hpp>
00011 #else // BOOST_VERSION >= 103500
00012 #include <boost/filesystem/path.hpp>
00013 #include <boost/filesystem/operations.hpp>
00014 #endif // BOOST_VERSION >= 103500
00015 // StdAir
00016 #include <stdair/basic/BasFileMgr.hpp>
00017
```

```
00018 namespace boostfs = boost::filesystem;
00019
00020 namespace stdair {
00021
00022   // ////////////////////////////////////////////////////////////////////
00023   bool BasFileMgr::doesExistAndIsReadable (const std::string& iFilepath) {
00024     bool oFine = false;
00025
00026     boostfs::path lPath (iFilepath);
00027
00028     if (boostfs::exists (lPath) == false) {
00029       return oFine;
00030     }
00031
00032 #if BOOST_VERSION >= 103500
00033     if (boostfs::is_regular (lPath) == true) {
00034       oFine = true;
00035     }
00036 #endif // BOOST_VERSION >= 103500
00037
00038     return oFine;
00039   }
00040
00041 }
```

35.49 stdair/basic/BasFileMgr.hpp File Reference

```
#include <string>
```

Classes

- struct stdair::BasFileMgr

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.50 BasFileMgr.hpp

```
00001 #ifndef __STDAIR_BAS_BASFILEMGR_HPP
00002 #define __STDAIR_BAS_BASFILEMGR_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009
00010 namespace stdair {
00011
00013   struct BasFileMgr {
00014   public:
00015
```

```
00016     // ////////////// Functional Support Methods //////////////
00017     static bool doesExistAndIsReadable (const std::string& iFilepath);
00018
00019   };
00020
00021 }
00022 #endif // __STDAIR_BAS_BASFILEMGR_HPP
```

35.51 stdair/basic/BasLogParams.cpp File Reference

```
#include <cassert>
#include <iostream>
#include <sstream>
#include <stdair/basic/BasLogParams.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.52 BasLogParams.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <iostream>
00007 #include <sstream>
00008 // StdAir
00009 #include <stdair/basic/BasLogParams.hpp>
00010
00011 namespace stdair {
00012
00013   // ////////////////////////////////////////////////////////////////////
00014   BasLogParams::BasLogParams()
00015     : _logLevel (LOG::DEBUG), _logStream (std::cout),
00016       _forceMultipleInit (false) {
00017     assert (false);
00018   }
00019
00020   // ////////////////////////////////////////////////////////////////////
00021   BasLogParams::BasLogParams (const BasLogParams& iLogParams)
00022     : _logLevel (iLogParams._logLevel), _logStream (iLogParams._logStream),
00023       _forceMultipleInit (iLogParams._forceMultipleInit) {
00024   }
00025
00026   // ////////////////////////////////////////////////////////////////////
00027   BasLogParams::BasLogParams (const LOG::EN_LogLevel iLogLevel,
00028                               std::ostream& ioLogOutputStream,
00029                               const bool iForceMultipleInstance)
00030     : _logLevel (iLogLevel), _logStream (ioLogOutputStream),
00031       _forceMultipleInit (iForceMultipleInstance) {
```

```
00032   }
00033
00034   // ////////////////////////////////////////////////////////////////////
00035   BasLogParams::~BasLogParams() {
00036   }
00037
00038   // ////////////////////////////////////////////////////////////////////
00039   const std::string BasLogParams::describe() const {
00040     return toString();
00041   }
00042
00043   // ////////////////////////////////////////////////////////////////////
00044   std::string BasLogParams::toShortString() const {
00045     const std::string isForcedStr = (_forceMultipleInit == true)?" (forced)":"";
00046     std::ostringstream oStr;
00047     oStr << LOG::_logLevels[_logLevel] << isForcedStr;
00048     return oStr.str();
00049   }
00050
00051   // ////////////////////////////////////////////////////////////////////
00052   std::string BasLogParams::toString() const {
00053     std::ostringstream oStr;
00054     oStr << LOG::_logLevels[_logLevel];
00055     return oStr.str();
00056   }
00057
00058 }
```

35.53 stdair/basic/BasLogParams.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_log.hpp>
#include <stdair/basic/StructAbstract.hpp>
```

Classes

- struct stdair::BasLogParams

  Structure holding parameters for logging.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.54 BasLogParams.hpp

```
00001 #ifndef __STDAIR_BAS_BASLOGPARAMS_HPP
00002 #define __STDAIR_BAS_BASLOGPARAMS_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
```

```
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // Stdair
00011 #include <stdair/stdair_log.hpp>
00012 #include <stdair/basic/StructAbstract.hpp>
00013
00014 namespace stdair {
00015
00019   struct BasLogParams : public StructAbstract {
00020     friend class Logger;
00021   public:
00022     // ///////// Getters ////////
00026     const LOG::EN_LogLevel& getLogLevel() const {
00027       return _logLevel;
00028     }
00029
00033     std::ostream& getLogStream() const {
00034       return _logStream;
00035     }
00036
00040     const bool getForcedInitialisationFlag() const {
00041       return _forceMultipleInit;
00042     }
00043
00044
00045     // ///////// Setters //////////
00049     void setForcedInitialisationFlag (const bool iForceMultipleInstance) {
00050       _forceMultipleInit = iForceMultipleInstance;
00051     }
00052
00053
00054   public:
00055     // ///////// Busines methods ////////
00059     bool check() const;
00060
00061
00062   public:
00063     // ///////// Display methods ////////
00067     const std::string describe() const;
00068
00072     std::string toShortString() const;
00073
00077     std::string toString() const;
00078
00079
00080   public:
00089     BasLogParams (const LOG::EN_LogLevel iLogLevel,
00090                   std::ostream& ioLogOutputStream,
00091                   const bool iForceMultipleInstance = false);
00092
00096     BasLogParams (const BasLogParams&);
00097
00101     ~BasLogParams();
00102
00103   private:
00107     BasLogParams();
00108
00109
00110   private:
```

```
00111     // /////// Attributes /////////
00115     const LOG::EN_LogLevel _logLevel;
00116
00120     std::ostream& _logStream;
00121
00135     bool _forceMultipleInit;
00136   };
00137
00138 }
00139 #endif // __STDAIR_BAS_BASLOGPARAMS_HPP
```

35.55 stdair/basic/BasParserHelperTypes.hpp File Reference

```
#include <string>
#include <sstream>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/service/Logger.hpp>
```

Classes

- struct stdair::date_time_element< MIN, MAX >

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef date_time_element< 0, 23 > stdair::hour_t
- typedef date_time_element< 0, 59 > stdair::minute_t
- typedef date_time_element< 0, 59 > stdair::second_t
- typedef date_time_element< 1900, 2100 > stdair::year_t
- typedef date_time_element< 1, 12 > stdair::month_t
- typedef date_time_element< 1, 31 > stdair::day_t

Functions

- template<int MIN, int MAX>
  date_time_element< MIN, MAX > stdair::operator* (const date_time_element< MIN, MAX > &o1, const date_time_element< MIN, MAX > &o2)
- template<int MIN, int MAX>
  date_time_element< MIN, MAX > stdair::operator+ (const date_time_element< MIN, MAX > &o1, const date_time_element< MIN, MAX > &o2)

35.56 BasParserHelperTypes.hpp

```
00001 #ifndef __STDAIR_BAS_BASCOMPARSERHELPERTYPES_HPP
00002 #define __STDAIR_BAS_BASCOMPARSERHELPERTYPES_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <sstream>
00010 // StdAir
00011 #include <stdair/stdair_exceptions.hpp>
00012 #include <stdair/service/Logger.hpp>
00013
00014 namespace stdair {
00015
00016   // //////////////////////////////////////////////////////////////////
00017   //
00018   // Parser structure helper
00019   //
00020   // //////////////////////////////////////////////////////////////////
00022   template <int MIN = 0, int MAX = 0>
00023   struct date_time_element {
00024     unsigned int _value;
00025
00026     // ********** Constructors ***********
00028     date_time_element () { }
00030     date_time_element (const date_time_element& t) : _value (t._value) { }
00032     date_time_element (int i) : _value (i) { }
00034     void check () const {
00035       if (_value < MIN || _value > MAX) {
00036         std::ostringstream oMessage;
00037         oMessage << "The value: " << _value << " is out of range ("
00038                  << MIN << ", " << MAX << ")";
00039         throw stdair::ParserException (oMessage.str());
00040       }
00041     }
00042   };
00043
00045   template <int MIN, int MAX>
00046   inline date_time_element<MIN,
00047                            MAX> operator*(const date_time_element<MIN, MAX>& o1,
00048                                           const date_time_element<MIN, MAX>& o2){

00049     return date_time_element<MIN, MAX> (o1._value * o2._value);
00050   }
00051
00053   template <int MIN, int MAX>
00054   inline date_time_element<MIN,
00055                            MAX> operator+(const date_time_element<MIN, MAX>& o1,
00056                                           const date_time_element<MIN, MAX>& o2){

00057     return date_time_element<MIN, MAX> (o1._value + o2._value);
00058   }
00059
00061   typedef date_time_element<0, 23> hour_t;
00062   typedef date_time_element<0, 59> minute_t;
00063   typedef date_time_element<0, 59> second_t;
00064   typedef date_time_element<1900, 2100> year_t;
00065   typedef date_time_element<1, 12> month_t;
00066   typedef date_time_element<1, 31> day_t;
```

```
00067
00068 }
00069 #endif // __STDAIR_BAS_BASCOMPARSERHELPERTYPES_HPP
```

35.57 stdair/basic/BasParserTypes.hpp File Reference

```
#include <string>
#include <boost/spirit/include/qi.hpp>
#include <boost/spirit/include/phoenix_core.hpp>
#include <boost/spirit/include/phoenix_operator.hpp>
#include <boost/spirit/include/support_multi_pass.hpp>
#include <stdair/basic/BasParserHelperTypes.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::istreambuf_iterator< char > stdair::base_iterator_t
- typedef boost::spirit::multi_pass< base_iterator_t > stdair::iterator_t
- typedef boost::spirit::qi::int_parser< unsigned int, 10, 1, 1 > stdair::int1_p_t
- typedef boost::spirit::qi::uint_parser< int, 10, 2, 2 > stdair::uint2_p_t
- typedef boost::spirit::qi::uint_parser< int, 10, 4, 4 > stdair::uint4_p_t
- typedef boost::spirit::qi::uint_parser< int, 10, 1, 4 > stdair::uint1_4_p_t
- typedef boost::spirit::qi::uint_parser< hour_t, 10, 2, 2 > stdair::hour_p_t
- typedef boost::spirit::qi::uint_parser< minute_t, 10, 2, 2 > stdair::minute_p_t
- typedef boost::spirit::qi::uint_parser< second_t, 10, 2, 2 > stdair::second_p_t
- typedef boost::spirit::qi::uint_parser< year_t, 10, 4, 4 > stdair::year_p_t
- typedef boost::spirit::qi::uint_parser< month_t, 10, 2, 2 > stdair::month_p_t
- typedef boost::spirit::qi::uint_parser< day_t, 10, 2, 2 > stdair::day_p_t

35.58 BasParserTypes.hpp

```
00001 #ifndef __STDAIR_BAS_BASCOMPARSERTYPES_HPP
00002 #define __STDAIR_BAS_BASCOMPARSERTYPES_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // Boost Spirit (Parsing)
00010 #include <boost/spirit/include/qi.hpp>
00011 #include <boost/spirit/include/phoenix_core.hpp>
```

```
00012 #include <boost/spirit/include/phoenix_operator.hpp>
00013 #include <boost/spirit/include/support_multi_pass.hpp>
00014 // STDAIR
00015 #include <stdair/basic/BasParserHelperTypes.hpp>
00016
00017 namespace stdair {
00018
00019   // ////////////////////////////////////////////////////////////////////
00020   //
00021   //  Definition of Basic Types
00022   //
00023   // ////////////////////////////////////////////////////////////////////
00024   // The types of iterator, scanner and rule are then derived from
00025   // the parsing unit.
00026   typedef std::istreambuf_iterator<char> base_iterator_t;
00027   typedef boost::spirit::multi_pass<base_iterator_t> iterator_t;
00028
00029   // ////////////////////////////////////////////////////////////////////
00030   //
00031   //  Parser related types
00032   //
00033   // ////////////////////////////////////////////////////////////////////
00035   typedef boost::spirit::qi::int_parser<unsigned int, 10, 1, 1> int1_p_t;
00036
00038   typedef boost::spirit::qi::uint_parser<int, 10, 2, 2> uint2_p_t;
00039
00041   typedef boost::spirit::qi::uint_parser<int, 10, 4, 4> uint4_p_t;
00042
00044   typedef boost::spirit::qi::uint_parser<int, 10, 1, 4> uint1_4_p_t;
00045
00047   typedef boost::spirit::qi::uint_parser<hour_t, 10, 2, 2> hour_p_t;
00048   typedef boost::spirit::qi::uint_parser<minute_t, 10, 2, 2> minute_p_t;
00049   typedef boost::spirit::qi::uint_parser<second_t, 10, 2, 2> second_p_t;
00050   typedef boost::spirit::qi::uint_parser<year_t, 10, 4, 4> year_p_t;
00051   typedef boost::spirit::qi::uint_parser<month_t, 10, 2, 2> month_p_t;
00052   typedef boost::spirit::qi::uint_parser<day_t, 10, 2, 2> day_p_t;
00053 }
00054 #endif // __STDAIR_BAS_BASCOMPARSERTYPES_HPP
```

35.59 stdair/basic/BasTypes.hpp File Reference

```
#include <string>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.60 BasTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BAS_BASTYPES_HPP
00003 #define __STDAIR_BAS_BASTYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
```

```
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <string>
00010
00011 namespace stdair {
00012
00013 }
00014 #endif // __STDAIR_BAS_BASTYPES_HPP
```

35.61 stdair/basic/ContinuousAttributeLite.hpp File Reference

```
#include <cassert>
#include <iosfwd>
#include <string>
#include <vector>
#include <map>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/DictionaryManager.hpp>
```

Classes

- struct stdair::ContinuousAttributeLite< T >

  Class modeling the distribution of values that can be taken by a continuous attribute.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.62 ContinuousAttributeLite.hpp

```
00001 #ifndef __STDAIR_BAS_CONTINUOUSATTRIBUTELITE_HPP
00002 #define __STDAIR_BAS_CONTINUOUSATTRIBUTELITE_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <cassert>
00009 #include <iosfwd>
00010 #include <string>
00011 #include <vector>
00012 #include <map>
00013 // StdAir
00014 #include <stdair/stdair_basic_types.hpp>
00015 // TraDemGen
```

```
00016 #include <stdair/stdair_exceptions.hpp>
00017 #include <stdair/basic/DictionaryManager.hpp>
00018
00019 namespace stdair {
00020
00025   template <typename T>
00026   struct ContinuousAttributeLite {
00027   public:
00028     // ////////////////////// Type definitions ///////////////////////
00032     typedef std::map<T, stdair::Probability_T> ContinuousDistribution_T;
00033
00034   public:
00035     // ////////////////////// Business Methods ///////////////////
00039     const T getValue(const stdair::Probability_T& iCumulativeProbability) const{
00040       const DictionaryKey_T& lKey =
00041         DictionaryManager::valueToKey (iCumulativeProbability);
00042
00043       // Find the first cumulative probablity value greater or equal to lKey.
00044       unsigned int idx = 0;
00045       for (; idx < _size; ++idx) {
00046         if (_cumulativeDistribution.at(idx) > lKey) {
00047           break;
00048         }
00049       }
00050
00051       if (idx == 0) {
00052         return _valueArray.at(idx);
00053       }
00054       if (idx == _size) {
00055         return _valueArray.at(idx-1);
00056       }
00057
00058       //
00059       const stdair::Probability_T& lCumulativeCurrentPoint =
00060         DictionaryManager::keyToValue (_cumulativeDistribution.at(idx));
00061       const T& lValueCurrentPoint = _valueArray.at(idx);
00062
00063       //
00064       const stdair::Probability_T& lCumulativePreviousPoint =
00065         DictionaryManager::keyToValue (_cumulativeDistribution.at(idx-1));
00066       const T& lValuePreviousPoint = _valueArray.at(idx-1);
00067
00068       if (lCumulativePreviousPoint == lCumulativeCurrentPoint) {
00069         return lValuePreviousPoint;
00070       }
00071
00072       T oValue= lValuePreviousPoint + (lValueCurrentPoint - lValuePreviousPoint)
00073         * (iCumulativeProbability - lCumulativePreviousPoint)
00074         / (lCumulativeCurrentPoint - lCumulativePreviousPoint);
00075
00076       return oValue;
00077     }
00078
00079   public:
00080     // ////////////////////// Business Methods ///////////////////
00084     const stdair::Probability_T getRemainingProportion(const T& iValue) const {

00085
00086       // Find the first value greater than iValue.
00087       unsigned int idx = 0;
00088       for (; idx < _size; ++idx) {
00089         if (_valueArray.at(idx) > iValue) {
```

```
00090           break;
00091         }
00092       }
00093       if (idx == 0) {
00094         const stdair::Probability_T& oCumulativeProbability =
00095           DictionaryManager::keyToValue (_cumulativeDistribution.at(idx));
00096         return 1 - oCumulativeProbability;
00097       }
00098       if (idx == _size) {
00099         const stdair::Probability_T& oCumulativeProbability =
00100           DictionaryManager::keyToValue (_cumulativeDistribution.at(idx-1));
00101         return 1 - oCumulativeProbability;
00102       }
00103 
00104       //
00105       const stdair::Probability_T& lCumulativeCurrentPoint =
00106         DictionaryManager::keyToValue (_cumulativeDistribution.at(idx));
00107       const T& lValueCurrentPoint = _valueArray.at(idx);
00108 
00109       //
00110       const stdair::Probability_T& lCumulativePreviousPoint =
00111         DictionaryManager::keyToValue (_cumulativeDistribution.at(idx-1));
00112       const T& lValuePreviousPoint = _valueArray.at(idx-1);
00113 
00114       if (lValuePreviousPoint == lValueCurrentPoint) {
00115         return 1 - lCumulativePreviousPoint;
00116       }
00117 
00118       const stdair::Probability_T& oCumulativeProbability =
00119         lCumulativePreviousPoint + (lCumulativeCurrentPoint - lCumulativePrevious
      Point)
00120         * (iValue - lValuePreviousPoint)
00121         / (lValueCurrentPoint - lValuePreviousPoint);
00122 
00123       return 1 - oCumulativeProbability;
00124     }
00125 
00126   public:
00127     // ////////////////////// Business Methods ////////////////////
00131     const double getDerivativeValue(const T iKey) const{
00132 
00133       // Find the first key value greater or equal to iKey.
00134       unsigned int idx = 0;
00135       for (; idx < _size; ++idx) {
00136         if (_valueArray.at(idx) > iKey) {
00137           break;
00138         }
00139       }
00140       assert (idx != 0);
00141       assert (idx != _size);
00142 
00143       //
00144       const stdair::Probability_T& lCumulativeCurrentPoint =
00145         DictionaryManager::keyToValue (_cumulativeDistribution.at(idx));
00146       const T& lValueCurrentPoint = _valueArray.at(idx);
00147 
00148       //
00149       const stdair::Probability_T& lCumulativePreviousPoint =
00150         DictionaryManager::keyToValue (_cumulativeDistribution.at(idx-1));
00151       const T& lValuePreviousPoint = _valueArray.at(idx-1);
00152       assert (lValueCurrentPoint != lValuePreviousPoint);
00153 
```

```
00154       const double oValue= (lCumulativeCurrentPoint - lCumulativePreviousPoint)
00155         / (lValueCurrentPoint - lValuePreviousPoint);
00156
00157       return oValue;
00158     }
00159
00163     const T getUpperBound (const T iKey) const {
00164       // Find the first key value greater or equal to iKey.
00165       unsigned int idx = 0;
00166       for (; idx < _size; ++idx) {
00167         if (_valueArray.at(idx) > iKey) {
00168           break;
00169         }
00170       }
00171       assert (idx != 0);
00172       assert (idx != _size);
00173
00174       return _valueArray.at (idx);
00175     }
00176
00177   public:
00178     // ///////////// Display Support Methods ////////////////
00182     const std::string displayCumulativeDistribution() const {
00183       std::ostringstream oStr;
00184
00185       for (unsigned int idx = 0; idx < _size; ++idx) {
00186         if (idx != 0) {
00187           oStr << ", ";
00188         }
00189
00190         const stdair::Probability_T& lProbability =
00191           DictionaryManager::keyToValue (_cumulativeDistribution.at(idx));
00192
00193         oStr << _valueArray.at(idx) << ":" << lProbability;
00194       }
00195       return oStr.str();
00196     }
00197
00198
00199   public:
00200     // ////////// Constructors and destructors //////////////
00204     ContinuousAttributeLite (const ContinuousDistribution_T& iValueMap)
00205       : _size (iValueMap.size()) {
00206       init (iValueMap);
00207     }
00208
00212     ContinuousAttributeLite (const ContinuousAttributeLite& iCAL)
00213       : _size (iCAL._size),
00214         _cumulativeDistribution (iCAL._cumulativeDistribution),
00215         _valueArray (iCAL._valueArray) {
00216     }
00217
00221     ContinuousAttributeLite& operator= (const ContinuousAttributeLite& iCAL) {
00222       _size = iCAL._size;
00223       _cumulativeDistribution = iCAL._cumulativeDistribution;
00224       _valueArray = iCAL._valueArray;
00225       return *this;
00226     }
00227
00231     virtual ~ContinuousAttributeLite() {
00232     }
00233
```

```
00234   private:
00238     ContinuousAttributeLite() : _size(1) {
00239     }
00240
00245     void init (const ContinuousDistribution_T& iValueMap) {
00246       //
00247       const unsigned int lSize = iValueMap.size();
00248       _cumulativeDistribution.reserve (lSize);
00249       _valueArray.reserve (lSize);
00250
00251       // Browse the map to retrieve the values and cumulative probabilities.
00252       for (typename ContinuousDistribution_T::const_iterator it =
00253              iValueMap.begin(); it != iValueMap.end(); ++it) {
00254
00255         const T& attributeValue = it->first;
00256         const DictionaryKey_T& lKey = DictionaryManager::valueToKey (it->second);

00257
00258         // Build the two arrays.
00259         _cumulativeDistribution.push_back (lKey);
00260         _valueArray.push_back (attributeValue);
00261       }
00262     }
00263
00264
00265   private:
00266     // ********** Attributes **********
00270     unsigned int _size;
00271
00275     std::vector<DictionaryKey_T> _cumulativeDistribution;
00276
00280     std::vector<T> _valueArray;
00281   };
00282
00283 }
00284 #endif // __STDAIR_BAS_CONTINUOUSATTRIBUTELITE_HPP
```

35.63 stdair/basic/DemandGenerationMethod.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/DemandGenerationMethod.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.64 DemandGenerationMethod.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
```

```
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/stdair_exceptions.hpp>
00009 #include <stdair/basic/DemandGenerationMethod.hpp>
00010
00011 namespace stdair {
00012
00013   // //////////////////////////////////////////////////////////////////
00014   const std::string DemandGenerationMethod::_labels[LAST_VALUE] =
00015     { "PoissonProcess", "SatisticsOrder" };
00016
00017   // //////////////////////////////////////////////////////////////////
00018   const char DemandGenerationMethod::_methodLabels[LAST_VALUE] = { 'P', 'S' };
00019
00020
00021   // //////////////////////////////////////////////////////////////////
00022   DemandGenerationMethod::DemandGenerationMethod() : _method (LAST_VALUE) {
00023     assert (false);
00024   }
00025
00026   // //////////////////////////////////////////////////////////////////
00027   DemandGenerationMethod::
00028   DemandGenerationMethod (const DemandGenerationMethod& iDemandGenerationMethod)
00029     : _method (iDemandGenerationMethod._method) {
00030   }
00031
00032   // //////////////////////////////////////////////////////////////////
00033   DemandGenerationMethod::
00034   DemandGenerationMethod (const EN_DemandGenerationMethod& iDemandGenerationMetho
      d)
00035     : _method (iDemandGenerationMethod) {
00036   }
00037
00038   // //////////////////////////////////////////////////////////////////
00039   DemandGenerationMethod::EN_DemandGenerationMethod
00040   DemandGenerationMethod::getMethod (const char iMethodChar) {
00041     EN_DemandGenerationMethod oMethod;
00042     switch (iMethodChar) {
00043     case 'P': oMethod = POI_PRO; break;
00044     case 'S': oMethod = STA_ORD; break;
00045     default: oMethod = LAST_VALUE; break;
00046     }
00047
00048     if (oMethod == LAST_VALUE) {
00049       const std::string& lLabels = describeLabels();
00050       std::ostringstream oMessage;
00051       oMessage << "The demand (booking request) generation method '"
00052                << iMethodChar
00053                << "' is not known. Known demand (booking request) generation "
00054                << "methods: " << lLabels;
00055       throw CodeConversionException (oMessage.str());
00056     }
00057
00058     return oMethod;
00059   }
00060
00061   // //////////////////////////////////////////////////////////////////
00062   DemandGenerationMethod::DemandGenerationMethod (const char iMethodChar)
00063     : _method (getMethod (iMethodChar)) {
```

```
00064   }
00065
00066   // //////////////////////////////////////////////////////////////////
00067   DemandGenerationMethod::
00068   DemandGenerationMethod (const std::string& iMethodStr) {
00069     //
00070     const size_t lSize = iMethodStr.size();
00071     assert (lSize == 1);
00072     const char lMethodChar = iMethodStr[0];
00073     _method = getMethod (lMethodChar);
00074   }
00075
00076   // //////////////////////////////////////////////////////////////////
00077   const std::string& DemandGenerationMethod::
00078   getLabel (const EN_DemandGenerationMethod& iMethod) {
00079     return _labels[iMethod];
00080   }
00081
00082   // //////////////////////////////////////////////////////////////////
00083   char DemandGenerationMethod::
00084   getMethodLabel (const EN_DemandGenerationMethod& iMethod) {
00085     return _methodLabels[iMethod];
00086   }
00087
00088   // //////////////////////////////////////////////////////////////////
00089   std::string DemandGenerationMethod::
00090   getMethodLabelAsString (const EN_DemandGenerationMethod& iMethod) {
00091     std::ostringstream oStr;
00092     oStr << _methodLabels[iMethod];
00093     return oStr.str();
00094   }
00095
00096   // //////////////////////////////////////////////////////////////////
00097   std::string DemandGenerationMethod::describeLabels() {
00098     std::ostringstream ostr;
00099     for (unsigned short idx = 0; idx != LAST_VALUE; ++idx) {
00100       if (idx != 0) {
00101         ostr << ", ";
00102       }
00103       ostr << _labels[idx];
00104     }
00105     return ostr.str();
00106   }
00107
00108   // //////////////////////////////////////////////////////////////////
00109   DemandGenerationMethod::EN_DemandGenerationMethod
00110   DemandGenerationMethod::getMethod() const {
00111     return _method;
00112   }
00113
00114   // //////////////////////////////////////////////////////////////////
00115   char DemandGenerationMethod::getMethodAsChar() const {
00116     const char oMethodChar = _methodLabels[_method];
00117     return oMethodChar;
00118   }
00119
00120   // //////////////////////////////////////////////////////////////////
00121   std::string DemandGenerationMethod::getMethodAsString() const {
00122     std::ostringstream oStr;
00123     oStr << _methodLabels[_method];
00124     return oStr.str();
00125   }
```

```
00126
00127   // ////////////////////////////////////////////////////////////////////
00128   const std::string DemandGenerationMethod::describe() const {
00129     std::ostringstream ostr;
00130     ostr << _labels[_method];
00131     return ostr.str();
00132   }
00133
00134   // ////////////////////////////////////////////////////////////////////
00135   bool DemandGenerationMethod::
00136   operator== (const EN_DemandGenerationMethod& iMethod) const {
00137     return (_method == iMethod);
00138   }
00139
00140 }
```

35.65 stdair/basic/DemandGenerationMethod.hpp File Reference

```
#include <string>
#include <stdair/basic/StructAbstract.hpp>
```

Classes

- struct stdair::DemandGenerationMethod

  Enumeration of demand (booking request) generation methods.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.66 DemandGenerationMethod.hpp

```
00001 #ifndef __STDAIR_BAS_DEMANDGENERATIONMETHOD_HPP
00002 #define __STDAIR_BAS_DEMANDGENERATIONMETHOD_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/basic/StructAbstract.hpp>
00011
00012 namespace stdair {
00013
00017   struct DemandGenerationMethod : public StructAbstract {
00018   public:
00019     typedef enum {
00020       POI_PRO = 0,
00021       STA_ORD,
00022       LAST_VALUE
```

```
00023     } EN_DemandGenerationMethod;
00024
00028     static const std::string& getLabel (const EN_DemandGenerationMethod&);
00029
00033     static EN_DemandGenerationMethod getMethod (const char);
00034
00038     static char getMethodLabel (const EN_DemandGenerationMethod&);
00039
00043     static std::string getMethodLabelAsString (const EN_DemandGenerationMethod&);
00044
00048     static std::string describeLabels();
00049
00053     EN_DemandGenerationMethod getMethod() const;
00054
00058     char getMethodAsChar() const;
00059
00063     std::string getMethodAsString() const;
00064
00069     const std::string describe() const;
00070
00071   public:
00075     bool operator== (const EN_DemandGenerationMethod&) const;
00076
00077   public:
00081     DemandGenerationMethod (const EN_DemandGenerationMethod&);
00085     DemandGenerationMethod (const char iMethod);
00089     DemandGenerationMethod (const std::string& iMethod);
00093     DemandGenerationMethod (const DemandGenerationMethod&);
00094
00095   private:
00099     DemandGenerationMethod();
00100
00101
00102   private:
00106     static const std::string _labels[LAST_VALUE];
00110     static const char _methodLabels[LAST_VALUE];
00111
00112   private:
00113     // //////// Attributes /////////
00117     EN_DemandGenerationMethod _method;
00118   };
00119
00120 }
00121 #endif // __STDAIR_BAS_DEMANDGENERATIONMETHOD_HPP
```

35.67 stdair/basic/DictionaryManager.cpp File Reference

```
#include <stdair/basic/DictionaryManager.hpp>
#include <stdair/basic/BasConst_General.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.68 DictionaryManager.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // StdAir
00005 #include <stdair/basic/DictionaryManager.hpp>
00006 #include <stdair/basic/BasConst_General.hpp>
00007
00008 namespace stdair {
00009
00010   // ////////////////////////////////////////////////////////////////////
00011   const stdair::Probability_T DictionaryManager::
00012   keyToValue (const DictionaryKey_T iKey) {
00013     const float lValue =
00014       static_cast<float> (iKey) / DEFAULT_NUMBER_OF_SUBDIVISIONS;
00015     const stdair::Probability_T lProbability (lValue);
00016     return lProbability;
00017   }
00018
00019   // ////////////////////////////////////////////////////////////////////
00020   const DictionaryKey_T DictionaryManager::
00021   valueToKey (const stdair::Probability_T iValue) {
00022     const unsigned short lValueMultipliedByThousand =
00023       static_cast<unsigned short> (iValue) * DEFAULT_NUMBER_OF_SUBDIVISIONS;
00024     const DictionaryKey_T lDictionaryKey (lValueMultipliedByThousand);
00025     return lDictionaryKey;
00026   }
00027
00028 }
```

35.69 stdair/basic/DictionaryManager.hpp File Reference

```
#include <stdair/stdair_maths_types.hpp>
```

Classes

- class stdair::DictionaryManager

  Class wrapper of dictionary business methods.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef unsigned short stdair::DictionaryKey_T

35.70 DictionaryManager.hpp

```
00001 // ///////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BASIC_DICTIONARYMANAGER_HPP
00003 #define __STDAIR_BASIC_DICTIONARYMANAGER_HPP
00004
00005 // ///////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ///////////////////////////////////////////////////////////////////
00008 // StdAir
00009 #include <stdair/stdair_maths_types.hpp>
00010
00011 namespace stdair {
00012
00013   // ////////////// Type definitions /////////////////
00017   typedef unsigned short DictionaryKey_T;
00018
00022   class DictionaryManager {
00023   public:
00024     // ////////////// Business methods /////////////////
00028     static const stdair::Probability_T keyToValue (const DictionaryKey_T);
00029
00033     static const DictionaryKey_T valueToKey (const stdair::Probability_T);
00034   };
00035 }
00036 #endif // __STDAIR_BASIC_DICTIONARYMANAGER_HPP
```

35.71 stdair/basic/EventType.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/EventType.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.72 EventType.cpp

```
00001 // ///////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ///////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/stdair_exceptions.hpp>
00009 #include <stdair/basic/EventType.hpp>
00010
00011 namespace stdair {
00012
```

```
00013   // ////////////////////////////////////////////////////////////////////
00014   const std::string EventType::_labels[LAST_VALUE] =
00015     { "BookingRequest", "Cancellation","OptimisationNotificationForFlightDate",
00016       "OptimisationNotificationForNetwork", "ScheduleChange", "Snapshot",
00017       "RevenueMangement", "BreakPoint" };
00018
00019   // ////////////////////////////////////////////////////////////////////
00020   const char EventType::
00021   _typeLabels[LAST_VALUE] = { 'B', 'X', 'F', 'N', 'C', 'S', 'R', 'P' };
00022
00023
00024   // ////////////////////////////////////////////////////////////////////
00025   EventType::EventType()
00026     : _type (LAST_VALUE) {
00027     assert (false);
00028   }
00029
00030   // ////////////////////////////////////////////////////////////////////
00031   EventType::EventType (const EventType& iEventType)
00032     : _type (iEventType._type) {
00033   }
00034
00035   // ////////////////////////////////////////////////////////////////////
00036   EventType::EventType (const EN_EventType& iEventType)
00037     : _type (iEventType) {
00038   }
00039
00040   // ////////////////////////////////////////////////////////////////////
00041   EventType::EventType (const char iType) {
00042     switch (iType) {
00043     case 'B': _type = BKG_REQ; break;
00044     case 'X': _type = CX; break;
00045     case 'F': _type = OPT_NOT_4_FD; break;
00046     case 'N': _type = OPT_NOT_4_NET; break;
00047     case 'C': _type = SKD_CHG; break;
00048     case 'S': _type = SNAPSHOT; break;
00049     case 'R': _type = RM; break;
00050     case 'P': _type = BRK_PT; break;
00051     default: _type = LAST_VALUE; break;
00052     }
00053
00054     if (_type == LAST_VALUE) {
00055       const std::string& lLabels = describeLabels();
00056       std::ostringstream oMessage;
00057       oMessage << "The event type '" << iType
00058                << "' is not known. Known event types: " << lLabels;
00059       throw CodeConversionException (oMessage.str());
00060     }
00061   }
00062
00063   // ////////////////////////////////////////////////////////////////////
00064   const std::string& EventType::getLabel (const EN_EventType& iType) {
00065     return _labels[iType];
00066   }
00067
00068   // ////////////////////////////////////////////////////////////////////
00069   char EventType::getTypeLabel (const EN_EventType& iType) {
00070     return _typeLabels[iType];
00071   }
00072
00073   // ////////////////////////////////////////////////////////////////////
00074   std::string EventType::getTypeLabelAsString (const EN_EventType& iType) {
```

```
00075     std::ostringstream oStr;
00076     oStr << _typeLabels[iType];
00077     return oStr.str();
00078   }
00079
00080   // ////////////////////////////////////////////////////////////////////
00081   std::string EventType::describeLabels() {
00082     std::ostringstream ostr;
00083     for (unsigned short idx = 0; idx != LAST_VALUE; ++idx) {
00084       if (idx != 0) {
00085         ostr << ", ";
00086       }
00087       ostr << _labels[idx];
00088     }
00089     return ostr.str();
00090   }
00091
00092   // ////////////////////////////////////////////////////////////////////
00093   EventType::EN_EventType EventType::getType() const {
00094     return _type;
00095   }
00096
00097   // ////////////////////////////////////////////////////////////////////
00098   std::string EventType::getTypeAsString() const {
00099     std::ostringstream oStr;
00100     oStr << _typeLabels[_type];
00101     return oStr.str();
00102   }
00103
00104   // ////////////////////////////////////////////////////////////////////
00105   const std::string EventType::describe() const {
00106     std::ostringstream ostr;
00107     ostr << _labels[_type];
00108     return ostr.str();
00109   }
00110
00111   // ////////////////////////////////////////////////////////////////////
00112   bool EventType::operator== (const EN_EventType& iType) const {
00113     return (_type == iType);
00114   }
00115
00116 }
```

35.73 stdair/basic/EventType.hpp File Reference

```
#include <string>
#include <stdair/basic/StructAbstract.hpp>
```

Classes

- struct stdair::EventType

Namespaces

- namespace stdair

Handle on the StdAir library context.

35.74 EventType.hpp

```
00001 #ifndef __STDAIR_BAS_EVENTTYPE_HPP
00002 #define __STDAIR_BAS_EVENTTYPE_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/basic/StructAbstract.hpp>
00011
00012 namespace stdair {
00013
00015   struct EventType : public StructAbstract {
00016   public:
00017     typedef enum {
00018       BKG_REQ = 0,
00019       CX,
00020       OPT_NOT_4_FD,
00021       OPT_NOT_4_NET,
00022       SKD_CHG,
00023       SNAPSHOT,
00024       RM,
00025       BRK_PT,
00026       LAST_VALUE
00027     } EN_EventType;
00028
00031     static const std::string& getLabel (const EN_EventType&);
00032
00034     static char getTypeLabel (const EN_EventType&);
00035
00037     static std::string getTypeLabelAsString (const EN_EventType&);
00038
00040     static std::string describeLabels();
00041
00043     EN_EventType getType() const;
00044
00046     std::string getTypeAsString() const;
00047
00050     const std::string describe() const;
00051
00052   public:
00054     bool operator== (const EN_EventType&) const;
00055
00056   public:
00058     EventType (const EN_EventType&);
00060     EventType (const char iType);
00062     EventType (const EventType&);
00063
00064   private:
00066     EventType();
00067
00068
00069   private:
00071     static const std::string _labels[LAST_VALUE];
00073     static const char _typeLabels[LAST_VALUE];
```

```
00074
00075
00076   private:
00077     // //////// Attributes /////////
00079     EN_EventType _type;
00080   };
00081
00082 }
00083 #endif // __STDAIR_BAS_EVENTTYPE_HPP
```

35.75 stdair/basic/float_utils.hpp File Reference

```
#include <stdair/basic/float_utils_google.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.76 float_utils.hpp

```
00001 #ifndef __STDAIR_BAS_FLOAT_UTILS_HPP
00002 #define __STDAIR_BAS_FLOAT_UTILS_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/basic/float_utils_google.hpp>
00009
00010 namespace stdair {
00011
00023 }
00024 #endif // __STDAIR_BAS_FLOAT_UTILS_HPP
```

35.77 stdair/basic/float_utils_google.hpp File Reference

Classes

- class TypeWithSize< size >
- class TypeWithSize< 4 >
- class TypeWithSize< 8 >
- class FloatingPoint< RawType >

35.78 float_utils_google.hpp

```
00001 #ifndef __STDAIR_BAS_FLOAT_UTILS_GOOGLE_HPP
00002 #define __STDAIR_BAS_FLOAT_UTILS_GOOGLE_HPP
00003
00004 // Redistribution and use in source and binary forms, with or without
```

```
00005 // modification, are permitted provided that the following conditions are
00006 // met:
00007 //
00008 //     * Redistributions of source code must retain the above copyright
00009 // notice, this list of conditions and the following disclaimer.
00010 //     * Redistributions in binary form must reproduce the above
00011 // copyright notice, this list of conditions and the following disclaimer
00012 // in the documentation and/or other materials provided with the
00013 // distribution.
00014 //     * Neither the name of Google Inc. nor the names of its
00015 // contributors may be used to endorse or promote products derived from
00016 // this software without specific prior written permission.
00017 //
00018 // THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
00019 // "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
00020 // LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
00021 // A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
00022 // OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
00023 // SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
00024 // LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
00025 // DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
00026 // THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
00027 // (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
00028 // OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
00029 //
00030 // Authors: wan@google.com (Zhanyong Wan), eefacm@gmail.com (Sean Mcafee)
00031 //
00032 // The Google C++ Testing Framework (Google Test)
00033
00034
00035 // This template class serves as a compile-time function from size to
00036 // type.  It maps a size in bytes to a primitive type with that
00037 // size. e.g.
00038 //
00039 //   TypeWithSize<4>::UInt
00040 //
00041 // is typedef-ed to be unsigned int (unsigned integer made up of 4
00042 // bytes).
00043 //
00044 // Such functionality should belong to STL, but I cannot find it
00045 // there.
00046 //
00047 // Google Test uses this class in the implementation of floating-point
00048 // comparison.
00049 //
00050 // For now it only handles UInt (unsigned int) as that's all Google Test
00051 // needs.  Other types can be easily added in the future if need
00052 // arises.
00053 template <size_t size>
00054 class TypeWithSize {
00055  public:
00056   // This prevents the user from using TypeWithSize<N> with incorrect
00057   // values of N.
00058   typedef void UInt;
00059 };
00060
00061 // The specialization for size 4.
00062 template <>
00063 class TypeWithSize<4> {
00064  public:
00065   // unsigned int has size 4 in both gcc and MSVC.
00066   //
```

```
00067   // As base/basictypes.h doesn't compile on Windows, we cannot use
00068   // uint32, uint64, and etc here.
00069   typedef int Int;
00070   typedef unsigned int UInt;
00071 };
00072
00073 // The specialization for size 8.
00074 template <>
00075 class TypeWithSize<8> {
00076  public:
00077 #if GTEST_OS_WINDOWS
00078   typedef __int64 Int;
00079   typedef unsigned __int64 UInt;
00080 #else
00081   typedef long long Int;  // NOLINT
00082   typedef unsigned long long UInt;  // NOLINT
00083 #endif  // GTEST_OS_WINDOWS
00084 };
00085
00086
00087 // This template class represents an IEEE floating-point number
00088 // (either single-precision or double-precision, depending on the
00089 // template parameters).
00090 //
00091 // The purpose of this class is to do more sophisticated number
00092 // comparison.  (Due to round-off error, etc, it's very unlikely that
00093 // two floating-points will be equal exactly.  Hence a naive
00094 // comparison by the == operation often doesn't work.)
00095 //
00096 // Format of IEEE floating-point:
00097 //
00098 //   The most-significant bit being the leftmost, an IEEE
00099 //   floating-point looks like
00100 //
00101 //     sign_bit exponent_bits fraction_bits
00102 //
00103 //   Here, sign_bit is a single bit that designates the sign of the
00104 //   number.
00105 //
00106 //   For float, there are 8 exponent bits and 23 fraction bits.
00107 //
00108 //   For double, there are 11 exponent bits and 52 fraction bits.
00109 //
00110 //   More details can be found at
00111 //   http://en.wikipedia.org/wiki/IEEE_floating-point_standard.
00112 //
00113 // Template parameter:
00114 //
00115 //   RawType: the raw floating-point type (either float or double)
00116 template <typename RawType>
00117 class FloatingPoint {
00118  public:
00119   // Defines the unsigned integer type that has the same size as the
00120   // floating point number.
00121   typedef typename TypeWithSize<sizeof(RawType)>::UInt Bits;
00122
00123   // Constants.
00124
00125   // # of bits in a number.
00126   static const size_t kBitCount = 8*sizeof(RawType);
00127
00128   // # of fraction bits in a number.
```

```
00129   static const size_t kFractionBitCount =
00130     std::numeric_limits<RawType>::digits - 1;
00131
00132   // # of exponent bits in a number.
00133   static const size_t kExponentBitCount = kBitCount - 1 - kFractionBitCount;
00134
00135   // The mask for the sign bit.
00136   static const Bits kSignBitMask = static_cast<Bits>(1) << (kBitCount - 1);
00137
00138   // The mask for the fraction bits.
00139   static const Bits kFractionBitMask =
00140     ~static_cast<Bits>(0) >> (kExponentBitCount + 1);
00141
00142   // The mask for the exponent bits.
00143   static const Bits kExponentBitMask = ~(kSignBitMask | kFractionBitMask);
00144
00145   // How many ULP's (Units in the Last Place) we want to tolerate when
00146   // comparing two numbers.  The larger the value, the more error we
00147   // allow.  A 0 value means that two numbers must be exactly the same
00148   // to be considered equal.
00149   //
00150   // The maximum error of a single floating-point operation is 0.5
00151   // units in the last place.  On Intel CPU's, all floating-point
00152   // calculations are done with 80-bit precision, while double has 64
00153   // bits.  Therefore, 4 should be enough for ordinary use.
00154   //
00155   // See the following article for more details on ULP:
00156   // http://www.cygnus-software.com/papers/comparingfloats/comparingfloats.htm.
00157   static const size_t kMaxUlps = 4;
00158
00159   // Constructs a FloatingPoint from a raw floating-point number.
00160   //
00161   // On an Intel CPU, passing a non-normalized NAN (Not a Number)
00162   // around may change its bits, although the new value is guaranteed
00163   // to be also a NAN.  Therefore, don't expect this constructor to
00164   // preserve the bits in x when x is a NAN.
00165   explicit FloatingPoint(const RawType& x) { u_.value_ = x; }
00166
00167   // Static methods
00168
00169   // Reinterprets a bit pattern as a floating-point number.
00170   //
00171   // This function is needed to test the AlmostEquals() method.
00172   static RawType ReinterpretBits(const Bits bits) {
00173     FloatingPoint fp(0);
00174     fp.u_.bits_ = bits;
00175     return fp.u_.value_;
00176   }
00177
00178   // Returns the floating-point number that represent positive infinity.
00179   static RawType Infinity() {
00180     return ReinterpretBits(kExponentBitMask);
00181   }
00182
00183   // Non-static methods
00184
00185   // Returns the bits that represents this number.
00186   const Bits &bits() const { return u_.bits_; }
00187
00188   // Returns the exponent bits of this number.
00189   Bits exponent_bits() const { return kExponentBitMask & u_.bits_; }
00190
```

```
00191   // Returns the fraction bits of this number.
00192   Bits fraction_bits() const { return kFractionBitMask & u_.bits_; }
00193
00194   // Returns the sign bit of this number.
00195   Bits sign_bit() const { return kSignBitMask & u_.bits_; }
00196
00197   // Returns true iff this is NAN (not a number).
00198   bool is_nan() const {
00199     // It's a NAN if the exponent bits are all ones and the fraction
00200     // bits are not entirely zeros.
00201     return (exponent_bits() == kExponentBitMask) && (fraction_bits() != 0);
00202   }
00203
00204   // Returns true iff this number is at most kMaxUlps ULP's away from
00205   // rhs.  In particular, this function:
00206   //
00207   //   - returns false if either number is (or both are) NAN.
00208   //   - treats really large numbers as almost equal to infinity.
00209   //   - thinks +0.0 and -0.0 are 0 DLP's apart.
00210   bool AlmostEquals(const FloatingPoint& rhs) const {
00211     // The IEEE standard says that any comparison operation involving
00212     // a NAN must return false.
00213     if (is_nan() || rhs.is_nan()) return false;
00214
00215     return DistanceBetweenSignAndMagnitudeNumbers(u_.bits_, rhs.u_.bits_)
00216         <= kMaxUlps;
00217   }
00218
00219  private:
00220   // The data type used to store the actual floating-point number.
00221   union FloatingPointUnion {
00222     RawType value_;  // The raw floating-point number.
00223     Bits bits_;      // The bits that represent the number.
00224   };
00225
00226   // Converts an integer from the sign-and-magnitude representation to
00227   // the biased representation.  More precisely, let N be 2 to the
00228   // power of (kBitCount - 1), an integer x is represented by the
00229   // unsigned number x + N.
00230   //
00231   // For instance,
00232   //
00233   //   -N + 1 (the most negative number representable using
00234   //          sign-and-magnitude) is represented by 1;
00235   //   0      is represented by N; and
00236   //   N - 1  (the biggest number representable using
00237   //          sign-and-magnitude) is represented by 2N - 1.
00238   //
00239   // Read http://en.wikipedia.org/wiki/Signed_number_representations
00240   // for more details on signed number representations.
00241   static Bits SignAndMagnitudeToBiased(const Bits &sam) {
00242     if (kSignBitMask & sam) {
00243       // sam represents a negative number.
00244       return ~sam + 1;
00245     } else {
00246       // sam represents a positive number.
00247       return kSignBitMask | sam;
00248     }
00249   }
00250
00251   // Given two numbers in the sign-and-magnitude representation,
00252   // returns the distance between them as an unsigned number.
```

```
00253   static Bits DistanceBetweenSignAndMagnitudeNumbers(const Bits &sam1,
00254                                                      const Bits &sam2) {
00255     const Bits biased1 = SignAndMagnitudeToBiased(sam1);
00256     const Bits biased2 = SignAndMagnitudeToBiased(sam2);
00257     return (biased1 >= biased2) ? (biased1 - biased2) : (biased2 - biased1);
00258   }
00259
00260   FloatingPointUnion u_;
00261 };
00262
00263 #endif // __STDAIR_BAS_FLOAT_UTILS_GOOGLE_HPP
```

35.79 stdair/basic/ForecastingMethod.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/ForecastingMethod.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.80 ForecastingMethod.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/stdair_exceptions.hpp>
00009 #include <stdair/basic/ForecastingMethod.hpp>
00010
00011 namespace stdair {
00012
00013   // ////////////////////////////////////////////////////////////////////
00014   const std::string ForecastingMethod::_labels[LAST_VALUE] =
00015     { "AdditivePickUp", "MultiplicativePickUp" };
00016
00017   // ////////////////////////////////////////////////////////////////////
00018   const char ForecastingMethod::
00019   _methodLabels[LAST_VALUE] = { 'A', 'M' };
00020
00021
00022   // ////////////////////////////////////////////////////////////////////
00023   ForecastingMethod::ForecastingMethod()
00024     : _method (LAST_VALUE) {
00025     assert (false);
00026   }
00027
```

```
00028   // //////////////////////////////////////////////////////////////////
00029   ForecastingMethod::
00030   ForecastingMethod (const ForecastingMethod& iForecastingMethod)
00031     : _method (iForecastingMethod._method) {
00032   }
00033
00034   // //////////////////////////////////////////////////////////////////
00035   ForecastingMethod::
00036   ForecastingMethod (const EN_ForecastingMethod& iForecastingMethod)
00037     : _method (iForecastingMethod) {
00038   }
00039
00040   // //////////////////////////////////////////////////////////////////
00041   ForecastingMethod::ForecastingMethod (const char iMethod) {
00042     switch (iMethod) {
00043     case 'A': _method = ADD_PK; break;
00044     case 'M': _method = MUL_PK; break;
00045     default: _method = LAST_VALUE; break;
00046     }
00047
00048     if (_method == LAST_VALUE) {
00049       const std::string& lLabels = describeLabels();
00050       std::ostringstream oMessage;
00051       oMessage << "The forecasting method '" << iMethod
00052                << "' is not known. Known forecasting methods: " << lLabels;
00053       throw CodeConversionException (oMessage.str());
00054     }
00055   }
00056
00057   // //////////////////////////////////////////////////////////////////
00058   const std::string& ForecastingMethod::
00059   getLabel (const EN_ForecastingMethod& iMethod) {
00060     return _labels[iMethod];
00061   }
00062
00063   // //////////////////////////////////////////////////////////////////
00064   char ForecastingMethod::getMethodLabel (const EN_ForecastingMethod& iMethod) {
00065     return _methodLabels[iMethod];
00066   }
00067
00068   // //////////////////////////////////////////////////////////////////
00069   std::string ForecastingMethod::
00070   getMethodLabelAsString (const EN_ForecastingMethod& iMethod) {
00071     std::ostringstream oStr;
00072     oStr << _methodLabels[iMethod];
00073     return oStr.str();
00074   }
00075
00076   // //////////////////////////////////////////////////////////////////
00077   std::string ForecastingMethod::describeLabels() {
00078     std::ostringstream ostr;
00079     for (unsigned short idx = 0; idx != LAST_VALUE; ++idx) {
00080       if (idx != 0) {
00081         ostr << ", ";
00082       }
00083       ostr << _labels[idx];
00084     }
00085     return ostr.str();
00086   }
00087
00088   // //////////////////////////////////////////////////////////////////
00089   ForecastingMethod::EN_ForecastingMethod ForecastingMethod::getMethod() const {
```

```
00090     return _method;
00091   }
00092
00093   // ////////////////////////////////////////////////////////////////////
00094   std::string ForecastingMethod::getMethodAsString() const {
00095     std::ostringstream oStr;
00096     oStr << _methodLabels[_method];
00097     return oStr.str();
00098   }
00099
00100   // ////////////////////////////////////////////////////////////////////
00101   const std::string ForecastingMethod::describe() const {
00102     std::ostringstream ostr;
00103     ostr << _labels[_method];
00104     return ostr.str();
00105   }
00106
00107   // ////////////////////////////////////////////////////////////////////
00108   bool ForecastingMethod::
00109   operator== (const EN_ForecastingMethod& iMethod) const {
00110     return (_method == iMethod);
00111   }
00112
00113 }
```

35.81 stdair/basic/ForecastingMethod.hpp File Reference

```
#include <string>
#include <stdair/basic/StructAbstract.hpp>
```

Classes

- struct stdair::ForecastingMethod

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.82 ForecastingMethod.hpp

```
00001 #ifndef __STDAIR_BAS_FORECASTINGMETHOD_HPP
00002 #define __STDAIR_BAS_FORECASTINGMETHOD_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/basic/StructAbstract.hpp>
00011
00012 namespace stdair {
```

```
00013
00015   struct ForecastingMethod : public StructAbstract {
00016   public:
00017     typedef enum {
00018       ADD_PK = 0,
00019       MUL_PK,
00020       LAST_VALUE
00021     } EN_ForecastingMethod;
00022
00025     static const std::string& getLabel (const EN_ForecastingMethod&);
00026
00028     static char getMethodLabel (const EN_ForecastingMethod&);
00029
00031     static std::string getMethodLabelAsString (const EN_ForecastingMethod&);
00032
00034     static std::string describeLabels();
00035
00037     EN_ForecastingMethod getMethod() const;
00038
00040     std::string getMethodAsString() const;
00041
00044     const std::string describe() const;
00045
00046   public:
00048     bool operator== (const EN_ForecastingMethod&) const;
00049
00050   public:
00052     ForecastingMethod (const EN_ForecastingMethod&);
00054     ForecastingMethod (const char iMethod);
00056     ForecastingMethod (const ForecastingMethod&);
00057
00058   private:
00060     ForecastingMethod();
00061
00062
00063   private:
00065     static const std::string _labels[LAST_VALUE];
00067     static const char _methodLabels[LAST_VALUE];
00068
00069
00070   private:
00071     // //////// Attributes /////////
00073     EN_ForecastingMethod _method;
00074   };
00075
00076 }
00077 #endif // __STDAIR_BAS_FORECASTINGMETHOD_HPP
```

35.83 stdair/basic/PartnershipTechnique.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/PartnershipTechnique.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.84 PartnershipTechnique.cpp

```
00001 // //////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/stdair_exceptions.hpp>
00009 #include <stdair/basic/PartnershipTechnique.hpp>
00010
00011 namespace stdair {
00012
00013   // //////////////////////////////////////////////////////////////////////
00014   const std::string PartnershipTechnique::_labels[LAST_VALUE] =
00015     { "None",
00016       "RevenueAvailabilityExchangeDemandAggregation",
00017       "RevenueAvailabilityExchangeYieldProration",
00018       "InterlineBidPriceDemandAggregation",
00019       "InterlineBidPriceYieldProration",
00020       "NonProtectionistInterlineBidPriceYieldProration",
00021       "RevenueManagementCooperation",
00022       "AdvancedRevenueManagementCooperation"};
00023
00024   // //////////////////////////////////////////////////////////////////////
00025   const char PartnershipTechnique::_techniqueLabels[LAST_VALUE] = { 'N',
00026                                                                     'r',
00027                                                                     'R',
00028                                                                     'i',
00029                                                                     'I',
00030                                                                     'U',
00031                                                                     'C',
00032                                                                     'A'};
00033
00034
00035   // //////////////////////////////////////////////////////////////////////
00036   PartnershipTechnique::PartnershipTechnique() : _technique (LAST_VALUE) {
00037     assert (false);
00038   }
00039
00040   // //////////////////////////////////////////////////////////////////////
00041   PartnershipTechnique::
00042   PartnershipTechnique (const PartnershipTechnique& iPartnershipTechnique)
00043     : _technique (iPartnershipTechnique._technique) {
00044   }
00045
00046   // //////////////////////////////////////////////////////////////////////
00047   PartnershipTechnique::
00048   PartnershipTechnique (const EN_PartnershipTechnique& iPartnershipTechnique)
00049     : _technique (iPartnershipTechnique) {
00050   }
00051
00052   // //////////////////////////////////////////////////////////////////////
00053   PartnershipTechnique::EN_PartnershipTechnique
```

```
00054   PartnershipTechnique::getTechnique (const char iTechniqueChar) {
00055     EN_PartnershipTechnique oTechnique;
00056     switch (iTechniqueChar) {
00057     case 'N': oTechnique = NONE; break;
00058     case 'r': oTechnique = RAE_DA; break;
00059     case 'R': oTechnique = RAE_YP; break;
00060     case 'i': oTechnique = IBP_DA; break;
00061     case 'I': oTechnique = IBP_YP; break;
00062     case 'U': oTechnique = IBP_YP_U; break;
00063     case 'C': oTechnique = RMC; break;
00064     case 'A': oTechnique = A_RMC; break;
00065     default: oTechnique = LAST_VALUE; break;
00066     }
00067
00068     if (oTechnique == LAST_VALUE) {
00069       const std::string& lLabels = describeLabels();
00070       std::ostringstream oMessage;
00071       oMessage << "The partnership technique '"
00072                << iTechniqueChar
00073                << "' is not known. Known partnership techniques: "
00074                << lLabels;
00075       throw CodeConversionException (oMessage.str());
00076     }
00077
00078     return oTechnique;
00079   }
00080
00081   // ////////////////////////////////////////////////////////////////////
00082   PartnershipTechnique::PartnershipTechnique (const char iTechniqueChar)
00083     : _technique (getTechnique (iTechniqueChar)) {
00084   }
00085
00086   // ////////////////////////////////////////////////////////////////////
00087   PartnershipTechnique::
00088   PartnershipTechnique (const std::string& iTechniqueStr) {
00089     //
00090     const size_t lSize = iTechniqueStr.size();
00091     assert (lSize == 1);
00092     const char lTechniqueChar = iTechniqueStr[0];
00093     _technique = getTechnique (lTechniqueChar);
00094   }
00095
00096   // ////////////////////////////////////////////////////////////////////
00097   const std::string& PartnershipTechnique::
00098   getLabel (const EN_PartnershipTechnique& iTechnique) {
00099     return _labels[iTechnique];
00100   }
00101
00102   // ////////////////////////////////////////////////////////////////////
00103   char PartnershipTechnique::
00104   getTechniqueLabel (const EN_PartnershipTechnique& iTechnique) {
00105     return _techniqueLabels[iTechnique];
00106   }
00107
00108   // ////////////////////////////////////////////////////////////////////
00109   std::string PartnershipTechnique::
00110   getTechniqueLabelAsString (const EN_PartnershipTechnique& iTechnique) {
00111     std::ostringstream oStr;
00112     oStr << _techniqueLabels[iTechnique];
00113     return oStr.str();
00114   }
00115
```

```
00116   // ////////////////////////////////////////////////////////////////////
00117   std::string PartnershipTechnique::describeLabels() {
00118     std::ostringstream ostr;
00119     for (unsigned short idx = 0; idx != LAST_VALUE; ++idx) {
00120       if (idx != 0) {
00121         ostr << ", ";
00122       }
00123       ostr << _labels[idx];
00124     }
00125     return ostr.str();
00126   }
00127
00128   // ////////////////////////////////////////////////////////////////////
00129   PartnershipTechnique::EN_PartnershipTechnique
00130   PartnershipTechnique::getTechnique() const {
00131     return _technique;
00132   }
00133
00134   // ////////////////////////////////////////////////////////////////////
00135   char PartnershipTechnique::getTechniqueAsChar() const {
00136     const char oTechniqueChar = _techniqueLabels[_technique];
00137     return oTechniqueChar;
00138   }
00139
00140   // ////////////////////////////////////////////////////////////////////
00141   std::string PartnershipTechnique::getTechniqueAsString() const {
00142     std::ostringstream oStr;
00143     oStr << _techniqueLabels[_technique];
00144     return oStr.str();
00145   }
00146
00147   // ////////////////////////////////////////////////////////////////////
00148   const std::string PartnershipTechnique::describe() const {
00149     std::ostringstream ostr;
00150     ostr << _labels[_technique];
00151     return ostr.str();
00152   }
00153
00154   // ////////////////////////////////////////////////////////////////////
00155   bool PartnershipTechnique::
00156   operator== (const EN_PartnershipTechnique& iTechnique) const {
00157     return (_technique == iTechnique);
00158   }
00159
00160 }
```

35.85 stdair/basic/PartnershipTechnique.hpp File Reference

```
#include <string>
#include <stdair/basic/StructAbstract.hpp>
```

Classes

- struct stdair::PartnershipTechnique

  Enumeration of partnership techniques.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.86 PartnershipTechnique.hpp

```
00001 #ifndef __STDAIR_BAS_PARTNERSHIPTECHNIQUE_HPP
00002 #define __STDAIR_BAS_PARTNERSHIPTECHNIQUE_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/basic/StructAbstract.hpp>
00011
00012 namespace stdair {
00013
00017   struct PartnershipTechnique : public StructAbstract {
00018   public:
00019     typedef enum {
00020       NONE = 0,
00021       RAE_DA,
00022       RAE_YP,
00023       IBP_DA,
00024       IBP_YP,
00025       IBP_YP_U,
00026       RMC,
00027       A_RMC,
00028       LAST_VALUE
00029     } EN_PartnershipTechnique;
00030
00034     static const std::string& getLabel (const EN_PartnershipTechnique&);
00035
00039     static EN_PartnershipTechnique getTechnique (const char);
00040
00044     static char getTechniqueLabel (const EN_PartnershipTechnique&);
00045
00049     static std::string getTechniqueLabelAsString (const EN_PartnershipTechnique&)
      ;
00050
00054     static std::string describeLabels();
00055
00059     EN_PartnershipTechnique getTechnique() const;
00060
00064     char getTechniqueAsChar() const;
00065
00069     std::string getTechniqueAsString() const;
00070
00075     const std::string describe() const;
00076
00077   public:
00081     bool operator== (const EN_PartnershipTechnique&) const;
00082
00083   public:
00087     PartnershipTechnique (const EN_PartnershipTechnique&);
00091     PartnershipTechnique (const char iTechnique);
00095     PartnershipTechnique (const std::string& iTechnique);
```

```
00099     PartnershipTechnique (const PartnershipTechnique&);
00100
00101   private:
00105     PartnershipTechnique();
00106
00107
00108   private:
00112     static const std::string _labels[LAST_VALUE];
00116     static const char _techniqueLabels[LAST_VALUE];
00117
00118   private:
00119     // //////// Attributes /////////
00123     EN_PartnershipTechnique _technique;
00124   };
00125
00126 }
00127 #endif // __STDAIR_BAS_PARTNERSHIPTECHNIQUE_HPP
```

35.87 stdair/basic/PassengerType.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/PassengerType.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.88 PassengerType.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/stdair_exceptions.hpp>
00009 #include <stdair/basic/PassengerType.hpp>
00010
00011 namespace stdair {
00012
00013   // //////////////////////////////////////////////////////////////////
00014   const std::string PassengerType::_labels[LAST_VALUE] =
00015     { "Leisure", "Business", "First" };
00016
00017   const char PassengerType::_typeLabels[LAST_VALUE] = { 'L', 'B', 'F' };
00018
00019
00020   // //////////////////////////////////////////////////////////////////
00021   PassengerType::PassengerType (const EN_PassengerType& iPassengerType)
```

```
00022     : _type (iPassengerType) {
00023   }
00024
00025   // ////////////////////////////////////////////////////////////////////
00026   PassengerType::PassengerType (const char iType) {
00027     switch (iType) {
00028     case 'L': _type = LEISURE; break;
00029     case 'B': _type = BUSINESS; break;
00030     case 'F': _type = FIRST; break;
00031     default: _type = LAST_VALUE; break;
00032     }
00033
00034     if (_type == LAST_VALUE) {
00035       const std::string& lLabels = describeLabels();
00036       std::ostringstream oMessage;
00037       oMessage << "The passenger type '" << iType
00038                << "' is not known. Known passenger types: " << lLabels;
00039       throw CodeConversionException (oMessage.str());
00040     }
00041   }
00042
00043   // ////////////////////////////////////////////////////////////////////
00044   const std::string& PassengerType::getLabel (const EN_PassengerType& iType) {
00045     return _labels[iType];
00046   }
00047
00048   // ////////////////////////////////////////////////////////////////////
00049   char PassengerType::getTypeLabel (const EN_PassengerType& iType) {
00050     return _typeLabels[iType];
00051   }
00052
00053   // ////////////////////////////////////////////////////////////////////
00054   std::string PassengerType::
00055   getTypeLabelAsString (const EN_PassengerType& iType) {
00056     std::ostringstream oStr;
00057     oStr << _typeLabels[iType];
00058     return oStr.str();
00059   }
00060
00061   // ////////////////////////////////////////////////////////////////////
00062   std::string PassengerType::describeLabels() {
00063     std::ostringstream ostr;
00064     for (unsigned short idx = 0; idx != LAST_VALUE; ++idx) {
00065       if (idx != 0) {
00066         ostr << ", ";
00067       }
00068       ostr << _labels[idx];
00069     }
00070     return ostr.str();
00071   }
00072
00073   // ////////////////////////////////////////////////////////////////////
00074   PassengerType::EN_PassengerType PassengerType::getType() const {
00075     return _type;
00076   }
00077
00078   // ////////////////////////////////////////////////////////////////////
00079   std::string PassengerType::getTypeAsString() const {
00080     std::ostringstream oStr;
00081     oStr << _typeLabels[_type];
00082     return oStr.str();
00083   }
```

```
00084
00085   // ////////////////////////////////////////////////////////////////////
00086   const std::string PassengerType::describe() const {
00087     std::ostringstream ostr;
00088     ostr << _labels[_type];
00089     return ostr.str();
00090   }
00091
00092   // ////////////////////////////////////////////////////////////////////
00093   bool PassengerType::operator== (const EN_PassengerType& iType) const {
00094     return (_type == iType);
00095   }
00096
00097 }
```

35.89 stdair/basic/PassengerType.hpp File Reference

```
#include <string>
#include <stdair/basic/StructAbstract.hpp>
```

Classes

- struct stdair::PassengerType

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.90 PassengerType.hpp

```
00001 #ifndef __STDAIR_BAS_PASSENGERTYPE_HPP
00002 #define __STDAIR_BAS_PASSENGERTYPE_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/basic/StructAbstract.hpp>
00011
00012 namespace stdair {
00013
00015   struct PassengerType : public StructAbstract {
00016   public:
00017     typedef enum {
00018       LEISURE = 0,
00019       BUSINESS,
00020       FIRST,
00021       LAST_VALUE
00022     } EN_PassengerType;
00023
```

```
00025     static const std::string& getLabel (const EN_PassengerType&);
00026
00028     static char getTypeLabel (const EN_PassengerType&);
00029
00031     static std::string getTypeLabelAsString (const EN_PassengerType&);
00032
00034     static std::string describeLabels();
00035
00037     EN_PassengerType getType() const;
00038
00040     std::string getTypeAsString() const;
00041
00043     const std::string describe() const;
00044
00045   public:
00047     bool operator== (const EN_PassengerType&) const;
00048
00049   public:
00051     PassengerType (const EN_PassengerType&);
00053     PassengerType (const char iType);
00054
00055
00056   private:
00058     static const std::string _labels[LAST_VALUE];
00060     static const char _typeLabels[LAST_VALUE];
00061
00062
00063   private:
00064     // //////// Attributes /////////
00066     EN_PassengerType _type;
00067   };
00068
00069 }
00070 #endif // __STDAIR_BAS_PASSENGERTYPE_HPP
```

35.91 stdair/basic/ProgressStatus.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/BasConst_Event.hpp>
#include <stdair/basic/ProgressStatus.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.92 ProgressStatus.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
```

```
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/stdair_exceptions.hpp>
00009 #include <stdair/basic/BasConst_Event.hpp>
00010 #include <stdair/basic/ProgressStatus.hpp>
00011
00012 namespace stdair {
00013
00014   // ////////////////////////////////////////////////////////////////////
00015   ProgressStatus::ProgressStatus (const Count_T& iCurrentNb,
00016                                   const Count_T& iExpectedNb,
00017                                   const Count_T& iActualNb)
00018     : _currentNb (iCurrentNb),
00019       _expectedNb (iExpectedNb), _actualNb (iActualNb) {
00020   }
00021
00022   // ////////////////////////////////////////////////////////////////////
00023   ProgressStatus::ProgressStatus (const Count_T& iExpectedNb,
00024                                   const Count_T& iActualNb)
00025     : _currentNb (DEFAULT_PROGRESS_STATUS),
00026       _expectedNb (iExpectedNb), _actualNb (iActualNb) {
00027   }
00028
00029   // ////////////////////////////////////////////////////////////////////
00030   ProgressStatus::ProgressStatus (const Count_T& iActualNb)
00031     : _currentNb (DEFAULT_PROGRESS_STATUS),
00032       _expectedNb (iActualNb), _actualNb (DEFAULT_PROGRESS_STATUS) {
00033   }
00034
00035   // ////////////////////////////////////////////////////////////////////
00036   ProgressStatus::ProgressStatus()
00037     : _currentNb (DEFAULT_PROGRESS_STATUS),
00038       _expectedNb (DEFAULT_PROGRESS_STATUS),
00039       _actualNb (DEFAULT_PROGRESS_STATUS) {
00040   }
00041
00042   // ////////////////////////////////////////////////////////////////////
00043   ProgressStatus::ProgressStatus (const ProgressStatus& iProgressStatus)
00044     : _currentNb (iProgressStatus._currentNb),
00045       _expectedNb (iProgressStatus._expectedNb),
00046       _actualNb (iProgressStatus._actualNb) {
00047   }
00048
00049   // ////////////////////////////////////////////////////////////////////
00050   void ProgressStatus::reset() {
00051     _currentNb = DEFAULT_PROGRESS_STATUS;
00052     _actualNb = DEFAULT_PROGRESS_STATUS;
00053   }
00054
00055   // ////////////////////////////////////////////////////////////////////
00056   const std::string ProgressStatus::describe() const {
00057     std::ostringstream oStr;
00058     oStr << _currentNb << " / {" << _expectedNb << ", " << _actualNb << "}";
00059     return oStr.str();
00060   }
00061
00062 }
```

35.93 stdair/basic/ProgressStatus.hpp File Reference

```
#include <string>
#include <boost/progress.hpp>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
```

Classes

- struct stdair::ProgressStatus

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.94 ProgressStatus.hpp

```
00001 #ifndef __STDAIR_BAS_PROGRESSSTATUS_HPP
00002 #define __STDAIR_BAS_PROGRESSSTATUS_HPP
00003
00004 // //////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // Boost Progress
00010 #include <boost/progress.hpp>
00011 // StdAir
00012 #include <stdair/stdair_basic_types.hpp>
00013 #include <stdair/basic/StructAbstract.hpp>
00014
00015 namespace stdair {
00016
00025   struct ProgressStatus : public StructAbstract {
00026   public:
00027     // ////////////////// Getters /////////////////
00029     const Count_T& count() const {
00030       return _currentNb;
00031     }
00032
00034     const Count_T& getCurrentNb() const {
00035       return _currentNb;
00036     }
00037
00039     const Count_T& getExpectedNb() const {
00040       return _expectedNb;
00041     }
00042
00044     const Count_T& getActualNb() const {
00045       return _actualNb;
00046     }
00047
```

```
00049     const ProgressPercentage_T progress() const {
00050       if (_actualNb == 0) {
00051         return 100.0;
00052       }
00053       return (static_cast<Percentage_T> (_currentNb)
00054               / static_cast<Percentage_T> (_actualNb));
00055     }
00056
00057
00058     // ////////////////// Setters /////////////////
00060     void setCurrentNb (const Count_T& iCurrentNb) {
00061       _currentNb = iCurrentNb;
00062     }
00063
00065     void setExpectedNb (const Count_T& iExpectedNb) {
00066       _expectedNb = iExpectedNb;
00067     }
00068
00070     void setActualNb (const Count_T& iActualNb) {
00071       _actualNb = iActualNb;
00072     }
00073
00075     void reset();
00076
00078     Count_T operator+= (Count_T iIncrement) {
00079       _currentNb += iIncrement;
00080       return _currentNb;
00081     }
00082
00084     Count_T operator++() {
00085       ++_currentNb;
00086       return _currentNb;
00087     }
00088
00089
00090   public:
00091     // ////////////////// Display Support Methods /////////////////
00093     const std::string describe() const;
00094
00095
00096   public:
00104     ProgressStatus (const Count_T& iCurrentNb, const Count_T& iExpectedNb,
00105                     const Count_T& iActualNb);
00106
00115     ProgressStatus (const Count_T& iExpectedNb, const Count_T& iActualNb);
00116
00125     ProgressStatus (const Count_T& iActualNb);
00126
00132     ProgressStatus();
00133
00137     ProgressStatus (const ProgressStatus&);
00138
00139   private:
00140     // ////////////////// Attributes /////////////////
00142     Count_T _currentNb;
00143
00145     Count_T _expectedNb;
00146
00148     Count_T _actualNb;
00149   };
00150
00151 }
```

```
00152 #endif // __STDAIR_BAS_PROGRESSSTATUS_HPP
```

35.95 stdair/basic/ProgressStatusSet.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/ProgressStatusSet.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.96 ProgressStatusSet.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/ProgressStatusSet.hpp>
00009
00010 namespace stdair {
00011
00012   // ////////////////////////////////////////////////////////////////////
00013   ProgressStatusSet::ProgressStatusSet()
00014     : _eventType (EventType::LAST_VALUE), _typeSpecificProgressStatus(),
00015       _generatorProgressStatus(), _overallProgressStatus(), _generatorKey ("") {
00016     assert (false);
00017   }
00018
00019   // ////////////////////////////////////////////////////////////////////
00020   ProgressStatusSet::ProgressStatusSet (const EventType::EN_EventType& iType)
00021     : _eventType (iType), _typeSpecificProgressStatus(),
00022       _generatorProgressStatus(), _overallProgressStatus(), _generatorKey ("") {
00023   }
00024
00025   // ////////////////////////////////////////////////////////////////////
00026   ProgressStatusSet::
00027     ProgressStatusSet (const ProgressStatusSet& iProgressStatusSet)
00028       : _eventType (iProgressStatusSet._eventType),
00029         _typeSpecificProgressStatus(iProgressStatusSet._typeSpecificProgressStatu
      s),
00030         _generatorProgressStatus (iProgressStatusSet._generatorProgressStatus),
00031         _overallProgressStatus (iProgressStatusSet._overallProgressStatus),
00032         _generatorKey (iProgressStatusSet._generatorKey) {
00033   }
00034
00035   // ////////////////////////////////////////////////////////////////////
00036   ProgressStatusSet::~ProgressStatusSet() {
00037   }
00038
```

```
00039   // ////////////////////////////////////////////////////////////////////
00040   void ProgressStatusSet::fromStream (std::istream& ioIn) {
00041   }
00042
00043   // ////////////////////////////////////////////////////////////////////
00044   const std::string ProgressStatusSet::describe() const {
00045     std::ostringstream oStr;
00046
00047     oStr << "-[Overall]"
00048          << "[" << _overallProgressStatus.getCurrentNb()
00049          << "/{" << _overallProgressStatus.getExpectedNb()
00050          << "," << _overallProgressStatus.getActualNb()
00051          << "}] ";
00052
00053     oStr << "[" << EventType (_eventType) << "]"
00054          << "[" << _typeSpecificProgressStatus.getCurrentNb()
00055          << "/{" << _typeSpecificProgressStatus.getExpectedNb()
00056          << "," << _typeSpecificProgressStatus.getActualNb()
00057          << "}]";
00058
00059     oStr << " [Specific generator: " << _generatorKey << "]"
00060          << "[" << _generatorProgressStatus.getCurrentNb()
00061          << "/{" << _generatorProgressStatus.getExpectedNb()
00062          << "," << _generatorProgressStatus.getActualNb()
00063          << "}]";
00064
00065     return oStr.str();
00066   }
00067
00068 }
```

35.97 stdair/basic/ProgressStatusSet.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_event_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/basic/EventType.hpp>
#include <stdair/basic/ProgressStatus.hpp>
```

Classes

- struct stdair::ProgressStatusSet

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.98 ProgressStatusSet.hpp

```
00001 #ifndef __STDAIR_BAS_PROGRESSSTATUSSET_HPP
00002 #define __STDAIR_BAS_PROGRESSSTATUSSET_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/stdair_event_types.hpp>
00013 #include <stdair/basic/StructAbstract.hpp>
00014 #include <stdair/basic/EventType.hpp>
00015 #include <stdair/basic/ProgressStatus.hpp>
00016
00017 namespace stdair {
00018
00022   struct ProgressStatusSet : public StructAbstract {
00023     // ////////////// Getters ///////////
00031     const ProgressStatus& getTypeSpecificStatus() const {
00032       return _typeSpecificProgressStatus;
00033     }
00034
00043     const ProgressStatus& getSpecificGeneratorStatus() const {
00044       return _generatorProgressStatus;
00045     }
00046
00054     const ProgressStatus& getOverallStatus() const {
00055       return _overallProgressStatus;
00056     }
00057
00058
00059     // ////////////// Setters ///////////
00060   public:
00062     void setTypeSpecificStatus (const ProgressStatus& iProgressStatus) {
00063       _typeSpecificProgressStatus = iProgressStatus;
00064     }
00065
00068     void setSpecificGeneratorStatus (const ProgressStatus& iProgressStatus,
00069                                      const EventGeneratorKey_T& iKey) {
00070       _generatorProgressStatus = iProgressStatus;
00071       _generatorKey = iKey;
00072     }
00073
00076     void setOverallStatus (const ProgressStatus& iProgressStatus) {
00077       _overallProgressStatus = iProgressStatus;
00078     }
00079
00080
00081     // ////////// Display methods //////////
00082   public:
00085     void fromStream (std::istream& ioIn);
00086
00088     const std::string describe() const;
00089
00090
00091     // ////////// Constructors and destructors /////////
00092   public:
00094     ProgressStatusSet (const EventType::EN_EventType&);
```

```
00096     ProgressStatusSet (const ProgressStatusSet&);
00098     ~ProgressStatusSet();
00099
00100   private:
00102     ProgressStatusSet ();
00103
00104     // ////////////////// Attributes /////////////////
00105   private:
00109     const EventType::EN_EventType _eventType;
00110
00114     ProgressStatus _typeSpecificProgressStatus;
00115
00119     ProgressStatus _generatorProgressStatus;
00120
00124     ProgressStatus _overallProgressStatus;
00125
00129     EventGeneratorKey_T _generatorKey;
00130   };
00131
00132 }
00133 #endif // __STDAIR_BAS_PROGRESSSTATUSSET_HPP
```

35.99 stdair/basic/RandomGeneration.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/version.hpp>
#include <stdair/basic/RandomGeneration.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.100 RandomGeneration.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost
00008 #include <boost/version.hpp>
00009 #if BOOST_VERSION >= 103500
00010 #include <boost/math/distributions/normal.hpp>
00011 #endif // BOOST_VERSION >= 103500
00012 // StdAir
00013 #include <stdair/basic/RandomGeneration.hpp>
00014
00015 namespace stdair {
00016
00022   // ////////////////////////////////////////////////////////////////////
```

```
00023   RandomGeneration::RandomGeneration() : _generator (1) {
00024   }
00025
00026   // ////////////////////////////////////////////////////////////////////
00027   RandomGeneration::RandomGeneration (const RandomSeed_T& iSeed)
00028     : _generator (iSeed) {
00029   }
00030
00031   // ////////////////////////////////////////////////////////////////////
00032   RandomGeneration::RandomGeneration (const RandomGeneration& iRandomGeneration)
00033     : _generator (iRandomGeneration._generator) {
00034   }
00035
00036   // ////////////////////////////////////////////////////////////////////
00037   RandomGeneration::~RandomGeneration() {
00038   }
00039
00040   // ////////////////////////////////////////////////////////////////////
00041   void RandomGeneration::init (const RandomSeed_T& iSeed) {
00042     _generator.seed (iSeed);
00043   }
00044
00045   // ////////////////////////////////////////////////////////////////////
00046   const std::string RandomGeneration::describe() const {
00047     std::ostringstream oStr;
00048     oStr << _generator;
00049     return oStr.str();
00050   }
00051
00052   // ////////////////////////////////////////////////////////////////////
00053   RealNumber_T RandomGeneration::generateUniform01() {
00054     UniformGenerator_T lGenerator (_generator, boost::uniform_real<>(0, 1));
00055     return lGenerator();
00056   }
00057
00058   // ////////////////////////////////////////////////////////////////////
00059   RealNumber_T RandomGeneration::generateUniform(const RealNumber_T& iMinValue,
00060                                                  const RealNumber_T& iMaxValue) {

00061     const Probability_T lVariateUnif01 = generateUniform01();
00062     const RealNumber_T lVariateUnif =
00063       iMinValue + lVariateUnif01 * (iMaxValue - iMinValue);
00064     return lVariateUnif;
00065   }
00066
00067   // ////////////////////////////////////////////////////////////////////
00068   RealNumber_T RandomGeneration::generateNormal (const RealNumber_T& mu,
00069                                                  const RealNumber_T& sigma) {
00070
00071 #if BOOST_VERSION >= 103500
00072     const Probability_T lVariateUnif = generateUniform01();
00073     const boost::math::normal lNormal (mu, sigma);
00074     const RealNumber_T lRealNumberOfRequestsToBeGenerated =
00075       boost::math::quantile (lNormal, lVariateUnif);
00076 #else // BOOST_VERSION >= 103500
00077     // TODO: rely on GSL when Boost version smaller than 1.35
00078     const RealNumber_T lRealNumberOfRequestsToBeGenerated = 0.0;
00079 #endif // BOOST_VERSION >= 103500
00080
00081     return lRealNumberOfRequestsToBeGenerated;
00082
00083   }
```

```
00084
00085   // ////////////////////////////////////////////////////////////////////
00086   RealNumber_T RandomGeneration::generateExponential (const RealNumber_T& lambda)
       {
00091     ExponentialDistribution_T lExponentialDistribution (lambda);
00092
00094     ExponentialGenerator_T lExponentialDistributionGenerator (_generator,
00095                                                               lExponentialDistrib
      ution);
00096
00097     // Generate a random variate, expressed in (fractional) day
00098     const RealNumber_T lExponentialVariateInDays =
00099       lExponentialDistributionGenerator();
00100
00101     return lExponentialVariateInDays;
00102   }
00103
00104 }
```

35.101 stdair/basic/RandomGeneration.hpp File Reference

```
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_maths_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
```

Classes

- struct stdair::RandomGeneration

  Class holding a random generator.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.102 RandomGeneration.hpp

```
00001 #ifndef __STDAIR_BAS_RANDOMGENERATION_HPP
00002 #define __STDAIR_BAS_RANDOMGENERATION_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/stdair_maths_types.hpp>
00010 #include <stdair/basic/StructAbstract.hpp>
00011
00012 namespace stdair {
00013
00017   struct RandomGeneration : public StructAbstract {
00018   public:
```

```
00019     // ////////////// Business Methods /////////////
00024     RealNumber_T generateUniform01();
00025
00030     RealNumber_T operator()() {
00031       return generateUniform01();
00032     }
00033
00039     RealNumber_T generateUniform (const RealNumber_T&, const RealNumber_T&);
00040
00045     RealNumber_T generateNormal (const RealNumber_T&, const RealNumber_T&);
00046
00051     RealNumber_T generateExponential (const RealNumber_T&);
00052
00056     BaseGenerator_T& getBaseGenerator () { return _generator; }
00057
00058
00059   public:
00060     // ///////////////// Display Support Methods ///////////
00064     const std::string describe() const;
00065
00066
00067   public:
00068     // ////////// Constructors and destructors /////////
00072     RandomGeneration (const RandomSeed_T&);
00076     RandomGeneration();
00077
00078   private:
00082     RandomGeneration (const RandomGeneration&);
00086     RandomGeneration& operator= (const RandomGeneration& iRandomGeneration) {
00087       _generator = iRandomGeneration._generator;
00088       return *this;
00089     }
00090   public:
00094     ~RandomGeneration();
00095
00103     void init (const RandomSeed_T&);
00104
00105     // ////////// Attributes //////////
00112     BaseGenerator_T _generator;
00113   };
00114
00115 }
00116 #endif // __STDAIR_BAS_RANDOMGENERATION_HPP
```

35.103 stdair/basic/SampleType.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/SampleType.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.104 SampleType.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/stdair_exceptions.hpp>
00009 #include <stdair/basic/SampleType.hpp>
00010
00011 namespace stdair {
00012
00013   // //////////////////////////////////////////////////////////////////
00014   const std::string SampleType::_labels[LAST_VALUE] =
00015     { "All", "AllForPartnerships", "RevenueManagement", "Inventory", "Schedule",
00016       "RevenueAccounting", "FareQuote", "CRS", "DemandGeneration", "EventManageme
      nt",
00017       "CustomerChoice" };
00018
00019   // //////////////////////////////////////////////////////////////////
00020   const char SampleType::
00021   _typeLabels[LAST_VALUE] = { 'A', 'P', 'R', 'I', 'S', 'T', 'F', 'C', 'D', 'E', '
      M' };
00022
00023
00024   // //////////////////////////////////////////////////////////////////
00025   SampleType::SampleType()
00026     : _type (LAST_VALUE) {
00027     assert (false);
00028   }
00029
00030   // //////////////////////////////////////////////////////////////////
00031   SampleType::SampleType (const SampleType& iSampleType)
00032     : _type (iSampleType._type) {
00033   }
00034
00035   // //////////////////////////////////////////////////////////////////
00036   SampleType::SampleType (const EN_SampleType& iSampleType)
00037     : _type (iSampleType) {
00038   }
00039
00040   // //////////////////////////////////////////////////////////////////
00041   SampleType::SampleType (const char iType) {
00042     switch (iType) {
00043     case 'A': _type = ALL; break;
00044     case 'P': _type = A4P; break;
00045     case 'R': _type = RMS; break;
00046     case 'I': _type = INV; break;
00047     case 'S': _type = SCH; break;
00048     case 'T': _type = RAC; break;
00049     case 'F': _type = FQT; break;
00050     case 'C': _type = CRS; break;
00051     case 'D': _type = DEM; break;
00052     case 'E': _type = EVT; break;
00053     case 'M': _type = CCM; break;
00054     default: _type = LAST_VALUE; break;
00055     }
00056
00057     if (_type == LAST_VALUE) {
00058       const std::string& lLabels = describeLabels();
```

```
00059       std::ostringstream oMessage;
00060       oMessage << "The sample type '" << iType
00061                << "' is not known. Known sample types: " << lLabels;
00062       throw CodeConversionException (oMessage.str());
00063     }
00064   }
00065
00066   // ////////////////////////////////////////////////////////////////////
00067   const std::string& SampleType::getLabel (const EN_SampleType& iType) {
00068     return _labels[iType];
00069   }
00070
00071   // ////////////////////////////////////////////////////////////////////
00072   char SampleType::getTypeLabel (const EN_SampleType& iType) {
00073     return _typeLabels[iType];
00074   }
00075
00076   // ////////////////////////////////////////////////////////////////////
00077   std::string SampleType::getTypeLabelAsString (const EN_SampleType& iType) {
00078     std::ostringstream oStr;
00079     oStr << _typeLabels[iType];
00080     return oStr.str();
00081   }
00082
00083   // ////////////////////////////////////////////////////////////////////
00084   std::string SampleType::describeLabels() {
00085     std::ostringstream ostr;
00086     for (unsigned short idx = 0; idx != LAST_VALUE; ++idx) {
00087       if (idx != 0) {
00088         ostr << ", ";
00089       }
00090       ostr << _labels[idx];
00091     }
00092     return ostr.str();
00093   }
00094
00095   // ////////////////////////////////////////////////////////////////////
00096   SampleType::EN_SampleType SampleType::getType() const {
00097     return _type;
00098   }
00099
00100   // ////////////////////////////////////////////////////////////////////
00101   std::string SampleType::getTypeAsString() const {
00102     std::ostringstream oStr;
00103     oStr << _typeLabels[_type];
00104     return oStr.str();
00105   }
00106
00107   // ////////////////////////////////////////////////////////////////////
00108   const std::string SampleType::describe() const {
00109     std::ostringstream ostr;
00110     ostr << _labels[_type];
00111     return ostr.str();
00112   }
00113
00114   // ////////////////////////////////////////////////////////////////////
00115   bool SampleType::operator== (const EN_SampleType& iType) const {
00116     return (_type == iType);
00117   }
00118
00119 }
```

35.105 stdair/basic/SampleType.hpp File Reference

```
#include <string>
#include <stdair/basic/StructAbstract.hpp>
```

Classes

- struct stdair::SampleType

  Enumeration of BOM sample types.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.106 SampleType.hpp

```
00001 #ifndef __STDAIR_BAS_SAMPLETYPE_HPP
00002 #define __STDAIR_BAS_SAMPLETYPE_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/basic/StructAbstract.hpp>
00011
00012 namespace stdair {
00013
00025   struct SampleType : public StructAbstract {
00026   public:
00027     typedef enum {
00028       ALL = 0,
00029       A4P,
00030       RMS,
00031       INV,
00032       SCH,
00033       RAC,
00034       FQT,
00035       CRS,
00036       DEM,
00037       EVT,
00038       CCM,
00039       LAST_VALUE
00040     } EN_SampleType;
00041
00045     static const std::string& getLabel (const EN_SampleType&);
00046
00050     static char getTypeLabel (const EN_SampleType&);
00051
00055     static std::string getTypeLabelAsString (const EN_SampleType&);
00056
00060     static std::string describeLabels();
```

```
00061
00065     EN_SampleType getType() const;
00066
00070     std::string getTypeAsString() const;
00071
00075     const std::string describe() const;
00076
00077   public:
00081     bool operator== (const EN_SampleType&) const;
00082
00083   public:
00087     SampleType (const EN_SampleType&);
00091     SampleType (const char iType);
00095     SampleType (const SampleType&);
00096
00097   private:
00101     SampleType();
00102
00103
00104   private:
00108     static const std::string _labels[LAST_VALUE];
00109
00113     static const char _typeLabels[LAST_VALUE];
00114
00115
00116   private:
00117     // ******** Attributes *********
00121     EN_SampleType _type;
00122   };
00123
00124 }
00125 #endif // __STDAIR_BAS_SAMPLETYPE_HPP
```

35.107 stdair/basic/ServiceInitialisationType.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/ServiceInitialisationType.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.108 ServiceInitialisationType.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
```

```
00007 // StdAir
00008 #include <stdair/stdair_exceptions.hpp>
00009 #include <stdair/basic/ServiceInitialisationType.hpp>
00010
00011 namespace stdair {
00012
00013   // ////////////////////////////////////////////////////////////////////
00014   const std::string ServiceInitialisationType::_labels[LAST_VALUE] =
00015     { "Not yet initialised", "File parsing",  "Built-in sample BOM" };
00016
00017   // ////////////////////////////////////////////////////////////////////
00018   const char ServiceInitialisationType::_typeLabels[LAST_VALUE] =
00019     { 'N', 'F', 'B' };
00020
00021
00022   // ////////////////////////////////////////////////////////////////////
00023   ServiceInitialisationType::ServiceInitialisationType()
00024     : _type (LAST_VALUE) {
00025     assert (false);
00026   }
00027
00028   // ////////////////////////////////////////////////////////////////////
00029   ServiceInitialisationType::
00030   ServiceInitialisationType (const ServiceInitialisationType& iServiceInitialisat
      ionType)
00031     : _type (iServiceInitialisationType._type) {
00032   }
00033
00034   // ////////////////////////////////////////////////////////////////////
00035   ServiceInitialisationType::
00036   ServiceInitialisationType (const EN_ServiceInitialisationType& iServiceInitiali
      sationType)
00037     : _type (iServiceInitialisationType) {
00038   }
00039
00040   // ////////////////////////////////////////////////////////////////////
00041   ServiceInitialisationType::EN_ServiceInitialisationType
00042   ServiceInitialisationType::getType (const char iTypeChar) {
00043     EN_ServiceInitialisationType oType;
00044     switch (iTypeChar) {
00045     case 'N': oType = NOT_YET_INITIALISED; break;
00046     case 'F': oType = FILE_PARSING; break;
00047     case 'B': oType = BUILTIN_SAMPLE; break;
00048     default: oType = LAST_VALUE; break;
00049     }
00050
00051     if (oType == LAST_VALUE) {
00052       const std::string& lLabels = describeLabels();
00053       std::ostringstream oMessage;
00054       oMessage << "The service initialisation type '" << iTypeChar
00055                << "' is not known. "
00056                << "Known service initialisation types: " << lLabels;
00057       throw CodeConversionException (oMessage.str());
00058     }
00059
00060     return oType;
00061   }
00062
00063   // ////////////////////////////////////////////////////////////////////
00064   ServiceInitialisationType::
00065   ServiceInitialisationType (const char iTypeChar)
00066     : _type (getType (iTypeChar)) {
```

```
00067   }
00068
00069   // //////////////////////////////////////////////////////////////////
00070   ServiceInitialisationType::
00071   ServiceInitialisationType (const std::string& iTypeStr) {
00072     //
00073     const size_t lSize = iTypeStr.size();
00074     assert (lSize == 1);
00075     const char lTypeChar = iTypeStr[0];
00076     _type = getType (lTypeChar);
00077   }
00078
00079   // //////////////////////////////////////////////////////////////////
00080   const std::string& ServiceInitialisationType::
00081   getLabel (const EN_ServiceInitialisationType& iType) {
00082     return _labels[iType];
00083   }
00084
00085   // //////////////////////////////////////////////////////////////////
00086   char ServiceInitialisationType::
00087   getTypeLabel (const EN_ServiceInitialisationType& iType) {
00088     return _typeLabels[iType];
00089   }
00090
00091   // //////////////////////////////////////////////////////////////////
00092   std::string ServiceInitialisationType::
00093   getTypeLabelAsString (const EN_ServiceInitialisationType& iType) {
00094     std::ostringstream oStr;
00095     oStr << _typeLabels[iType];
00096     return oStr.str();
00097   }
00098
00099   // //////////////////////////////////////////////////////////////////
00100   std::string ServiceInitialisationType::describeLabels() {
00101     std::ostringstream ostr;
00102     for (unsigned short idx = 0; idx != LAST_VALUE; ++idx) {
00103       if (idx != 0) {
00104         ostr << ", ";
00105       }
00106       ostr << _labels[idx];
00107     }
00108     return ostr.str();
00109   }
00110
00111   // //////////////////////////////////////////////////////////////////
00112   ServiceInitialisationType::EN_ServiceInitialisationType
00113   ServiceInitialisationType::getType() const {
00114     return _type;
00115   }
00116
00117   // //////////////////////////////////////////////////////////////////
00118   char ServiceInitialisationType::getTypeAsChar() const {
00119     const char oTypeChar = _typeLabels[_type];
00120     return oTypeChar;
00121   }
00122
00123   // //////////////////////////////////////////////////////////////////
00124   std::string ServiceInitialisationType::getTypeAsString() const {
00125     std::ostringstream oStr;
00126     oStr << _typeLabels[_type];
00127     return oStr.str();
00128   }
```

```
00129
00130   // //////////////////////////////////////////////////////////////////
00131   const std::string ServiceInitialisationType::describe() const {
00132     std::ostringstream ostr;
00133     ostr << _labels[_type];
00134     return ostr.str();
00135   }
00136
00137   // //////////////////////////////////////////////////////////////////
00138   bool ServiceInitialisationType::
00139   operator== (const EN_ServiceInitialisationType& iType) const {
00140     return (_type == iType);
00141   }
00142
00143 }
```

35.109 stdair/basic/ServiceInitialisationType.hpp File Reference

```
#include <string>
#include <stdair/basic/StructAbstract.hpp>
```

Classes

- struct stdair::ServiceInitialisationType

  Enumeration of service initialisation types.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.110 ServiceInitialisationType.hpp

```
00001 #ifndef __STDAIR_BAS_SERVICEINITIALISATIONTYPE_HPP
00002 #define __STDAIR_BAS_SERVICEINITIALISATIONTYPE_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/basic/StructAbstract.hpp>
00011
00012 namespace stdair {
00013
00017   struct ServiceInitialisationType : public StructAbstract {
00018   public:
00019     typedef enum {
00020       NOT_YET_INITIALISED = 0,
00021       FILE_PARSING,
00022       BUILTIN_SAMPLE,
```

```
00023       LAST_VALUE
00024     } EN_ServiceInitialisationType;
00025
00030     static const std::string& getLabel (const EN_ServiceInitialisationType&);
00031
00035     static EN_ServiceInitialisationType getType (const char);
00036
00040     static char getTypeLabel (const EN_ServiceInitialisationType&);
00041
00045     static std::string
00046     getTypeLabelAsString (const EN_ServiceInitialisationType&);
00047
00051     static std::string describeLabels();
00052
00056     EN_ServiceInitialisationType getType() const;
00057
00061     char getTypeAsChar() const;
00062
00066     std::string getTypeAsString() const;
00067
00072     const std::string describe() const;
00073
00074   public:
00078     bool operator== (const EN_ServiceInitialisationType&) const;
00079
00080   public:
00084     ServiceInitialisationType (const EN_ServiceInitialisationType&);
00088     ServiceInitialisationType (const char iType);
00092     ServiceInitialisationType (const std::string& iType);
00096     ServiceInitialisationType (const ServiceInitialisationType&);
00097
00098   private:
00102     ServiceInitialisationType();
00103
00104
00105   private:
00109     static const std::string _labels[LAST_VALUE];
00113     static const char _typeLabels[LAST_VALUE];
00114
00115   private:
00116     // //////// Attributes /////////
00120     EN_ServiceInitialisationType _type;
00121   };
00122
00123 }
00124 #endif // __STDAIR_BAS_SERVICEINITIALISATIONTYPE_HPP
```

35.111 stdair/basic/StructAbstract.hpp File Reference

```
#include <iosfwd>
#include <string>
```

Classes

- struct stdair::StructAbstract

  Base class for the light structures.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Functions

- template<class charT , class traits >
  std::basic_ostream< charT, traits > & operator<< (std::basic_ostream< charT, traits > &ioOut, const stdair::StructAbstract &iStruct)
- template<class charT , class traits >
  std::basic_istream< charT, traits > & operator>> (std::basic_istream< charT, traits > &ioIn, stdair::StructAbstract &ioStruct)

35.111.1 Function Documentation

35.111.1.1 template<class charT , class traits > std::basic_ostream<charT, traits>& operator<< (std::basic_ostream< charT, traits > & *ioOut,* const stdair::StructAbstract & *iStruct*) [inline]

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (p653) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 61 of file StructAbstract.hpp.

References stdair::StructAbstract::toStream().

35.111.1.2 template<class charT , class traits > std::basic_istream<charT, traits>& operator>> (std::basic_istream< charT, traits > & *ioIn,* stdair::StructAbstract & *ioStruct*) [inline]

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (pp655-657) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 89 of file StructAbstract.hpp.

References stdair::StructAbstract::fromStream().

35.112 StructAbstract.hpp

```
00001 #ifndef __STDAIR_BAS_STRUCTABSTRACT_HPP
00002 #define __STDAIR_BAS_STRUCTABSTRACT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010
```

```
00011 namespace stdair {
00012
00016   struct StructAbstract {
00017   public:
00018
00022     virtual ~StructAbstract() {}
00023
00029     void toStream (std::ostream& ioOut) const {
00030       ioOut << describe();
00031     }
00032
00038     virtual void fromStream (std::istream& ioIn) {}
00039
00043     virtual const std::string describe() const = 0;
00044
00045   protected:
00049     StructAbstract() {}
00050   };
00051 }
00052
00058 template <class charT, class traits>
00059 inline
00060 std::basic_ostream<charT, traits>&
00061 operator<< (std::basic_ostream<charT, traits>& ioOut,
00062             const stdair::StructAbstract& iStruct) {
00068   std::basic_ostringstream<charT,traits> ostr;
00069   ostr.copyfmt (ioOut);
00070   ostr.width (0);
00071
00072   // Fill string stream
00073   iStruct.toStream (ostr);
00074
00075   // Print string stream
00076   ioOut << ostr.str();
00077
00078   return ioOut;
00079 }
00080
00086 template <class charT, class traits>
00087 inline
00088 std::basic_istream<charT, traits>&
00089 operator>> (std::basic_istream<charT, traits>& ioIn,
00090             stdair::StructAbstract& ioStruct) {
00091   // Fill the Structure object with the input stream.
00092   ioStruct.fromStream (ioIn);
00093   return ioIn;
00094
00095 }
00096 #endif // __STDAIR_BAS_STRUCTABSTRACT_HPP
```

35.113 stdair/basic/YieldRange.cpp File Reference

```
#include <limits>
#include <sstream>
#include <stdair/basic/YieldRange.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.114 YieldRange.cpp

```
00001 // //////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <limits>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/YieldRange.hpp>
00009
00010 namespace stdair {
00011
00012   // //////////////////////////////////////////////////////////////////////
00013   YieldRange::YieldRange() :
00014     _upperYield (std::numeric_limits<Yield_T>::max()),
00015     _averageYield (std::numeric_limits<Yield_T>::max()),
00016     _lowerYield (std::numeric_limits<Yield_T>::min()) {
00017   }
00018
00019   // //////////////////////////////////////////////////////////////////////
00020   YieldRange::YieldRange (const YieldRange& iYieldRange) :
00021     _upperYield (iYieldRange.getUpperYield()),
00022     _averageYield (iYieldRange.getAverageYield()),
00023     _lowerYield (std::numeric_limits<Yield_T>::min()) {
00024   }
00025
00026   // //////////////////////////////////////////////////////////////////////
00027   YieldRange::YieldRange (const Yield_T iUpperYield) :
00028     _upperYield (iUpperYield), _averageYield (iUpperYield),
00029     _lowerYield (iUpperYield) {
00030   }
00031
00032   // //////////////////////////////////////////////////////////////////////
00033   YieldRange::YieldRange (const Yield_T iUpperYield,
00034                           const Yield_T iAverageYield) :
00035     _upperYield (iUpperYield), _averageYield (iAverageYield),
00036     _lowerYield (std::numeric_limits<Yield_T>::min()) {
00037   }
00038
00039   // //////////////////////////////////////////////////////////////////////
00040   YieldRange::YieldRange (const Yield_T iUpperYield,
00041                           const Yield_T iAverageYield,
00042                           const Yield_T iLowerYield) :
00043     _upperYield (iUpperYield), _averageYield (iAverageYield),
00044     _lowerYield (iLowerYield) {
00045   }
00046
00047   // //////////////////////////////////////////////////////////////////////
00048   YieldRange::~YieldRange() {
00049   }
00050
00051   // //////////////////////////////////////////////////////////////////////
00052   void YieldRange::toStream (std::ostream& ioOut) const {
00053     ioOut << _averageYield << "([" << _lowerYield << ", "
```

```
00054           << _upperYield << "])";
00055   }
00056
00057   // ////////////////////////////////////////////////////////////////////
00058   void YieldRange::fromStream (std::istream& ioIn) {
00059   }
00060
00061   // ////////////////////////////////////////////////////////////////////
00062   const std::string YieldRange::describe() const {
00063     std::ostringstream oStr;
00064
00065     return oStr.str();
00066   }
00067
00068 }
```

35.115 stdair/basic/YieldRange.hpp File Reference

```
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
```

Classes

- class stdair::YieldRange

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.116 YieldRange.hpp

```
00001 #ifndef __STDAIR_BAS_YIELDRANGE_HPP
00002 #define __STDAIR_BAS_YIELDRANGE_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/stdair_inventory_types.hpp>
00009 #include <stdair/basic/StructAbstract.hpp>
00010
00011 namespace stdair {
00012
00023   class YieldRange : public StructAbstract {
00024   public:
00026     YieldRange ();
00027     YieldRange (const YieldRange&);
00028     YieldRange (const Yield_T iUpperYield);
00029     YieldRange (const Yield_T iUpperYield, const Yield_T iAverageYield);
00030     YieldRange (const Yield_T iUpperYield, const Yield_T iAverageYield,
00031                 const Yield_T iLowerYield);
00032
```

```
00034     virtual ~YieldRange();
00035
00036
00037     // ////////////// Getters ////////////
00039     Yield_T getUpperYield() const {
00040       return _upperYield;
00041     }
00043     Yield_T getAverageYield() const {
00044       return _averageYield;
00045     }
00047     Yield_T getLowerYield() const {
00048       return _lowerYield;
00049     }
00050
00051     // //////// Setters /////////
00053     void setUpperYield (const Yield_T iUpperYield) {
00054       _upperYield = iUpperYield;
00055     }
00057     void setAverageYield (const Yield_T iAverageYield) {
00058       _averageYield = iAverageYield;
00059     }
00061     void setLowerYield (const Yield_T iLowerYield) {
00062       _lowerYield = iLowerYield;
00063     }
00064
00065
00066     // ///////// Display methods ////////
00069     void toStream (std::ostream&) const;
00070
00073     void fromStream (std::istream&);
00074
00076     const std::string describe() const;
00077
00078   private:
00079     // ////////// Attributes /////////
00081     Yield_T _upperYield;
00082
00084     Yield_T _averageYield;
00085
00087     Yield_T _lowerYield;
00088   };
00089 }
00090 #endif // __STDAIR_BAS_YIELDRANGE_HPP
```

35.117 stdair/bom/AirlineClassList.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/bom/AirlineClassList.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.118 AirlineClassList.cpp

```
00001 // //////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 #include <stdair/service/Logger.hpp>
00014 #include <stdair/bom/AirlineClassList.hpp>
00015
00016 namespace stdair {
00017
00018   // //////////////////////////////////////////////////////////////////////
00019   AirlineClassList::AirlineClassList()
00020     : _key (DEFAULT_AIRLINE_CODE_LIST, DEFAULT_CLASS_CODE_LIST),
00021       _parent (NULL)  {
00022     assert (false);
00023   }
00024
00025   // //////////////////////////////////////////////////////////////////////
00026   AirlineClassList::AirlineClassList (const AirlineClassList& iACL)
00027     : _key (iACL._key), _parent (NULL)  {
00028     assert (false);
00029   }
00030
00031   // //////////////////////////////////////////////////////////////////////
00032   AirlineClassList::AirlineClassList (const Key_T& iKey)
00033     : _key (iKey), _parent (NULL)  {
00034   }
00035
00036   // //////////////////////////////////////////////////////////////////////
00037   AirlineClassList::~AirlineClassList() {
00038   }
00039
00040   // //////////////////////////////////////////////////////////////////////
00041   std::string AirlineClassList::toString() const {
00042     std::ostringstream oStr;
00043     oStr << describeKey() << ", " << _yield <<  ", " << _fare;
00044     return oStr.str();
00045   }
00046
00047   // //////////////////////////////////////////////////////////////////////
00048   void AirlineClassList::serialisationImplementationExport() const {
00049     std::ostringstream oStr;
00050     boost::archive::text_oarchive oa (oStr);
00051     oa << *this;
00052   }
00053
```

```
00054   // ////////////////////////////////////////////////////////////////////
00055   void AirlineClassList::serialisationImplementationImport() {
00056     std::istringstream iStr;
00057     boost::archive::text_iarchive ia (iStr);
00058     ia >> *this;
00059   }
00060
00061   // ////////////////////////////////////////////////////////////////////
00062   template<class Archive>
00063   void AirlineClassList::serialize (Archive& ioArchive,
00064                                     const unsigned int iFileVersion) {
00065     ioArchive & _key & _yield & _fare;
00066   }
00067
00068 }
00069
00070
00071
```

35.119 stdair/bom/AirlineClassList.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/AirlineClassListKey.hpp>
#include <stdair/bom/AirlineClassListTypes.hpp>
```

Classes

- class stdair::AirlineClassList

  Class representing the actual attributes for a segment-features.

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.120 AirlineClassList.hpp

```
00001 #ifndef __STDAIR_BOM_AIRLINECLASSLIST_HPP
00002 #define __STDAIR_BOM_AIRLINECLASSLIST_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STL
```

```
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/bom/BomAbstract.hpp>
00012 #include <stdair/bom/AirlineClassListKey.hpp>
00013 #include <stdair/bom/AirlineClassListTypes.hpp>
00014
00016 namespace boost {
00017   namespace serialization {
00018     class access;
00019   }
00020 }
00021
00022 namespace stdair {
00023
00027   class AirlineClassList : public BomAbstract {
00028     template <typename BOM> friend class FacBom;
00029     friend class FacBomManager;
00030     friend class boost::serialization::access;
00031
00032   public:
00033     // ////////// Type definitions ////////////
00037     typedef AirlineClassListKey Key_T;
00038
00039
00040   public:
00041     // ////////// Getters ////////////
00043     const Key_T& getKey() const {
00044       return _key;
00045     }
00046
00048     BomAbstract* const getParent() const {
00049       return _parent;
00050     }
00051
00053     const AirlineCodeList_T& getAirlineCodeList() const {
00054       return _key.getAirlineCodeList();
00055     }
00056
00058     const ClassList_StringList_T& getClassCodeList() const {
00059       return _key.getClassCodeList();
00060     }
00061
00063     const  HolderMap_T& getHolderMap() const {
00064       return _holderMap;
00065     }
00066
00068     const stdair::Yield_T& getYield() const {
00069       return _yield;
00070     }
00071
00073     const stdair::Fare_T& getFare() const {
00074       return _fare;
00075     }
00076
00077   public:
00078     // ////////// Setters //////////////
00079     void setYield (const Yield_T& iYield) {
00080       _yield = iYield;
00081     }
00082
00083     void setFare (const Fare_T& iFare) {
```

```
00084       _fare = iFare;
00085     }
00086
00087   public:
00088     // ////////// Display support methods /////////
00094     void toStream (std::ostream& ioOut) const {
00095       ioOut << toString();
00096     }
00097
00103     void fromStream (std::istream& ioIn) {
00104     }
00105
00109     std::string toString() const;
00110
00114     const std::string describeKey() const {
00115       return _key.toString();
00116     }
00117
00118
00119   public:
00120     // ////////// (Boost) Serialisation support methods /////////
00124     template<class Archive>
00125     void serialize (Archive& ar, const unsigned int iFileVersion);
00126
00127   private:
00132     void serialisationImplementationExport() const;
00133     void serialisationImplementationImport();
00134
00135
00136   protected:
00137     // ////////// Constructors and destructors /////////
00141     AirlineClassList (const Key_T&);
00145     virtual ~AirlineClassList();
00146
00147   private:
00151     AirlineClassList();
00152
00156     AirlineClassList (const AirlineClassList&);
00157
00158
00159   protected:
00160     // ////////// Attributes /////////
00164     Key_T _key;
00165
00169     BomAbstract* _parent;
00170
00174     HolderMap_T _holderMap;
00175
00176     /*
00177      * Yield value.
00178      */
00179     Yield_T _yield;
00180
00181     /*
00182      * Fare value.
00183      */
00184     Fare_T _fare;
00185   };
00186
00187 }
00188 #endif // __STDAIR_BOM_AIRLINECLASSLIST_HPP
00189
```

35.121 stdair/bom/AirlineClassListKey.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/AirlineClassListKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Functions

- template void stdair::AirlineClassListKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void stdair::AirlineClassListKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)

35.122 AirlineClassListKey.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_BomDisplay.hpp>
00013 #include <stdair/bom/AirlineClassListKey.hpp>
00014
00015 namespace stdair {
00016
00017   // //////////////////////////////////////////////////////////////////
00018   AirlineClassListKey::AirlineClassListKey() {
00019     assert (false);
00020   }
00021
00022   // //////////////////////////////////////////////////////////////////
00023   AirlineClassListKey::
00024   AirlineClassListKey (const AirlineCodeList_T& iAirlineCodeList,
00025                        const ClassList_StringList_T& iClassCodeList)
00026     : _airlineCodeList (iAirlineCodeList), _classCodeList (iClassCodeList) {
```

```
00027   }
00028
00029   // ////////////////////////////////////////////////////////////////////
00030   AirlineClassListKey::AirlineClassListKey (const AirlineClassListKey& iKey)
00031     : _airlineCodeList (iKey._airlineCodeList),
00032       _classCodeList (iKey._classCodeList) {
00033   }
00034
00035   // ////////////////////////////////////////////////////////////////////
00036   AirlineClassListKey::~AirlineClassListKey() {
00037   }
00038
00039   // ////////////////////////////////////////////////////////////////////
00040   void AirlineClassListKey::toStream (std::ostream& ioOut) const {
00041     ioOut << "AirlineClassListKey: " << toString() << std::endl;
00042   }
00043
00044   // ////////////////////////////////////////////////////////////////////
00045   void AirlineClassListKey::fromStream (std::istream& ioIn) {
00046   }
00047
00048   // ////////////////////////////////////////////////////////////////////
00049   const std::string AirlineClassListKey::toString() const {
00050     std::ostringstream oStr;
00051     assert (_airlineCodeList.size() == _classCodeList.size());
00052
00053     unsigned short idx = 0;
00054     AirlineCodeList_T::const_iterator itAirlineCode = _airlineCodeList.begin();
00055     for (ClassList_StringList_T::const_iterator itClassCode =
00056            _classCodeList.begin(); itClassCode != _classCodeList.end();
00057          ++itClassCode, ++itAirlineCode, ++idx) {
00058       if (idx != 0) {
00059         oStr << DEFAULT_KEY_SUB_FLD_DELIMITER << " ";
00060       }
00061
00062       const AirlineCode_T& lAirlineCode = *itAirlineCode;
00063       const ClassCode_T& lClassCode = *itClassCode;
00064       oStr << lAirlineCode << " " << lClassCode;
00065     }
00066
00067     return oStr.str();
00068   }
00069
00070   // ////////////////////////////////////////////////////////////////////
00071   void AirlineClassListKey::serialisationImplementationExport() const {
00072     std::ostringstream oStr;
00073     boost::archive::text_oarchive oa (oStr);
00074     oa << *this;
00075   }
00076
00077   // ////////////////////////////////////////////////////////////////////
00078   void AirlineClassListKey::serialisationImplementationImport() {
00079     std::istringstream iStr;
00080     boost::archive::text_iarchive ia (iStr);
00081     ia >> *this;
00082   }
00083
00084   // ////////////////////////////////////////////////////////////////////
00085   template<class Archive>
00086   void AirlineClassListKey::serialize (Archive& ioArchive,
00087                                        const unsigned int iFileVersion) {
00096     AirlineCodeList_T::const_iterator itAirlineCode = _airlineCodeList.begin();
```

```
00097     for (ClassList_StringList_T::const_iterator itClassCode =
00098            _classCodeList.begin(); itClassCode != _classCodeList.end();
00099          ++itClassCode, ++itAirlineCode) {
00100       AirlineCode_T lAirlineCode = *itAirlineCode;
00101       ClassCode_T lClassCode = *itClassCode;
00102 
00103       ioArchive & lAirlineCode & lClassCode;
00104     }
00105   }
00106 
00107   // //////////////////////////////////////////////////////////////////
00108   // Explicit template instantiation
00109   namespace ba = boost::archive;
00110   template void AirlineClassListKey::
00111   serialize<ba::text_oarchive> (ba::text_oarchive&, unsigned int);
00112   template void AirlineClassListKey::
00113   serialize<ba::text_iarchive> (ba::text_iarchive&, unsigned int);
00114   // //////////////////////////////////////////////////////////////////
00115 
00116 }
```

35.123 stdair/bom/AirlineClassListKey.hpp File Reference

```
#include <iosfwd>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

Classes

- struct stdair::AirlineClassListKey

  Key of airport-pair.

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.124 AirlineClassListKey.hpp

```
00001 #ifndef __STDAIR_BOM_AIRLINECLASSLISTKEY_HPP
00002 #define __STDAIR_BOM_AIRLINECLASSLISTKEY_HPP
00003 
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
```

```
00009 // StdAir
00010 #include <stdair/stdair_inventory_types.hpp>
00011 #include <stdair/bom/KeyAbstract.hpp>
00012
00014 namespace boost {
00015   namespace serialization {
00016     class access;
00017   }
00018 }
00019
00020 namespace stdair  {
00021
00025   struct AirlineClassListKey : public KeyAbstract {
00026     friend class boost::serialization::access;
00027
00028     // ////////// Constructors and destructors //////////
00029   private:
00033     AirlineClassListKey();
00034
00035   public:
00039     AirlineClassListKey (const AirlineCodeList_T&,
00040                          const ClassList_StringList_T&);
00041
00045     AirlineClassListKey (const AirlineClassListKey&);
00046
00050     ~AirlineClassListKey();
00051
00052
00053   public:
00054     // ////////// Getters //////////
00056     const AirlineCodeList_T& getAirlineCodeList() const {
00057       return _airlineCodeList;
00058     }
00059
00061     const ClassList_StringList_T& getClassCodeList() const {
00062       return _classCodeList;
00063     }
00064
00065
00066   public:
00067     // ////////// Display support methods /////////
00073     void toStream (std::ostream& ioOut) const;
00074
00080     void fromStream (std::istream& ioIn);
00081
00091     const std::string toString() const;
00092
00093
00094   public:
00095     // ////////// (Boost) Serialisation support methods /////////
00099     template<class Archive>
00100     void serialize (Archive& ar, const unsigned int iFileVersion);
00101
00102   private:
00107     void serialisationImplementationExport() const;
00108     void serialisationImplementationImport();
00109
00110
00111   private:
00112     // ////////////////// Attributes ///////////////
00116     AirlineCodeList_T _airlineCodeList;
00117
```

```
00121     ClassList_StringList_T _classCodeList;
00122   };
00123
00124 }
00125 #endif // __STDAIR_BOM_AIRLINECLASSLISTKEY_HPP
```

35.125 stdair/bom/AirlineClassListTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< AirlineClassList * > stdair::AirlineClassListList_T
- typedef std::map< const MapKey_T, AirlineClassList * > stdair::AirlineClassListMap_T
- typedef std::pair< MapKey_T, AirlineClassList * > stdair::AirlineClassListWithKey_T
- typedef std::list< AirlineClassListWithKey_T > stdair::AirlineClassListDetailedList_T

35.126 AirlineClassListTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_AIRLINECLASSLISTTYPES_HPP
00003 #define __STDAIR_BOM_AIRLINECLASSLISTTYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // STDAIR
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations.
00017   class AirlineClassList;
00018
00020   typedef std::list<AirlineClassList*> AirlineClassListList_T;
00021
00023   typedef std::map<const MapKey_T, AirlineClassList*> AirlineClassListMap_T;
```

```
00024
00026   typedef std::pair<MapKey_T, AirlineClassList*> AirlineClassListWithKey_T;
00027   typedef std::list<AirlineClassListWithKey_T> AirlineClassListDetailedList_T;
00028 }
00029 #endif // __STDAIR_BOM_AIRLINECLASSLISTTYPES_HPP
```

35.127 stdair/bom/AirlineFeature.cpp File Reference

```
#include <cassert>
#include <stdair/stdair_types.hpp>
#include <stdair/bom/AirlineFeature.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.128 AirlineFeature.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/stdair_types.hpp>
00008 #include <stdair/bom/AirlineFeature.hpp>
00009
00010 namespace stdair {
00011
00012   // ////////////////////////////////////////////////////////////////////
00013   AirlineFeature::AirlineFeature (const Key_T& iKey) : _key (iKey) {
00014   }
00015
00016   // ////////////////////////////////////////////////////////////////////
00017   AirlineFeature::~AirlineFeature () {
00018   }
00019
00020   // ////////////////////////////////////////////////////////////////////
00021   void AirlineFeature::init (const ForecasterMode_T& iForecastMode,
00022                              const HistoricalDataLimit_T& iHistoricalDataLimit,
00023                              const ControlMode_T& iControlMode) {
00024     _forecasterMode = iForecastMode;
00025     _historicalDataLimit = iHistoricalDataLimit;
00026     _controlMode = iControlMode;
00027   }
00028
00029   // ////////////////////////////////////////////////////////////////////
00030   std::string AirlineFeature::toString() const {
00031     std::ostringstream ostr;
00032     ostr << describeKey()
00033          << ", " << _forecasterMode
00034          << ", " << _historicalDataLimit
00035          << ", " << _controlMode;
```

```
00036     return ostr.str();
00037   }
00038
00039 }
00040
```

35.129 stdair/bom/AirlineFeature.hpp File Reference

```
#include <stdair/stdair_rm_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/AirlineFeatureKey.hpp>
#include <stdair/bom/AirlineFeatureTypes.hpp>
```

Classes

- class stdair::AirlineFeature

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.130 AirlineFeature.hpp

```
00001 #ifndef __STDAIR_BOM_AIRLINEFEATURE_HPP
00002 #define __STDAIR_BOM_AIRLINEFEATURE_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_rm_types.hpp>
00009 #include <stdair/bom/BomAbstract.hpp>
00010 #include <stdair/bom/AirlineFeatureKey.hpp>
00011 #include <stdair/bom/AirlineFeatureTypes.hpp>
00012
00013 namespace stdair {
00014
00016   class AirlineFeature : public BomAbstract {
00017     template <typename BOM> friend class FacBom;
00018
00019   public:
00020     // Type definitions.
00022     typedef AirlineFeatureKey Key_T;
00023
00024   public:
00025     // ////////// Getters ////////////
00027     const Key_T& getKey() const {
00028       return _key;
00029     }
00030
```

```
00031   public:
00032     // ////////////// Setters //////////
00034     void init (const ForecasterMode_T&, const HistoricalDataLimit_T&,
00035                const ControlMode_T&);
00036
00037   public:
00038     // ////////////// Display support methods /////////
00041     void toStream (std::ostream& ioOut) const { ioOut << toString(); }
00042
00045     void fromStream (std::istream& ioIn) { }
00046
00048     std::string toString() const;
00049
00051     const std::string describeKey() const { return _key.toString(); }
00052
00053   protected:
00055     AirlineFeature ();
00056     AirlineFeature (const AirlineFeature&);
00057     AirlineFeature (const Key_T&);
00059     virtual ~AirlineFeature();
00060
00061   protected:
00062     // Attributes
00064     Key_T _key;
00065
00067     ForecasterMode_T _forecasterMode;
00068
00070     HistoricalDataLimit_T _historicalDataLimit;
00071
00073     ControlMode_T _controlMode;
00074   };
00075
00076 }
00077 #endif // __STDAIR_BOM_AIRLINEFEATURE_HPP
00078
```

35.131 stdair/bom/AirlineFeatureKey.cpp File Reference

```
#include <sstream>
#include <stdair/bom/AirlineFeatureKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.132 AirlineFeatureKey.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <sstream>
00006 // StdAir
00007 #include <stdair/bom/AirlineFeatureKey.hpp>
```

```
00008
00009 namespace stdair {
00010
00011   // ////////////////////////////////////////////////////////////////////
00012   AirlineFeatureKey::AirlineFeatureKey (const AirlineCode_T& iAirlineCode)
00013     : _airlineCode (iAirlineCode) {
00014   }
00015
00016   // ////////////////////////////////////////////////////////////////////
00017   AirlineFeatureKey::~AirlineFeatureKey () {
00018   }
00019
00020   // ////////////////////////////////////////////////////////////////////
00021   void AirlineFeatureKey::toStream (std::ostream& ioOut) const {
00022     ioOut << "AirlineFeatureKey: " << toString() << std::endl;
00023   }
00024
00025   // ////////////////////////////////////////////////////////////////////
00026   void AirlineFeatureKey::fromStream (std::istream& ioIn) {
00027   }
00028
00029   // ////////////////////////////////////////////////////////////////////
00030   const std::string AirlineFeatureKey::toString() const {
00031     std::ostringstream oStr;
00032     oStr << _airlineCode;
00033     return oStr.str();
00034   }
00035
00036 }
```

35.133 stdair/bom/AirlineFeatureKey.hpp File Reference

```
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

Classes

- struct stdair::AirlineFeatureKey

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.134 AirlineFeatureKey.hpp

```
00001 #ifndef __STDAIR_BOM_AIRLINEFEATUREKEY_HPP
00002 #define __STDAIR_BOM_AIRLINEFEATUREKEY_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
```

```
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_inventory_types.hpp>
00011 #include <stdair/bom/KeyAbstract.hpp>
00012
00013 namespace stdair {
00015   struct AirlineFeatureKey : public KeyAbstract {
00016
00017   public:
00018     // ////////// Construction //////////
00020     AirlineFeatureKey (const AirlineCode_T& iAirlineCode);
00021
00023     ~AirlineFeatureKey ();
00024
00025     // ////////// Getters //////////
00027     const AirlineCode_T& getAirlineCode() const { return _airlineCode; }
00028
00029     // ////////// Display support methods /////////
00032     void toStream (std::ostream& ioOut) const;
00033
00036     void fromStream (std::istream& ioIn);
00037
00043     const std::string toString() const;
00044
00045   private:
00046     // Attributes
00048     AirlineCode_T _airlineCode;
00049   };
00050
00051 }
00052 #endif // __STDAIR_BOM_AIRLINEFEATUREKEY_HPP
```

35.135 stdair/bom/AirlineFeatureTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< AirlineFeature * > stdair::AirlineFeatureList_T
- typedef std::map< const MapKey_T, AirlineFeature * > stdair::AirlineFeatureMap_T

35.136 AirlineFeatureTypes.hpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_AIRLINEFEATURETYPES_HPP
00003 #define __STDAIR_BOM_AIRLINEFEATURETYPES_HPP
00004
00005 // //////////////////////////////////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations.
00017   class AirlineFeature;
00018
00020   typedef std::list<AirlineFeature*> AirlineFeatureList_T;
00021
00023   typedef std::map<const MapKey_T, AirlineFeature*> AirlineFeatureMap_T;
00024
00025 }
00026 #endif // __STDAIR_BOM_AIRLINEFEATURETYPES_HPP
00027
```

35.137 stdair/bom/AirlineStruct.cpp File Reference

```
#include <cassert>
#include <istream>
#include <ostream>
#include <sstream>
#include <stdair/bom/AirlineStruct.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.138 AirlineStruct.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <istream>
00007 #include <ostream>
00008 #include <sstream>
00009 // StdAir
```

```
00010 #include <stdair/bom/AirlineStruct.hpp>
00011
00012 namespace stdair {
00013
00014   // ////////////////////////////////////////////////////////////////////
00015   AirlineStruct::AirlineStruct () {
00016   }
00017
00018   // ////////////////////////////////////////////////////////////////////
00019   AirlineStruct::AirlineStruct (const AirlineStruct& iAirlineStruct)
00020     : _code (iAirlineStruct._code), _name (iAirlineStruct._name) {
00021   }
00022
00023   // ////////////////////////////////////////////////////////////////////
00024   AirlineStruct::AirlineStruct (const AirlineCode_T& iAirlineCode,
00025                                 const std::string& iAirlineName)
00026     : _code (iAirlineCode), _name (iAirlineName) {
00027   }
00028
00029   // ////////////////////////////////////////////////////////////////////
00030   AirlineStruct::~AirlineStruct () {
00031   }
00032
00033   // ////////////////////////////////////////////////////////////////////
00034   void AirlineStruct::toStream (std::ostream& ioOut) const {
00035     ioOut << describe();
00036   }
00037
00038   // ////////////////////////////////////////////////////////////////////
00039   void AirlineStruct::fromStream (std::istream& ioIn) {
00040   }
00041
00042   // ////////////////////////////////////////////////////////////////////
00043   const std::string AirlineStruct::describe() const {
00044     std::ostringstream oStr;
00045     oStr << _code << " " << _name;
00046     return oStr.str();
00047   }
00048
00049 }
```

35.139 stdair/bom/AirlineStruct.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <vector>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
```

Classes

- struct stdair::AirlineStruct

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.140 AirlineStruct.hpp

```
00001 #ifndef __STDAIR_BOM_AIRLINESTRUCT_HPP
00002 #define __STDAIR_BOM_AIRLINESTRUCT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 #include <vector>
00011 // StdAir
00012 #include <stdair/stdair_inventory_types.hpp>
00013 #include <stdair/basic/StructAbstract.hpp>
00014
00015 namespace stdair {
00016
00018   struct AirlineStruct : public StructAbstract {
00019   public:
00020     // ////////// Getters ///////////////
00022     const AirlineCode_T& getAirlineCode() const {
00023       return _code;
00024     }
00025
00027     const std::string& getAirlineName() const {
00028       return _name;
00029     }
00030
00031     // ////////// Setters ///////////////
00033     void setAirlineCode (const AirlineCode_T& iAirlineCode) {
00034       _code = iAirlineCode;
00035     }
00036
00038     void setAirlineName (const std::string& iAirlineName) {
00039       _name = iAirlineName;
00040     }
00041
00042
00043   public:
00044     // ////////// Display support method /////////////
00047     void toStream (std::ostream& ioOut) const;
00048
00051     void fromStream (std::istream& ioIn);
00052
00054     const std::string describe() const;
00055
00056
00057   public:
00058     // ////////// Constructors & Destructor ///////////////
00060     AirlineStruct (const AirlineCode_T&, const std::string& iAirlineName);
00062     AirlineStruct ();
00064     AirlineStruct (const AirlineStruct&);
00066     ~AirlineStruct ();
00067
```

```
00068
00069   private:
00070     // ////////////////////// Attributes ///////////////////////
00072     AirlineCode_T _code;
00073
00075     std::string _name;
00076   };
00077
00078 }
00079 #endif // __STDAIR_BOM_AIRLINESTRUCT_HPP
```

35.141 stdair/bom/AirportPair.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/bom/AirportPair.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.142 AirportPair.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Inventory.hpp>
00009 #include <stdair/service/Logger.hpp>
00010 #include <stdair/bom/AirportPair.hpp>
00011
00012 namespace stdair {
00013
00014   // ////////////////////////////////////////////////////////////////////
00015   AirportPair::AirportPair()
00016     : _key (DEFAULT_ORIGIN, DEFAULT_DESTINATION),
00017       _parent (NULL)  {
00018     // That constructor is used by the serialisation process
00019   }
00020
00021   // ////////////////////////////////////////////////////////////////////
00022   AirportPair::AirportPair (const AirportPair& iAirportPair)
00023     : _key (iAirportPair.getKey()), _parent (NULL)  {
00024     assert (false);
00025   }
00026
```

```
00027   // ////////////////////////////////////////////////////////////////////
00028   AirportPair::AirportPair (const Key_T& iKey)
00029     : _key (iKey), _parent (NULL)  {
00030   }
00031
00032   // ////////////////////////////////////////////////////////////////////
00033   AirportPair::~AirportPair () {
00034   }
00035
00036   // ////////////////////////////////////////////////////////////////////
00037   std::string AirportPair::toString() const {
00038     std::ostringstream oStr;
00039     oStr << describeKey();
00040     return oStr.str();
00041   }
00042 }
00043
00044
```

35.143 stdair/bom/AirportPair.hpp File Reference

```
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/AirportPairKey.hpp>
#include <stdair/bom/AirportPairTypes.hpp>
```

Classes

- class stdair::AirportPair

  Class representing the actual attributes for an airport-pair.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.144 AirportPair.hpp

```
00001 #ifndef __STDAIR_BOM_AIRPORTPAIR_HPP
00002 #define __STDAIR_BOM_AIRPORTPAIR_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/BomAbstract.hpp>
00009 #include <stdair/bom/AirportPairKey.hpp>
00010 #include <stdair/bom/AirportPairTypes.hpp>
00011
00012 // Forward declaration
00013 namespace stdair {
00014
00018   class AirportPair : public BomAbstract {
```

```
00019     template <typename BOM> friend class FacBom;
00020     friend class FacBomManager;
00021
00022   public:
00023     // ////////////// Type definitions ///////////////
00027     typedef AirportPairKey Key_T;
00028
00029   public:
00030     // ////////////// Display support methods /////////
00036     void toStream (std::ostream& ioOut) const {
00037       ioOut << toString();
00038     }
00039
00045     void fromStream (std::istream& ioIn) {
00046     }
00047
00051     std::string toString() const;
00052
00056     const std::string describeKey() const {
00057       return _key.toString();
00058     }
00059
00060   public:
00061     // ////////// Getters ////////////
00065     const Key_T& getKey() const {
00066       return _key;
00067     }
00068
00072     const AirportCode_T& getBoardingPoint() const {
00073       return _key.getBoardingPoint();
00074     }
00075
00079     const AirportCode_T& getOffPoint() const {
00080       return _key.getOffPoint();
00081     }
00082
00086     BomAbstract* const getParent() const {
00087       return _parent;
00088     }
00089
00093     const HolderMap_T& getHolderMap() const {
00094       return _holderMap;
00095     }
00096
00097   protected:
00098     // ////////// Constructors and destructors /////////
00102     AirportPair (const Key_T&);
00106     virtual ~AirportPair();
00107
00108   private:
00112     AirportPair();
00116     AirportPair (const AirportPair&);
00117
00118   protected:
00119     // ////////////// Attributes /////////////
00123     Key_T _key;
00124
00128     BomAbstract* _parent;
00129
00133     HolderMap_T _holderMap;
00134
00135   };
```

```
00136
00137 }
00138 #endif // __STDAIR_BOM_AIRPORTPAIR_HPP
00139
```

35.145 stdair/bom/AirportPairKey.cpp File Reference

```
#include <ostream>
#include <sstream>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/AirportPairKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.146 AirportPairKey.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <ostream>
00006 #include <sstream>
00007 // STDAIR
00008 #include <stdair/basic/BasConst_BomDisplay.hpp>
00009 #include <stdair/basic/BasConst_Inventory.hpp>
00010 #include <stdair/bom/AirportPairKey.hpp>
00011
00012 namespace stdair {
00013
00014   // ////////////////////////////////////////////////////////////////////
00015   AirportPairKey::AirportPairKey ()
00016     : _boardingPoint (DEFAULT_ORIGIN),
00017       _offPoint (DEFAULT_DESTINATION) {
00018     assert (false);
00019   }
00020
00021   // ////////////////////////////////////////////////////////////////////
00022   AirportPairKey::AirportPairKey (const AirportCode_T& iBoardingPoint,
00023                                   const AirportCode_T& iOffPoint)
00024     : _boardingPoint (iBoardingPoint), _offPoint (iOffPoint) {
00025   }
00026
00027   // ////////////////////////////////////////////////////////////////////
00028   AirportPairKey::AirportPairKey (const AirportPairKey& iKey)
00029     : _boardingPoint (iKey._boardingPoint),
00030       _offPoint (iKey._offPoint) {
00031   }
00032
```

```
00033   // ////////////////////////////////////////////////////////////////////
00034   AirportPairKey::~AirportPairKey () {
00035   }
00036
00037   // ////////////////////////////////////////////////////////////////////
00038   void AirportPairKey::toStream (std::ostream& ioOut) const {
00039     ioOut << "AirportPairKey: " << toString() << std::endl;
00040   }
00041
00042   // ////////////////////////////////////////////////////////////////////
00043   void AirportPairKey::fromStream (std::istream& ioIn) {
00044   }
00045
00046   // ////////////////////////////////////////////////////////////////////
00047   const std::string AirportPairKey::toString() const {
00048     std::ostringstream oStr;
00049     oStr << _boardingPoint << DEFAULT_KEY_SUB_FLD_DELIMITER
00050          << " " << _offPoint;
00051     return oStr.str();
00052   }
00053
00054 }
```

35.147 stdair/bom/AirportPairKey.hpp File Reference

```
#include <stdair/bom/KeyAbstract.hpp>
#include <stdair/stdair_basic_types.hpp>
```

Classes

- struct stdair::AirportPairKey

  Key of airport-pair.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.148 AirportPairKey.hpp

```
00001 #ifndef __STDAIR_BOM_AIRPORTPAIRKEY_HPP
00002 #define __STDAIR_BOM_AIRPORTPAIRKEY_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/KeyAbstract.hpp>
00009 #include <stdair/stdair_basic_types.hpp>
00010
00011 namespace stdair  {
00012
```

```
00016   struct AirportPairKey : public KeyAbstract {
00017
00018   public:
00019     // ////////// Construction //////////
00021     AirportPairKey (const stdair::AirportCode_T&,
00022                     const stdair::AirportCode_T&);
00024     AirportPairKey (const AirportPairKey&);
00026     ~AirportPairKey ();
00027   private:
00029     AirportPairKey ();
00030
00031   public:
00032     // ////////// Getters //////////
00036     const stdair::AirportCode_T& getBoardingPoint() const {
00037       return _boardingPoint;
00038     }
00039
00043     const stdair::AirportCode_T& getOffPoint() const {
00044       return _offPoint;
00045     }
00046
00047     // ////////// Display support methods /////////
00053     void toStream (std::ostream& ioOut) const;
00054
00060     void fromStream (std::istream& ioIn);
00061
00067     const std::string toString() const;
00068
00069   private:
00070     // ////////////////// Attributes ////////////////////
00074     AirportCode_T _boardingPoint;
00075
00079     AirportCode_T _offPoint;
00080   };
00081
00082 }
00083 #endif // __SIMFQT_BOM_AIRPORTPAIRKEY_HPP
```

35.149 stdair/bom/AirportPairTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< AirportPair * > stdair::AirportPairList_T
- typedef std::map< const MapKey_T, AirportPair * > stdair::AirportPairMap_T
- typedef std::pair< MapKey_T, AirportPair * > stdair::AirportPairWithKey_T

- typedef std::list< AirportPairWithKey_T > stdair::AirportPairDetailedList_T

35.150 AirportPairTypes.hpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_AIRPORTPAIRTYPES_HPP
00003 #define __STDAIR_BOM_AIRPORTPAIRTYPES_HPP
00004
00005 // //////////////////////////////////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // STDAIR
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations.
00017   class AirportPair;
00018
00020   typedef std::list<AirportPair*> AirportPairList_T;
00021
00023   typedef std::map<const MapKey_T, AirportPair*> AirportPairMap_T;
00024
00026   typedef std::pair<MapKey_T, AirportPair*> AirportPairWithKey_T;
00027   typedef std::list<AirportPairWithKey_T> AirportPairDetailedList_T;
00028 }
00029 #endif // __STDAIR_BOM_AIRPORTPAIRTYPES_HPP
00030
```

35.151 stdair/bom/BomAbstract.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <map>
#include <typeinfo>
```

Classes

- class stdair::BomAbstract

  Base class for the Business Object Model (BOM) layer.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::map< const std::type_info *, BomAbstract * > stdair::HolderMap_T

Functions

- template<class charT , class traits >
  std::basic_ostream< charT, traits > & operator<< (std::basic_ostream< charT, traits > &ioOut, const stdair::BomAbstract &iBom)
- template<class charT , class traits >
  std::basic_istream< charT, traits > & operator>> (std::basic_istream< charT, traits > &ioIn, stdair::BomAbstract &ioBom)

35.151.1 Function Documentation

35.151.1.1 template<class charT , class traits > std::basic_ostream<charT, traits>& operator<< (std::basic_ostream< charT, traits > & *ioOut,* const stdair::BomAbstract & *iBom*) [inline]

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (p653) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 59 of file BomAbstract.hpp.

References stdair::BomAbstract::toStream().

35.151.1.2 template<class charT , class traits > std::basic_istream<charT, traits>& operator>> (std::basic_istream< charT, traits > & *ioIn,* stdair::BomAbstract & *ioBom*) [inline]

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (pp655-657) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 87 of file BomAbstract.hpp.

References stdair::BomAbstract::fromStream().

35.152 BomAbstract.hpp

```
00001
00006 #ifndef __STDAIR_BOM_BOMABSTRACT_HPP
00007 #define __STDAIR_BOM_BOMABSTRACT_HPP
00008
00009 // //////////////////////////////////////////////////////////////////////
00010 // Import section
00011 // //////////////////////////////////////////////////////////////////////
00012 // STL
00013 #include <iosfwd>
00014 #include <string>
00015 #include <map>
```

```
00016 #include <typeinfo>
00017
00018 namespace stdair {
00019
00023   class BomAbstract {
00024   public:
00025     // ////////// Display support methods /////////
00028     virtual void toStream (std::ostream& ioOut) const = 0;
00029
00032     virtual void fromStream (std::istream& ioIn) = 0;
00033
00035     virtual std::string toString() const = 0;
00036
00037
00038   protected:
00040     BomAbstract() {}
00041     BomAbstract(const BomAbstract&) {}
00042   public:
00044     virtual ~BomAbstract() {}
00045   };
00046
00047   /* Define the map of object holder type. */
00048   typedef std::map<const std::type_info*, BomAbstract*> HolderMap_T;
00049 }
00050
00056 template <class charT, class traits>
00057 inline
00058 std::basic_ostream<charT, traits>&
00059 operator<< (std::basic_ostream<charT, traits>& ioOut,
00060             const stdair::BomAbstract& iBom) {
00066   std::basic_ostringstream<charT,traits> ostr;
00067   ostr.copyfmt (ioOut);
00068   ostr.width (0);
00069
00070   // Fill string stream
00071   iBom.toStream (ostr);
00072
00073   // Print string stream
00074   ioOut << ostr.str();
00075
00076   return ioOut;
00077 }
00078
00084 template <class charT, class traits>
00085 inline
00086 std::basic_istream<charT, traits>&
00087 operator>> (std::basic_istream<charT, traits>& ioIn,
00088             stdair::BomAbstract& ioBom) {
00089   // Fill Bom object with input stream
00090   ioBom.fromStream (ioIn);
00091   return ioIn;
00092 }
00093
00094 #endif // __STDAIR_BOM_BOMABSTRACT_HPP
```

35.153 stdair/bom/BomArchive.cpp File Reference

```
#include <cassert>
#include <sstream>
```

```
#include <boost/archive/tmpdir.hpp>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/base_object.hpp>
#include <boost/serialization/utility.hpp>
#include <boost/serialization/list.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightDate.hpp>
#include <stdair/bom/LegDate.hpp>
#include <stdair/bom/SegmentDate.hpp>
#include <stdair/bom/LegCabin.hpp>
#include <stdair/bom/SegmentCabin.hpp>
#include <stdair/bom/FareFamily.hpp>
#include <stdair/bom/BookingClass.hpp>
#include <stdair/bom/BookingRequestStruct.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BomArchive.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.154 BomArchive.cpp

```
00001 // //////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/tmpdir.hpp>
00009 #include <boost/archive/text_iarchive.hpp>
00010 #include <boost/archive/text_oarchive.hpp>
00011 #include <boost/serialization/base_object.hpp>
00012 #include <boost/serialization/utility.hpp>
00013 #include <boost/serialization/list.hpp>
00014 //#include <boost/serialization/assume_abstract.hpp>
00015 // StdAir
00016 #include <stdair/bom/BomRoot.hpp>
00017 #include <stdair/bom/Inventory.hpp>
```

```
00018 #include <stdair/bom/FlightDate.hpp>
00019 #include <stdair/bom/LegDate.hpp>
00020 #include <stdair/bom/SegmentDate.hpp>
00021 #include <stdair/bom/LegCabin.hpp>
00022 #include <stdair/bom/SegmentCabin.hpp>
00023 #include <stdair/bom/FareFamily.hpp>
00024 #include <stdair/bom/BookingClass.hpp>
00025 #include <stdair/bom/BookingRequestStruct.hpp>
00026 #include <stdair/bom/BomManager.hpp>
00027 #include <stdair/bom/BomArchive.hpp>
00028
00029 namespace stdair {
00030
00031   // ////////////////////////////////////////////////////////////////////
00032   void BomArchive::archive (const BomRoot& iBomRoot) {
00033   }
00034
00035   // ////////////////////////////////////////////////////////////////////
00036   std::string BomArchive::archive (const Inventory& iInventory) {
00037     std::ostringstream oStr;
00038     boost::archive::text_oarchive oa (oStr);
00039     oa << iInventory;
00040     return oStr.str();
00041   }
00042
00043   // ////////////////////////////////////////////////////////////////////
00044   void BomArchive::restore (const std::string& iArchive,
00045                             Inventory& ioInventory) {
00046     std::istringstream iStr;
00047     boost::archive::text_iarchive ia (iStr);
00048     ia >> ioInventory;
00049   }
00050
00051   // ////////////////////////////////////////////////////////////////////
00052   void BomArchive::archive (const FlightDate& iFlightDate) {
00053   }
00054
00055 }
```

35.155 stdair/bom/BomArchive.hpp File Reference

`#include <iosfwd>`

Classes

- class stdair::BomArchive

  Utility class to archive/restore BOM objects with Boost serialisation.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.156 BomArchive.hpp

```
00001 #ifndef __STDAIR_BOM_BOMARCHIVE_HPP
00002 #define __STDAIR_BOM_BOMARCHIVE_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009
00010 namespace stdair {
00011
00013   class BomRoot;
00014   class Inventory;
00015   class FlightDate;
00016   class LegDate;
00017   class SegmentDate;
00018   class LegCabin;
00019   class SegmentCabin;
00020   class FareFamily;
00021   class BookingClass;
00022   struct BookingRequestStruct;
00023
00028   class BomArchive {
00029   public:
00036     static void archive (const BomRoot&);
00037
00044     static std::string archive (const Inventory&);
00045
00053     static void restore (const std::string& iArchive, Inventory&);
00054
00061     static void archive (const FlightDate&);
00062   };
00063
00064 }
00065 #endif // __STDAIR_BOM_BOMARCHIVE_HPP
```

35.157 stdair/bom/BomDisplay.cpp File Reference

35.158 BomDisplay.cpp

```
00001
00005 // //////////////////////////////////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <cassert>
00010 #include <ostream>
00011 // StdAir
00012 #include <stdair/basic/BasConst_BomDisplay.hpp>
00013 #include <stdair/bom/BomManager.hpp>
00014 #include <stdair/bom/BomRoot.hpp>
00015 #include <stdair/bom/EventQueue.hpp>
00016 #include <stdair/bom/Inventory.hpp>
00017 #include <stdair/bom/FlightDate.hpp>
00018 #include <stdair/bom/LegDate.hpp>
00019 #include <stdair/bom/SegmentDate.hpp>
00020 #include <stdair/bom/LegCabin.hpp>
```

```
00021 #include <stdair/bom/SegmentCabin.hpp>
00022 #include <stdair/bom/FareFamily.hpp>
00023 #include <stdair/bom/BookingClass.hpp>
00024 #include <stdair/bom/AirportPair.hpp>
00025 #include <stdair/bom/PosChannel.hpp>
00026 #include <stdair/bom/DatePeriod.hpp>
00027 #include <stdair/bom/TimePeriod.hpp>
00028 #include <stdair/bom/FareFeatures.hpp>
00029 #include <stdair/bom/YieldFeatures.hpp>
00030 #include <stdair/bom/AirlineClassList.hpp>
00031 #include <stdair/bom/Bucket.hpp>
00032 #include <stdair/bom/TravelSolutionTypes.hpp>
00033 #include <stdair/bom/TravelSolutionStruct.hpp>
00034 #include <stdair/bom/BomDisplay.hpp>
00035 #include <stdair/bom/OnDDate.hpp>
00036
00037 namespace stdair {
00038
00044   struct FlagSaver {
00045   public:
00047     FlagSaver (std::ostream& oStream)
00048       : _oStream (oStream), _streamFlags (oStream.flags()) {
00049     }
00050
00052     ~FlagSaver() {
00053       // Reset formatting flags of the given output stream
00054       _oStream.flags (_streamFlags);
00055     }
00056
00057   private:
00059     std::ostream& _oStream;
00061     std::ios::fmtflags _streamFlags;
00062   };
00063
00064   // ////////////////////////////////////////////////////////////////////
00065   std::string BomDisplay::csvDisplay (const EventQueue& iEventQueue) {
00066     std::ostringstream oStream;
00067
00071     oStream << std::endl;
00072     oStream << "================================================================="
00073             << std::endl;
00074     oStream << "EventQueue: " << iEventQueue.describeKey() << std::endl;
00075     oStream << "================================================================="
00076             << std::endl;
00077
00078     return oStream.str();
00079   }
00080
00081   // ////////////////////////////////////////////////////////////////////
00082   void BomDisplay::list (std::ostream& oStream, const BomRoot& iBomRoot,
00083                          const AirlineCode_T& iAirlineCode,
00084                          const FlightNumber_T& iFlightNumber) {
00085     // Save the formatting flags for the given STL output stream
00086     FlagSaver flagSaver (oStream);
00087
00088     // Check whether there are Inventory objects
00089     if (BomManager::hasList<Inventory> (iBomRoot) == false) {
00090       return;
00091     }
00092
00093     // Browse the inventories
00094     unsigned short invIdx = 1;
```

```
00095     const InventoryList_T& lInventoryList =
00096       BomManager::getList<Inventory> (iBomRoot);
00097     for (InventoryList_T::const_iterator itInv = lInventoryList.begin();
00098          itInv != lInventoryList.end(); ++itInv, ++invIdx) {
00099       const Inventory* lInv_ptr = *itInv;
00100       assert (lInv_ptr != NULL);
00101
00102       // Retrieve the inventory key (airline code)
00103       const AirlineCode_T& lAirlineCode = lInv_ptr->getAirlineCode();
00104
00105       // Display only the requested inventories
00106       if (iAirlineCode == "all" || iAirlineCode == lAirlineCode) {
00107         // Get the list of flight-dates for that inventory
00108         list (oStream, *lInv_ptr, invIdx, iFlightNumber);
00109       }
00110     }
00111   }
00112
00113   // //////////////////////////////////////////////////////////////////
00114   void BomDisplay::list (std::ostream& oStream, const Inventory& iInventory,
00115                          const unsigned short iInventoryIndex,
00116                          const FlightNumber_T& iFlightNumber) {
00117     // Save the formatting flags for the given STL output stream
00118     FlagSaver flagSaver (oStream);
00119
00120     // Check whether there are FlightDate objects
00121     if (BomManager::hasMap<FlightDate> (iInventory) == false) {
00122       return;
00123     }
00124
00133     //
00134     const AirlineCode_T& lAirlineCode = iInventory.getAirlineCode();
00135     oStream << iInventoryIndex << ". " << lAirlineCode << std::endl;
00136
00137     // Browse the flight-dates
00138     unsigned short lCurrentFlightNumber = 0;
00139     unsigned short flightNumberIdx = 0;
00140     unsigned short departureDateIdx = 1;
00141     const FlightDateMap_T& lFlightDateList =
00142       BomManager::getMap<FlightDate> (iInventory);
00143     for (FlightDateMap_T::const_iterator itFD = lFlightDateList.begin();
00144          itFD != lFlightDateList.end(); ++itFD, ++departureDateIdx) {
00145       const FlightDate* lFD_ptr = itFD->second;
00146       assert (lFD_ptr != NULL);
00147
00148       // Retrieve the key of the flight-date
00149       const FlightNumber_T& lFlightNumber = lFD_ptr->getFlightNumber();
00150       const Date_T& lFlightDateDate = lFD_ptr->getDepartureDate();
00151
00152       // Display only the requested flight number
00153       if (iFlightNumber == 0 || iFlightNumber == lFlightNumber) {
00154         //
00155         if (lCurrentFlightNumber != lFlightNumber) {
00156           lCurrentFlightNumber = lFlightNumber;
00157           ++flightNumberIdx; departureDateIdx = 1;
00158           oStream << "  " << iInventoryIndex << "." << flightNumberIdx << ". "
00159                   << lAirlineCode << lFlightNumber << std::endl;
00160         }
00161
00162         oStream << "    " << iInventoryIndex << "." << flightNumberIdx
00163                 << "." << departureDateIdx << ". "
00164                 << lAirlineCode << lFlightNumber << " / " << lFlightDateDate
```

```
00165                 << std::endl;
00166       }
00167     }
00168   }
00169
00170   // ////////////////////////////////////////////////////////////////////
00171   void BomDisplay::listAirportPairDateRange (std::ostream& oStream,
00172                                              const BomRoot& iBomRoot) {
00173     // Save the formatting flags for the given STL output stream
00174     FlagSaver flagSaver (oStream);
00175
00176     // Check whether there are AirportPair objects
00177     if (BomManager::hasList<AirportPair> (iBomRoot) == false) {
00178       return;
00179     }
00180
00181     const AirportPairList_T& lAirportPairList =
00182       BomManager::getList<AirportPair> (iBomRoot);
00183     for (AirportPairList_T::const_iterator itAir = lAirportPairList.begin();
00184          itAir != lAirportPairList.end(); ++itAir ) {
00185       const AirportPair* lAir_ptr = *itAir;
00186       assert (lAir_ptr != NULL);
00187
00188       // Check whether there are date-period objects
00189       assert (BomManager::hasList<DatePeriod> (*lAir_ptr) == true);
00190
00191       // Browse the date-period objects
00192       const DatePeriodList_T& lDatePeriodList =
00193         BomManager::getList<DatePeriod> (*lAir_ptr);
00194
00195       for (DatePeriodList_T::const_iterator itDP = lDatePeriodList.begin();
00196            itDP != lDatePeriodList.end(); ++itDP) {
00197         const DatePeriod* lDP_ptr = *itDP;
00198         assert (lDP_ptr != NULL);
00199
00200         // Display the date-period object
00201         oStream << lAir_ptr->describeKey()
00202                 <<" / " << lDP_ptr->describeKey() << std::endl;
00203       }
00204
00205     }
00206   }
00207
00208   // ////////////////////////////////////////////////////////////////////
00209   void BomDisplay::csvDisplay (std::ostream& oStream,
00210                                const BomRoot& iBomRoot) {
00211     // Save the formatting flags for the given STL output stream
00212     FlagSaver flagSaver (oStream);
00213
00217     oStream << std::endl;
00218     oStream << "================================================================="
00219             << std::endl;
00220     oStream << "BomRoot: " << iBomRoot.describeKey() << std::endl;
00221     oStream << "================================================================="
00222             << std::endl;
00223
00224     // Check whether there are Inventory objects
00225     if (BomManager::hasList<Inventory> (iBomRoot) == false) {
00226       return;
00227     }
00228
00229     // Browse the inventories
```

```
00230     const InventoryList_T& lInventoryList =
00231       BomManager::getList<Inventory> (iBomRoot);
00232     for (InventoryList_T::const_iterator itInv = lInventoryList.begin();
00233          itInv != lInventoryList.end(); ++itInv) {
00234       const Inventory* lInv_ptr = *itInv;
00235       assert (lInv_ptr != NULL);
00236
00237       // Display the inventory
00238       csvDisplay (oStream, *lInv_ptr);
00239     }
00240   }
00241
00242   // ////////////////////////////////////////////////////////////////////
00243   void BomDisplay::csvDisplay (std::ostream& oStream,
00244                                const Inventory& iInventory) {
00245     // Save the formatting flags for the given STL output stream
00246     FlagSaver flagSaver (oStream);
00247
00251     oStream << "++++++++++++++++++++++++++++++++++++++++++++++++++" << std::endl;
00252     oStream << "Inventory: " << iInventory.describeKey() << std::endl;
00253     oStream << "++++++++++++++++++++++++++++++++++++++++++++++++++" << std::endl;
00254
00255     // Check whether there are FlightDate objects
00256     if (BomManager::hasList<FlightDate> (iInventory) == false) {
00257       return;
00258     }
00259
00260     // Browse the flight-dates
00261     const FlightDateList_T& lFlightDateList =
00262       BomManager::getList<FlightDate> (iInventory);
00263     for (FlightDateList_T::const_iterator itFD = lFlightDateList.begin();
00264          itFD != lFlightDateList.end(); ++itFD) {
00265       const FlightDate* lFD_ptr = *itFD;
00266       assert (lFD_ptr != NULL);
00267
00268       // Display the flight-date
00269       csvDisplay (oStream, *lFD_ptr);
00270     }
00271
00272     // Check if the inventory contains a list of partners
00273
00274     if (BomManager::hasList<Inventory> (iInventory)){
00275
00276       // Browse the partner's inventories
00277       const InventoryList_T& lPartnerInventoryList =
00278         BomManager::getList<Inventory> (iInventory);
00279
00280       for (InventoryList_T::const_iterator itInv = lPartnerInventoryList.begin();

00281            itInv != lPartnerInventoryList.end(); ++itInv) {
00282
00283         oStream << "--------------------------------------------------" << std::en
      dl;
00284         oStream << "Partner inventory:" << std::endl;
00285         oStream << "--------------------------------------------------" << std::en
      dl;
00286         const Inventory* lInv_ptr = *itInv;
00287         assert (lInv_ptr != NULL);
00288
00289         // Display the inventory
00290         csvDisplay (oStream, *lInv_ptr);
00291       }
```

```
00292       oStream << "****************************************" << std::endl;
00293       oStream << std::endl;
00294     }
00295
00296     // Check if the inventory contains a list of O&D dates
00297
00298     if (BomManager::hasList<OnDDate> (iInventory)){
00299
00300       //Browse the O&Ds
00301       const OnDDateList_T& lOnDDateList =
00302         BomManager::getList<OnDDate> (iInventory);
00303
00304       for (OnDDateList_T::const_iterator itOnD = lOnDDateList.begin();
00305            itOnD != lOnDDateList.end(); ++itOnD) {
00306         oStream << "****************************************" << std::endl;
00307         oStream << "O&D-Date:" << std::endl;
00308         oStream << "----------" << std::endl;
00309         oStream << "Airline, Date, Origin-Destination, Segments, " << std::endl;
00310
00311         const OnDDate* lOnDDate_ptr = *itOnD;
00312         assert (lOnDDate_ptr != NULL);
00313
00314         // Display the O&D date
00315         csvDisplay (oStream, *lOnDDate_ptr);
00316       }
00317       oStream << "****************************************" << std::endl;
00318     }
00319   }
00320
00321   // //////////////////////////////////////////////////////////////////
00322   void BomDisplay::csvDisplay (std::ostream& oStream,
00323                                const OnDDate& iOnDDate) {
00324     // Save the formatting flags for the given STL output stream
00325     FlagSaver flagSaver (oStream);
00326
00330     const AirlineCode_T& lAirlineCode = iOnDDate.getAirlineCode();
00331     const Date_T& lDate = iOnDDate.getDate();
00332     const AirportCode_T& lOrigin = iOnDDate.getOrigin();
00333     const AirportCode_T& lDestination = iOnDDate.getDestination();
00334
00335     oStream << lAirlineCode <<", " << lDate << ", "<< lOrigin << "-"
00336             << lDestination << ", " << iOnDDate.describeKey() << ", "
00337             << std::endl;
00338
00339     const StringDemandStructMap_T& lDemandInfoMap =
00340       iOnDDate.getDemandInfoMap();
00341
00342     // Check if the map contains information.
00343     const bool isInfoMapEmpty = lDemandInfoMap.empty();
00344     if (isInfoMapEmpty) {
00345       return;
00346     }
00347     assert (lDemandInfoMap.empty() ==false);
00348
00349     oStream << "----------" << std::endl;
00350     oStream << "Cabin-Class path, Demand mean, Demand std dev, Yield, "
00351             << std::endl;
00352
00353     for (StringDemandStructMap_T::const_iterator itDI = lDemandInfoMap.begin();
00354          itDI != lDemandInfoMap.end(); ++itDI) {
00355
00356       const std::string& lCabinClassPath = itDI->first;
```

```
00357       const YieldDemandPair_T lYieldDemandPair =
00358         itDI->second;
00359       const Yield_T lYield = lYieldDemandPair.first;
00360       const MeanStdDevPair_T lMeanStdDevPair =
00361         lYieldDemandPair.second;
00362       const MeanValue_T lDemandMean = lMeanStdDevPair.first;
00363       const StdDevValue_T lDemandStdDev = lMeanStdDevPair.second;
00364
00365       oStream << lCabinClassPath << ", "
00366               << lDemandMean << ", "
00367               << lDemandStdDev << ", "
00368               << lYield << ", "
00369               << std::endl;
00370     }
00371
00372   }
00373
00374   // ////////////////////////////////////////////////////////////////////
00375   void BomDisplay::csvDisplay (std::ostream& oStream,
00376                                const FlightDate& iFlightDate) {
00377     // Save the formatting flags for the given STL output stream
00378     FlagSaver flagSaver (oStream);
00379
00383     const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
00384     oStream << "****************************************" << std::endl;
00385     oStream << "FlightDate: " << lAirlineCode << iFlightDate.describeKey()
00386             << std::endl;
00387     oStream << "****************************************" << std::endl;
00388
00389     //
00390     csvSegmentDateDisplay (oStream, iFlightDate);
00391     //
00392     csvLegDateDisplay (oStream, iFlightDate);
00393
00394     //
00395     csvLegCabinDisplay (oStream, iFlightDate);
00396
00397     //
00398     csvBucketDisplay (oStream, iFlightDate);
00399
00400     //
00401     csvFareFamilyDisplay (oStream, iFlightDate);
00402
00403     //
00404     csvBookingClassDisplay (oStream, iFlightDate);
00405   }
00406
00407   // ////////////////////////////////////////////////////////////////////
00408   void BomDisplay::csvLegDateDisplay (std::ostream& oStream,
00409                                       const FlightDate& iFlightDate) {
00410     // Save the formatting flags for the given STL output stream
00411     FlagSaver flagSaver (oStream);
00412
00418     oStream << "****************************************" << std::endl;
00419     oStream << "Leg-Dates:" << std::endl
00420             << "----------" << std::endl;
00421     oStream << "Flight, Leg, BoardDate, BoardTime, "
00422             << "OffDate, OffTime, Date Offset, Time Offset, Elapsed, "
00423             << "Distance, Capacity, " << std::endl;
00424
00425     // Retrieve the key of the flight-date
00426     const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
```

```
00427     const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
00428     const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();
00429
00430     // Check whether there are LegDate objects
00431     if (BomManager::hasList<LegDate> (iFlightDate) == false) {
00432       return;
00433     }
00434
00435     // Browse the leg-dates
00436     const LegDateList_T& lLegDateList =
00437       BomManager::getList<LegDate> (iFlightDate);
00438     for (LegDateList_T::const_iterator itLD = lLegDateList.begin();
00439          itLD != lLegDateList.end(); ++itLD) {
00440       const LegDate* lLD_ptr = *itLD;
00441       assert (lLD_ptr != NULL);
00442
00443       oStream << lAirlineCode << lFlightNumber << " "
00444               << lFlightDateDate << ", ";
00445
00446       oStream << lLD_ptr->getBoardingPoint() << "-"
00447               << lLD_ptr->getOffPoint() << ", "
00448               << lLD_ptr->getBoardingDate() << ", "
00449               << lLD_ptr->getBoardingTime() << ", "
00450               << lLD_ptr->getOffDate() << ", "
00451               << lLD_ptr->getOffTime() << ", "
00452               << lLD_ptr->getElapsedTime() << ", "
00453               << lLD_ptr->getDateOffset().days() << ", "
00454               << lLD_ptr->getTimeOffset() << ", "
00455               << lLD_ptr->getDistance() << ", "
00456               << lLD_ptr->getCapacity() << ", " << std::endl;
00457     }
00458     oStream << "****************************************" << std::endl;
00459   }
00460
00461   // //////////////////////////////////////////////////////////////////////
00462   void BomDisplay::csvSegmentDateDisplay (std::ostream& oStream,
00463                                           const FlightDate& iFlightDate) {
00464     // Save the formatting flags for the given STL output stream
00465     FlagSaver flagSaver (oStream);
00466
00470     oStream << "****************************************" << std::endl;
00471     oStream << "SegmentDates:" << std::endl
00472             << "----------" << std::endl;
00473     oStream << "Flight, Segment, Date"
00474             << std::endl;
00475
00476     // Retrieve the key of the flight-date
00477     const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
00478     const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
00479     const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();
00480
00481     // Check whether there are SegmentDate objects
00482     if (BomManager::hasList<SegmentDate> (iFlightDate) == false) {
00483       return;
00484     }
00485
00486     // Browse the segment-dates
00487     const SegmentDateList_T& lSegmentDateList =
00488       BomManager::getList<SegmentDate> (iFlightDate);
00489     for (SegmentDateList_T::const_iterator itSD = lSegmentDateList.begin();
00490          itSD != lSegmentDateList.end(); ++itSD) {
00491       const SegmentDate* lSD_ptr = *itSD;
```

```
00492       assert (lSD_ptr != NULL);
00493
00494       // Retrieve the key of the segment-date, as well as its dates
00495       const Date_T& lSegmentDateDate = lSD_ptr->getBoardingDate();
00496       const AirportCode_T& lBoardPoint = lSD_ptr->getBoardingPoint();
00497       const AirportCode_T& lOffPoint = lSD_ptr->getOffPoint();
00498       oStream << lAirlineCode << lFlightNumber << " " << lFlightDateDate << ", "
00499               << lBoardPoint << "-" << lOffPoint << ", " << lSegmentDateDate << s
      td::endl;
00500
00501       // Check if the current segment has corresponding marketing segments.
00502       const bool isMarketingSDListEmpty = BomManager::hasList<SegmentDate>(*lSD_p
      tr);
00503       if (isMarketingSDListEmpty == false) {
00504         //
00505         const SegmentDateList_T& lMarketingSDList = BomManager::getList<SegmentDa
      te>(*lSD_ptr);
00506
00507         oStream << " *** Marketed by ";
00508         for (SegmentDateList_T::const_iterator itMarketingSD = lMarketingSDList.b
      egin();
00509              itMarketingSD != lMarketingSDList.end(); ++itMarketingSD) {
00510           SegmentDate* lMarketingSD_ptr = *itMarketingSD;
00511           FlightDate* lMarketingFD_ptr = BomManager::getParentPtr<FlightDate>(*lM
      arketingSD_ptr);
00512           Inventory* lMarketingInv_ptr = BomManager::getParentPtr<Inventory>(*lMa
      rketingFD_ptr);
00513           oStream << lMarketingInv_ptr->toString() << lMarketingFD_ptr->toString(
      ) <<" * ";
00514         }
00515       }
00516
00517       // Check if the current segment is operated by another segment date.
00518       const SegmentDate* lOperatingSD_ptr = lSD_ptr->getOperatingSegmentDate ();
00519       if (lOperatingSD_ptr != NULL) {
00520
00521         const FlightDate* lOperatingFD_ptr = BomManager::getParentPtr<FlightDate>
      (*lOperatingSD_ptr);
00522         const Inventory* lOperatingInv_ptr = BomManager::getParentPtr<Inventory>(
      *lOperatingFD_ptr);
00523         oStream << " *** Operated by " << lOperatingInv_ptr->toString()
00524                 << lOperatingFD_ptr->toString() << std::endl;
00525       }
00526
00527       oStream << std::endl;
00528     }
00529   }
00530
00531   // ////////////////////////////////////////////////////////////////////
00532   void BomDisplay::csvLegCabinDisplay (std::ostream& oStream,
00533                                        const FlightDate& iFlightDate) {
00534     // Save the formatting flags for the given STL output stream
00535     FlagSaver flagSaver (oStream);
00536
00540     oStream << "****************************************" << std::endl;
00541     oStream << "LegCabins:" << std::endl
00542             << "----------" << std::endl;
00543     oStream << "Flight, Leg, Cabin, "
00544             << "OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, "
00545             << "CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice, "
00546             << std::endl;
00547
```

```
00548     // Retrieve the key of the flight-date
00549     const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
00550     const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
00551     const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();
00552
00553     // Check whether there are LegDate objects
00554     if (BomManager::hasList<LegDate> (iFlightDate) == false) {
00555       return;
00556     }
00557
00558     // Browse the leg-dates
00559     const LegDateList_T& lLegDateList =
00560       BomManager::getList<LegDate> (iFlightDate);
00561     for (LegDateList_T::const_iterator itLD = lLegDateList.begin();
00562          itLD != lLegDateList.end(); ++itLD) {
00563       const LegDate* lLD_ptr = *itLD;
00564       assert (lLD_ptr != NULL);
00565
00566       // Retrieve the key of the leg-date, as well as its off point
00567       const Date_T& lLegDateDate = lLD_ptr->getBoardingDate();
00568       const AirportCode_T& lBoardPoint = lLD_ptr->getBoardingPoint();
00569       const AirportCode_T& lOffPoint = lLD_ptr->getOffPoint();
00570
00571       // Browse the leg-cabins
00572       const LegCabinList_T& lLegCabinList =
00573         BomManager::getList<LegCabin> (*lLD_ptr);
00574       for (LegCabinList_T::const_iterator itLC = lLegCabinList.begin();
00575            itLC != lLegCabinList.end(); ++itLC) {
00576         const LegCabin* lLC_ptr = *itLC;
00577         assert (lLC_ptr != NULL);
00578
00579         oStream << lAirlineCode << lFlightNumber << " "
00580                 << lFlightDateDate << ", ";
00581
00582         oStream << lBoardPoint << "-" << lOffPoint
00583                 << " " << lLegDateDate << ", ";
00584
00585         oStream << lLC_ptr->getCabinCode() << ", ";
00586
00587         oStream << lLC_ptr->getOfferedCapacity() << ", "
00588                 << lLC_ptr->getPhysicalCapacity() << ", "
00589                 << lLC_ptr->getRegradeAdjustment() << ", "
00590                 << lLC_ptr->getAuthorizationLevel() << ", "
00591                 << lLC_ptr->getUPR() << ", "
00592                 << lLC_ptr->getSoldSeat() << ", "
00593                 << lLC_ptr->getStaffNbOfSeats() << ", "
00594                 << lLC_ptr->getWLNbOfSeats() << ", "
00595                 << lLC_ptr->getGroupNbOfSeats() << ", "
00596                 << lLC_ptr->getCommittedSpace() << ", "
00597                 << lLC_ptr->getAvailabilityPool() << ", "
00598                 << lLC_ptr->getAvailability() << ", "
00599                 << lLC_ptr->getNetAvailability() << ", "
00600                 << lLC_ptr->getGrossAvailability() << ", "
00601                 << lLC_ptr->getAvgCancellationPercentage() << ", "
00602                 << lLC_ptr->getETB() << ", "
00603                 << lLC_ptr->getCurrentBidPrice() << ", "
00604                 << std::endl;
00605       }
00606     }
00607     oStream << "****************************************" << std::endl;
00608   }
00609
```

```
00610 // ////////////////////////////////////////////////////////////////////
00611 void BomDisplay::csvSegmentCabinDisplay (std::ostream& oStream,
00612                                          const FlightDate& iFlightDate) {
00613   // Save the formatting flags for the given STL output stream
00614   FlagSaver flagSaver (oStream);
00615
00619 }
00620
00621 // ////////////////////////////////////////////////////////////////////
00622 void BomDisplay::csvFareFamilyDisplay (std::ostream& oStream,
00623                                        const FlightDate& iFlightDate) {
00624   // Save the formatting flags for the given STL output stream
00625   FlagSaver flagSaver (oStream);
00626
00631   oStream << "****************************************" << std::endl;
00632   oStream << "SegmentCabins:" << std::endl
00633           << "--------------" << std::endl;
00634   oStream << "Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, "
00635           << "CommSpace, AvPool, BP, " << std::endl;
00636
00637   // Retrieve the key of the flight-date
00638   const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
00639   const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
00640   const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();
00641
00642   // Check whether there are SegmentDate objects
00643   if (BomManager::hasList<SegmentDate> (iFlightDate) == false) {
00644     return;
00645   }
00646
00647   // Browse the segment-dates
00648   const SegmentDateList_T& lSegmentDateList =
00649     BomManager::getList<SegmentDate> (iFlightDate);
00650   for (SegmentDateList_T::const_iterator itSD = lSegmentDateList.begin();
00651        itSD != lSegmentDateList.end(); ++itSD) {
00652     const SegmentDate* lSD_ptr = *itSD;
00653     assert (lSD_ptr != NULL);
00654
00655     // Retrieve the key of the segment-date, as well as its dates
00656     const Date_T& lSegmentDateDate = lSD_ptr->getBoardingDate();
00657     const AirportCode_T& lBoardPoint = lSD_ptr->getBoardingPoint();
00658     const AirportCode_T& lOffPoint = lSD_ptr->getOffPoint();
00659
00660     // Browse the segment-cabins
00661     const SegmentCabinList_T& lSegmentCabinList =
00662       BomManager::getList<SegmentCabin> (*lSD_ptr);
00663     for (SegmentCabinList_T::const_iterator itSC = lSegmentCabinList.begin();
00664          itSC != lSegmentCabinList.end(); ++itSC) {
00665       const SegmentCabin* lSC_ptr = *itSC;
00666       assert (lSC_ptr != NULL);
00667
00668       // Retrieve the key of the segment-cabin
00669       const CabinCode_T& lCabinCode = lSC_ptr->getCabinCode();
00670
00671       // Check whether there are fare family objects
00672       if (BomManager::hasList<FareFamily> (*lSC_ptr) == false) {
00673         continue;
00674       }
00675
00676       // Browse the fare families
00677       const FareFamilyList_T& lFareFamilyList =
00678         BomManager::getList<FareFamily> (*lSC_ptr);
```

```
00679         for (FareFamilyList_T::const_iterator itFF = lFareFamilyList.begin();
00680              itFF != lFareFamilyList.end(); ++itFF) {
00681           const FareFamily* lFF_ptr = *itFF;
00682           assert (lFF_ptr != NULL);
00683
00684           oStream << lAirlineCode << lFlightNumber << " "
00685                   << lFlightDateDate << ", ";
00686
00687           oStream << lBoardPoint << "-" << lOffPoint << " "
00688                   << lSegmentDateDate << ", ";
00689
00690           oStream << lCabinCode << ", " << lFF_ptr->getFamilyCode() << ", ";
00691
00692           oStream << lSC_ptr->getBookingCounter() << ", "
00693                   << lSC_ptr->getMIN() << ", "
00694                   << lSC_ptr->getUPR() << ", "
00695                   << lSC_ptr->getCommittedSpace() << ", "
00696                   << lSC_ptr->getAvailabilityPool() << ", "
00697                   << lSC_ptr->getCurrentBidPrice() << ", "
00698                   << std::endl;
00699         }
00700       }
00701     }
00702     oStream << "****************************************" << std::endl;
00703   }
00704
00705   // //////////////////////////////////////////////////////////////////
00706   void BomDisplay::csvBucketDisplay (std::ostream& oStream,
00707                                      const FlightDate& iFlightDate) {
00708     // Save the formatting flags for the given STL output stream
00709     FlagSaver flagSaver (oStream);
00710
00714     oStream << "****************************************" << std::endl;
00715     oStream << "Buckets:" << std::endl
00716             << "--------" << std::endl;
00717     oStream << "Flight, Leg, Cabin, Yield, AU/SI, SS, AV, "
00718             << std::endl;
00719
00720     // Retrieve the key of the flight-date
00721     const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
00722     const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
00723     const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();
00724
00725     // Check whether there are LegDate objects
00726     if (BomManager::hasList<LegDate> (iFlightDate) == false) {
00727       return;
00728     }
00729
00730     // Browse the leg-dates
00731     const LegDateList_T& lLegDateList =
00732       BomManager::getList<LegDate> (iFlightDate);
00733     for (LegDateList_T::const_iterator itLD = lLegDateList.begin();
00734          itLD != lLegDateList.end(); ++itLD) {
00735       const LegDate* lLD_ptr = *itLD;
00736       assert (lLD_ptr != NULL);
00737
00738       // Retrieve the key of the leg-date, as well as its off point
00739       const Date_T& lLegDateDate = lLD_ptr->getBoardingDate();
00740       const AirportCode_T& lBoardPoint = lLD_ptr->getBoardingPoint();
00741       const AirportCode_T& lOffPoint = lLD_ptr->getOffPoint();
00742
00743       // Browse the leg-cabins
```

```
00744       const LegCabinList_T& lLegCabinList =
00745         BomManager::getList<LegCabin> (*lLD_ptr);
00746       for (LegCabinList_T::const_iterator itLC = lLegCabinList.begin();
00747            itLC != lLegCabinList.end(); ++itLC) {
00748         const LegCabin* lLC_ptr = *itLC;
00749         assert (lLC_ptr != NULL);
00750
00751         // Check whether there are bucket objects
00752         if (BomManager::hasList<Bucket> (*lLC_ptr) == false) {
00753           continue;
00754         }
00755
00756         // Retrieve the key of the leg-cabin
00757         const CabinCode_T& lCabinCode = lLC_ptr->getCabinCode();
00758
00759         // Browse the buckets
00760         const BucketList_T& lBucketList = BomManager::getList<Bucket> (*lLC_ptr);

00761         for (BucketList_T::const_iterator itBuck = lBucketList.begin();
00762              itBuck != lBucketList.end(); ++itBuck) {
00763           const Bucket* lBucket_ptr = *itBuck;
00764           assert (lBucket_ptr != NULL);
00765
00766           oStream << lAirlineCode << lFlightNumber << " "
00767                   << lFlightDateDate << ", ";
00768
00769           oStream << lBoardPoint << "-" << lOffPoint << " "
00770                   << lLegDateDate << ", " << lCabinCode << ", ";
00771
00772           oStream << lBucket_ptr->getYieldRangeUpperValue() << ", "
00773                   << lBucket_ptr->getSeatIndex() << ", "
00774                   << lBucket_ptr->getSoldSeats() << ", "
00775                   << lBucket_ptr->getAvailability() << ", ";
00776           oStream << std::endl;
00777         }
00778       }
00779     }
00780     oStream << "****************************************" << std::endl;
00781   }
00782
00783   // //////////////////////////////////////////////////////////////////
00784   void BomDisplay::csvBookingClassDisplay (std::ostream& oStream,
00785                                            const BookingClass& iBookingClass,
00786                                            const std::string& iLeadingString) {
00787     // Save the formatting flags for the given STL output stream
00788     FlagSaver flagSaver (oStream);
00789
00796     oStream << iLeadingString << iBookingClass.getClassCode();
00797
00798     if (iBookingClass.getSubclassCode() == 0) {
00799       oStream << ", ";
00800     } else {
00801       oStream << iBookingClass.getSubclassCode() << ", ";
00802     }
00803     oStream << iBookingClass.getAuthorizationLevel() << " ("
00804             << iBookingClass.getProtection() << "), "
00805             << iBookingClass.getNegotiatedSpace() << ", "
00806             << iBookingClass.getNoShowPercentage() << ", "
00807             << iBookingClass.getCancellationPercentage() << ", "
00808             << iBookingClass.getNbOfBookings() << ", "
00809             << iBookingClass.getNbOfGroupBookings() << " ("
00810             << iBookingClass.getNbOfPendingGroupBookings() << "), "
```

```
00811             << iBookingClass.getNbOfStaffBookings() << ", "
00812             << iBookingClass.getNbOfWLBookings() << ", "
00813             << iBookingClass.getETB() << ", "
00814             << iBookingClass.getNetClassAvailability() << ", "
00815             << iBookingClass.getNetRevenueAvailability() << ", "
00816             << iBookingClass.getSegmentAvailability() << ", "
00817             << std::endl;
00818   }
00819
00820   // //////////////////////////////////////////////////////////////////
00821   void BomDisplay::csvBookingClassDisplay (std::ostream& oStream,
00822                                            const FlightDate& iFlightDate) {
00823     // Save the formatting flags for the given STL output stream
00824     FlagSaver flagSaver (oStream);
00825
00826     // Headers
00827     oStream << "****************************************" << std::endl;
00828     oStream << "Subclasses:" << std::endl
00829             << "-----------" << std::endl;
00830     oStream << "Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), "
00831             << "Nego, NS%, OB%, "
00832             << "Bkgs, GrpBks (pdg), StfBkgs, WLBkgs, ETB, "
00833             << "ClassAvl, RevAvl, SegAvl, "
00834             << std::endl;
00835
00836     // Retrieve the key of the flight-date
00837     const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
00838     const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
00839     const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();
00840
00841     // Check whether there are SegmentDate objects
00842     if (BomManager::hasList<SegmentDate> (iFlightDate) == false) {
00843       return;
00844     }
00845
00846     // Browse the segment-dates
00847     const SegmentDateList_T& lSegmentDateList =
00848       BomManager::getList<SegmentDate> (iFlightDate);
00849     for (SegmentDateList_T::const_iterator itSD = lSegmentDateList.begin();
00850          itSD != lSegmentDateList.end(); ++itSD) {
00851       const SegmentDate* lSD_ptr = *itSD;
00852       assert (lSD_ptr != NULL);
00853
00854       // Retrieve the key of the segment-date, as well as its dates
00855       const Date_T& lSegmentDateDate = lSD_ptr->getBoardingDate();
00856       const AirportCode_T& lBoardPoint = lSD_ptr->getBoardingPoint();
00857       const AirportCode_T& lOffPoint = lSD_ptr->getOffPoint();
00858
00859       // Browse the segment-cabins
00860       const SegmentCabinList_T& lSegmentCabinList =
00861         BomManager::getList<SegmentCabin> (*lSD_ptr);
00862       for (SegmentCabinList_T::const_iterator itSC = lSegmentCabinList.begin();
00863            itSC != lSegmentCabinList.end(); ++itSC) {
00864         const SegmentCabin* lSC_ptr = *itSC;
00865         assert (lSC_ptr != NULL);
00866
00867         // Retrieve the key of the segment-cabin
00868         const CabinCode_T& lCabinCode = lSC_ptr->getCabinCode();
00869
00870         // Build the leading string to be displayed
00871         std::ostringstream oSCLeadingStr;
00872         oSCLeadingStr << lAirlineCode << lFlightNumber << " "
```

```
00873                       << lFlightDateDate << ", "
00874                       << lBoardPoint << "-" << lOffPoint << " "
00875                       << lSegmentDateDate << ", "
00876                       << lCabinCode << ", ";
00877
00878         // Default Fare Family code, when there are no FF
00879         FamilyCode_T lFamilyCode ("NoFF");
00880
00881         // Check whether there are FareFamily objects
00882         if (BomManager::hasList<FareFamily> (*lSC_ptr) == true) {
00883
00884           // Browse the fare families
00885           const FareFamilyList_T& lFareFamilyList =
00886             BomManager::getList<FareFamily> (*lSC_ptr);
00887           for (FareFamilyList_T::const_iterator itFF = lFareFamilyList.begin();
00888                itFF != lFareFamilyList.end(); ++itFF) {
00889             const FareFamily* lFF_ptr = *itFF;
00890             assert (lFF_ptr != NULL);
00891
00892             // Retrieve the key of the segment-cabin
00893             lFamilyCode = lFF_ptr->getFamilyCode();
00894
00895             // Complete the leading string to be displayed
00896             std::ostringstream oFFLeadingStr;
00897             oFFLeadingStr << oSCLeadingStr.str() << lFamilyCode << ", ";
00898
00899             // Browse the booking-classes
00900             const BookingClassList_T& lBookingClassList =
00901               BomManager::getList<BookingClass> (*lFF_ptr);
00902             for (BookingClassList_T::const_iterator itBC =
00903                    lBookingClassList.begin();
00904                  itBC != lBookingClassList.end(); ++itBC) {
00905               const BookingClass* lBC_ptr = *itBC;
00906               assert (lBC_ptr != NULL);
00907
00908               //
00909               csvBookingClassDisplay (oStream, *lBC_ptr, oFFLeadingStr.str());
00910             }
00911           }
00912
00913           // Go on to the next segment-cabin
00914           continue;
00915         }
00916         assert (BomManager::hasList<FareFamily> (*lSC_ptr) == false);
00917
00918         // The fare family code is a fake one ('NoFF'), and therefore
00919         // does not vary
00920         std::ostringstream oFFLeadingStr;
00921         oFFLeadingStr << oSCLeadingStr.str() << lFamilyCode << ", ";
00922
00923         // Browse the booking-classes, directly from the segment-cabin object
00924         const BookingClassList_T& lBookingClassList =
00925           BomManager::getList<BookingClass> (*lSC_ptr);
00926         for (BookingClassList_T::const_iterator itBC =
00927                lBookingClassList.begin();
00928              itBC != lBookingClassList.end(); ++itBC) {
00929           const BookingClass* lBC_ptr = *itBC;
00930           assert (lBC_ptr != NULL);
00931
00932           //
00933           csvBookingClassDisplay (oStream, *lBC_ptr, oFFLeadingStr.str());
00934         }
```

```
00935       }
00936     }
00937     oStream << "****************************************" << std::endl;
00938   }
00939
00940   // //////////////////////////////////////////////////////////////////
00941   void BomDisplay::
00942   csvDisplay (std::ostream& oStream,
00943               const TravelSolutionList_T& iTravelSolutionList) {
00944
00945     // Save the formatting flags for the given STL output stream
00946     FlagSaver flagSaver (oStream);
00947
00948     oStream << "Travel solutions:";
00949     unsigned short idx = 0;
00950     for (TravelSolutionList_T::const_iterator itTS =
00951            iTravelSolutionList.begin();
00952          itTS != iTravelSolutionList.end(); ++itTS, ++idx) {
00953       const TravelSolutionStruct& lTS = *itTS;
00954
00955       oStream << std::endl;
00956       oStream << "    [" << idx << "] " << lTS.display();
00957     }
00958   }
00959
00960   // //////////////////////////////////////////////////////////////////
00961   void BomDisplay::
00962   csvDisplay (std::ostream& oStream,
00963               const DatePeriodList_T& iDatePeriodList) {
00964
00965     // Save the formatting flags for the given STL output stream
00966     FlagSaver flagSaver (oStream);
00967
00968     // Browse the date-period objects
00969     for (DatePeriodList_T::const_iterator itDP = iDatePeriodList.begin();
00970          itDP != iDatePeriodList.end(); ++itDP) {
00971       const DatePeriod* lDP_ptr = *itDP;
00972       assert (lDP_ptr != NULL);
00973
00974       // Display the date-period object
00975       csvDateDisplay (oStream, *lDP_ptr);
00976     }
00977   }
00978
00979   // //////////////////////////////////////////////////////////////////
00980   void BomDisplay::csvSimFQTAirRACDisplay (std::ostream& oStream,
00981                                            const BomRoot& iBomRoot) {
00982     // Save the formatting flags for the given STL output stream
00983     FlagSaver flagSaver (oStream);
00984
00988     oStream << std::endl;
00989     oStream << "================================================================="
00990             << std::endl;
00991     oStream << "BomRoot: " << iBomRoot.describeKey() << std::endl;
00992     oStream << "================================================================="
00993             << std::endl;
00994
00995     // Check whether there are airport-pair objects
00996     if (BomManager::hasList<AirportPair> (iBomRoot) == false) {
00997       return;
00998     }
00999
```

```
01000     // Browse the airport-pair objects
01001     const AirportPairList_T& lAirportPairList =
01002       BomManager::getList<AirportPair> (iBomRoot);
01003     for (AirportPairList_T::const_iterator itAir = lAirportPairList.begin();
01004          itAir != lAirportPairList.end(); ++itAir ) {
01005       const AirportPair* lAir_ptr = *itAir;
01006       assert (lAir_ptr != NULL);
01007
01008       // Display the airport pair object
01009       csvAirportPairDisplay (oStream, *lAir_ptr);
01010     }
01011   }
01012
01013   // ////////////////////////////////////////////////////////////////////
01014   void BomDisplay::csvAirportPairDisplay (std::ostream& oStream,
01015                                           const AirportPair& iAirportPair) {
01016     // Save the formatting flags for the given STL output stream
01017     FlagSaver flagSaver (oStream);
01018
01022     oStream << "++++++++++++++++++++++++++++++++++++++++++++++++++" << std::endl;
01023     oStream << "AirportPair: " << iAirportPair.describeKey() << std::endl;
01024     oStream << "++++++++++++++++++++++++++++++++++++++++++++++++++" << std::endl;
01025
01026     // Check whether there are date-period objects
01027     if (BomManager::hasList<DatePeriod> (iAirportPair) == false) {
01028       return;
01029     }
01030
01031     // Browse the date-period objects
01032     const DatePeriodList_T& lDatePeriodList =
01033       BomManager::getList<DatePeriod> (iAirportPair);
01034     for (DatePeriodList_T::const_iterator itDP = lDatePeriodList.begin();
01035          itDP != lDatePeriodList.end(); ++itDP) {
01036       const DatePeriod* lDP_ptr = *itDP;
01037       assert (lDP_ptr != NULL);
01038
01039       // Display the date-period object
01040       csvDateDisplay (oStream, *lDP_ptr);
01041     }
01042   }
01043
01044   // ////////////////////////////////////////////////////////////////////
01045   void BomDisplay::csvDateDisplay (std::ostream& oStream,
01046                                    const DatePeriod& iDatePeriod) {
01047
01048     // Save the formatting flags for the given STL output stream
01049     FlagSaver flagSaver (oStream);
01050
01054     oStream << "------------------------------------------" << std::endl;
01055     oStream << "DatePeriod: " << iDatePeriod.describeKey() << std::endl;
01056     oStream << "------------------------------------------" << std::endl;
01057
01058     // Check whether there are pos-channel objects
01059     if (BomManager::hasList<PosChannel> (iDatePeriod) == false) {
01060       return;
01061     }
01062
01063     // Browse the pos-channel objects
01064     const PosChannelList_T& lPosChannelList =
01065       BomManager::getList<PosChannel> (iDatePeriod);
01066     for (PosChannelList_T::const_iterator itPC = lPosChannelList.begin();
01067          itPC != lPosChannelList.end(); ++itPC) {
```

```
01068       const PosChannel* lPC_ptr = *itPC;
01069       assert (lPC_ptr != NULL);
01070
01071       // Display the pos-channel object
01072       csvPosChannelDisplay (oStream, *lPC_ptr);
01073     }
01074   }
01075
01076   // ////////////////////////////////////////////////////////////////////
01077   void BomDisplay::csvPosChannelDisplay (std::ostream& oStream,
01078                                          const PosChannel& iPosChannel) {
01079     // Save the formatting flags for the given STL output stream
01080     FlagSaver flagSaver (oStream);
01081
01085     oStream << "****************************************" << std::endl;
01086     oStream << "PosChannel: " << iPosChannel.describeKey() << std::endl;
01087     oStream << "****************************************" << std::endl;
01088
01089     // Check whether there are time-period objects
01090     if (BomManager::hasList<TimePeriod> (iPosChannel) == false) {
01091       return;
01092     }
01093
01094     // Browse the time-period objects
01095     const TimePeriodList_T& lTimePeriodList =
01096       BomManager::getList<TimePeriod> (iPosChannel);
01097     for (TimePeriodList_T::const_iterator itTP = lTimePeriodList.begin();
01098          itTP != lTimePeriodList.end(); ++itTP) {
01099       const TimePeriod* lTP_ptr = *itTP;
01100       assert (lTP_ptr != NULL);
01101
01102       // Display the time-period object
01103       csvTimeDisplay (oStream, *lTP_ptr);
01104     }
01105   }
01106
01107   // ////////////////////////////////////////////////////////////////////
01108   void BomDisplay::csvTimeDisplay (std::ostream& oStream,
01109                                    const TimePeriod& iTimePeriod) {
01110
01111     // Save the formatting flags for the given STL output stream
01112     FlagSaver flagSaver (oStream);
01113
01117     oStream << "----------------------------------------" << std::endl;
01118     oStream << "TimePeriod: " << iTimePeriod.describeKey() << std::endl;
01119     oStream << "----------------------------------------" << std::endl;
01120
01121     // Only one of the fare/yield feature list exists. Each of the following
01122     // two methods will check for the existence of the list. So, only the
01123     // existing list will be actually displayed.
01124     csvFeatureListDisplay<FareFeatures> (oStream, iTimePeriod);
01125     csvFeatureListDisplay<YieldFeatures> (oStream, iTimePeriod);
01126   }
01127
01128   // ////////////////////////////////////////////////////////////////////
01129   template <typename FEATURE_TYPE>
01130   void BomDisplay::csvFeatureListDisplay (std::ostream& oStream,
01131                                           const TimePeriod& iTimePeriod) {
01132
01133     // Check whether there are fare/yield-feature objects
01134     if (BomManager::hasList<FEATURE_TYPE> (iTimePeriod) == false) {
01135       return;
```

```
01136     }
01137
01138     // Browse the fare/yield-feature objects
01139     typedef typename BomHolder<FEATURE_TYPE>::BomList_T FeaturesList_T;
01140     const FeaturesList_T& lFeaturesList =
01141       BomManager::getList<FEATURE_TYPE> (iTimePeriod);
01142     for (typename FeaturesList_T::const_iterator itFF = lFeaturesList.begin();
01143          itFF != lFeaturesList.end(); ++itFF) {
01144       const FEATURE_TYPE* lFF_ptr = *itFF;
01145       assert (lFF_ptr != NULL);
01146
01147       // Display the fare-features object
01148       csvFeaturesDisplay (oStream, *lFF_ptr);
01149     }
01150   }
01151
01152   // ////////////////////////////////////////////////////////////////////
01153   template <typename FEATURE_TYPE>
01154   void BomDisplay::csvFeaturesDisplay (std::ostream& oStream,
01155                                        const FEATURE_TYPE& iFeatures) {
01156     // Save the formatting flags for the given STL output stream
01157     FlagSaver flagSaver (oStream);
01158
01162     oStream << "---------------------------------------" << std::endl;
01163     oStream << "Fare/yield-Features: " << iFeatures.describeKey() << std::endl;
01164     oStream << "---------------------------------------" << std::endl;
01165
01166     // Check whether there are airlineClassList objects
01167     if (BomManager::hasList<AirlineClassList> (iFeatures) == false) {
01168       return;
01169     }
01170
01171     // Browse the airlineClassList objects
01172     const AirlineClassListList_T& lAirlineClassListList =
01173       BomManager::getList<AirlineClassList> (iFeatures);
01174     for (AirlineClassListList_T::const_iterator itACL =
01175            lAirlineClassListList.begin();
01176          itACL != lAirlineClassListList.end(); ++itACL) {
01177       const AirlineClassList* lACL_ptr = *itACL;
01178       assert (lACL_ptr != NULL);
01179
01180       // Display the airlineClassList object
01181       csvAirlineClassDisplay(oStream, *lACL_ptr);
01182     }
01183   }
01184
01185   // ////////////////////////////////////////////////////////////////////
01186   void BomDisplay::
01187   csvAirlineClassDisplay  (std::ostream& oStream,
01188                            const AirlineClassList& iAirlineClassList) {
01189     // Save the formatting flags for the given STL output stream
01190     FlagSaver flagSaver (oStream);
01191
01195     oStream << "-----------------------------------" << std::endl;
01196     oStream << "AirlineClassList: "
01197             << iAirlineClassList.describeKey() << std::endl;
01198     oStream << "-----------------------------------" << std::endl;
01199   }
01200
01201 }
01202
```

35.159 stdair/bom/BomDisplay.hpp File Reference

```
#include <iosfwd>
#include <stdair/bom/TravelSolutionTypes.hpp>
#include <stdair/bom/DatePeriodTypes.hpp>
```

Classes

- class stdair::BomDisplay

  Utility class to display StdAir objects with a pretty format.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.160 BomDisplay.hpp

```
00001 #ifndef __STDAIR_BOM_BOMDISPLAY_HPP
00002 #define __STDAIR_BOM_BOMDISPLAY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 // StdAir
00010 #include <stdair/bom/TravelSolutionTypes.hpp>
00011 #include <stdair/bom/DatePeriodTypes.hpp>
00012
00013 namespace stdair {
00014
00016   class BomRoot;
00017   class EventQueue;
00018   class Inventory;
00019   class FlightDate;
00020   class LegDate;
00021   class SegmentDate;
00022   class LegCabin;
00023   class SegmentCabin;
00024   class FareFamily;
00025   class BookingClass;
00026   class AirportPair;
00027   class PosChannel;
00028   class DatePeriod;
00029   class TimePeriod;
00030   class FareFeatures;
00031   class YieldFeatures;
00032   class AirlineClassList;
00033   class OnDDate;
00034
00039   class BomDisplay {
00040   public:
```

```
00041     // ///////////////// Display support methods /////////////////
00050     static std::string csvDisplay (const EventQueue&);
00051
00066     static void list (std::ostream&, const BomRoot&,
00067                       const AirlineCode_T& iAirlineCode = "all",
00068                       const FlightNumber_T& iFlightNumber = 0);
00069
00083     static void list (std::ostream&, const Inventory&,
00084                       const unsigned short iInventoryIndex = 0,
00085                       const FlightNumber_T& iFlightNumber = 0);
00086
00095     static void listAirportPairDateRange (std::ostream&,
00096                                           const BomRoot&);
00097
00106     static void csvDisplay (std::ostream&, const BomRoot&);
00107
00116     static void csvDisplay (std::ostream&, const Inventory&);
00117
00125     static void csvDisplay (std::ostream&, const OnDDate&);
00126
00135     static void csvDisplay (std::ostream&, const FlightDate&);
00136
00145     static void csvLegDateDisplay (std::ostream&, const FlightDate&);
00146
00155     static void csvSegmentDateDisplay (std::ostream&, const FlightDate&);
00156
00165     static void csvLegCabinDisplay (std::ostream&, const FlightDate&);
00166
00175     static void csvSegmentCabinDisplay (std::ostream&, const FlightDate&);
00176
00185     static void csvFareFamilyDisplay (std::ostream&, const FlightDate&);
00186
00195     static void csvBucketDisplay (std::ostream&, const FlightDate&);
00196
00206     static void csvBookingClassDisplay (std::ostream&, const BookingClass&,
00207                                         const std::string& iLeadingString);
00216     static void csvBookingClassDisplay (std::ostream&, const FlightDate&);
00217
00226     static void csvDisplay (std::ostream&, const TravelSolutionList_T&);
00227
00236     static void csvDisplay (std::ostream&, const DatePeriodList_T&);
00237
00246     static void csvSimFQTAirRACDisplay (std::ostream&, const BomRoot&);
00247
00257     static void csvAirportPairDisplay (std::ostream&, const AirportPair&);
00258
00268     static void csvDateDisplay (std::ostream&, const DatePeriod&);
00269
00279     static void csvPosChannelDisplay (std::ostream&, const PosChannel&);
00280
00290     static void csvTimeDisplay (std::ostream&, const TimePeriod&);
00291
00300     template <typename FEATURE_TYPE>
00301     static void csvFeatureListDisplay (std::ostream& oStream, const TimePeriod&);

00302
00311     template <typename FEATURE_TYPE>
00312     static void csvFeaturesDisplay (std::ostream& oStream, const FEATURE_TYPE&);
00313
00322     static void csvAirlineClassDisplay (std::ostream&, const AirlineClassList&);
00323   };
00324
```

```
00325 }
00326 #endif // __STDAIR_BOM_BOMDISPLAY_HPP
```

35.161 stdair/bom/BomHolder.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <list>
#include <map>
#include <stdair/bom/key_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/BomHolderKey.hpp>
```

Classes

- class stdair::BomHolder< BOM >

  Class representing the holder of BOM object containers (list and map).

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.162 BomHolder.hpp

```
00001 #ifndef __STDAIR_BOM_BOMHOLDER_HPP
00002 #define __STDAIR_BOM_BOMHOLDER_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 #include <list>
00011 #include <map>
00012 // StdAir
00013 #include <stdair/bom/key_types.hpp>
00014 #include <stdair/bom/BomAbstract.hpp>
00015 #include <stdair/bom/BomHolderKey.hpp>
00016
00017 namespace stdair {
00018
00023   template <typename BOM>
00024   class BomHolder : public stdair::BomAbstract {
00026     template <typename> friend class FacBom;
00027     friend class FacBomManager;
00028
```

```
00029   public:
00030     // ////////////////// Type definitions ////////////////
00034     typedef stdair::BomHolderKey Key_T;
00035
00039     typedef std::list<BOM*> BomList_T;
00040
00044     typedef std::map<const MapKey_T, BOM*> BomMap_T;
00045
00046
00047   public:
00048     // /////////// Display support methods /////////
00054     void toStream (std::ostream& ioOut) const {
00055       ioOut << toString();
00056     }
00057
00063     void fromStream (std::istream& ioIn) {
00064     }
00065
00069     std::string toString() const {
00070       return "BomHolder";
00071     }
00072
00076     const std::string describeKey() const {
00077       return "BomHolder";
00078     }
00079
00080   protected:
00084     BomHolder();
00085
00089     BomHolder (const BomHolder&);
00090
00094     BomHolder (const Key_T& iKey) : _key (iKey) { }
00095
00099     ~BomHolder() { };
00100
00101   public:
00102     // ///////////////// Attributes /////////////////
00106     Key_T _key;
00107
00111     BomList_T _bomList;
00112
00116     BomMap_T _bomMap;
00117   };
00118
00119 }
00120 #endif // __STDAIR_BOM_BOMHOLDER_HPP
```

35.163 stdair/bom/BomHolderKey.cpp File Reference

```
#include <ostream>
#include <sstream>
#include <stdair/bom/BomHolderKey.hpp>
```

Namespaces

- namespace stdair

Handle on the StdAir library context.

35.164 BomHolderKey.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <ostream>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/bom/BomHolderKey.hpp>
00009
00010 namespace stdair {
00011
00012   // //////////////////////////////////////////////////////////////////
00013   BomHolderKey::BomHolderKey () {
00014   }
00015
00016   // //////////////////////////////////////////////////////////////////
00017   BomHolderKey::~BomHolderKey () {
00018   }
00019
00020   // //////////////////////////////////////////////////////////////////
00021   void BomHolderKey::toStream (std::ostream& ioOut) const {
00022     ioOut << "BomHolderKey: " << toString() << std::endl;
00023   }
00024
00025   // //////////////////////////////////////////////////////////////////
00026   void BomHolderKey::fromStream (std::istream& ioIn) {
00027   }
00028
00029   // //////////////////////////////////////////////////////////////////
00030   const std::string BomHolderKey::toString() const {
00031     std::ostringstream oStr;
00032     oStr << " -- HOLDER -- ";
00033     return oStr.str();
00034   }
00035
00036 }
```

35.165 stdair/bom/BomHolderKey.hpp File Reference

```
#include <stdair/bom/KeyAbstract.hpp>
```

Classes

- struct stdair::BomHolderKey

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.166 BomHolderKey.hpp

```
00001 #ifndef __STDAIR_BOM_BOMHOLDERKEY_HPP
00002 #define __STDAIR_BOM_BOMHOLDERKEY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/KeyAbstract.hpp>
00009
00010 namespace stdair {
00012   struct BomHolderKey : public KeyAbstract {
00013
00014   public:
00015     // ////////// Construction //////////
00017     BomHolderKey ();
00019     ~BomHolderKey ();
00020
00021     // ////////// Display support methods /////////
00024     void toStream (std::ostream& ioOut) const;
00025
00028     void fromStream (std::istream& ioIn);
00029
00035     const std::string toString() const;
00036
00038     const std::string describe() const;
00039
00040   };
00041
00042 }
00043 #endif // __STDAIR_BOM_BOMHOLDERKEY_HPP
```

35.167 stdair/bom/BomJSONExport.cpp File Reference

```
#include <cassert>
#include <ostream>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightDate.hpp>
#include <stdair/bom/LegDate.hpp>
#include <stdair/bom/SegmentDate.hpp>
#include <stdair/bom/LegCabin.hpp>
#include <stdair/bom/SegmentCabin.hpp>
#include <stdair/bom/FareFamily.hpp>
#include <stdair/bom/BookingClass.hpp>
#include <stdair/bom/Bucket.hpp>
```

```
#include <stdair/bom/BomJSONExport.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.168 BomJSONExport.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <ostream>
00007 #if BOOST_VERSION >= 103400
00008 // Boost ForEach
00009 #include <boost/foreach.hpp>
00010 #endif // BOOST_VERSION >= 103400
00011 // StdAir
00012 #include <stdair/basic/BasConst_BomDisplay.hpp>
00013 #include <stdair/bom/BomManager.hpp>
00014 #include <stdair/bom/BomRoot.hpp>
00015 #include <stdair/bom/Inventory.hpp>
00016 #include <stdair/bom/FlightDate.hpp>
00017 #include <stdair/bom/LegDate.hpp>
00018 #include <stdair/bom/SegmentDate.hpp>
00019 #include <stdair/bom/LegCabin.hpp>
00020 #include <stdair/bom/SegmentCabin.hpp>
00021 #include <stdair/bom/FareFamily.hpp>
00022 #include <stdair/bom/BookingClass.hpp>
00023 #include <stdair/bom/Bucket.hpp>
00024 #include <stdair/bom/BomJSONExport.hpp>
00025
00026 namespace stdair {
00027
00028   // ////////////////////////////////////////////////////////////////////
00029   void BomJSONExport::jsonExport (std::ostream& oStream,
00030                                   const FlightDate& iFlightDate) {
00031
00032     // Create an empty property tree object
00033     bpt::ptree pt;
00034
00035 #if BOOST_VERSION >= 104100
00036
00039     const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
00040     const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
00041     const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();
00042
00043     // Put airline code in property tree
00044     pt.put ("flight_date.airline_code", lAirlineCode);
00045
00046     // Put flight number level in property tree
00047     pt.put ("flight_date.flight_number", lFlightNumber);
00048
00049     // Put the flight departure date in property tree
00050     const std::string& lDepartureDateStr =
00051       boost::gregorian::to_simple_string (lFlightDateDate);
```

```
00052     pt.put ("flight_date.departure_date", lDepartureDateStr);
00053 #endif // BOOST_VERSION >= 104100
00054
00055     //
00056     jsonLegDateExport (pt, iFlightDate);
00057
00058     //
00059     jsonLegCabinExport (pt, iFlightDate);
00060
00061     //
00062     jsonBucketExport (pt, iFlightDate);
00063
00064     //
00065     jsonSegmentDateExport (pt, iFlightDate);
00066
00067     //
00068     jsonSegmentCabinExport (pt, iFlightDate);
00069
00070     //
00071     jsonFareFamilyExport (pt, iFlightDate);
00072
00073     //
00074     jsonBookingClassExport (pt, iFlightDate);
00075
00076 #if BOOST_VERSION >= 104100
00077     // Write the property tree into the JSON stream.
00078     write_json (oStream, pt);
00079 #endif // BOOST_VERSION >= 104100
00080   }
00081
00082   // ////////////////////////////////////////////////////////////////////
00083   void BomJSONExport::jsonLegDateExport (bpt::ptree& ioPropertyTree,
00084                                          const FlightDate& iFlightDate) {
00089     // Check whether there are LegDate objects
00090     if (BomManager::hasList<LegDate> (iFlightDate) == false) {
00091       return;
00092     }
00093
00094     // Browse the leg-dates
00095     const LegDateList_T& lLegDateList =
00096       BomManager::getList<LegDate> (iFlightDate);
00097     for (LegDateList_T::const_iterator itLD = lLegDateList.begin();
00098          itLD != lLegDateList.end(); ++itLD) {
00099       const LegDate* lLD_ptr = *itLD;
00100       assert (lLD_ptr != NULL);
00101
00102 #if BOOST_VERSION >= 104100
00103
00104       //
00105       bpt::ptree lLegDateArray;
00106
00107       // Put boarding point in property tree
00108       lLegDateArray.put ("BoardPoint", lLD_ptr->getBoardingPoint());
00109       // Put off point in property tree
00110       lLegDateArray.put ("OffPoint", lLD_ptr->getOffPoint());
00111       // Put boarding date in property tree
00112       lLegDateArray.put ("BoardDate", lLD_ptr->getBoardingDate());
00113       // Put off date in property tree
00114       lLegDateArray.put ("OffDate", lLD_ptr->getOffDate());
00115       // Put boarding time in property tree
00116       lLegDateArray.put ("BoardTime", lLD_ptr->getBoardingTime());
00117       // Put off time in property tree
```

```
00118       lLegDateArray.put ("OffTime", lLD_ptr->getOffTime());
00119       // Put elapsed time in property tree
00120       lLegDateArray.put ("Elapsed", lLD_ptr->getElapsedTime());
00121       // Put date offset in property tree
00122       lLegDateArray.put ("Date_Offset", lLD_ptr->getDateOffset());
00123       // Put time offset in property tree
00124       lLegDateArray.put ("Time_Offset", lLD_ptr->getTimeOffset());
00125       // Put distance in property tree
00126       lLegDateArray.put ("Distance", lLD_ptr->getDistance());
00127       // Put capacity in property tree
00128       lLegDateArray.put ("Capacity", lLD_ptr->getCapacity());
00129
00130       // Put leg date array in property tree
00131       std::ostringstream oStream;
00132       oStream << "flight_date.leg_" << lLD_ptr->getBoardingPoint();
00133       ioPropertyTree.put_child(oStream.str(),lLegDateArray);
00134
00135 #endif // BOOST_VERSION >= 104100
00136     }
00137   }
00138
00139   // ////////////////////////////////////////////////////////////////////
00140   void BomJSONExport::jsonLegCabinExport (bpt::ptree& ioPropertyTree,
00141                                           const FlightDate& iFlightDate) {
00146     // Check whether there are LegDate objects
00147     if (BomManager::hasList<LegDate> (iFlightDate) == false) {
00148       return;
00149     }
00150
00151     const LegDateList_T& lLegDateList =
00152       BomManager::getList<LegDate> (iFlightDate);
00153     for (LegDateList_T::const_iterator itLD = lLegDateList.begin();
00154          itLD != lLegDateList.end(); ++itLD) {
00155       const LegDate* lLD_ptr = *itLD;
00156       assert (lLD_ptr != NULL);
00157
00158       // Browse the leg-cabins
00159       const LegCabinList_T& lLegCabinList =
00160         BomManager::getList<LegCabin> (*lLD_ptr);
00161       for (LegCabinList_T::const_iterator itLC = lLegCabinList.begin();
00162            itLC != lLegCabinList.end(); ++itLC) {
00163         const LegCabin* lLC_ptr = *itLC;
00164         assert (lLC_ptr != NULL);
00165
00166 #if BOOST_VERSION >= 104100
00167
00168         //
00169         bpt::ptree lLegCabinArray;
00170
00171         // Put the offered capacity in property tree
00172         lLegCabinArray.put ("OffedCAP", lLC_ptr->getOfferedCapacity());
00173         // Put the physical capacity in property tree
00174         lLegCabinArray.put ("PhyCAP", lLC_ptr->getPhysicalCapacity());
00175         // Put regrade adjustment in property tree
00176         lLegCabinArray.put ("RgdADJ", lLC_ptr->getRegradeAdjustment());
00177         // Put authorization level in property tree
00178         lLegCabinArray.put ("AU", lLC_ptr->getAuthorizationLevel());
00179         // Put UPR in property tree
00180         lLegCabinArray.put ("UPR", lLC_ptr->getUPR());
00181         // Put sold seats in property tree
00182         lLegCabinArray.put ("SS", lLC_ptr->getSoldSeat());
00183         // Put staff nb of seats in property tree
```

```
00184         lLegCabinArray.put ("Staff", lLC_ptr->getStaffNbOfSeats());
00185         // Put waiting list nb of seats in property tree
00186         lLegCabinArray.put ("WL", lLC_ptr->getWLNbOfSeats());
00187         // Put group nb of seats in property tree
00188         lLegCabinArray.put ("Group", lLC_ptr->getGroupNbOfSeats());
00189         // Put committed space in property tree
00190         lLegCabinArray.put ("CommSpace", lLC_ptr->getCommittedSpace());
00191         // Put availability pool in property tree
00192         lLegCabinArray.put ("AvPool", lLC_ptr->getAvailabilityPool());
00193         // Put availability in property tree
00194         lLegCabinArray.put ("Avl", lLC_ptr->getAvailability());
00195         // Put net availability in property tree
00196         lLegCabinArray.put ("NAV", lLC_ptr->getNetAvailability());
00197         // Put gross availability in property tree
00198         lLegCabinArray.put ("GAV", lLC_ptr->getGrossAvailability());
00199         // Put avg cancellation percentage in property tree
00200         lLegCabinArray.put ("ACP", lLC_ptr->getAvgCancellationPercentage());
00201         // Put ETB in property tree
00202         lLegCabinArray.put ("ETB", lLC_ptr->getETB());
00203         // Put current bid price in property tree
00204         lLegCabinArray.put ("BidPrice", lLC_ptr->getCurrentBidPrice());
00205 
00206         // Put leg cabin array in property tree
00207         std::ostringstream oStream;
00208         oStream << "flight_date"
00209                 << ".leg_" << lLD_ptr->getBoardingPoint()
00210                 << ".cabin_" << lLC_ptr->toString();
00211         ioPropertyTree.put_child (oStream.str(), lLegCabinArray);
00212 
00213 #endif // BOOST_VERSION >= 104100
00214       }
00215     }
00216   }
00217 
00218   // ////////////////////////////////////////////////////////////////////
00219   void BomJSONExport::jsonBucketExport (bpt::ptree& ioPropertyTree,
00220                                         const FlightDate& iFlightDate) {
00225     // Check whether there are LegDate objects
00226     if (BomManager::hasList<LegDate> (iFlightDate) == false) {
00227       return;
00228     }
00229 
00230     // Browse the leg-dates
00231     const LegDateList_T& lLegDateList =
00232       BomManager::getList<LegDate> (iFlightDate);
00233     for (LegDateList_T::const_iterator itLD = lLegDateList.begin();
00234          itLD != lLegDateList.end(); ++itLD) {
00235       const LegDate* lLD_ptr = *itLD;
00236       assert (lLD_ptr != NULL);
00237 
00238       // Browse the leg-cabins
00239       const LegCabinList_T& lLegCabinList =
00240         BomManager::getList<LegCabin> (*lLD_ptr);
00241       for (LegCabinList_T::const_iterator itLC = lLegCabinList.begin();
00242            itLC != lLegCabinList.end(); ++itLC) {
00243         const LegCabin* lLC_ptr = *itLC;
00244         assert (lLC_ptr != NULL);
00245 
00246         // Check whether there are bucket objects
00247         if (BomManager::hasList<Bucket> (*lLC_ptr) == false) {
00248           return;
00249         }
```

```
00250
00251         // Browse the buckets
00252         const BucketList_T& lBucketList = BomManager::getList<Bucket> (*lLC_ptr);

00253         for (BucketList_T::const_iterator itBuck = lBucketList.begin();
00254              itBuck != lBucketList.end(); ++itBuck) {
00255           const Bucket* lBucket_ptr = *itBuck;
00256           assert (lBucket_ptr != NULL);
00257
00258 #if BOOST_VERSION >= 104100
00259
00260           //
00261           bpt::ptree lLegBucketArray;
00262
00263           // Put yield in property tree
00264           lLegBucketArray.put ("Yield", lBucket_ptr->getYieldRangeUpperValue());

00265           // Put seat_index in property tree
00266           lLegBucketArray.put ("SI", lBucket_ptr->getSeatIndex());
00267           // Put sold_seats in property tree
00268           lLegBucketArray.put ("SS", lBucket_ptr->getSoldSeats());
00269           // Put avaibility in property tree
00270           lLegBucketArray.put ("AV", lBucket_ptr->getAvailability());
00271
00272           // Put bucket array in property tree
00273           std::ostringstream oStream;
00274           oStream << "flight_date"
00275                   << ".leg_" << lLD_ptr->getBoardingPoint()
00276                   << ".cabin_" << lLC_ptr->toString()
00277                   << ".bucket_" << lBucket_ptr->toString();
00278           ioPropertyTree.put_child (oStream.str(),lLegBucketArray);
00279
00280 #endif // BOOST_VERSION >= 104100
00281         }
00282       }
00283     }
00284   }
00285
00286   // ////////////////////////////////////////////////////////////////////
00287   void BomJSONExport::jsonSegmentDateExport (bpt::ptree& ioPropertyTree,
00288                                              const FlightDate& iFlightDate)
      {
00289
00294     // Check whether there are SegmentDate objects
00295     if (BomManager::hasList<SegmentDate> (iFlightDate) == false) {
00296       return;
00297     }
00298
00299     // Browse the segment-dates
00300     unsigned short idx = 0;
00301     const SegmentDateList_T& lSegmentDateList =
00302       BomManager::getList<SegmentDate> (iFlightDate);
00303     for (SegmentDateList_T::const_iterator itSD = lSegmentDateList.begin();
00304          itSD != lSegmentDateList.end(); ++itSD, ++idx) {
00305       const SegmentDate* lSD_ptr = *itSD;
00306       assert (lSD_ptr != NULL);
00307
00308 #if BOOST_VERSION >= 104100
00309
00310       //
00311       bpt::ptree lSegmentDateArray;
00312
```

```
00313       // Put boarding point in property tree
00314       lSegmentDateArray.put ("BoardPoint", lSD_ptr->getBoardingPoint());
00315       // Put off point in property tree
00316       lSegmentDateArray.put ("OffPoint", lSD_ptr->getOffPoint());
00317       // Put boarding date in property tree
00318       lSegmentDateArray.put ("BoardDate", lSD_ptr->getBoardingDate());
00319       // Put off date in property tree
00320       lSegmentDateArray.put ("OffDate", lSD_ptr->getOffDate());
00321       // Put boarding time in property tree
00322       lSegmentDateArray.put ("BoardTime", lSD_ptr->getBoardingTime());
00323       // Put off time in property tree
00324       lSegmentDateArray.put ("OffTime", lSD_ptr->getOffTime());
00325       // Put elapsed time in property tree
00326       lSegmentDateArray.put ("Elapsed", lSD_ptr->getElapsedTime());
00327       // Put date offset in property tree
00328       lSegmentDateArray.put ("Date_Offset", lSD_ptr->getDateOffset());
00329       // Put time offset in property tree
00330       lSegmentDateArray.put ("Time_Offset", lSD_ptr->getTimeOffset());
00331       // Put distance in property tree
00332       lSegmentDateArray.put ("Distance", lSD_ptr->getDistance());
00333
00334       // Put segment date array in property tree
00335       std::ostringstream oStream;
00336       oStream << "flight_date.segment_" << lSD_ptr->getBoardingPoint()
00337               << "_" << lSD_ptr->getOffPoint();
00338       ioPropertyTree.put_child(oStream.str(),lSegmentDateArray);
00339
00340 #endif // BOOST_VERSION >= 104100
00341     }
00342   }
00343
00344   // ////////////////////////////////////////////////////////////////////
00345   void BomJSONExport::jsonSegmentCabinExport (bpt::ptree& ioPropertyTree,
00346                                               const FlightDate& iFlightDate) {
00350   }
00351
00352   // ////////////////////////////////////////////////////////////////////
00353   void BomJSONExport::jsonFareFamilyExport (bpt::ptree& ioPropertyTree,
00354                                             const FlightDate& iFlightDate) {
00359     // Check whether there are SegmentDate objects
00360     if (BomManager::hasList<SegmentDate> (iFlightDate) == false) {
00361       return;
00362     }
00363
00364     // Browse the segment-dates
00365     unsigned short idx = 0;
00366     const SegmentDateList_T& lSegmentDateList =
00367       BomManager::getList<SegmentDate> (iFlightDate);
00368     for (SegmentDateList_T::const_iterator itSD = lSegmentDateList.begin();
00369          itSD != lSegmentDateList.end(); ++itSD, ++idx) {
00370       const SegmentDate* lSD_ptr = *itSD;
00371       assert (lSD_ptr != NULL);
00372
00373       // Browse the segment-cabins
00374       const SegmentCabinList_T& lSegmentCabinList =
00375         BomManager::getList<SegmentCabin> (*lSD_ptr);
00376       for (SegmentCabinList_T::const_iterator itSC = lSegmentCabinList.begin();
00377            itSC != lSegmentCabinList.end(); ++itSC) {
00378         const SegmentCabin* lSC_ptr = *itSC;
00379         assert (lSC_ptr != NULL);
00380
00381         // Check whether there are fare family objects
```

```
00382         if (BomManager::hasList<FareFamily> (*lSC_ptr) == false) {
00383           continue;
00384         }
00385
00386         // Browse the fare families
00387         unsigned short ffIdx = 0;
00388         const FareFamilyList_T& lFareFamilyList =
00389           BomManager::getList<FareFamily> (*lSC_ptr);
00390         for (FareFamilyList_T::const_iterator itFF = lFareFamilyList.begin();
00391              itFF != lFareFamilyList.end(); ++itFF, ++ffIdx) {
00392           const FareFamily* lFF_ptr = *itFF;
00393           assert (lFF_ptr != NULL);
00394
00395 #if BOOST_VERSION >= 104100
00396           //
00397           bpt::ptree lFFArray;
00398
00399           // Put cabin in property tree
00400           lFFArray.put ("cabin",lSC_ptr->toString());
00401           // Put fare family in property tree
00402           lFFArray.put ("code", lFF_ptr->getFamilyCode());
00403           // Put MIN in property tree
00404           lFFArray.put ("MIN", lSC_ptr->getMIN());
00405           // Put UPR in property tree
00406           lFFArray.put ("UPR", lSC_ptr->getUPR());
00407           // Put committed Ssace in property tree
00408           lFFArray.put ("CommSpace", lSC_ptr->getCommittedSpace());
00409           // Put availability pool in property tree
00410           lFFArray.put ("AvPool", lSC_ptr->getAvailabilityPool());
00411           // Put current bid price in property tree
00412           lFFArray.put ("BP", lSC_ptr->getCurrentBidPrice());
00413
00414           std::ostringstream oStream;
00415           oStream << "flight_date.segment_" << lSD_ptr->getBoardingPoint()
00416                   << "_" << lSD_ptr->getOffPoint()
00417                   << ".fare_family_" << lFF_ptr->toString();
00418           ioPropertyTree.put_child (oStream.str(), lFFArray);
00419 #endif // BOOST_VERSION >= 104100
00420         }
00421       }
00422     }
00423   }
00424
00425   // ////////////////////////////////////////////////////////////////////
00426   void BomJSONExport::jsonBookingClassExport (bpt::ptree& ioPropertyTree,
00427                                               const BookingClass& iBookingClass,
00428                                               const std::string& iLeadingString)
      {
00435     std::ostringstream oStream;
00436     oStream << iLeadingString;
00437     oStream << ".class_" << iBookingClass.toString();
00438
00439 #if BOOST_VERSION >= 104100
00440
00441     bpt::ptree lBookingClassArray;
00442
00443     // Put sub class in property tree
00444     lBookingClassArray.put ("Subclass", iBookingClass.getSubclassCode());
00445     // Put authorization level in property tree
00446     std::ostringstream oAUProtStr;
00447     oAUProtStr << iBookingClass.getAuthorizationLevel()
00448                << " (" << iBookingClass.getProtection()
```

```
00449                << ") ";
00450     lBookingClassArray.put ("MIN/AU (Prot)", oAUProtStr.str());
00451     // Put negotiated space in property tree
00452     lBookingClassArray.put ("Nego", iBookingClass.getNegotiatedSpace());
00453     // Put no show percentage in property tree
00454     lBookingClassArray.put ("NS%", iBookingClass.getNoShowPercentage());
00455     // Put cancellation percentage in property tree
00456     lBookingClassArray.put ("OB%", iBookingClass.getCancellationPercentage());
00457     // Put sub nb of bookings in property tree
00458     lBookingClassArray.put ("Bkgs", iBookingClass.getNbOfBookings());
00459     // Put nb of group bookings in property tree
00460     lBookingClassArray.put ("GrpBks (pdg)", iBookingClass.getNbOfGroupBookings())
    ;
00461     // Put nb of staff bookings in property tree
00462     lBookingClassArray.put ("StfBkgs", iBookingClass.getNbOfStaffBookings());
00463     // Put nb of WL bookings in property tree
00464     lBookingClassArray.put ("WLBkgs", iBookingClass.getNbOfWLBookings());
00465     // Put ETB in property tree
00466     lBookingClassArray.put ("ETB", iBookingClass.getETB());
00467     // Put net class availability in property tree
00468     lBookingClassArray.put ("ClassAvl", iBookingClass.getNetClassAvailability());

00469     // Put segment availability in property tree
00470     lBookingClassArray.put ("SegAvl", iBookingClass.getSegmentAvailability());
00471     // Put net revenue availability in property tree
00472     lBookingClassArray.put ("RevAvl", iBookingClass.getNetRevenueAvailability());

00473
00474     //
00475     ioPropertyTree.put_child (oStream.str(), lBookingClassArray);
00476
00477 #endif // BOOST_VERSION >= 104100
00478   }
00479
00480   // ////////////////////////////////////////////////////////////////////
00481   void BomJSONExport::jsonBookingClassExport (bpt::ptree& ioPropertyTree,
00482                                               const FlightDate& iFlightDate) {
00483     // Check whether there are SegmentDate objects
00484     if (BomManager::hasList<SegmentDate> (iFlightDate) == false) {
00485       return;
00486     }
00487
00488     // Browse the segment-dates
00489     const SegmentDateList_T& lSegmentDateList =
00490       BomManager::getList<SegmentDate> (iFlightDate);
00491     for (SegmentDateList_T::const_iterator itSD = lSegmentDateList.begin();
00492          itSD != lSegmentDateList.end(); ++itSD) {
00493       const SegmentDate* lSD_ptr = *itSD;
00494       assert (lSD_ptr != NULL);
00495
00496       // Build the leading string to be displayed
00497       std::ostringstream oLeadingStr;
00498       // Begin completed the leading string to be displayed
00499       oLeadingStr << "flight_date.segment_" << lSD_ptr->getBoardingPoint()
00500                   << "_" << lSD_ptr->getOffPoint();
00501
00502       // Browse the segment-cabins
00503       const SegmentCabinList_T& lSegmentCabinList =
00504         BomManager::getList<SegmentCabin> (*lSD_ptr);
00505       for (SegmentCabinList_T::const_iterator itSC = lSegmentCabinList.begin();
00506            itSC != lSegmentCabinList.end(); ++itSC) {
00507         const SegmentCabin* lSC_ptr = *itSC;
```

```
00508         assert (lSC_ptr != NULL);
00509
00510         // Check whether there are FareFamily objects
00511         if (BomManager::hasList<FareFamily> (*lSC_ptr) == true) {
00512
00513           // Browse the fare families
00514           const FareFamilyList_T& lFareFamilyList =
00515             BomManager::getList<FareFamily> (*lSC_ptr);
00516           for (FareFamilyList_T::const_iterator itFF = lFareFamilyList.begin();
00517                itFF != lFareFamilyList.end(); ++itFF) {
00518             const FareFamily* lFF_ptr = *itFF;
00519             assert (lFF_ptr != NULL);
00520
00521             oLeadingStr << ".fare_family_" << lFF_ptr->toString();
00522
00523             // Browse the booking-classes
00524             const BookingClassList_T& lBookingClassList =
00525               BomManager::getList<BookingClass> (*lFF_ptr);
00526             for (BookingClassList_T::const_iterator itBC =
00527                    lBookingClassList.begin();
00528                  itBC != lBookingClassList.end(); ++itBC) {
00529               const BookingClass* lBC_ptr = *itBC;
00530               assert (lBC_ptr != NULL);
00531
00532               //
00533               jsonBookingClassExport (ioPropertyTree, *lBC_ptr,
00534                                       oLeadingStr.str());
00535             }
00536           }
00537         } else {
00538
00539           // The fare family code is a fake one ('NoFF'), and therefore
00540           // does not vary
00541           FamilyCode_T lDefaultFamilyCode ("NoFF");
00542           oLeadingStr << ".fare_family_" << lDefaultFamilyCode ;
00543
00544           // Browse the booking-classes, directly from the segment-cabin object
00545           const BookingClassList_T& lBookingClassList =
00546             BomManager::getList<BookingClass> (*lSC_ptr);
00547           for (BookingClassList_T::const_iterator itBC =
00548                  lBookingClassList.begin();
00549                itBC != lBookingClassList.end(); ++itBC) {
00550             const BookingClass* lBC_ptr = *itBC;
00551             assert (lBC_ptr != NULL);
00552
00553             //
00554             jsonBookingClassExport (ioPropertyTree, *lBC_ptr, oLeadingStr.str());

00555           }
00556         }
00557       }
00558     }
00559   }
00560 }
```

35.169 stdair/bom/BomJSONExport.hpp File Reference

```
#include <iosfwd>

#include <stdair/bom/BookingClass.hpp>
```

Classes

- class stdair::BomJSONExport

  Utility class to export StdAir objects in a JSON format.

Namespaces

- namespace bpt
- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef char bpt::ptree

35.170 BomJSONExport.hpp

```
00001 #ifndef __STDAIR_BOM_BOMJSONEXPORT_HPP
00002 #define __STDAIR_BOM_BOMJSONEXPORT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 // Boost Property Tree
00010 #if BOOST_VERSION >= 104100
00011 #include <boost/property_tree/ptree.hpp>
00012 #include <boost/property_tree/json_parser.hpp>
00013 #endif // BOOST_VERSION >= 104100
00014 // StdAir
00015 #include <stdair/bom/BookingClass.hpp>
00016
00017 #if BOOST_VERSION >= 104100
00018   namespace bpt = boost::property_tree;
00019 #else // BOOST_VERSION >= 104100
00020   namespace bpt {
00021     typedef char ptree;
00022   }
00023 #endif // BOOST_VERSION >= 104100
00024
00025 namespace stdair {
00026
00028   class FlightDate;
00029
00034   class BomJSONExport {
00035   public:
00036     // ////////////////// Export support methods /////////////////
00045     static void jsonExport (std::ostream&, const FlightDate&);
00046
00047   private:
00048
00049     static void jsonLegDateExport (bpt::ptree&, const FlightDate&);
00050
00051     static void jsonLegCabinExport (bpt::ptree&, const FlightDate&);
```

```
00052
00053     static void jsonBucketExport (bpt::ptree&, const FlightDate&);
00054
00055     static void jsonSegmentDateExport (bpt::ptree&, const FlightDate&);
00056
00057     static void jsonSegmentCabinExport (bpt::ptree&, const FlightDate&);
00058
00059     static void jsonFareFamilyExport (bpt::ptree&, const FlightDate&);
00060
00061     static void jsonBookingClassExport (bpt::ptree&,
00062                                         const BookingClass&,
00063                                         const std::string&);
00064
00065     static void jsonBookingClassExport (bpt::ptree&, const FlightDate&);
00066
00067   };
00068
00069 }
00070 #endif // __STDAIR_BOM_BOMJSONEXPORT_HPP
```

35.171 stdair/bom/BomJSONImport.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/bom/BomJSONImport.hpp>
```

Namespaces

- namespace bpt
- namespace stdair

  Handle on the StdAir library context.

35.172 BomJSONImport.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 #if BOOST_VERSION >= 104100
00008 // Boost Property Tree
00009 #include <boost/property_tree/ptree.hpp>
00010 #include <boost/property_tree/json_parser.hpp>
00011 #endif // BOOST_VERSION >= 104100
00012 // StdAir
00013 #include <stdair/bom/BomJSONImport.hpp>
00014
00015 #if BOOST_VERSION >= 104100
00016 namespace bpt = boost::property_tree;
00017 #else // BOOST_VERSION >= 104100
00018 namespace bpt {
00019   typedef char ptree;
00020 }
```

```
00021 #endif // BOOST_VERSION >= 104100
00022
00023 namespace stdair {
00024
00025   // ////////////////////////////////////////////////////////////////////
00026   bool BomJSONImport::jsonImportInventoryKey (const std::string& iBomTree,
00027                                               AirlineCode_T& ioAirlineCode) {
00028     bool hasKeyBeenSuccessfullyRetrieved = true;
00029
00030 #if BOOST_VERSION >= 104100
00031     // Create an empty property tree object
00032     bpt::ptree pt;
00033
00034     try {
00035
00036       // Load the JSON formatted string into the property tree.
00037       // If reading fails (cannot open stream, parse error), an
00038       // exception is thrown.
00039       std::istringstream iStr (iBomTree);
00040       read_json (iStr, pt);
00041
00042       // Get the airline_code and build an InventoryKey structure.
00043       // If the flight_date.airline_code key is not found, an
00044       // exception is thrown.
00045       ioAirlineCode = pt.get<AirlineCode_T> ("flight_date.airline_code");
00046
00047     } catch (bpt::ptree_error& bptException) {
00048       hasKeyBeenSuccessfullyRetrieved = false;
00049     }
00050 #endif // BOOST_VERSION >= 104100
00051
00052     return hasKeyBeenSuccessfullyRetrieved;
00053   }
00054
00055   // ////////////////////////////////////////////////////////////////////
00056   bool BomJSONImport::jsonImportFlightDateKey (const std::string& iBomTree,
00057                                                FlightNumber_T& ioFlightNumber,
00058                                                Date_T& ioDepartureDate) {
00059     bool hasKeyBeenSuccessfullyRetrieved = false;
00060
00061 #if BOOST_VERSION >= 104100
00062     // Create an empty property tree object
00063     bpt::ptree pt;
00064
00065     try {
00066
00067       // Load the JSON formatted string into the property tree.
00068       // If reading fails (cannot open stream, parse error), an
00069       // exception is thrown.
00070       std::istringstream iStr (iBomTree);
00071       read_json (iStr, pt);
00072
00073       // Get the flight_number and departure_date and build an
00074       // FlightDateKey structure.
00075       ioFlightNumber = pt.get<FlightNumber_T> ("flight_date.flight_number");
00076
00077       const std::string& lDepartureDateStr =
00078         pt.get<std::string> ("flight_date.departure_date");
00079       ioDepartureDate = boost::gregorian::from_simple_string (lDepartureDateStr);

00080
00081     } catch (bpt::ptree_error& bptException) {
```

```
00082       hasKeyBeenSuccessfullyRetrieved = false;
00083     }
00084 #endif // BOOST_VERSION >= 104100
00085
00086     return hasKeyBeenSuccessfullyRetrieved;
00087   }
00088
00089 }
```

35.173 stdair/bom/BomJSONImport.hpp File Reference

```
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
```

Classes

- class stdair::BomJSONImport

  Utility class to import StdAir objects in a JSON format.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.174 BomJSONImport.hpp

```
00001 #ifndef __STDAIR_BOM_BOMJSONIMPORT_HPP
00002 #define __STDAIR_BOM_BOMJSONIMPORT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_basic_types.hpp>
00011 #include <stdair/stdair_date_time_types.hpp>
00012
00013 namespace stdair {
00014
00018   class BomJSONImport {
00019   public:
00020     // ///////////////// Import support methods /////////////////
00028     static bool jsonImportInventoryKey (const std::string& iBomKey,
00029                                         AirlineCode_T&);
00030
00039     static bool jsonImportFlightDateKey (const std::string& iBomKey,
00040                                          FlightNumber_T&,
00041                                          Date_T& ioDepartureDate);
00042   };
00043
```

```
00044 }
00045 #endif // __STDAIR_BOM_BOMJSONIMPORT_HPP
```

35.175 stdair/bom/BomKeyManager.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/tokenizer.hpp>
#include <boost/lexical_cast.hpp>
#include <boost/date_time/gregorian/parsers.hpp>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/InventoryKey.hpp>
#include <stdair/bom/FlightDateKey.hpp>
#include <stdair/bom/SegmentDateKey.hpp>
#include <stdair/bom/ParsedKey.hpp>
#include <stdair/bom/BomKeyManager.hpp>
#include <stdair/service/Logger.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef boost::tokenizer< boost::char_separator< char > > stdair::Tokeniser_T

35.176 BomKeyManager.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost
00008 #include <boost/tokenizer.hpp>
00009 #include <boost/lexical_cast.hpp>
00010 #include <boost/date_time/gregorian/parsers.hpp>
00011 // StdAir
00012 #include <stdair/stdair_exceptions.hpp>
00013 #include <stdair/basic/BasConst_BomDisplay.hpp>
00014 #include <stdair/bom/InventoryKey.hpp>
```

```
00015 #include <stdair/bom/FlightDateKey.hpp>
00016 #include <stdair/bom/SegmentDateKey.hpp>
00017 #include <stdair/bom/ParsedKey.hpp>
00018 #include <stdair/bom/BomKeyManager.hpp>
00019 #include <stdair/service/Logger.hpp>
00020
00021 namespace stdair {
00022
00023   // ////////////// Tokenising support ///////////////
00027   typedef boost::tokenizer<boost::char_separator<char> > Tokeniser_T;
00028
00029   // ////////////////////////////////////////////////////////////////////
00030   ParsedKey BomKeyManager::extractKeys (const std::string& iFullKeyStr) {
00031     ParsedKey oParsedKey;
00032     oParsedKey._fullKey = iFullKeyStr;
00033
00034     // Token-ise the full key string
00035     Tokeniser_T lTokens (iFullKeyStr, DEFAULT_KEY_TOKEN_DELIMITER);
00036     Tokeniser_T::iterator itToken = lTokens.begin();
00037
00038     // Airline code
00039     if (itToken != lTokens.end()) {
00040       oParsedKey._airlineCode = *itToken;
00041
00042     // Flight number
00043       ++itToken;
00044       if (itToken != lTokens.end()) {
00045         oParsedKey._flightNumber = *itToken;
00046
00047         // Departure date
00048         ++itToken;
00049         if (itToken != lTokens.end()) {
00050           oParsedKey._departureDate = *itToken;
00051
00052           // Origin
00053           ++itToken;
00054           if (itToken != lTokens.end()) {
00055             oParsedKey._boardingPoint = *itToken;
00056
00057             // Destination
00058             ++itToken;
00059             if (itToken != lTokens.end()) {
00060               oParsedKey._offPoint = *itToken;
00061
00062               // Boarding time
00063               ++itToken;
00064               if (itToken != lTokens.end()) {
00065                 oParsedKey._boardingTime = *itToken;
00066               }
00067             }
00068           }
00069         }
00070       }
00071     }
00072
00073     return oParsedKey;
00074   }
00075
00076   // ////////////////////////////////////////////////////////////////////
00077   InventoryKey BomKeyManager::
00078   extractInventoryKey (const std::string& iFullKeyStr) {
00079     ParsedKey lParsedKey = extractKeys (iFullKeyStr);
```

```
00080
00081     return lParsedKey.getInventoryKey();
00082   }
00083
00084   // ////////////////////////////////////////////////////////////////////
00085   FlightDateKey BomKeyManager::
00086   extractFlightDateKey (const std::string& iFullKeyStr) {
00087     ParsedKey lParsedKey = extractKeys (iFullKeyStr);
00088
00089     return lParsedKey.getFlightDateKey();
00090   }
00091
00092   // ////////////////////////////////////////////////////////////////////
00093   SegmentDateKey BomKeyManager::
00094   extractSegmentDateKey (const std::string& iFullKeyStr) {
00095     ParsedKey lParsedKey = extractKeys (iFullKeyStr);
00096
00097     return lParsedKey.getSegmentKey();
00098   }
00099 }
```

35.177 stdair/bom/BomKeyManager.hpp File Reference

```
#include <iosfwd>
#include <stdair/stdair_basic_types.hpp>
```

Classes

- class stdair::BomKeyManager

  Utility class to extract key structures from strings.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.178 BomKeyManager.hpp

```
00001 #ifndef __STDAIR_BOM_BOMKEYMANAGER_HPP
00002 #define __STDAIR_BOM_BOMKEYMANAGER_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 // StdAir
00010 #include <stdair/stdair_basic_types.hpp>
00011
00012 namespace stdair {
00013
00015   struct BomRootKey;
```

```
00016   struct InventoryKey;
00017   struct FlightDateKey;
00018   struct LegDateKey;
00019   struct SegmentDateKey;
00020   struct LegCabinKey;
00021   struct SegmentCabinKey;
00022   struct FareFamilyKey;
00023   struct BookingClassKey;
00024   struct ParsedKey;
00025
00029   class BomKeyManager {
00030   public:
00031     // ////////////////// Key management support methods /////////////////
00036     static ParsedKey extractKeys (const std::string& iFullKeyStr);
00037
00049     static InventoryKey extractInventoryKey (const std::string& iFullKeyStr);
00050
00062     static FlightDateKey extractFlightDateKey (const std::string& iFullKeyStr);
00063
00075     static SegmentDateKey extractSegmentDateKey (const std::string& iFullKeyStr);

00076   };
00077
00078 }
00079 #endif // __STDAIR_BOM_BOMKEYMANAGER_HPP
```

35.179 stdair/bom/BomManager.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <list>
#include <map>
#include <boost/static_assert.hpp>
#include <boost/type_traits/is_same.hpp>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/BomHolder.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/bom/SegmentDate.hpp>
```

Classes

- class stdair::BomManager

  Utility class for StdAir-based objects.

Namespaces

- namespace stdair

Handle on the StdAir library context.

35.180 BomManager.hpp

```
00001 #ifndef __STDAIR_BOM_BOMMANAGER_HPP
00002 #define __STDAIR_BOM_BOMMANAGER_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 #include <list>
00011 #include <map>
00012 // Boost
00013 #include <boost/static_assert.hpp>
00014 #include <boost/type_traits/is_same.hpp>
00015 // StdAir
00016 #include <stdair/stdair_exceptions.hpp>
00017 #include <stdair/bom/BomAbstract.hpp>
00018 #include <stdair/bom/BomHolder.hpp>
00019 #include <stdair/service/Logger.hpp>
00020 // Stdair BOM Objects
00021 #include <stdair/bom/SegmentDate.hpp>
00022
00023 namespace stdair {
00024
00032   class BomManager {
00033     friend class FacBomManager;
00034
00035   public:
00039     template <typename OBJECT2, typename OBJECT1>
00040     static const typename BomHolder<OBJECT2>::BomList_T& getList(const OBJECT1&);

00041
00045     template <typename OBJECT2, typename OBJECT1>
00046     static const typename BomHolder<OBJECT2>::BomMap_T& getMap (const OBJECT1&);
00047
00051     template <typename OBJECT2, typename OBJECT1>
00052     static bool hasList (const OBJECT1&);
00053
00057     template <typename OBJECT2, typename OBJECT1>
00058     static bool hasMap (const OBJECT1&);
00059
00065     template <typename PARENT, typename CHILD>
00066     static PARENT* getParentPtr (const CHILD&);
00067
00071     template <typename PARENT, typename CHILD>
00072     static PARENT& getParent (const CHILD&);
00073
00079     template <typename OBJECT2, typename OBJECT1>
00080     static OBJECT2* getObjectPtr (const OBJECT1&, const MapKey_T&);
00081
00085     template <typename OBJECT2, typename OBJECT1>
00086     static OBJECT2& getObject (const OBJECT1&, const MapKey_T&);
00087
00088
00089   private:
00094     template <typename OBJECT2, typename OBJECT1>
```

```
00095     static const BomHolder<OBJECT2>& getBomHolder (const OBJECT1&);
00096   };
00097
00098   // ////////////////////////////////////////////////////////////////////
00099   // Private method.
00100   template <typename OBJECT2, typename OBJECT1>
00101   const BomHolder<OBJECT2>& BomManager::getBomHolder (const OBJECT1& iObject1) {
00102
00103     const HolderMap_T& lHolderMap = iObject1.getHolderMap();
00104
00105     HolderMap_T::const_iterator itHolder = lHolderMap.find (&typeid (OBJECT2));
00106
00107     if (itHolder == lHolderMap.end()) {
00108       const std::string lName (typeid (OBJECT2).name());
00109       throw NonInitialisedContainerException ("Cannot find the holder of type "
00110                                               + lName + " within: "
00111                                               + iObject1.describeKey());
00112     }
00113
00114     const BomHolder<OBJECT2>* lBomHolder_ptr =
00115       static_cast<const BomHolder<OBJECT2>*> (itHolder->second);
00116     assert (lBomHolder_ptr != NULL);
00117
00118     return *lBomHolder_ptr;
00119   }
00120
00121   // ////////////////////////////////////////////////////////////////////
00122   // Public business method.
00123   // This method is specialized for the following couple types:
00124   // <SegmentDate, SegmentDate>
00125   template <typename OBJECT2, typename OBJECT1>
00126   const typename BomHolder<OBJECT2>::BomList_T& BomManager::
00127   getList (const OBJECT1& iObject1) {
00128
00129   const BomHolder<OBJECT2>& lBomHolder = getBomHolder<OBJECT2> (iObject1);
00130     return lBomHolder._bomList;
00131   }
00132
00133   // ////////////////////////////////////////////////////////////////////
00134   // Public business method.
00135   // Compile time assertation to check OBJECT1 and OBJECT2 types.
00136   template <typename OBJECT2, typename OBJECT1>
00137   const typename BomHolder<OBJECT2>::BomMap_T& BomManager::
00138   getMap (const OBJECT1& iObject1) {
00139
00140     //
00141     // Compile time assertation: this function must never be called with the
00142     // following list of couple types:
00143     // <SegmentDate, SegmentDate>
00144     //
00145     BOOST_STATIC_ASSERT ((boost::is_same<OBJECT1, SegmentDate>::value == false
00146                           || boost::is_same<OBJECT2, SegmentDate>::value == false
      ));
00147
00148     const BomHolder<OBJECT2>& lBomHolder = getBomHolder<OBJECT2> (iObject1);
00149     return lBomHolder._bomMap;
00150   }
00151
00152   // ////////////////////////////////////////////////////////////////////
00153   // Public business method.
00154   // This method is specialized for the following couple types:
00155   // <SegmentDate, SegmentDate>
```

```
00156   template <typename OBJECT2, typename OBJECT1>
00157   bool BomManager::hasList (const OBJECT1& iObject1) {
00158
00159     const HolderMap_T& lHolderMap = iObject1.getHolderMap();
00160     HolderMap_T::const_iterator itHolder = lHolderMap.find (&typeid (OBJECT2));
00161
00162     if (itHolder == lHolderMap.end()) {
00163       return false;
00164     }
00165     const BomHolder<OBJECT2>* lBomHolder_ptr =
00166       static_cast<const BomHolder<OBJECT2>*> (itHolder->second);
00167     assert (lBomHolder_ptr != NULL);
00168
00169     return !lBomHolder_ptr->_bomList.empty();
00170   }
00171
00172   // ////////////////////////////////////////////////////////////////////
00173   // Public business method.
00174   // This method is specialized for the following couple types:
00175   // <SegmentDate, SegmentDate>
00176   template <typename OBJECT2, typename OBJECT1>
00177   bool BomManager::hasMap (const OBJECT1& iObject1) {
00178
00179     const HolderMap_T& lHolderMap = iObject1.getHolderMap();
00180     HolderMap_T::const_iterator itHolder = lHolderMap.find (&typeid (OBJECT2));
00181
00182     if (itHolder == lHolderMap.end()) {
00183       return false;
00184     }
00185     const BomHolder<OBJECT2>* lBomHolder_ptr =
00186       static_cast<const BomHolder<OBJECT2>*> (itHolder->second);
00187     assert (lBomHolder_ptr != NULL);
00188
00189     return !lBomHolder_ptr->_bomMap.empty();
00190   }
00191
00192   // ////////////////////////////////////////////////////////////////////
00193   // Public business method valid for all PARENT and CHILD types.
00194   // (No compile time assertation to check PARENT and CHILD types.)
00195   template <typename PARENT, typename CHILD>
00196   PARENT* BomManager::getParentPtr (const CHILD& iChild) {
00197
00198     PARENT* const lParent_ptr = static_cast<PARENT* const> (iChild.getParent());
00199     return lParent_ptr;
00200   }
00201
00202   // ////////////////////////////////////////////////////////////////////
00203   // Public business method valid for all PARENT and CHILD types.
00204   // (No compile time assertation to check PARENT and CHILD types.)
00205   template <typename PARENT, typename CHILD>
00206   PARENT& BomManager::getParent (const CHILD& iChild) {
00207
00208     PARENT* const lParent_ptr = getParentPtr<PARENT> (iChild);
00209     assert (lParent_ptr != NULL);
00210     return *lParent_ptr;
00211   }
00212
00213   // ////////////////////////////////////////////////////////////////////
00214   // Public business method.
00215   // Compile time assertation to check OBJECT1 and OBJECT2 types.
00216   template <typename OBJECT2, typename OBJECT1>
00217   OBJECT2* BomManager::getObjectPtr (const OBJECT1& iObject1,
```

```
00218                                     const MapKey_T& iKey) {
00219
00220     //
00221     // Compile time assertation: this function must never be called with the
00222     // following list of couple types:
00223     // <SegmentDate, SegmentDate>
00224     //
00225     BOOST_STATIC_ASSERT ((boost::is_same<OBJECT1, SegmentDate>::value == false
00226                           || boost::is_same<OBJECT2, SegmentDate>::value == false
      ));
00227
00228     OBJECT2* oBom_ptr = NULL;
00229
00230     const HolderMap_T& lHolderMap = iObject1.getHolderMap();
00231
00232     typename HolderMap_T::const_iterator itHolder =
00233       lHolderMap.find (&typeid (OBJECT2));
00234
00235     if (itHolder != lHolderMap.end()) {
00236
00237       BomHolder<OBJECT2>* const lBomHolder_ptr =
00238         static_cast<BomHolder<OBJECT2>* const> (itHolder->second);
00239       assert (lBomHolder_ptr != NULL);
00240
00241       //
00242       typedef typename BomHolder<OBJECT2>::BomMap_T BomMap_T;
00243       BomMap_T& lBomMap =  lBomHolder_ptr->_bomMap;
00244       typename BomMap_T::iterator itBom = lBomMap.find (iKey);
00245
00246       if (itBom != lBomMap.end()) {
00247         oBom_ptr = itBom->second;
00248         assert (oBom_ptr != NULL);
00249       }
00250     }
00251
00252     return oBom_ptr;
00253   }
00254
00255   // ////////////////////////////////////////////////////////////////////
00256   // Public business method.
00257   // Compile time assertation to check OBJECT1 and OBJECT2 types.
00258   template <typename OBJECT2, typename OBJECT1>
00259   OBJECT2& BomManager::getObject (const OBJECT1& iObject1,
00260                                   const MapKey_T& iKey) {
00261
00262     //
00263     // Compile time assertation: this function must never be called with the
00264     // following list of couple types:
00265     // <SegmentDate, SegmentDate>
00266     //
00267     BOOST_STATIC_ASSERT ((boost::is_same<OBJECT1, SegmentDate>::value == false
00268                           || boost::is_same<OBJECT2, SegmentDate>::value == false
      ));
00269
00270     OBJECT2* oBom_ptr = NULL;
00271
00272     typedef std::map<const MapKey_T, OBJECT2*> BomMap_T;
00273     const BomMap_T& lBomMap = getMap<OBJECT2> (iObject1);
00274
00275     typename BomMap_T::const_iterator itBom = lBomMap.find (iKey);
00276
00277     if (itBom == lBomMap.end()) {
```

```
00278       const std::string lName (typeid (OBJECT2).name());
00279
00280       STDAIR_LOG_ERROR ("Cannot find the objet of type " << lName
00281                         << " with key " << iKey << " within: "
00282                         << iObject1.describeKey());
00283       assert (false);
00284     }
00285
00286     oBom_ptr = itBom->second;
00287     assert (oBom_ptr != NULL);
00288
00289     return *oBom_ptr;
00290   }
00291
00292   // ////////////////////////////////////////////////////////////////////
00293   //
00294   // Specialization of the template methods above for a segment
00295   // date and its corresponding marketing segment dates.
00296   //
00297   // ////////////////////////////////////////////////////////////////////
00298
00299   // Specialization of the template method hasList above for the types
00300   // <SegmentDate, SegmentDate>.
00301   // Add an element to the marketing segment date list of a segment date.
00302   template<>
00303   inline bool BomManager::hasList<SegmentDate,SegmentDate>
00304   (const SegmentDate& ioSegmentDate) {
00305
00306     const SegmentDateList_T& lMarketingSegmentDateList =
00307       ioSegmentDate.getMarketingSegmentDateList ();
00308     const bool isMarketingSegmentDateListEmpty =
00309       lMarketingSegmentDateList.empty();
00310     return isMarketingSegmentDateListEmpty;
00311   }
00312
00313   // Specialization of the template method hasList above for the types
00314   // <SegmentDate, SegmentDate>.
00315   // Return a boolean saying if the marketing segment date list is empty
00316   // or not.
00317   template<>
00318   inline const BomHolder<SegmentDate>::BomList_T&
00319   BomManager::getList<SegmentDate,SegmentDate> (const SegmentDate& ioSegmentDate)
      {
00320
00321     const SegmentDateList_T& lMarketingSegmentDateList =
00322       ioSegmentDate.getMarketingSegmentDateList ();
00323     return lMarketingSegmentDateList;
00324   }
00325
00326   // Specialization of the template method hasMap above for the types
00327   // <SegmentDate, SegmentDate>.
00328   // A segment date does not have a Segment Date Map but it can have a
00329   // Segment Date list (containing its marketing segment dates).
00330   template<>
00331   inline bool BomManager::hasMap<SegmentDate,SegmentDate>
00332   (const SegmentDate& ioSegmentDate) {
00333
00334     const bool hasList = false;
00335     return hasList;
00336   }
00337
00338 }
```

```
00339 #endif // __STDAIR_BOM_BOMMANAGER_HPP
```

35.181 stdair/bom/BomRetriever.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/BomKeyManager.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightDate.hpp>
#include <stdair/bom/LegDate.hpp>
#include <stdair/bom/SegmentDate.hpp>
#include <stdair/bom/LegCabin.hpp>
#include <stdair/bom/SegmentCabin.hpp>
#include <stdair/bom/FareFamily.hpp>
#include <stdair/bom/BookingClass.hpp>
#include <stdair/bom/BomRetriever.hpp>
#include <stdair/bom/ParsedKey.hpp>
#include <stdair/bom/AirportPair.hpp>
#include <stdair/service/Logger.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.182 BomRetriever.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Inventory.hpp>
00009 #include <stdair/bom/BomKeyManager.hpp>
00010 #include <stdair/bom/BomManager.hpp>
00011 #include <stdair/bom/BomRoot.hpp>
```

```
00012 #include <stdair/bom/Inventory.hpp>
00013 #include <stdair/bom/FlightDate.hpp>
00014 #include <stdair/bom/LegDate.hpp>
00015 #include <stdair/bom/SegmentDate.hpp>
00016 #include <stdair/bom/LegCabin.hpp>
00017 #include <stdair/bom/SegmentCabin.hpp>
00018 #include <stdair/bom/FareFamily.hpp>
00019 #include <stdair/bom/BookingClass.hpp>
00020 #include <stdair/bom/BomRetriever.hpp>
00021 #include <stdair/bom/ParsedKey.hpp>
00022 #include <stdair/bom/AirportPair.hpp>
00023 #include <stdair/service/Logger.hpp>
00024
00025 namespace stdair {
00026
00027   // ////////////////////////////////////////////////////////////////////
00028   Inventory* BomRetriever::
00029   retrieveInventoryFromLongKey (const BomRoot& iBomRoot,
00030                                 const std::string& iFullKeyStr) {
00031     Inventory* oInventory_ptr = NULL;
00032
00033     // Extract the inventory key (i.e., airline code)
00034     const InventoryKey& lInventoryKey =
00035       BomKeyManager::extractInventoryKey (iFullKeyStr);
00036
00037     oInventory_ptr = iBomRoot.getInventory (lInventoryKey);
00038
00039     return oInventory_ptr;
00040   }
00041
00042   // ////////////////////////////////////////////////////////////////////
00043   Inventory* BomRetriever::retrieveInventoryFromKey (const BomRoot& iBomRoot,
00044                                                      const InventoryKey& iKey) {
00045     Inventory* oInventory_ptr = NULL;
00046
00047     //
00048     oInventory_ptr = iBomRoot.getInventory (iKey);
00049
00050     return oInventory_ptr;
00051   }
00052
00053   // ////////////////////////////////////////////////////////////////////
00054   Inventory* BomRetriever::
00055   retrieveInventoryFromKey (const BomRoot& iBomRoot,
00056                             const AirlineCode_T& iAirlineCode) {
00057     Inventory* oInventory_ptr = NULL;
00058
00059     //
00060     const InventoryKey lKey (iAirlineCode);
00061     oInventory_ptr = iBomRoot.getInventory (lKey);
00062
00063     return oInventory_ptr;
00064   }
00065
00066   // ////////////////////////////////////////////////////////////////////
00067   FlightDate* BomRetriever::
00068   retrieveFlightDateFromLongKey (const BomRoot& iBomRoot,
00069                                  const std::string& iFullKeyStr) {
00070     FlightDate* oFlightDate_ptr = NULL;
00071
00072     // Retrieve the inventory
00073     Inventory* oInventory_ptr =
```

```
00074       BomRetriever::retrieveInventoryFromLongKey (iBomRoot, iFullKeyStr);
00075     if (oInventory_ptr == NULL) {
00076       return oFlightDate_ptr;
00077     }
00078     assert (oInventory_ptr != NULL);
00079
00080     // Extract the flight-date key (i.e., flight number and date)
00081     const FlightDateKey& lFlightDateKey =
00082       BomKeyManager::extractFlightDateKey (iFullKeyStr);
00083
00084     oFlightDate_ptr = oInventory_ptr->getFlightDate (lFlightDateKey);
00085
00086     return oFlightDate_ptr;
00087   }
00088
00089   // ////////////////////////////////////////////////////////////////////
00090   FlightDate* BomRetriever::
00091   retrieveFlightDateFromKeySet (const BomRoot& iBomRoot,
00092                                 const AirlineCode_T& iAirlineCode,
00093                                 const FlightNumber_T& iFlightNumber,
00094                                 const Date_T& iFlightDateDate) {
00095     FlightDate* oFlightDate_ptr = NULL;
00096
00097     // Retrieve the inventory
00098     Inventory* oInventory_ptr =
00099       BomRetriever::retrieveInventoryFromKey (iBomRoot, iAirlineCode);
00100     if (oInventory_ptr == NULL) {
00101       return oFlightDate_ptr;
00102     }
00103     assert (oInventory_ptr != NULL);
00104
00105     //
00106     oFlightDate_ptr = retrieveFlightDateFromKey (*oInventory_ptr,
00107                                                  iFlightNumber, iFlightDateDate);
00108
00109     return oFlightDate_ptr;
00110   }
00111
00112   // ////////////////////////////////////////////////////////////////////
00113   FlightDate* BomRetriever::
00114   retrieveFlightDateFromLongKey (const Inventory& iInventory,
00115                                  const std::string& iFullKeyStr) {
00116     FlightDate* oFlightDate_ptr = NULL;
00117
00118     // Extract the flight-date key (i.e., flight number and date)
00119     const FlightDateKey& lFlightDateKey =
00120       BomKeyManager::extractFlightDateKey (iFullKeyStr);
00121
00122     oFlightDate_ptr = iInventory.getFlightDate (lFlightDateKey);
00123
00124     return oFlightDate_ptr;
00125   }
00126
00127   // ////////////////////////////////////////////////////////////////////
00128   FlightDate* BomRetriever::
00129   retrieveFlightDateFromKey (const Inventory& iInventory,
00130                              const FlightDateKey& iKey) {
00131     FlightDate* oFlightDate_ptr = NULL;
00132
00133     //
00134     oFlightDate_ptr = iInventory.getFlightDate (iKey);
```

```
00135
00136     return oFlightDate_ptr;
00137   }
00138
00139   // ////////////////////////////////////////////////////////////////////
00140   FlightDate* BomRetriever::
00141   retrieveFlightDateFromKey (const Inventory& iInventory,
00142                              const FlightNumber_T& iFlightNumber,
00143                              const Date_T& iFlightDateDate) {
00144     FlightDate* oFlightDate_ptr = NULL;
00145
00146     //
00147     const FlightDateKey lKey (iFlightNumber, iFlightDateDate);
00148     oFlightDate_ptr = iInventory.getFlightDate (lKey);
00149
00150     return oFlightDate_ptr;
00151   }
00152
00153   // ////////////////////////////////////////////////////////////////////
00154   SegmentDate* BomRetriever::
00155   retrieveSegmentDateFromLongKey (const BomRoot& iBomRoot,
00156                                   const std::string& iFullKeyStr) {
00157     SegmentDate* oSegmentDate_ptr = NULL;
00158
00159     // Retrieve the flight-date
00160     FlightDate* oFlightDate_ptr =
00161       BomRetriever::retrieveFlightDateFromLongKey (iBomRoot, iFullKeyStr);
00162     if (oFlightDate_ptr == NULL) {
00163       return oSegmentDate_ptr;
00164     }
00165     assert (oFlightDate_ptr != NULL);
00166
00167     // Extract the segment-date key (i.e., origin and destination)
00168     const SegmentDateKey& lSegmentDateKey =
00169       BomKeyManager::extractSegmentDateKey (iFullKeyStr);
00170
00171     oSegmentDate_ptr = oFlightDate_ptr->getSegmentDate (lSegmentDateKey);
00172
00173     return oSegmentDate_ptr;
00174   }
00175
00176   // ////////////////////////////////////////////////////////////////////
00177   SegmentDate* BomRetriever::
00178   retrieveSegmentDateFromLongKey (const Inventory& iInventory,
00179                                   const std::string& iFullKeyStr) {
00180     SegmentDate* oSegmentDate_ptr = NULL;
00181
00182     ParsedKey lParsedKey = BomKeyManager::extractKeys (iFullKeyStr);
00183
00184     if (iInventory.getAirlineCode() != lParsedKey._airlineCode) {
00185       STDAIR_LOG_DEBUG ("Airline code: " << lParsedKey._airlineCode);
00186       return oSegmentDate_ptr;
00187     }
00188
00189     FlightDate* lFlightDate_ptr =
00190       retrieveFlightDateFromKey (iInventory, lParsedKey.getFlightDateKey());
00191     if (lFlightDate_ptr == NULL) {
00192       STDAIR_LOG_DEBUG ("Flight-date key: "
00193                         << lParsedKey.getFlightDateKey().toString());
00194       return oSegmentDate_ptr;
00195     }
00196
```

```
00197     oSegmentDate_ptr =
00198       retrieveSegmentDateFromKey (*lFlightDate_ptr, lParsedKey.getSegmentKey());
00199     if (oSegmentDate_ptr == NULL) {
00200       STDAIR_LOG_DEBUG ("Segment-date key: "
00201                         << lParsedKey.getSegmentKey().toString());
00202       return oSegmentDate_ptr;
00203     }
00204
00205     return oSegmentDate_ptr;
00206   }
00207
00208   // ////////////////////////////////////////////////////////////////////
00209   SegmentDate* BomRetriever::
00210   retrieveSegmentDateFromLongKey (const FlightDate& iFlightDate,
00211                                   const std::string& iFullKeyStr) {
00212     SegmentDate* oSegmentDate_ptr = NULL;
00213
00214     // Extract the segment-date key (i.e., origin and destination)
00215     const SegmentDateKey& lSegmentDateKey =
00216       BomKeyManager::extractSegmentDateKey (iFullKeyStr);
00217
00218     oSegmentDate_ptr = iFlightDate.getSegmentDate (lSegmentDateKey);
00219
00220     return oSegmentDate_ptr;
00221   }
00222
00223   // ////////////////////////////////////////////////////////////////////
00224   SegmentDate* BomRetriever::
00225   retrieveSegmentDateFromKey (const FlightDate& iFlightDate,
00226                               const SegmentDateKey& iKey) {
00227     SegmentDate* oSegmentDate_ptr = NULL;
00228
00229     //
00230     oSegmentDate_ptr = iFlightDate.getSegmentDate (iKey);
00231
00232     return oSegmentDate_ptr;
00233   }
00234
00235   // ////////////////////////////////////////////////////////////////////
00236   SegmentDate* BomRetriever::
00237   retrieveSegmentDateFromKey (const FlightDate& iFlightDate,
00238                               const AirportCode_T& iOrigin,
00239                               const AirportCode_T& iDestination) {
00240     SegmentDate* oSegmentDate_ptr = NULL;
00241
00242     //
00243     const SegmentDateKey lKey (iOrigin, iDestination);
00244     oSegmentDate_ptr = iFlightDate.getSegmentDate (lKey);
00245
00246     return oSegmentDate_ptr;
00247   }
00248
00249   // ////////////////////////////////////////////////////////////////////
00250   BookingClass* BomRetriever::
00251   retrieveBookingClassFromLongKey (const Inventory& iInventory,
00252                                    const std::string& iFullKeyStr,
00253                                    const ClassCode_T& iClassCode) {
00254     BookingClass* oBookingClass_ptr = NULL;
00255
00256     SegmentDate* lSegmentDate_ptr = retrieveSegmentDateFromLongKey (iInventory,
00257                                                                     iFullKeyStr);
```

```
00258
00259     if (lSegmentDate_ptr == NULL) {
00260       return oBookingClass_ptr;
00261     }
00262     assert (lSegmentDate_ptr != NULL);
00263
00264     //
00265     oBookingClass_ptr =
00266       BomManager::getObjectPtr<BookingClass> (*lSegmentDate_ptr, iClassCode);
00267
00268     return oBookingClass_ptr;
00269   }
00270
00271   // ////////////////////////////////////////////////////////////////////
00272   AirportPair* BomRetriever::
00273   retrieveAirportPairFromKeySet (const BomRoot& iBomRoot,
00274                                  const stdair::AirportCode_T& iOrigin,
00275                                  const stdair::AirportCode_T& iDestination) {
00276
00277     // Get the Airport pair stream of the segment path.
00278     const AirportPairKey lAirportPairKey (iOrigin, iDestination);
00279
00280     // Search for the fare rules having the same origin and
00281     // destination airport as the travel solution
00282     AirportPair* oAirportPair_ptr = BomManager::
00283       getObjectPtr<AirportPair> (iBomRoot, lAirportPairKey.toString());
00284
00285     return oAirportPair_ptr;
00286
00287   }
00288
00289   // ////////////////////////////////////////////////////////////////////
00290   void BomRetriever::
00291   retrieveDatePeriodListFromKey (const AirportPair& iAirportPair,
00292                                  const stdair::Date_T& iDepartureDate,
00293                                  stdair::DatePeriodList_T& ioDatePeriodList) {
00294
00295     // Get the list of date-period
00296     const DatePeriodList_T& lFareDatePeriodList =
00297       BomManager::getList<DatePeriod> (iAirportPair);
00298
00299     // Browse the date-period list
00300     for (DatePeriodList_T::const_iterator itDateRange =
00301            lFareDatePeriodList.begin();
00302          itDateRange != lFareDatePeriodList.end(); ++itDateRange) {
00303
00304       DatePeriod* lCurrentFareDatePeriod_ptr = *itDateRange ;
00305       assert (lCurrentFareDatePeriod_ptr != NULL);
00306
00307       // Select the date-period objects having a corresponding date range
00308       const bool isDepartureDateValid =
00309         lCurrentFareDatePeriod_ptr->isDepartureDateValid (iDepartureDate);
00310
00311       // Add the date-period objects having a corresponding date range
00312       // to the list to display
00313       if (isDepartureDateValid == true) {
00314         ioDatePeriodList.push_back(lCurrentFareDatePeriod_ptr);
00315       }
00316     }
00317
00318   }
00319
```

```
00320   // ////////////////////////////////////////////////////////////////////
00321   void BomRetriever::
00322   retrieveDatePeriodListFromKeySet (const BomRoot& iBomRoot,
00323                                     const stdair::AirportCode_T& iOrigin,
00324                                     const stdair::AirportCode_T& iDestination,
00325                                     const stdair::Date_T& iDepartureDate,
00326                                     stdair::DatePeriodList_T& ioDatePeriodList) {

00327
00328     // Retrieve the airport-pair
00329     AirportPair* oAirportPair_ptr =
00330       BomRetriever::retrieveAirportPairFromKeySet(iBomRoot, iOrigin,
00331                                                   iDestination);
00332     if (oAirportPair_ptr == NULL) {
00333       return;
00334     }
00335     assert (oAirportPair_ptr != NULL);
00336
00337     // Retrieve the flight date
00338     BomRetriever::retrieveDatePeriodListFromKey (*oAirportPair_ptr, iDepartureDat
      e,
00339                                                  ioDatePeriodList);
00340
00341   }
00342
00343   // ////////////////////////////////////////////////////////////////////
00344   LegCabin& BomRetriever::
00345   retrieveDummyLegCabin (stdair::BomRoot& iBomRoot) {
00346
00347     LegCabin* oLegCabin_ptr = NULL;
00348
00349     // Retrieve the Inventory
00350     const Inventory* lInventory_ptr = BomRetriever::
00351       retrieveInventoryFromKey (iBomRoot, DEFAULT_AIRLINE_CODE);
00352
00353     if (lInventory_ptr == NULL) {
00354       std::ostringstream oStr;
00355       oStr << "The inventory corresponding to the '"
00356            << DEFAULT_AIRLINE_CODE << "' airline can not be found";
00357       throw ObjectNotFoundException (oStr.str());
00358     }
00359
00360     // Retrieve the FlightDate
00361     const FlightDate* lFlightDate_ptr = BomRetriever::
00362       retrieveFlightDateFromKey (*lInventory_ptr, DEFAULT_FLIGHT_NUMBER,
00363                                  DEFAULT_DEPARTURE_DATE);
00364
00365     if (lFlightDate_ptr == NULL) {
00366       std::ostringstream oStr;
00367       oStr << "The flight-date corresponding to ("
00368            << DEFAULT_FLIGHT_NUMBER << ", "
00369            << DEFAULT_DEPARTURE_DATE << ") can not be found";
00370       throw ObjectNotFoundException (oStr.str());
00371     }
00372
00373     // Retrieve the LegDate
00374     const LegDateKey lLegDateKey (DEFAULT_ORIGIN);
00375     const LegDate* lLegDate_ptr =
00376       lFlightDate_ptr->getLegDate (lLegDateKey);
00377
00378     if (lLegDate_ptr == NULL) {
00379       std::ostringstream oStr;
```

```
00380       oStr << "The leg-date corresponding to the '"
00381            << DEFAULT_ORIGIN << "' origin can not be found";
00382       throw ObjectNotFoundException (oStr.str());
00383     }
00384
00385     // Retrieve the LegCabin
00386     const LegCabinKey lLegCabinKey (DEFAULT_CABIN_CODE);
00387     oLegCabin_ptr = lLegDate_ptr->getLegCabin (lLegCabinKey);
00388
00389     if (oLegCabin_ptr == NULL) {
00390       std::ostringstream oStr;
00391       oStr << "The leg-cabin corresponding to the '"
00392            << DEFAULT_CABIN_CODE << "' cabin code can not be found";
00393       throw ObjectNotFoundException (oStr.str());
00394     }
00395
00396     assert (oLegCabin_ptr != NULL);
00397     return *oLegCabin_ptr;
00398
00399   }
00400
00401   // //////////////////////////////////////////////////////////////////
00402   SegmentCabin& BomRetriever::
00403   retrieveDummySegmentCabin (stdair::BomRoot& iBomRoot) {
00404
00405     SegmentCabin* oSegmentCabin_ptr = NULL;
00406
00407     // Retrieve the Inventory
00408     const Inventory* lInventory_ptr = BomRetriever::
00409       retrieveInventoryFromKey (iBomRoot, DEFAULT_AIRLINE_CODE);
00410
00411     if (lInventory_ptr == NULL) {
00412       std::ostringstream oStr;
00413       oStr << "The inventory corresponding to the '"
00414            << DEFAULT_AIRLINE_CODE << "' airline can not be found";
00415       throw ObjectNotFoundException (oStr.str());
00416     }
00417
00418     // Retrieve the FlightDate
00419     const FlightDate* lFlightDate_ptr = BomRetriever::
00420       retrieveFlightDateFromKey (*lInventory_ptr, DEFAULT_FLIGHT_NUMBER,
00421                                  DEFAULT_DEPARTURE_DATE);
00422
00423     if (lFlightDate_ptr == NULL) {
00424       std::ostringstream oStr;
00425       oStr << "The flight-date corresponding to ("
00426            << DEFAULT_FLIGHT_NUMBER << ", "
00427            << DEFAULT_DEPARTURE_DATE << ") can not be found";
00428       throw ObjectNotFoundException (oStr.str());
00429     }
00430
00431     // Retrieve the SegmentDate
00432     const SegmentDateKey lSegmentDateKey (DEFAULT_ORIGIN, DEFAULT_DESTINATION);
00433     const SegmentDate* lSegmentDate_ptr =
00434       lFlightDate_ptr->getSegmentDate (lSegmentDateKey);
00435
00436     if (lSegmentDate_ptr == NULL) {
00437       std::ostringstream oStr;
00438       oStr << "The segment-date corresponding to the '"
00439            << DEFAULT_ORIGIN << "' origin and '"
00440            << DEFAULT_DESTINATION << "' destination can not be found";
00441       throw ObjectNotFoundException (oStr.str());
```

```
00442     }
00443
00444     // Retrieve the SegmentCabin
00445     const SegmentCabinKey lSegmentCabinKey (DEFAULT_CABIN_CODE);
00446     oSegmentCabin_ptr =
00447       BomManager::getObjectPtr<SegmentCabin> (*lSegmentDate_ptr, lSegmentCabinKey
      .toString());
00448
00449     if (oSegmentCabin_ptr == NULL) {
00450       std::ostringstream oStr;
00451       oStr << "The segment-cabin corresponding to the '"
00452            << DEFAULT_CABIN_CODE << "' cabin code can not be found";
00453       throw ObjectNotFoundException (oStr.str());
00454     }
00455
00456     assert (oSegmentCabin_ptr != NULL);
00457     return *oSegmentCabin_ptr;
00458   }
00459
00460 }
```

35.183 stdair/bom/BomRetriever.hpp File Reference

```
#include <iosfwd>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/bom/DatePeriod.hpp>
```

Classes

- class stdair::BomRetriever

  Utility class to retrieve StdAir objects.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.184 BomRetriever.hpp

```
00001 #ifndef __STDAIR_BOM_BOMRETRIEVER_HPP
00002 #define __STDAIR_BOM_BOMRETRIEVER_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 // StdAir
00010 #include <stdair/stdair_basic_types.hpp>
00011 #include <stdair/stdair_date_time_types.hpp>
```

```
00012 #include <stdair/bom/DatePeriod.hpp>
00013
00014 namespace stdair {
00015
00017   class BomRoot;
00018   struct InventoryKey;
00019   class Inventory;
00020   struct FlightDateKey;
00021   class FlightDate;
00022   class LegDate;
00023   struct SegmentDateKey;
00024   class SegmentDate;
00025   class LegCabin;
00026   class SegmentCabin;
00027   class FareFamily;
00028   class BookingClass;
00029   class DatePeriod;
00030   class AirportPair;
00031
00035   class BomRetriever {
00036   public:
00037     // ////////////////// Key management support methods /////////////////
00050     static Inventory*
00051     retrieveInventoryFromLongKey (const BomRoot&,
00052                                   const std::string& iFullKeyStr);
00053
00061     static Inventory* retrieveInventoryFromKey (const BomRoot&,
00062                                                 const InventoryKey&);
00063
00071     static Inventory* retrieveInventoryFromKey (const BomRoot&,
00072                                                 const AirlineCode_T&);
00073
00086     static FlightDate*
00087     retrieveFlightDateFromLongKey (const BomRoot&,
00088                                    const std::string& iFullKeyStr);
00089
00099     static FlightDate*
00100    retrieveFlightDateFromKeySet (const BomRoot&,
00101                                  const AirlineCode_T&, const FlightNumber_T&,
00102                                  const Date_T& iFlightDateDate);
00103
00116    static FlightDate*
00117    retrieveFlightDateFromLongKey (const Inventory&,
00118                                   const std::string& iFullKeyStr);
00119
00127    static FlightDate* retrieveFlightDateFromKey (const Inventory&,
00128                                                  const FlightDateKey&);
00129
00138    static FlightDate* retrieveFlightDateFromKey (const Inventory&,
00139                                                  const FlightNumber_T&,
00140                                                  const Date_T& iFlightDateDate);

00141
00154    static SegmentDate*
00155    retrieveSegmentDateFromLongKey (const BomRoot&,
00156                                    const std::string& iFullKeyStr);
00157
00170    static SegmentDate*
00171    retrieveSegmentDateFromLongKey (const Inventory&,
00172                                    const std::string& iFullKeyStr);
00173
00186    static SegmentDate*
```

```
00187     retrieveSegmentDateFromLongKey (const FlightDate&,
00188                                     const std::string& iFullKeyStr);
00189
00197     static SegmentDate* retrieveSegmentDateFromKey (const FlightDate&,
00198                                                     const SegmentDateKey&);
00199
00208     static SegmentDate*
00209     retrieveSegmentDateFromKey (const FlightDate&,
00210                                 const AirportCode_T& iOrigin,
00211                                 const AirportCode_T& iDestination);
00212
00236     static BookingClass*
00237     retrieveBookingClassFromLongKey (const Inventory&,
00238                                      const std::string& iFullKeyStr,
00239                                      const ClassCode_T&);
00240
00241
00250     static AirportPair*
00251     retrieveAirportPairFromKeySet (const BomRoot& ,
00252                                    const stdair::AirportCode_T&,
00253                                    const stdair::AirportCode_T&);
00254
00264     static void
00265     retrieveDatePeriodListFromKey (const AirportPair&,
00266                                    const stdair::Date_T&,
00267                                    stdair::DatePeriodList_T&);
00268
00281     static void
00282     retrieveDatePeriodListFromKeySet (const BomRoot&,
00283                                       const stdair::AirportCode_T&,
00284                                       const stdair::AirportCode_T&,
00285                                       const stdair::Date_T&,
00286                                       stdair::DatePeriodList_T&);
00287
00293     static stdair::LegCabin& retrieveDummyLegCabin (stdair::BomRoot&);
00294
00300     static stdair::SegmentCabin& retrieveDummySegmentCabin (stdair::BomRoot&);
00301
00302   };
00303
00304 }
00305 #endif // __STDAIR_BOM_BOMRETRIEVER_HPP
```

35.185 stdair/bom/BomRoot.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/InventoryKey.hpp>
#include <stdair/bom/Inventory.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.186 BomRoot.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_General.hpp>
00009 #include <stdair/bom/BomManager.hpp>
00010 #include <stdair/bom/BomRoot.hpp>
00011 #include <stdair/bom/InventoryKey.hpp>
00012 #include <stdair/bom/Inventory.hpp>
00013
00014 namespace stdair {
00015
00016   // //////////////////////////////////////////////////////////////////
00017   BomRoot::BomRoot() {
00018     assert (false);
00019   }
00020
00021   // //////////////////////////////////////////////////////////////////
00022   BomRoot::BomRoot (const BomRoot& iBomRoot) {
00023     assert (false);
00024   }
00025
00026   // //////////////////////////////////////////////////////////////////
00027   BomRoot::BomRoot (const Key_T& iKey) : _key (iKey) {
00028   }
00029
00030   // //////////////////////////////////////////////////////////////////
00031   BomRoot::~BomRoot() {
00032   }
00033
00034   // //////////////////////////////////////////////////////////////////
00035   std::string BomRoot::toString() const {
00036     std::ostringstream oStr;
00037     oStr << _key.toString();
00038     return oStr.str();
00039   }
00040
00041   // //////////////////////////////////////////////////////////////////
00042   Inventory* BomRoot::getInventory (const std::string& iInventoryKeyStr) const {
00043     Inventory* oInventory_ptr =
00044       BomManager::getObjectPtr<Inventory> (*this, iInventoryKeyStr);
00045     return oInventory_ptr;
00046   }
00047
00048   // //////////////////////////////////////////////////////////////////
00049   Inventory* BomRoot::getInventory (const InventoryKey& iInventoryKey) const {
00050     return getInventory (iInventoryKey.toString());
00051   }
00052
00053 }
```

35.187 stdair/bom/BomRoot.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/BomRootKey.hpp>
```

Classes

- class stdair::BomRoot

  Class representing the actual attributes for the Bom root.

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.188 BomRoot.hpp

```
00001 #ifndef __STDAIR_BOM_BOMROOT_HPP
00002 #define __STDAIR_BOM_BOMROOT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/bom/BomAbstract.hpp>
00012 #include <stdair/bom/BomRootKey.hpp>
00013
00015 namespace boost {
00016   namespace serialization {
00017     class access;
00018   }
00019 }
00020
00021 namespace stdair {
00022
00024   struct InventoryKey;
00025   class Inventory;
00026
00030   class BomRoot : public BomAbstract {
00031     template <typename BOM> friend class FacBom;
00032     friend class FacBomManager;
00033     friend class boost::serialization::access;
00034
```

```
00035   public:
00039     typedef BomRootKey Key_T;
00040
00041
00042   public:
00043     // ////////// Getters ////////////
00045     const Key_T& getKey() const {
00046       return _key;
00047     }
00048
00050     const HolderMap_T& getHolderMap() const {
00051       return _holderMap;
00052     }
00053
00064     Inventory* getInventory (const std::string& iInventoryKeyStr) const;
00065
00076     Inventory* getInventory (const InventoryKey&) const;
00077
00078
00079   public:
00080     // ////////// Display support methods /////////
00086     void toStream (std::ostream& ioOut) const {
00087       ioOut << toString();
00088     }
00089
00095     void fromStream (std::istream& ioIn) {
00096     }
00097
00101     std::string toString() const;
00102
00106     const std::string describeKey() const {
00107       return _key.toString();
00108     }
00109
00110
00111   public:
00112     // ////////// (Boost) Serialisation support methods /////////
00123     template<class Archive>
00124     void serialize (Archive& ar, const unsigned int iFileVersion);
00125
00126   private:
00134     void serialisationImplementationExport() const;
00135     void serialisationImplementationImport();
00136
00137
00138   protected:
00139     // ////////// Constructors and destructors /////////
00143     BomRoot();
00144
00148     BomRoot (const BomRoot&);
00149
00153     BomRoot (const Key_T& iKey);
00154
00158     ~BomRoot();
00159
00160
00161   protected:
00162     // ///////////////// Attributes ////////////////
00166     Key_T _key;
00167
00171     HolderMap_T _holderMap;
00172   };
```

```
00173
00174 }
00175 #endif // __STDAIR_BOM_BOMROOT_HPP
```

35.189 stdair/bom/BomRootKey.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/bom/BomRootKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Functions

- template void stdair::BomRootKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void stdair::BomRootKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)

35.190 BomRootKey.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_General.hpp>
00013 #include <stdair/bom/BomRootKey.hpp>
00014
00015 namespace stdair {
00016
00017   // ////////////////////////////////////////////////////////////////////
00018   BomRootKey::BomRootKey()
00019     : _id (DEFAULT_BOM_ROOT_KEY) {
00020   }
```

```
00021
00022   // //////////////////////////////////////////////////////////////////
00023   BomRootKey::BomRootKey (const BomRootKey& iBomRootKey)
00024     : _id (iBomRootKey._id) {
00025   }
00026
00027   // //////////////////////////////////////////////////////////////////
00028   BomRootKey::BomRootKey (const std::string& iIdentification)
00029     : _id (iIdentification) {
00030   }
00031
00032   // //////////////////////////////////////////////////////////////////
00033   BomRootKey::~BomRootKey() {
00034   }
00035
00036   // //////////////////////////////////////////////////////////////////
00037   void BomRootKey::toStream (std::ostream& ioOut) const {
00038     ioOut << "BomRootKey: " << toString() << std::endl;
00039   }
00040
00041   // //////////////////////////////////////////////////////////////////
00042   void BomRootKey::fromStream (std::istream& ioIn) {
00043   }
00044
00045   // //////////////////////////////////////////////////////////////////
00046   const std::string BomRootKey::toString() const {
00047     std::ostringstream oStr;
00048     oStr << _id;
00049     return oStr.str();
00050   }
00051
00052   // //////////////////////////////////////////////////////////////////
00053   void BomRootKey::serialisationImplementationExport() const {
00054     std::ostringstream oStr;
00055     boost::archive::text_oarchive oa (oStr);
00056     oa << *this;
00057   }
00058
00059   // //////////////////////////////////////////////////////////////////
00060   void BomRootKey::serialisationImplementationImport() {
00061     std::istringstream iStr;
00062     boost::archive::text_iarchive ia (iStr);
00063     ia >> *this;
00064   }
00065
00066   // //////////////////////////////////////////////////////////////////
00067   template<class Archive>
00068   void BomRootKey::serialize (Archive& ioArchive,
00069                               const unsigned int iFileVersion) {
00070     ioArchive & _id;
00071   }
00072
00073   // //////////////////////////////////////////////////////////////////
00074   // Explicit template instantiation
00075   namespace ba = boost::archive;
00076   template void BomRootKey::serialize<ba::text_oarchive> (ba::text_oarchive&,
00077                                                           unsigned int);
00078   template void BomRootKey::serialize<ba::text_iarchive> (ba::text_iarchive&,
00079                                                           unsigned int);
00080   // //////////////////////////////////////////////////////////////////
00081
00082 }
```

35.191 stdair/bom/BomRootKey.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/bom/KeyAbstract.hpp>
```

Classes

- struct stdair::BomRootKey

  Key of the BOM structure root.

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.192 BomRootKey.hpp

```
00001 #ifndef __STDAIR_BOM_BOMROOTKEY_HPP
00002 #define __STDAIR_BOM_BOMROOTKEY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/bom/KeyAbstract.hpp>
00012
00014 namespace boost {
00015   namespace serialization {
00016     class access;
00017   }
00018 }
00019
00020 namespace stdair {
00021
00025   struct BomRootKey : public KeyAbstract {
00026     friend class boost::serialization::access;
00027
00028     // ////////// Constructors and destructors //////////
00029   public:
00033     BomRootKey ();
00034
00038     BomRootKey (const std::string& iIdentification);
00039
00043     BomRootKey (const BomRootKey&);
00044
```

```
00048     ~BomRootKey();
00049
00050
00051   public:
00052     // ////////// Getters //////////
00056     const std::string& getID() const {
00057       return _id;
00058     }
00059
00060
00061   public:
00062     // ////////// Display support methods /////////
00068     void toStream (std::ostream& ioOut) const;
00069
00075     void fromStream (std::istream& ioIn);
00076
00086     const std::string toString() const;
00087
00088
00089   public:
00090     // ////////// (Boost) Serialisation support methods /////////
00094     template<class Archive>
00095     void serialize (Archive& ar, const unsigned int iFileVersion);
00096
00097   private:
00102     void serialisationImplementationExport() const;
00103     void serialisationImplementationImport();
00104
00105
00106   private:
00107     // ////////////////// Attributes ///////////////
00111     std::string _id;
00112   };
00113
00114 }
00115 #endif // __STDAIR_BOM_BOMROOTKEY_HPP
```

35.193 stdair/bom/BookingClass.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/RandomGeneration.hpp>
#include <stdair/bom/BookingClass.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.194 BookingClass.cpp

```
00001 // //////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_General.hpp>
00009 #include <stdair/basic/BasConst_Inventory.hpp>
00010 #include <stdair/basic/RandomGeneration.hpp>
00011 #include <stdair/bom/BookingClass.hpp>
00012
00013 namespace stdair {
00014
00015   // //////////////////////////////////////////////////////////////////////
00016   BookingClass::BookingClass() : _key (DEFAULT_CLASS_CODE), _parent (NULL) {
00017     assert (false);
00018   }
00019
00020   // //////////////////////////////////////////////////////////////////////
00021   BookingClass::BookingClass (const BookingClass&)
00022     : _key (DEFAULT_CLASS_CODE), _parent (NULL) {
00023     assert (false);
00024   }
00025
00026   // //////////////////////////////////////////////////////////////////////
00027   BookingClass::BookingClass (const Key_T& iKey)
00028     : _key (iKey), _parent (NULL), _cumulatedProtection (0.0),
00029       _protection (0.0), _cumulatedBookingLimit (0.0), _au (0.0), _nego (0.0),
00030       _noShowPercentage (0.0), _cancellationPercentage (0.0),
00031       _nbOfBookings (0.0), _groupNbOfBookings (0.0),
00032       _groupPendingNbOfBookings (0.0), _staffNbOfBookings (0.0),
00033       _wlNbOfBookings (0.0), _nbOfCancellations (0.), _etb (0.0),
00034       _netClassAvailability (0.0), _segmentAvailability (0.0),
00035       _netRevenueAvailability (0.0), _yield (0.0), _mean (0.0), _stdDev (0.0) {
00036   }
00037
00038   // //////////////////////////////////////////////////////////////////////
00039   BookingClass::~BookingClass() {
00040   }
00041
00042   // //////////////////////////////////////////////////////////////////////
00043   std::string BookingClass::toString() const {
00044     std::ostringstream oStr;
00045     oStr << describeKey();
00046     return oStr.str();
00047   }
00048
00049   // //////////////////////////////////////////////////////////////////////
00050   void BookingClass::sell (const NbOfBookings_T& iNbOfBookings) {
00051     _nbOfBookings += iNbOfBookings;
00052   }
00053
00054   // //////////////////////////////////////////////////////////////////////
00055   void BookingClass::cancel (const NbOfBookings_T& iNbOfCancellations) {
00056     _nbOfBookings -= iNbOfCancellations;
00057     _nbOfCancellations += iNbOfCancellations;
00058   }
00059
00060   // //////////////////////////////////////////////////////////////////////
```

```
00061   void BookingClass::generateDemandSamples (const int& K) {
00062     _generatedDemandVector.clear();
00063     if (_stdDev > 0) {
00064       RandomGeneration lGenerator (DEFAULT_RANDOM_SEED);
00065       for (int i = 0; i < K; ++i) {
00066         RealNumber_T lDemandSample = lGenerator.generateNormal (_mean, _stdDev);
00067         _generatedDemandVector.push_back (lDemandSample);
00068       }
00069     }
00070   }
00071
00072   // ////////////////////////////////////////////////////////////////////
00073   void BookingClass::generateDemandSamples (const int& K,
00074                                             const RandomSeed_T& iSeed) {
00075     _generatedDemandVector.clear();
00076     if (_stdDev > 0) {
00077       RandomGeneration lGenerator (iSeed);
00078       for (int i = 0; i < K; ++i) {
00079         RealNumber_T lDemandSample = lGenerator.generateNormal (_mean, _stdDev);
00080         _generatedDemandVector.push_back (lDemandSample);
00081       }
00082     }
00083   }
00084
00085 }
00086
```

35.195 stdair/bom/BookingClass.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_maths_types.hpp>
#include <stdair/stdair_rm_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/BookingClassKey.hpp>
#include <stdair/bom/BookingClassTypes.hpp>
```

Classes

- class stdair::BookingClass

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.196 BookingClass.hpp

```
00001 #ifndef __STDAIR_BOM_BOOKINGCLASS_HPP
00002 #define __STDAIR_BOM_BOOKINGCLASS_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/stdair_maths_types.hpp>
00013 #include <stdair/stdair_rm_types.hpp>
00014 #include <stdair/bom/BomAbstract.hpp>
00015 #include <stdair/bom/BookingClassKey.hpp>
00016 #include <stdair/bom/BookingClassTypes.hpp>
00017
00018 namespace stdair {
00019
00024   class BookingClass : public BomAbstract {
00025     template <typename BOM> friend class FacBom;
00026     friend class FacBomManager;
00027
00028   public:
00029     // ////////// Type definitions ////////////
00031     typedef BookingClassKey Key_T;
00032
00033   public:
00034     // ////////// Getters ////////////
00036     const Key_T& getKey() const {
00037       return _key;
00038     }
00039
00041     const ClassCode_T& getClassCode() const {
00042       return _key.getClassCode();
00043     }
00044
00046     BomAbstract* const getParent() const {
00047       return _parent;
00048     }
00049
00051     const HolderMap_T& getHolderMap() const {
00052       return _holderMap;
00053     }
00054
00056     const SubclassCode_T& getSubclassCode() const {
00057       return _subclassCode;
00058     }
00059
00061     const AuthorizationLevel_T& getAuthorizationLevel() const {
00062       return _au;
00063     }
00064
00066     const ProtectionLevel_T& getProtection() const {
00067       return _protection;
00068     }
00069
00071     const ProtectionLevel_T& getCumulatedProtection() const {
00072       return _cumulatedProtection;
00073     }
```

```
00074
00076     const BookingLimit_T& getCumulatedBookingLimit() const {
00077       return _cumulatedBookingLimit;
00078     }
00079
00081     const NbOfSeats_T& getNegotiatedSpace() const {
00082       return _nego;
00083     }
00084
00086     const OverbookingRate_T& getNoShowPercentage() const {
00087       return _noShowPercentage;
00088     }
00089
00091     const OverbookingRate_T& getCancellationPercentage() const {
00092       return _cancellationPercentage;
00093     }
00094
00096     const NbOfBookings_T& getNbOfBookings() const {
00097       return _nbOfBookings;
00098     }
00099
00101     const NbOfBookings_T& getNbOfGroupBookings() const {
00102       return _groupNbOfBookings;
00103     }
00104
00106     const NbOfBookings_T& getNbOfPendingGroupBookings() const {
00107       return _groupPendingNbOfBookings;
00108     }
00109
00111     const NbOfBookings_T& getNbOfStaffBookings() const {
00112       return _staffNbOfBookings;
00113     }
00114
00116     const NbOfBookings_T& getNbOfWLBookings() const {
00117       return _wlNbOfBookings;
00118     }
00119
00121     const NbOfCancellations_T& getNbOfCancellations() const {
00122       return _nbOfCancellations;
00123     }
00124
00126     const NbOfBookings_T& getETB() const {
00127       return _etb;
00128     }
00129
00131     const Availability_T& getNetClassAvailability() const {
00132       return _netClassAvailability;
00133     }
00134
00136     const Availability_T& getSegmentAvailability() const {
00137       return _segmentAvailability;
00138     }
00139
00141     const Availability_T& getNetRevenueAvailability() const {
00142       return _netRevenueAvailability;
00143     }
00144
00146     const Yield_T& getYield () const { return _yield; }
00147
00149     const MeanValue_T& getMean () const { return _mean; }
00150     const StdDevValue_T& getStdDev () const {return _stdDev; }
00151
```

```
00153     const GeneratedDemandVector_T& getGeneratedDemandVector () const {
00154       return _generatedDemandVector;
00155     }
00156
00157   public:
00158     // ////////////// Setters ////////////
00160     void setCumulatedProtection (const ProtectionLevel_T& iPL) {
00161       _cumulatedProtection = iPL;
00162     }
00163
00165     void setProtection (const ProtectionLevel_T& iPL) {
00166       _protection = iPL;
00167     }
00168
00170     void setCumulatedBookingLimit (const BookingLimit_T& iBL) {
00171       _cumulatedBookingLimit = iBL;
00172     }
00173
00175     void setAuthorizationLevel (const AuthorizationLevel_T& iAU) {
00176       _au = iAU;
00177     }
00178
00180     void setSegmentAvailability (const Availability_T& iAvl) {
00181       _segmentAvailability = iAvl;
00182     }
00183
00185     void setYield (const Yield_T& iYield) { _yield = iYield; }
00186
00188     void setMean (const MeanValue_T& iMean) { _mean = iMean; }
00189     void setStdDev (const StdDevValue_T& iStdDev) { _stdDev = iStdDev; }
00190
00191   public:
00192     // ////////////// Display support methods /////////
00195     void toStream (std::ostream& ioOut) const {
00196       ioOut << toString();
00197     }
00198
00201     void fromStream (std::istream& ioIn) {
00202     }
00203
00205     std::string toString() const;
00206
00208     const std::string describeKey() const {
00209       return _key.toString();
00210     }
00211
00212   public:
00213     // ///////////////// Business Methods ///////////////////
00215     void sell (const NbOfBookings_T&);
00216
00218     void cancel (const NbOfBookings_T&);
00219
00222     void generateDemandSamples (const int&);
00223
00226     void generateDemandSamples (const int&, const RandomSeed_T&);
00227
00228   protected:
00229     // ////////////// Constructors and destructors /////////
00231     BookingClass (const Key_T&);
00233     virtual ~BookingClass();
00234
00235   private:
```

```
00237     BookingClass();
00239     BookingClass (const BookingClass&);
00240
00241
00242   protected:
00243     // ////////// Attributes ////////
00245     Key_T _key;
00246
00248     BomAbstract* _parent;
00249
00251     HolderMap_T _holderMap;
00252
00254     SubclassCode_T _subclassCode;
00255
00257     ProtectionLevel_T _cumulatedProtection;
00258
00260     ProtectionLevel_T _protection;
00261
00263     BookingLimit_T _cumulatedBookingLimit;
00264
00266     AuthorizationLevel_T _au;
00267
00269     NbOfSeats_T _nego;
00270
00272     OverbookingRate_T _noShowPercentage;
00273
00275     OverbookingRate_T _cancellationPercentage;
00276
00278     NbOfBookings_T _nbOfBookings;
00279
00281     NbOfBookings_T _groupNbOfBookings;
00282
00284     NbOfBookings_T _groupPendingNbOfBookings;
00285
00287     NbOfBookings_T _staffNbOfBookings;
00288
00290     NbOfBookings_T _wlNbOfBookings;
00291
00293     NbOfCancellations_T _nbOfCancellations;
00294
00296     NbOfBookings_T _etb;
00297
00299     Availability_T _netClassAvailability;
00300
00302     Availability_T _segmentAvailability;
00303
00305     Availability_T _netRevenueAvailability;
00306
00308     Yield_T _yield;
00309
00311     MeanValue_T _mean;
00312     StdDevValue_T _stdDev;
00313
00315     GeneratedDemandVector_T _generatedDemandVector;
00316   };
00317
00318 }
00319 #endif // __STDAIR_BOM_BOOKINGCLASS_HPP
```

35.197 stdair/bom/BookingClassKey.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/BookingClassKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.198 BookingClassKey.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Inventory.hpp>
00009 #include <stdair/bom/BookingClassKey.hpp>
00010
00011 namespace stdair {
00012
00013   // ////////////////////////////////////////////////////////////////////
00014   BookingClassKey::BookingClassKey() : _classCode (DEFAULT_CLASS_CODE) {
00015     assert (false);
00016   }
00017
00018   // ////////////////////////////////////////////////////////////////////
00019   BookingClassKey::BookingClassKey (const BookingClassKey& iKey)
00020     : _classCode (iKey._classCode) {
00021   }
00022
00023   // ////////////////////////////////////////////////////////////////////
00024   BookingClassKey::BookingClassKey (const ClassCode_T& iClassCode)
00025     : _classCode (iClassCode) {
00026   }
00027
00028   // ////////////////////////////////////////////////////////////////////
00029   BookingClassKey::~BookingClassKey () {
00030   }
00031
00032   // ////////////////////////////////////////////////////////////////////
00033   void BookingClassKey::toStream (std::ostream& ioOut) const {
00034     ioOut << "BookingClassKey: " << toString();
00035   }
00036
00037   // ////////////////////////////////////////////////////////////////////
00038   void BookingClassKey::fromStream (std::istream& ioIn) {
00039   }
00040
00041   // ////////////////////////////////////////////////////////////////////
```

```
00042   const std::string BookingClassKey::toString() const {
00043     std::ostringstream oStr;
00044     oStr << _classCode;
00045     return oStr.str();
00046   }
00047
00048 }
```

35.199 stdair/bom/BookingClassKey.hpp File Reference

```
#include <stdair/stdair_basic_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

Classes

- struct stdair::BookingClassKey

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.200 BookingClassKey.hpp

```
00001 #ifndef __STDAIR_BOM_BOOKINGCLASSKEY_HPP
00002 #define __STDAIR_BOM_BOOKINGCLASSKEY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/bom/KeyAbstract.hpp>
00010
00011 namespace stdair {
00012
00016   struct BookingClassKey : public KeyAbstract {
00017
00018     // ////////// Constructors and destructors //////////
00019   private:
00021     BookingClassKey();
00022
00023   public:
00025     BookingClassKey (const ClassCode_T& iClassCode);
00027     BookingClassKey (const BookingClassKey&);
00029     ~BookingClassKey();
00030
00031
00032     // ////////// Getters //////////
00034     const ClassCode_T& getClassCode () const {
00035       return _classCode;
00036     }
00037
```

```
00038
00039     // ////////// Display support methods /////////
00042     void toStream (std::ostream& ioOut) const;
00043
00046     void fromStream (std::istream& ioIn);
00047
00053     const std::string toString() const;
00054
00055
00056   private:
00057     // ////////////////// Attributes ///////////////
00059     ClassCode_T _classCode;
00060   };
00061
00062 }
00063 #endif // __STDAIR_BOM_BOOKINGCLASSKEY_HPP
```

35.201 stdair/bom/BookingClassTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< BookingClass * > stdair::BookingClassList_T
- typedef std::map< const MapKey_T, BookingClass * > stdair::BookingClassMap_T

35.202 BookingClassTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_BOOKINGCLASSTYPES_HPP
00003 #define __STDAIR_BOM_BOOKINGCLASSTYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations.
```

```
00017   class BookingClass;
00018
00020   typedef std::list<BookingClass*> BookingClassList_T;
00021
00023   typedef std::map<const MapKey_T, BookingClass*> BookingClassMap_T;
00024 }
00025 #endif // __STDAIR_BOM_BOOKINGCLASSTYPES_HPP
00026
```

35.203 stdair/bom/BookingRequestStruct.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/date_time/gregorian/formatters.hpp>
#include <boost/date_time/posix_time/posix_time.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/bom/BookingRequestStruct.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Functions

- void stdair::intDisplay (std::ostream &oStream, const int &iInt)

35.204 BookingRequestStruct.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost
00008 #include <boost/date_time/gregorian/formatters.hpp>
00009 #include <boost/date_time/posix_time/posix_time.hpp>
00010 // StdAir
00011 #include <stdair/basic/BasConst_Inventory.hpp>
00012 #include <stdair/basic/BasConst_Request.hpp>
00013 #include <stdair/bom/BookingRequestStruct.hpp>
00014
00015 namespace stdair {
00016
00017   // ////////////////////////////////////////////////////////////////////
00018   BookingRequestStruct::BookingRequestStruct()
00019     : _origin (DEFAULT_ORIGIN), _destination (DEFAULT_DESTINATION),
```

```
00020       _pos (DEFAULT_POS),
00021       _preferredDepartureDate (DEFAULT_PREFERRED_DEPARTURE_DATE),
00022       _preferredDepartureTime (DEFAULT_PREFERRED_DEPARTURE_TIME),
00023       _requestDateTime (DEFAULT_REQUEST_DATE_TIME),
00024       _preferredCabin (DEFAULT_PREFERRED_CABIN),
00025       _partySize (DEFAULT_PARTY_SIZE),
00026       _channel (DEFAULT_CHANNEL),
00027       _tripType (TRIP_TYPE_ONE_WAY),
00028       _stayDuration (DEFAULT_STAY_DURATION),
00029       _frequentFlyerType (DEFAULT_FF_TIER),
00030       _wtp (DEFAULT_WTP),
00031       _valueOfTime (DEFAULT_VALUE_OF_TIME) {
00032     assert (false);
00033   }
00034
00035   // ////////////////////////////////////////////////////////////////////
00036   BookingRequestStruct::
00037   BookingRequestStruct (const BookingRequestStruct& iBookingRequest)
00038     : _generatorKey (iBookingRequest._generatorKey),
00039       _origin (iBookingRequest._origin),
00040       _destination (iBookingRequest._destination),
00041       _pos (iBookingRequest._pos),
00042       _preferredDepartureDate (iBookingRequest._preferredDepartureDate),
00043       _preferredDepartureTime (iBookingRequest._preferredDepartureTime),
00044       _requestDateTime (iBookingRequest._requestDateTime),
00045       _preferredCabin (iBookingRequest._preferredCabin),
00046       _partySize (iBookingRequest._partySize),
00047       _channel (iBookingRequest._channel),
00048       _tripType (iBookingRequest._tripType),
00049       _stayDuration (iBookingRequest._stayDuration),
00050       _frequentFlyerType (iBookingRequest._frequentFlyerType),
00051       _wtp (iBookingRequest._wtp),
00052       _valueOfTime (iBookingRequest._valueOfTime) {
00053   }
00054
00055   // ////////////////////////////////////////////////////////////////////
00056   BookingRequestStruct::
00057   BookingRequestStruct (const DemandGeneratorKey_T& iGeneratorKey,
00058                         const AirportCode_T& iOrigin,
00059                         const AirportCode_T& iDestination,
00060                         const CityCode_T& iPOS,
00061                         const Date_T& iDepartureDate,
00062                         const DateTime_T& iRequestDateTime,
00063                         const CabinCode_T& iPreferredCabin,
00064                         const NbOfSeats_T& iPartySize,
00065                         const ChannelLabel_T& iChannel,
00066                         const TripType_T& iTripType,
00067                         const DayDuration_T& iStayDuration,
00068                         const FrequentFlyer_T& iFrequentFlyerType,
00069                         const Duration_T& iPreferredDepartureTime,
00070                         const WTP_T& iWTP,
00071                         const PriceValue_T& iValueOfTime)
00072     : _generatorKey (iGeneratorKey), _origin (iOrigin),
00073       _destination (iDestination), _pos (iPOS),
00074       _preferredDepartureDate (iDepartureDate),
00075       _preferredDepartureTime (iPreferredDepartureTime),
00076       _requestDateTime (iRequestDateTime),
00077       _preferredCabin (iPreferredCabin), _partySize (iPartySize),
00078       _channel (iChannel), _tripType (iTripType),
00079       _stayDuration (iStayDuration), _frequentFlyerType (iFrequentFlyerType),
00080       _wtp (iWTP), _valueOfTime (iValueOfTime) {
00081   }
```

```
00082
00083   // ////////////////////////////////////////////////////////////////////
00084   BookingRequestStruct::
00085   BookingRequestStruct (const AirportCode_T& iOrigin,
00086                         const AirportCode_T& iDestination,
00087                         const CityCode_T& iPOS,
00088                         const Date_T& iDepartureDate,
00089                         const DateTime_T& iRequestDateTime,
00090                         const CabinCode_T& iPreferredCabin,
00091                         const NbOfSeats_T& iPartySize,
00092                         const ChannelLabel_T& iChannel,
00093                         const TripType_T& iTripType,
00094                         const DayDuration_T& iStayDuration,
00095                         const FrequentFlyer_T& iFrequentFlyerType,
00096                         const Duration_T& iPreferredDepartureTime,
00097                         const WTP_T& iWTP,
00098                         const PriceValue_T& iValueOfTime)
00099     : _generatorKey (""), _origin (iOrigin),
00100       _destination (iDestination), _pos (iPOS),
00101       _preferredDepartureDate (iDepartureDate),
00102       _preferredDepartureTime (iPreferredDepartureTime),
00103       _requestDateTime (iRequestDateTime),
00104       _preferredCabin (iPreferredCabin), _partySize (iPartySize),
00105       _channel (iChannel), _tripType (iTripType),
00106       _stayDuration (iStayDuration), _frequentFlyerType (iFrequentFlyerType),
00107       _wtp (iWTP), _valueOfTime (iValueOfTime) {
00108   }
00109
00110   // ////////////////////////////////////////////////////////////////////
00111   BookingRequestStruct::~BookingRequestStruct() {
00112   }
00113
00114   // ////////////////////////////////////////////////////////////////////
00115   void BookingRequestStruct::toStream (std::ostream& ioOut) const {
00116     ioOut << describe();
00117   }
00118
00119   // ////////////////////////////////////////////////////////////////////
00120   void BookingRequestStruct::fromStream (std::istream& ioIn) {
00121   }
00122
00123   // ////////////////////////////////////////////////////////////////////
00124   const std::string BookingRequestStruct::describe() const {
00125     std::ostringstream oStr;
00126     oStr << "At " << _requestDateTime
00127          << ", for (" << _pos << ", " << _channel << ")"
00128          << " " << _origin << "-" << _destination << " (" << _tripType << ")"
00129          << " " << _preferredDepartureDate << " (" << _stayDuration << " days)"
00130          << " " << _preferredDepartureTime
00131          << " " << _preferredCabin << " " << _partySize
00132          << " " << _frequentFlyerType << " " << _wtp << " " << _valueOfTime;
00133     return oStr.str();
00134   }
00135
00136   // ////////////////////////////////////////////////////////////////////
00137   void intDisplay (std::ostream& oStream, const int& iInt) {
00138     const int dInt = iInt - static_cast<int> (iInt / 100) * 100;
00139     if (dInt < 10) {
00140       oStream << "0" << dInt;
00141     } else {
00142       oStream << dInt;
00143     }
```

```
00144   }
00145
00146   // ////////////////////////////////////////////////////////////////////
00147   const std::string BookingRequestStruct::display() const {
00148     std::ostringstream oStr;
00149
00150     // Request date and time
00151     const Date_T& lRequestDate = _requestDateTime.date();
00152     oStr << boost::gregorian::to_iso_extended_string (lRequestDate);
00153
00154     const Duration_T& lRequestTime = _requestDateTime.time_of_day();
00155     oStr << ", " << boost::posix_time::to_simple_string (lRequestTime);
00156
00157     // POS
00158     oStr << ", " << _pos;
00159
00160     // Channel
00161     oStr << ", " << _channel;
00162
00163     // Origin
00164     oStr << ", " << _origin;
00165
00166     // Destination
00167     oStr << ", " << _destination;
00168
00169     // Preferred departure date
00170     oStr << ", "
00171          << boost::gregorian::to_iso_extended_string (_preferredDepartureDate);
00172
00173     // Preferred departure time
00174     oStr << ", "
00175          << boost::posix_time::to_simple_string (_preferredDepartureTime);
00176
00177     // MIN & MAX preferred departure time (hardcode)
00178     oStr << ", " << "00:00-23:59";
00179
00180     // Preferred arrival date (hardcode to the preferred departure date)
00181     oStr << ", "
00182          << boost::gregorian::to_iso_extended_string (_preferredDepartureDate);
00183
00184     // Preferred arrival time (hard-coded to 23:55)
00185     oStr << ", " << "23:55";
00186
00187     // Preferred cabin
00188     oStr << ", " << _preferredCabin;
00189
00190     // Trip type
00191     oStr << ", " << _tripType;
00192
00193     // Duration of stay
00194     oStr << ", ";
00195     if (_tripType == TRIP_TYPE_ONE_WAY) {
00196       oStr << "0";
00197     } else {
00198       oStr << _stayDuration;
00199     }
00200
00201     // Frequent flyer tier
00202     oStr << ", " << _frequentFlyerType;
00203
00204     // Willingness-to-pay
00205     oStr << ", " << _wtp;
```

```
00206
00207     // Disutility per stop (hardcode to 100, expressed as a monetary
00208     // unit per hour)
00209     oStr << ", " << "100";
00210
00211     // Value of time
00212     oStr << ", " << _valueOfTime;
00213
00214     return oStr.str();
00215   }
00216
00217 }
```

35.205 stdair/bom/BookingRequestStruct.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/bom/BookingRequestTypes.hpp>
```

Classes

- struct stdair::BookingRequestStruct

  Structure holding the elements of a booking request.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.206 BookingRequestStruct.hpp

```
00001 #ifndef __STDAIR_BOM_BOOKINGREQUESTSTRUCT_HPP
00002 #define __STDAIR_BOM_BOOKINGREQUESTSTRUCT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/stdair_demand_types.hpp>
00013 #include <stdair/basic/StructAbstract.hpp>
00014 #include <stdair/bom/BookingRequestTypes.hpp>
00015
```

```
00016 namespace stdair {
00017
00021   struct BookingRequestStruct : public StructAbstract {
00022   public:
00023     // ///////////////// Getters /////////////////
00025     const DemandGeneratorKey_T& getDemandGeneratorKey () const {
00026       return _generatorKey;
00027     }
00028
00030     const AirportCode_T& getOrigin() const {
00031       return _origin;
00032     }
00033
00035     const AirportCode_T& getDestination() const {
00036       return _destination;
00037     }
00038
00040     const CityCode_T& getPOS() const {
00041       return _pos;
00042     }
00043
00045     const Date_T& getPreferedDepartureDate() const {
00046       return _preferredDepartureDate;
00047     }
00048
00050     const Duration_T& getPreferredDepartureTime() const {
00051       return _preferredDepartureTime;
00052     }
00053
00055     const DateTime_T& getRequestDateTime() const {
00056       return _requestDateTime;
00057     }
00058
00060     const CabinCode_T& getPreferredCabin() const {
00061       return _preferredCabin;
00062     }
00063
00065     const NbOfSeats_T& getPartySize() const {
00066       return _partySize;
00067     }
00068
00070     const ChannelLabel_T& getBookingChannel() const {
00071       return _channel;
00072     }
00073
00075     const TripType_T& getTripType() const {
00076       return _tripType;
00077     }
00078
00080     const DayDuration_T& getStayDuration() const {
00081       return _stayDuration;
00082     }
00083
00085     const FrequentFlyer_T& getFrequentFlyerType() const {
00086       return _frequentFlyerType;
00087     }
00088
00090     const WTP_T& getWTP() const {
00091       return _wtp;
00092     }
00093
00095     const PriceValue_T& getValueOfTime () const {
```

```
00096       return _valueOfTime;
00097     }
00098
00099
00100   public:
00101     // ////////////// Display support method /////////////
00106     void toStream (std::ostream& ioOut) const;
00107
00112     void fromStream (std::istream& ioIn);
00113
00117     const std::string describe() const;
00118
00169     const std::string display() const;
00170
00171
00172   public:
00173     // ///////////////// Constructors and Destructors /////////////////
00177     BookingRequestStruct (const DemandGeneratorKey_T& iGeneratorKey,
00178                           const AirportCode_T& iOrigin,
00179                           const AirportCode_T& iDestination,
00180                           const CityCode_T& iPOS,
00181                           const Date_T& iDepartureDate,
00182                           const DateTime_T& iRequestDateTime,
00183                           const CabinCode_T& iPreferredCabin,
00184                           const NbOfSeats_T& iPartySize,
00185                           const ChannelLabel_T& iChannel,
00186                           const TripType_T& iTripType,
00187                           const DayDuration_T& iStayDuration,
00188                           const FrequentFlyer_T& iFrequentFlyerType,
00189                           const Duration_T& iPreferredDepartureTime,
00190                           const WTP_T& iWTP,
00191                           const PriceValue_T& iValueOfTime);
00192
00196     BookingRequestStruct (const AirportCode_T& iOrigin,
00197                           const AirportCode_T& iDestination,
00198                           const CityCode_T& iPOS,
00199                           const Date_T& iDepartureDate,
00200                           const DateTime_T& iRequestDateTime,
00201                           const CabinCode_T& iPreferredCabin,
00202                           const NbOfSeats_T& iPartySize,
00203                           const ChannelLabel_T& iChannel,
00204                           const TripType_T& iTripType,
00205                           const DayDuration_T& iStayDuration,
00206                           const FrequentFlyer_T& iFrequentFlyerType,
00207                           const Duration_T& iPreferredDepartureTime,
00208                           const WTP_T& iWTP,
00209                           const PriceValue_T& iValueOfTime);
00213     BookingRequestStruct (const BookingRequestStruct&);
00214
00218     ~BookingRequestStruct();
00219
00220
00221   private:
00227     BookingRequestStruct();
00228
00229
00230   private:
00231     // ///////////////// Attributes /////////////////
00233     const DemandGeneratorKey_T _generatorKey;
00234
00236     const AirportCode_T _origin;
00237
```

```
00239     const AirportCode_T _destination;
00240
00242     const CityCode_T _pos;
00243
00245     const Date_T _preferredDepartureDate;
00246
00248     const Duration_T _preferredDepartureTime;
00249
00251     const DateTime_T _requestDateTime;
00252
00254     const CabinCode_T _preferredCabin;
00255
00257     const NbOfSeats_T _partySize;
00258
00260     const ChannelLabel_T _channel;
00261
00264     const TripType_T _tripType;
00265
00267     const DayDuration_T _stayDuration;
00268
00270     const FrequentFlyer_T _frequentFlyerType;
00271
00273     const WTP_T _wtp;
00274
00276     const PriceValue_T _valueOfTime;
00277   };
00278
00279 }
00280 #endif // __STDAIR_BOM_BOOKINGREQUESTSTRUCT_HPP
```

35.207 stdair/bom/BookingRequestTypes.hpp File Reference

```
#include <boost/shared_ptr.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef boost::shared_ptr< BookingRequestStruct > stdair::BookingRequestPtr_T
- typedef std::string stdair::DemandGeneratorKey_T

35.208 BookingRequestTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_BOOKINGREQUESTTYPES_HPP
00003 #define __STDAIR_BOM_BOOKINGREQUESTTYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
```

```
00007 // ////////////////////////////////////////////////////////////////////
00008 // Boost
00009 #include <boost/shared_ptr.hpp>
00010
00011 namespace stdair {
00012
00013   // Forward declarations
00014   struct BookingRequestStruct;
00015
00016   // ////////////// Type definitions //////////////
00018   typedef boost::shared_ptr<BookingRequestStruct> BookingRequestPtr_T;
00019
00021   typedef std::string DemandGeneratorKey_T;
00022
00023
00024 }
00025 #endif // __STDAIR_BOM_BOOKINGREQUESTTYPES_HPP
00026
```

35.209 stdair/bom/Bucket.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/Bucket.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.210 Bucket.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 #include <stdair/bom/Bucket.hpp>
00014
00015 namespace stdair {
```

```
00016
00017   // ////////////////////////////////////////////////////////////////////
00018   Bucket::Bucket()
00019     : _key (DEFAULT_SEAT_INDEX), _parent (NULL) {
00020     assert (false);
00021   }
00022
00023   // ////////////////////////////////////////////////////////////////////
00024   Bucket::Bucket (const Key_T& iKey) : _key (iKey), _parent (NULL) {
00025   }
00026
00027   // ////////////////////////////////////////////////////////////////////
00028   Bucket::~Bucket() {
00029   }
00030
00031   // ////////////////////////////////////////////////////////////////////
00032   std::string Bucket::toString() const {
00033     std::ostringstream oStr;
00034     oStr <<  describeKey();
00035     return oStr.str();
00036   }
00037
00038   // ////////////////////////////////////////////////////////////////////
00039   void Bucket::serialisationImplementationExport() const {
00040     std::ostringstream oStr;
00041     boost::archive::text_oarchive oa (oStr);
00042     oa << *this;
00043   }
00044
00045   // ////////////////////////////////////////////////////////////////////
00046   void Bucket::serialisationImplementationImport() {
00047     std::istringstream iStr;
00048     boost::archive::text_iarchive ia (iStr);
00049     ia >> *this;
00050   }
00051
00052   // ////////////////////////////////////////////////////////////////////
00053   template<class Archive>
00054   void Bucket::serialize (Archive& ioArchive, const unsigned int iFileVersion) {
00055     ioArchive & _key;
00056   }
00057
00058 }
00059
```

35.211 stdair/bom/Bucket.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/BucketKey.hpp>
#include <stdair/bom/BucketTypes.hpp>
```

Classes

- class stdair::Bucket

  Class representing the actual attributes for an airline booking class.

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.212 Bucket.hpp

```
00001 #ifndef __STDAIR_BOM_BUCKET_HPP
00002 #define __STDAIR_BOM_BUCKET_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/bom/BomAbstract.hpp>
00013 #include <stdair/bom/BucketKey.hpp>
00014 #include <stdair/bom/BucketTypes.hpp>
00015
00017 namespace boost {
00018   namespace serialization {
00019     class access;
00020   }
00021 }
00022
00023 namespace stdair {
00024
00029   class Bucket : public BomAbstract {
00030     template <typename BOM> friend class FacBom;
00031     friend class FacBomManager;
00032     friend class boost::serialization::access;
00033
00034   public:
00035     // ////////////////// Type definitions ///////////////////
00039     typedef BucketKey Key_T;
00040
00041   public:
00042     // ////////// Getters ////////////
00046     const Key_T& getKey() const {
00047       return _key;
00048     }
00049
00053     BomAbstract* const getParent() const {
00054       return _parent;
00055     }
```

```
00056
00058     const HolderMap_T& getHolderMap() const {
00059       return _holderMap;
00060     }
00061
00063     const SeatIndex_T& getSeatIndex() const {
00064       return _key.getSeatIndex();
00065     }
00066
00068     const Yield_T& getYieldRangeUpperValue() const {
00069       return _yieldRangeUpperValue;
00070     }
00071
00073     const CabinCapacity_T& getAvailability() const {
00074       return _availability;
00075     }
00076
00078     const NbOfSeats_T& getSoldSeats() const {
00079       return _soldSeats;
00080     }
00081
00082
00083     // ////////////// Setters ////////////
00085     void setYieldRangeUpperValue (const Yield_T& iYield) {
00086       _yieldRangeUpperValue = iYield;
00087     }
00088
00090     void setAvailability (const CabinCapacity_T& iAvl) {
00091       _availability = iAvl;
00092     }
00093
00095     void setSoldSeats (const NbOfSeats_T& iSoldSeats) {
00096       _soldSeats = iSoldSeats;
00097     }
00098
00099
00100   public:
00101     // ////////////// Display support methods /////////
00107     void toStream (std::ostream& ioOut) const {
00108       ioOut << toString();
00109     }
00110
00116     void fromStream (std::istream& ioIn) {
00117     }
00118
00122     std::string toString() const;
00123
00127     const std::string describeKey() const {
00128       return _key.toString();
00129     }
00130
00131
00132   public:
00133     // ////////////// (Boost) Serialisation support methods /////////
00137     template<class Archive>
00138     void serialize (Archive& ar, const unsigned int iFileVersion);
00139
00140   private:
00145     void serialisationImplementationExport() const;
00146     void serialisationImplementationImport();
00147
00148
```

```
00149   protected:
00150     // ********** Constructors and destructors *********
00154     Bucket (const Key_T&);
00155
00159     virtual ~Bucket();
00160
00161   private:
00165     Bucket();
00166
00170     Bucket (const Bucket&);
00171
00172
00173   protected:
00174     // ******************** Children ******************
00178     Key_T _key;
00179
00183     BomAbstract* _parent;
00184
00188     HolderMap_T _holderMap;
00189
00190
00191   protected:
00192     // ******************** Attributes ******************
00196     Yield_T _yieldRangeUpperValue;
00197
00201     CabinCapacity_T _availability;
00202
00206     NbOfSeats_T _soldSeats;
00207   };
00208
00209 }
00210 #endif // __STDAIR_BOM_BUCKET_HPP
00211
```

35.213 stdair/bom/BucketKey.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/bom/BucketKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Functions

- template void stdair::BucketKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)

- template void stdair::BucketKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)

35.214 BucketKey.cpp

```
00001 // //////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/bom/BucketKey.hpp>
00013
00014 namespace stdair {
00015
00016   // //////////////////////////////////////////////////////////////////////
00017   BucketKey::BucketKey() {
00018     assert (false);
00019   }
00020
00021   // //////////////////////////////////////////////////////////////////////
00022   BucketKey::BucketKey (const SeatIndex_T& iSeatIndex)
00023     : _seatIndex (iSeatIndex) {
00024   }
00025
00026   // //////////////////////////////////////////////////////////////////////
00027   BucketKey::BucketKey (const BucketKey& iBucketKey)
00028     : _seatIndex (iBucketKey._seatIndex) {
00029   }
00030
00031   // //////////////////////////////////////////////////////////////////////
00032   BucketKey::~BucketKey() {
00033   }
00034
00035   // //////////////////////////////////////////////////////////////////////
00036   void BucketKey::toStream (std::ostream& ioOut) const {
00037     ioOut << "BucketKey: " << toString() << std::endl;
00038   }
00039
00040   // //////////////////////////////////////////////////////////////////////
00041   void BucketKey::fromStream (std::istream& ioIn) {
00042   }
00043
00044   // //////////////////////////////////////////////////////////////////////
00045   const std::string BucketKey::toString() const {
00046     std::ostringstream oStr;
00047     oStr << _seatIndex;
00048     return oStr.str();
00049   }
00050
00051   // //////////////////////////////////////////////////////////////////////
00052   void BucketKey::serialisationImplementationExport() const {
00053     std::ostringstream oStr;
00054     boost::archive::text_oarchive oa (oStr);
00055     oa << *this;
```

```
00056   }
00057
00058   // ////////////////////////////////////////////////////////////////////
00059   void BucketKey::serialisationImplementationImport() {
00060     std::istringstream iStr;
00061     boost::archive::text_iarchive ia (iStr);
00062     ia >> *this;
00063   }
00064
00065   // ////////////////////////////////////////////////////////////////////
00066   template<class Archive>
00067   void BucketKey::serialize (Archive& ioArchive,
00068                              const unsigned int iFileVersion) {
00069     ioArchive & _seatIndex;
00070   }
00071
00072   // ////////////////////////////////////////////////////////////////////
00073   // Explicit template instantiation
00074   namespace ba = boost::archive;
00075   template void BucketKey::serialize<ba::text_oarchive> (ba::text_oarchive&,
00076                                                          unsigned int);
00077   template void BucketKey::serialize<ba::text_iarchive> (ba::text_iarchive&,
00078                                                          unsigned int);
00079   // ////////////////////////////////////////////////////////////////////
00080
00081 }
```

35.215 stdair/bom/BucketKey.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

Classes

- struct stdair::BucketKey

  Key of booking-class.

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.216 BucketKey.hpp

```
00001 #ifndef __STDAIR_BOM_BUCKETKEY_HPP
```

```
00002 #define __STDAIR_BOM_BUCKETKEY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/bom/KeyAbstract.hpp>
00013
00015 namespace boost {
00016   namespace serialization {
00017     class access;
00018   }
00019 }
00020
00021 namespace stdair {
00022
00026   struct BucketKey : public KeyAbstract {
00027     friend class boost::serialization::access;
00028
00029     // ////////// Constructors and destructors //////////
00030   private:
00034     BucketKey();
00035
00036   public:
00040     BucketKey (const SeatIndex_T&);
00044     BucketKey (const BucketKey&);
00048     ~BucketKey();
00049
00050
00051   public:
00052     // ////////// Getters //////////
00054     const SeatIndex_T& getSeatIndex() const {
00055       return _seatIndex;
00056     }
00057
00058
00059   public:
00060     // ////////// Display support methods /////////
00066     void toStream (std::ostream& ioOut) const;
00067
00073     void fromStream (std::istream& ioIn);
00074
00084     const std::string toString() const;
00085
00086
00087   public:
00088     // ////////// (Boost) Serialisation support methods /////////
00092     template<class Archive>
00093     void serialize (Archive& ar, const unsigned int iFileVersion);
00094
00095   private:
00100     void serialisationImplementationExport() const;
00101     void serialisationImplementationImport();
00102
00103
00104   private:
00105     // ////////////////// Attributes ///////////////
00109     SeatIndex_T _seatIndex;
```

```
00110   };
00111
00112 }
00113 #endif // __STDAIR_BOM_BUCKETKEY_HPP
```

35.217 stdair/bom/BucketTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< Bucket * > stdair::BucketList_T
- typedef std::map< const MapKey_T, Bucket * > stdair::BucketMap_T

35.218 BucketTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_BUCKETTYPES_HPP
00003 #define __STDAIR_BOM_BUCKETTYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations
00017   class Bucket;
00018
00020   typedef std::list<Bucket*> BucketList_T;
00021
00023   typedef std::map<const MapKey_T, Bucket*> BucketMap_T;
00024
00025 }
00026 #endif // __STDAIR_BOM_BUCKETTYPES_HPP
00027
```

35.219 stdair/bom/CancellationStruct.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_BookingClass.hpp>
#include <stdair/bom/CancellationStruct.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.220 CancellationStruct.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_BookingClass.hpp>
00009 #include <stdair/bom/CancellationStruct.hpp>
00010
00011 namespace stdair {
00012   // ////////////////////////////////////////////////////////////////////
00013   CancellationStruct::CancellationStruct (const SegmentPath_T& iSegPath,
00014                                           const ClassList_String_T& iList,
00015                                           const PartySize_T& iSize,
00016                                           const DateTime_T& iDateTime)
00017     : _segmentPath (iSegPath), _classList (iList), _partySize (iSize),
00018       _datetime (iDateTime) {
00019   }
00020
00021   // ////////////////////////////////////////////////////////////////////
00022   CancellationStruct::~CancellationStruct() {
00023   }
00024
00025   // ////////////////////////////////////////////////////////////////////
00026   void CancellationStruct::toStream (std::ostream& ioOut) const {
00027     ioOut << describe();
00028   }
00029
00030   // ////////////////////////////////////////////////////////////////////
00031   void CancellationStruct::fromStream (std::istream& ioIn) {
00032   }
00033
00034   // ////////////////////////////////////////////////////////////////////
00035   const std::string CancellationStruct::describe() const {
00036     std::ostringstream oStr;
00037
00038     oStr << "Segment path: ";
00039     unsigned short idx = 0;
00040     for (SegmentPath_T::const_iterator lItSegmentPath = _segmentPath.begin();
00041          lItSegmentPath != _segmentPath.end(); ++lItSegmentPath, ++idx) {
```

```
00042       if (idx != 0) {
00043         oStr << "-";
00044       }
00045       const std::string& lSegmentKey = *lItSegmentPath;
00046       oStr << lSegmentKey;
00047     }
00048
00049     oStr << ";" << _classList << ";" << _partySize << ";" << _datetime;
00050     return oStr.str();
00051   }
00052
00053   // ////////////////////////////////////////////////////////////////////
00054   const std::string CancellationStruct::display() const {
00055     std::ostringstream oStr;
00056
00057     // List of segment keys (one per segment)
00058     unsigned short idx = 0;
00059     for (SegmentPath_T::const_iterator itSegPath = _segmentPath.begin();
00060          itSegPath != _segmentPath.end(); ++itSegPath, ++idx) {
00061       if (idx != 0) {
00062         oStr << " ; ";
00063       }
00064       const std::string& lSegmentKey = *itSegPath;
00065       oStr << "[" << idx << "] " << lSegmentKey;
00066     }
00067
00068     oStr << ";" << _classList << ";" << _partySize << ";" << _datetime;
00069     return oStr.str();
00070   }
00071 }
```

35.221 stdair/bom/CancellationStruct.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <vector>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/bom/BookingClassTypes.hpp>
#include <stdair/bom/TravelSolutionTypes.hpp>
```

Classes

- struct stdair::CancellationStruct

  Structure holding the elements of a travel solution.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.222 CancellationStruct.hpp

```
00001 #ifndef __STDAIR_BOM_CANCELLATIONSTRUCT_HPP
00002 #define __STDAIR_BOM_CANCELLATIONSTRUCT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 #include <vector>
00011 // StdAir
00012 #include <stdair/stdair_basic_types.hpp>
00013 #include <stdair/basic/StructAbstract.hpp>
00014 #include <stdair/bom/BookingClassTypes.hpp>
00015 #include <stdair/bom/TravelSolutionTypes.hpp>
00016
00017 namespace stdair {
00018
00022   struct CancellationStruct : public StructAbstract {
00023   public:
00024     // ////////// Getters ///////////////
00026     const SegmentPath_T& getSegmentPath() const {
00027       return _segmentPath;
00028     }
00029
00031     const ClassList_String_T& getClassList() const {
00032       return _classList;
00033     }
00034
00036     const PartySize_T& getPartySize() const {
00037       return _partySize;
00038     }
00039
00041     const DateTime_T& getCancellationDateTime() const {
00042       return _datetime;
00043     }
00044
00045   public:
00046     // ////////// Display support method /////////////
00052     void toStream (std::ostream& ioOut) const;
00053
00058     void fromStream (std::istream& ioIn);
00059
00063     const std::string describe() const;
00064
00068     const std::string display() const;
00069
00070
00071   public:
00072     // ////////// Constructors & Destructor ///////////////
00076     CancellationStruct (const SegmentPath_T&, const ClassList_String_T&,
00077                         const PartySize_T&, const DateTime_T&);
00078
00082     ~CancellationStruct();
00083
00084
00085   private:
00086     // ////////////////////// Attributes ///////////////////////
00090     SegmentPath_T _segmentPath;
00091
```

```
00095     ClassList_String_T _classList;
00096
00100     PartySize_T _partySize;
00101
00105     DateTime_T _datetime;
00106   };
00107
00108 }
00109 #endif // __STDAIR_BOM_CANCELLATIONSTRUCT_HPP
```

35.223 stdair/bom/CancellationTypes.hpp File Reference

```
#include <boost/shared_ptr.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef boost::shared_ptr< CancellationStruct > stdair::CancellationPtr_T

35.224 CancellationTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_CANCELLATIONTYPES_HPP
00003 #define __STDAIR_BOM_CANCELLATIONTYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // Boost
00009 #include <boost/shared_ptr.hpp>
00010
00011 namespace stdair {
00012
00013   // Forward declarations
00014   struct CancellationStruct;
00015
00016   // ////////////// Type definitions //////////////
00018   typedef boost::shared_ptr<CancellationStruct> CancellationPtr_T;
00019
00020 }
00021 #endif // __STDAIR_BOM_CANCELLATIONTYPES_HPP
00022
```

35.225 stdair/bom/DatePeriod.cpp File Reference

```
#include <cassert>
#include <sstream>
```

```
#include <stdair/basic/BasConst_Period_BOM.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/bom/DatePeriod.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.226 DatePeriod.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Period_BOM.hpp>
00009 #include <stdair/service/Logger.hpp>
00010 #include <stdair/bom/DatePeriod.hpp>
00011
00012 namespace stdair {
00013
00014   // ////////////////////////////////////////////////////////////////////
00015   DatePeriod::DatePeriod()
00016     : _key (BOOST_DEFAULT_DATE_PERIOD),
00017       _parent (NULL)  {
00018     // That constructor is used by the serialisation process
00019   }
00020
00021   // ////////////////////////////////////////////////////////////////////
00022   DatePeriod::DatePeriod (const DatePeriod& iDatePeriod)
00023     : _key (iDatePeriod.getKey()), _parent (NULL)  {
00024     assert (false);
00025   }
00026
00027   // ////////////////////////////////////////////////////////////////////
00028   DatePeriod::DatePeriod (const Key_T& iKey)
00029     : _key (iKey), _parent (NULL)  {
00030   }
00031
00032   // ////////////////////////////////////////////////////////////////////
00033   DatePeriod::~DatePeriod () {
00034   }
00035
00036   // ////////////////////////////////////////////////////////////////////
00037   std::string DatePeriod::toString() const {
00038     std::ostringstream oStr;
00039     oStr << describeKey();
00040     return oStr.str();
00041   }
00042
00043   // ////////////////////////////////////////////////////////////////////
00044   bool DatePeriod::
00045   isDepartureDateValid (const Date_T& iFlightDate) const {
```

```
00046
00047     // Check if the departure date is within the date range.
00048     const DatePeriod_T& lPeriod = getDatePeriod ();
00049     if (lPeriod.contains (iFlightDate) == false) {
00050       return false;
00051     }
00052
00053     return true;
00054   }
00055
00056 }
00057
```

35.227 stdair/bom/DatePeriod.hpp File Reference

```
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/DatePeriodKey.hpp>
#include <stdair/bom/DatePeriodTypes.hpp>
```

Classes

- class stdair::DatePeriod

  Class representing the actual attributes for a fare date-period.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.228 DatePeriod.hpp

```
00001 #ifndef __STDAIR_BOM_DATEPERIOD_HPP
00002 #define __STDAIR_BOM_DATEPERIOD_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/BomAbstract.hpp>
00009 #include <stdair/bom/DatePeriodKey.hpp>
00010 #include <stdair/bom/DatePeriodTypes.hpp>
00011
00012 // Forward declaration
00013 namespace stdair {
00014
00018   class DatePeriod : public BomAbstract {
00019     template <typename BOM> friend class FacBom;
00020     friend class FacBomManager;
00021
00022   public:
00023     // ////////////// Type definitions //////////////
00027     typedef DatePeriodKey Key_T;
```

```
00028
00029   public:
00030     // ////////////// Display support methods /////////
00036     void toStream (std::ostream& ioOut) const {
00037       ioOut << toString();
00038     }
00039
00045     void fromStream (std::istream& ioIn) {
00046     }
00047
00051     std::string toString() const;
00052
00056     const std::string describeKey() const {
00057       return _key.toString();
00058     }
00059
00060   public:
00061     // /////////// Getters ////////////
00065     const Key_T& getKey() const {
00066       return _key;
00067     }
00068
00072     BomAbstract* const getParent() const {
00073       return _parent;
00074     }
00075
00079     const  HolderMap_T& getHolderMap() const {
00080       return _holderMap;
00081     }
00082
00086     const DatePeriod_T& getDatePeriod() const {
00087       return _key.getDatePeriod();
00088     }
00089
00090
00091   public:
00092     // /////////////// Business methods ///////////////
00097     bool isDepartureDateValid (const Date_T&) const;
00098
00099   protected:
00100     // /////////// Constructors and destructors /////////
00104     DatePeriod (const Key_T&);
00108     virtual ~DatePeriod ();
00109
00110   private:
00114     DatePeriod ();
00118     DatePeriod (const DatePeriod&);
00119
00120   protected:
00121     // ////////////// Attributes //////////////
00125     Key_T _key;
00126
00130     BomAbstract* _parent;
00131
00135     HolderMap_T _holderMap;
00136
00137   };
00138
00139 }
00140 #endif // __STDAIR_BOM_DATEPERIOD_HPP
00141
```

35.229 stdair/bom/DatePeriodKey.cpp File Reference

```
#include <ostream>
#include <sstream>
#include <boost/date_time/gregorian/formatters.hpp>
#include <stdair/basic/BasConst_Period_BOM.hpp>
#include <stdair/bom/DatePeriodKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.230 DatePeriodKey.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <ostream>
00006 #include <sstream>
00007 // Boost Date-Time
00008 #include <boost/date_time/gregorian/formatters.hpp>
00009 // STDAIR
00010 #include <stdair/basic/BasConst_Period_BOM.hpp>
00011 #include <stdair/bom/DatePeriodKey.hpp>
00012
00013 namespace stdair {
00014
00015   // ////////////////////////////////////////////////////////////////////
00016   DatePeriodKey::DatePeriodKey()
00017     : _datePeriod (BOOST_DEFAULT_DATE_PERIOD) {
00018     assert (false);
00019   }
00020
00021   // ////////////////////////////////////////////////////////////////////
00022   DatePeriodKey::DatePeriodKey (const stdair::DatePeriod_T& iDatePeriod)
00023     : _datePeriod (iDatePeriod) {
00024   }
00025
00026   // ////////////////////////////////////////////////////////////////////
00027   DatePeriodKey::DatePeriodKey (const DatePeriodKey& iKey)
00028     : _datePeriod (iKey._datePeriod) {
00029   }
00030
00031   // ////////////////////////////////////////////////////////////////////
00032   DatePeriodKey::~DatePeriodKey () {
00033   }
00034
00035   // ////////////////////////////////////////////////////////////////////
00036   void DatePeriodKey::toStream (std::ostream& ioOut) const {
00037     ioOut << "DatePeriodKey: " << toString() << std::endl;
00038   }
00039
```

```
00040   // ////////////////////////////////////////////////////////////////////
00041   void DatePeriodKey::fromStream (std::istream& ioIn) {
00042   }
00043
00044   // ////////////////////////////////////////////////////////////////////
00045   const std::string DatePeriodKey::toString() const {
00046     std::ostringstream oStr;
00047     const stdair::Date_T lStart = _datePeriod.begin();
00048     const stdair::Date_T lEnd = _datePeriod.end();
00049     oStr << "[" << boost::gregorian::to_simple_string(lStart)
00050          << "/" << boost::gregorian::to_simple_string(lEnd)
00051          << "]";
00052     return oStr.str();
00053   }
00054
00055 }
```

35.231 stdair/bom/DatePeriodKey.hpp File Reference

```
#include <stdair/bom/KeyAbstract.hpp>
#include <stdair/stdair_date_time_types.hpp>
```

Classes

- struct stdair::DatePeriodKey

  Key of date-period.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.232 DatePeriodKey.hpp

```
00001 #ifndef __SIMFQT_BOM_DATEPERIODKEY_HPP
00002 #define __SIMFQT_BOM_DATEPERIODKEY_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/KeyAbstract.hpp>
00009 #include <stdair/stdair_date_time_types.hpp>
00010
00011 namespace stdair  {
00014   struct DatePeriodKey : public KeyAbstract {
00015
00016   public:
00017     // ////////// Construction //////////
00019     DatePeriodKey (const DatePeriod_T&);
00021     DatePeriodKey (const DatePeriodKey&);
00023     ~DatePeriodKey ();
```

```
00024
00025   private:
00027     DatePeriodKey();
00028
00029   public:
00030     // ////////// Getters //////////
00032     const DatePeriod_T& getDatePeriod() const {
00033       return _datePeriod;
00034     }
00035
00036   public:
00037
00038     // ////////// Display support methods /////////
00044     void toStream (std::ostream& ioOut) const;
00045
00051     void fromStream (std::istream& ioIn);
00052
00058     const std::string toString() const;
00059
00060   private:
00061     // ////////////////// Attributes ////////////////////
00065     DatePeriod_T _datePeriod;
00066
00067   };
00068
00069 }
00070 #endif // __SIMFQT_BOM_DATEPERIODKEY_HPP
```

35.233 stdair/bom/DatePeriodTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< DatePeriod * > stdair::DatePeriodList_T
- typedef std::map< const MapKey_T, DatePeriod * > stdair::DatePeriodMap_T
- typedef std::pair< MapKey_T, DatePeriod * > stdair::DatePeriodWithKey_T
- typedef std::list< DatePeriodWithKey_T > stdair::DatePeriodDetailedList_T

35.234 DatePeriodTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_DATEPERIODTYPES_HPP
00003 #define __STDAIR_BOM_DATEPERIODTYPES_HPP
```

```
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // STDAIR
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations.
00017   class DatePeriod;
00018
00020   typedef std::list<DatePeriod*> DatePeriodList_T;
00021
00023   typedef std::map<const MapKey_T, DatePeriod*> DatePeriodMap_T;
00024
00026   typedef std::pair<MapKey_T, DatePeriod*> DatePeriodWithKey_T;
00027   typedef std::list<DatePeriodWithKey_T> DatePeriodDetailedList_T;
00028 }
00029 #endif // __STDAIR_BOM_DATEPERIODTYPES_HPP
00030
```

35.235 stdair/bom/DoWStruct.cpp File Reference

```
#include <sstream>
#include <cassert>
#include <stdair/basic/BasConst_Period_BOM.hpp>
#include <stdair/bom/DoWStruct.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.236 DoWStruct.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <sstream>
00006 #include <cassert>
00007 // STDAIR
00008 #include <stdair/basic/BasConst_Period_BOM.hpp>
00009 #include <stdair/bom/DoWStruct.hpp>
00010
00011 namespace stdair {
00012
00013   // ////////////////////////////////////////////////////////////////////
00014   DoWStruct::DoWStruct () {
```

```
00015     for (unsigned short i = 0; i < 7; ++i) {
00016       _dowList.push_back (false);
00017     }
00018   }
00019
00020   // ////////////////////////////////////////////////////////////////////
00021   DoWStruct::DoWStruct (const std::string& iDowString) {
00022     const unsigned short lDowStringSize = iDowString.size();
00023     assert (lDowStringSize == 7);
00024
00025     _dowList.reserve (lDowStringSize);
00026     for (std::string::const_iterator itChar = iDowString.begin();
00027          itChar != iDowString.end(); ++itChar) {
00028       const bool isDoWSet = (*itChar == '1')?true:false;
00029       _dowList.push_back (isDoWSet);
00030     }
00031   }
00032
00033   // ////////////////////////////////////////////////////////////////////
00034   DoWStruct::DoWStruct (const DoWStruct& iDowStruct) :
00035     _dowList (iDowStruct._dowList) {
00036
00037   }
00038
00039   // ////////////////////////////////////////////////////////////////////
00040   const std::string DoWStruct::describeShort() const {
00041     std::ostringstream ostr;
00042     short i = 0;
00043     for (BooleanList_T::const_iterator itDoW = _dowList.begin();
00044          itDoW != _dowList.end(); ++itDoW, ++i) {
00045       const char lDoW = (*itDoW == true)?'1':'0';
00046       ostr << lDoW;
00047     }
00048     return ostr.str();
00049   }
00050
00051   // ////////////////////////////////////////////////////////////////////
00052   const std::string DoWStruct::describe() const {
00053     std::ostringstream ostr;
00054     short i = 0;
00055     for (BooleanList_T::const_iterator itDoW = _dowList.begin();
00056          itDoW != _dowList.end(); ++itDoW, ++i) {
00057       const bool lDoW = *itDoW;
00058       if (lDoW == true) {
00059         ostr << DOW_STR[i] << ".";
00060       }
00061     }
00062     return ostr.str();
00063   }
00064
00065   // ////////////////////////////////////////////////////////////////////
00066   bool DoWStruct::getDayOfWeek (const unsigned short i) const {
00067     return _dowList.at (i);
00068   }
00069
00070   // ////////////////////////////////////////////////////////////////////
00071   bool DoWStruct::getStandardDayOfWeek (const unsigned short i) const {
00072     unsigned short iStd = i;
00073     if (iStd == 0) {
00074       iStd = 6;
00075     } else {
00076       --iStd;
```

```
00077     }
00078     return _dowList.at (iStd);
00079   }
00080
00081   // ////////////////////////////////////////////////////////////////////
00082   void DoWStruct::setDayOfWeek (const unsigned short i, const bool iBool) {
00083     assert (i < 7);
00084     _dowList.at (i) = iBool;
00085   }
00086
00087   // ////////////////////////////////////////////////////////////////////
00088   DoWStruct DoWStruct::shift (const long& iNbOfDays) const {
00089     DoWStruct oDoW (DEFAULT_DOW_STRING);
00090
00091     for (short i = 0; i < 7; ++i) {
00092       const bool lDoWBool = _dowList.at (i);
00093       short lIndex = (i + iNbOfDays) % 7;
00094       if (lIndex < 0) {
00095         lIndex += 7;
00096       }
00097       oDoW.setDayOfWeek (lIndex, lDoWBool);
00098     }
00099
00100     return oDoW;
00101   }
00102
00103   // ////////////////////////////////////////////////////////////////////
00104   DoWStruct DoWStruct::intersection (const DoWStruct& iDoW) const {
00105     DoWStruct oDoW (DEFAULT_DOW_STRING);
00106     for (unsigned short i = 0; i < 7; ++i) {
00107       if (getDayOfWeek(i) && iDoW.getDayOfWeek(i)) {
00108         oDoW.setDayOfWeek (i, true);
00109       } else {
00110         oDoW.setDayOfWeek (i, false);
00111       }
00112     }
00113     return oDoW;
00114   }
00115
00116   // ////////////////////////////////////////////////////////////////////
00117   const bool DoWStruct::isValid () const {
00118     for (unsigned short i = 0; i < 7; ++i) {
00119       if (getDayOfWeek(i)) {
00120         return true;
00121       }
00122     }
00123     return false;
00124   }
00125
00126 }
```

35.237 stdair/bom/DoWStruct.hpp File Reference

```
#include <string>
#include <vector>
#include <stdair/basic/StructAbstract.hpp>
```

Classes

- struct stdair::DoWStruct

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.238 DoWStruct.hpp

```
00001 #ifndef __STDAIR_BOM_DOWSTRUCT_HPP
00002 #define __STDAIR_BOM_DOWSTRUCT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <vector>
00010 // STDAIR
00011 #include <stdair/basic/StructAbstract.hpp>
00012
00013 namespace stdair {
00014
00018   struct DoWStruct : public StructAbstract {
00019   public:
00021     typedef std::vector<bool> BooleanList_T;
00022
00023   public:
00024     // ////////////////// Getters ///////////////
00026     bool getDayOfWeek (const unsigned short i) const;
00027
00029     bool getStandardDayOfWeek (const unsigned short i) const;
00030
00031   public:
00032     // ////////////////// Setters ///////////////
00034     void setDayOfWeek (const unsigned short, const bool);
00035
00036   public:
00037     // ////////////////// Display methods ///////////////
00039     const std::string describe() const;
00040
00042     const std::string describeShort() const;
00043
00044   public:
00045     // ////////////////// Business Methods ////////////////
00047     DoWStruct shift (const long&) const;
00048
00050     DoWStruct intersection (const DoWStruct&) const;
00051
00053     const bool isValid () const;
00054
00055   public:
00058     DoWStruct (const std::string& iDowString);
00060     DoWStruct ();
00061     DoWStruct (const DoWStruct&);
00063     ~DoWStruct () { }
```

```
00064
00065   private:
00067     BooleanList_T _dowList;
00068   };
00069
00070 }
00071 #endif // __STDAIR_BOM_DOWSTRUCT_HPP
```

35.239 stdair/bom/EventQueue.cpp File Reference

```
#include <cassert>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/BasConst_Event.hpp>
#include <stdair/bom/EventStruct.hpp>
#include <stdair/bom/EventQueue.hpp>
#include <stdair/service/Logger.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.240 EventQueue.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/stdair_exceptions.hpp>
00008 #include <stdair/basic/BasConst_Event.hpp>
00009 #include <stdair/bom/EventStruct.hpp>
00010 #include <stdair/bom/EventQueue.hpp>
00011 #include <stdair/service/Logger.hpp>
00012
00013 namespace stdair {
00014
00015   // ////////////////////////////////////////////////////////////////////
00016   EventQueue::EventQueue()
00017     : _key (DEFAULT_EVENT_QUEUE_ID), _parent (NULL),
00018       _progressStatus (stdair::DEFAULT_PROGRESS_STATUS,
00019                        stdair::DEFAULT_PROGRESS_STATUS) {
00020   }
00021
00022   // ////////////////////////////////////////////////////////////////////
00023   EventQueue::EventQueue (const Key_T& iKey)
00024     : _key (iKey), _parent (NULL),
00025       _progressStatus (stdair::DEFAULT_PROGRESS_STATUS,
00026                        stdair::DEFAULT_PROGRESS_STATUS) {
00027   }
```

```
00028
00029   // //////////////////////////////////////////////////////////////////////
00030   EventQueue::EventQueue (const EventQueue& iEventQueue)
00031     : _key (DEFAULT_EVENT_QUEUE_ID), _parent (NULL),
00032       _progressStatus (stdair::DEFAULT_PROGRESS_STATUS,
00033                        stdair::DEFAULT_PROGRESS_STATUS) {
00034     assert (false);
00035   }
00036
00037   // //////////////////////////////////////////////////////////////////////
00038   EventQueue::~EventQueue() {
00039     _eventList.clear();
00040   }
00041
00042   // //////////////////////////////////////////////////////////////////////
00043   std::string EventQueue::toString() const {
00044     std::ostringstream oStr;
00045     oStr << "(" << _eventList.size() << ") "
00046          << _progressStatus.getCurrentNb() << "/{"
00047          << _progressStatus.getExpectedNb() << ","
00048          << _progressStatus.getActualNb() << "}";
00049     return oStr.str();
00050   }
00051
00052   // //////////////////////////////////////////////////////////////////////
00053   std::string EventQueue::display() const {
00054     std::ostringstream oStr;
00055
00056     oStr << toString();
00057
00058     return oStr.str();
00059   }
00060
00061   // //////////////////////////////////////////////////////////////////////
00062   Count_T EventQueue::getQueueSize() const {
00063     return _eventList.size();
00064   }
00065
00066   // //////////////////////////////////////////////////////////////////////
00067   bool EventQueue::isQueueEmpty() const {
00068     return _eventList.empty();
00069   }
00070
00071   // //////////////////////////////////////////////////////////////////////
00072   bool EventQueue::isQueueDone() const {
00073     const bool isQueueEmpty = _eventList.empty();
00074     return isQueueEmpty;
00075   }
00076
00077   // //////////////////////////////////////////////////////////////////////
00078   void EventQueue::reset() {
00079     // Reset only the current number of events, not the expected one
00080     _progressStatus.reset();
00081
00082     // Empty the list of events
00083     _eventList.clear();
00084
00085     // Reset the progress statuses for all the event types
00086     for (ProgressStatusMap_T::iterator itProgressStatus =
00087            _progressStatusMap.begin();
00088          itProgressStatus != _progressStatusMap.end(); ++itProgressStatus) {
00089       ProgressStatus& lProgressStatus = itProgressStatus->second;
```

```
00090       lProgressStatus.reset();
00091     }
00092
00093   }
00094
00095   // ////////////////////////////////////////////////////////////////////
00096   const Count_T& EventQueue::
00097   getCurrentNbOfEvents (const EventType::EN_EventType& iType) const {
00098
00099     // Retrieve the ProgressStatus structure corresponding to the
00100     // given event type
00101     ProgressStatusMap_T::const_iterator itProgressStatus =
00102       _progressStatusMap.find (iType);
00103     if (itProgressStatus == _progressStatusMap.end()) {
00104       //
00105       STDAIR_LOG_ERROR ("No ProgressStatus structure can be retrieved in the "
00106                         << "EventQueue: " << display());
00107       assert (false);
00108     }
00109
00110     const ProgressStatus& lProgressStatus = itProgressStatus->second;
00111     return lProgressStatus.getCurrentNb();
00112   }
00113
00114   // ////////////////////////////////////////////////////////////////////
00115   const Count_T& EventQueue::
00116   getExpectedTotalNbOfEvents (const EventType::EN_EventType& iType) const {
00117
00118     // Retrieve the ProgressStatus structure corresponding to the
00119     // given event type
00120     ProgressStatusMap_T::const_iterator itProgressStatus =
00121       _progressStatusMap.find (iType);
00122     if (itProgressStatus == _progressStatusMap.end()) {
00123       std::ostringstream oStr;
00124       oStr << "No ProgressStatus structure can be retrieved in the EventQueue '"
00125            << display() << "'. The EventQueue should be initialised, e.g., by "
00126            << "calling a buildSampleBom() method.";
00127       //
00128       STDAIR_LOG_ERROR (oStr.str());
00129       throw EventQueueException (oStr.str());
00130     }
00131
00132     const ProgressStatus& lProgressStatus = itProgressStatus->second;
00133     return lProgressStatus.getExpectedNb();
00134   }
00135
00136   // ////////////////////////////////////////////////////////////////////
00137   const Count_T& EventQueue::
00138   getActualTotalNbOfEvents (const EventType::EN_EventType& iType) const {
00139
00140     // Retrieve the ProgressStatus structure corresponding to the
00141     // given event type
00142     ProgressStatusMap_T::const_iterator itProgressStatus =
00143       _progressStatusMap.find (iType);
00144     if (itProgressStatus == _progressStatusMap.end()) {
00145       //
00146       STDAIR_LOG_ERROR ("No ProgressStatus structure can be retrieved in the "
00147                         << "EventQueue: " << display());
00148       assert (false);
00149     }
00150
00151     const ProgressStatus& lProgressStatus = itProgressStatus->second;
```

```
00152     return lProgressStatus.getActualNb();
00153   }
00154
00155   // ////////////////////////////////////////////////////////////////////
00156   void EventQueue::updateStatus (const EventType::EN_EventType& iType,
00157                                  const ProgressStatus& iProgressStatus) {
00158
00159     // Retrieve, if existing, the ProgressStatus structure
00160     // corresponding to the given event type
00161     ProgressStatusMap_T::iterator itProgressStatus =
00162       _progressStatusMap.find (iType);
00163     if (itProgressStatus == _progressStatusMap.end()) {
00164       const bool hasInsertBeenSuccessful =
00165         _progressStatusMap.insert (ProgressStatusMap_T::
00166                                    value_type (iType, iProgressStatus)).second;
00167
00168       if (hasInsertBeenSuccessful == false) {
00169         STDAIR_LOG_ERROR ("No progress_status can be inserted "
00170                           << "for the following event type: "
00171                           << EventType::getLabel(iType)
00172                           << ". EventQueue: " << toString());
00173         throw EventException ("No progress_status can be inserted for the "
00174                               "following event type: "
00175                               + EventType::getLabel(iType)
00176                               + ". EventQueue: " + toString());
00177       }
00178
00179       return;
00180     }
00181
00182     ProgressStatus& lProgressStatus = itProgressStatus->second;
00183
00184     // Update the progress status
00185     const Count_T& lCurrentNb = iProgressStatus.getCurrentNb();
00186     lProgressStatus.setCurrentNb (lCurrentNb);
00187
00188     const Count_T& lExpectedNb = iProgressStatus.getExpectedNb();
00189     lProgressStatus.setExpectedNb(lProgressStatus.getExpectedNb() + lExpectedNb);

00190
00191     const Count_T& lActualNb = iProgressStatus.getActualNb();
00192     lProgressStatus.setActualNb (lProgressStatus.getActualNb() + lActualNb);
00193   }
00194
00195   // ////////////////////////////////////////////////////////////////////
00196   void EventQueue::
00197   addStatus (const EventType::EN_EventType& iType,
00198              const NbOfEvents_T& iExpectedTotalNbOfEvents) {
00199
00200     // Initialise the progress status object
00201     const Count_T lExpectedTotalNbOfEventsInt =
00202       static_cast<const Count_T> (std::floor (iExpectedTotalNbOfEvents));
00203     const ProgressStatus lProgressStatus (lExpectedTotalNbOfEventsInt);
00204
00205     // Update the progress status for the given event type
00206     updateStatus (iType, lProgressStatus);
00207
00208     // Update the overall progress status
00209     const Count_T lExpectedNb =
00210       static_cast<const Count_T> (_progressStatus.getExpectedNb()
00211                                   + iExpectedTotalNbOfEvents);
00212     _progressStatus.setExpectedNb (lExpectedNb);
```

```
00213
00214     const Count_T lActualNb =
00215       static_cast<const Count_T> (_progressStatus.getActualNb()
00216                                   + iExpectedTotalNbOfEvents);
00217     _progressStatus.setActualNb (lActualNb);
00218   }
00219
00220   // ////////////////////////////////////////////////////////////////////
00221   void EventQueue::updateStatus (const EventType::EN_EventType& iType,
00222                                  const NbOfEvents_T& iActualNbOfEvents) {
00223
00224     // Initialise the progress status object for the type key
00225     Count_T lActualNbOfEventsInt =
00226       static_cast<const Count_T> (std::floor (iActualNbOfEvents));
00227
00228     // Update the progress status for the corresponding content type key
00229     ProgressStatusMap_T::iterator itProgressStatus =
00230       _progressStatusMap.find (iType);
00231     if (itProgressStatus != _progressStatusMap.end()) {
00232       ProgressStatus& lProgressStatus = itProgressStatus->second;
00233       //
00234       lActualNbOfEventsInt += lProgressStatus.getActualNb();
00235       //
00236       lProgressStatus.setActualNb (lActualNbOfEventsInt);
00237     }
00238   }
00239
00240   // ////////////////////////////////////////////////////////////////////
00241   void EventQueue::setStatus (const EventType::EN_EventType& iType,
00242                               const ProgressStatus& iProgressStatus) {
00243
00244     // Retrieve the ProgressStatus structure corresponding to the
00245     // given event type
00246     ProgressStatusMap_T::iterator itProgressStatus =
00247       _progressStatusMap.find (iType);
00248     // assert (itProgressStatus != _progressStatusMap.end());
00249     if (itProgressStatus != _progressStatusMap.end()) {
00250       // Update the ProgressStatus structure
00251       itProgressStatus->second = iProgressStatus;
00252     }
00253   }
00254
00255   // ////////////////////////////////////////////////////////////////////
00256   ProgressStatus EventQueue::
00257   getStatus (const EventType::EN_EventType& iType) const {
00258
00259     // Retrieve the ProgressStatus structure corresponding to the
00260     // given event type
00261     ProgressStatusMap_T::const_iterator itProgressStatus =
00262       _progressStatusMap.find (iType);
00263     if (itProgressStatus != _progressStatusMap.end()) {
00264       const ProgressStatus& oProgressStatus = itProgressStatus->second;
00265       return oProgressStatus;
00266     }
00267
00268     return ProgressStatus();
00269   }
00270
00271   // ////////////////////////////////////////////////////////////////////
00272   ProgressPercentage_T EventQueue::
00273   calculateProgress (const EventType::EN_EventType& iType) const {
00274
```

```
00275     // Retrieve the ProgressStatus structure corresponding to the
00276     // given event type
00277     ProgressStatusMap_T::const_iterator itProgressStatus =
00278       _progressStatusMap.find (iType);
00279     if (itProgressStatus == _progressStatusMap.end()) {
00280       //
00281       STDAIR_LOG_ERROR ("No ProgressStatus structure can be retrieved in the "
00282                         << "EventQueue: " << display());
00283       assert (false);
00284     }
00285
00286     const ProgressStatus& lProgressStatus = itProgressStatus->second;
00287     return lProgressStatus.progress();
00288   }
00289
00290   // ////////////////////////////////////////////////////////////////////
00291   ProgressStatusSet EventQueue::popEvent (EventStruct& ioEventStruct) {
00292     assert (_eventList.empty() == false);
00293
00297     // Get an iterator on the first event (sorted by date-time stamps)
00298     EventList_T::iterator itEvent = _eventList.begin();
00299
00306     ioEventStruct = itEvent->second;
00307     // Retrieve the event type
00308     const EventType::EN_EventType& lEventType = ioEventStruct.getEventType();
00309     ProgressStatusSet oProgressStatusSet (lEventType);
00310
00311     // Update the (current number part of the) overall progress status,
00312     // to account for the event that is being popped out of the event
00313     // queue.
00314     ++_progressStatus;
00315
00316     // Remove the event, which has just been retrieved
00317     _eventList.erase (itEvent);
00318
00319
00327     // Retrieve the progress status specific to that event type
00328     ProgressStatus lEventTypeProgressStatus = getStatus (lEventType);
00329
00330     // Increase the current number of events
00331     ++lEventTypeProgressStatus;
00332
00333     // Store back the progress status
00334     setStatus (lEventType, lEventTypeProgressStatus);
00335
00336     // Update the progress status of the progress status set, specific to
00337     // the event type.
00338     oProgressStatusSet.setTypeSpecificStatus (lEventTypeProgressStatus);
00339
00343     // Update the overall progress status of the progress status set.
00344     oProgressStatusSet.setOverallStatus (_progressStatus);
00345
00346     //
00347     return oProgressStatusSet;
00348   }
00349
00350   // ////////////////////////////////////////////////////////////////////
00351   bool EventQueue::addEvent (EventStruct& ioEventStruct) {
00352     bool insertionSucceeded =
00353       _eventList.insert (EventListElement_T (ioEventStruct._eventTimeStamp,
00354                                              ioEventStruct)).second;
00355
```

```
00368     const unsigned int idx = 0;
00369     while (insertionSucceeded == false && idx != 1e3) {
00370       // Retrieve the date-time stamp (expressed in milliseconds)
00371       LongDuration_T& lEventTimeStamp (ioEventStruct._eventTimeStamp);
00372       ++lEventTimeStamp;
00373
00374       // Retry to insert into the event queue
00375       insertionSucceeded =
00376         _eventList.insert (EventListElement_T (ioEventStruct._eventTimeStamp,
00377                                                ioEventStruct)).second;
00378     }
00379     assert (idx != 1e3);
00380
00381     return insertionSucceeded;
00382   }
00383
00384 }
```

35.241 stdair/bom/EventQueue.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/basic/ProgressStatusSet.hpp>
#include <stdair/basic/EventType.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/EventQueueKey.hpp>
#include <stdair/bom/EventQueueTypes.hpp>
#include <stdair/bom/EventTypes.hpp>
```

Classes

- class stdair::EventQueue

  Class holding event structures.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.242 EventQueue.hpp

```
00001 #ifndef __STDAIR_BOM_EVENTQUEUE_HPP
00002 #define __STDAIR_BOM_EVENTQUEUE_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
```

```
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/basic/ProgressStatusSet.hpp>
00013 #include <stdair/basic/EventType.hpp>
00014 #include <stdair/bom/BomAbstract.hpp>
00015 #include <stdair/bom/EventQueueKey.hpp>
00016 #include <stdair/bom/EventQueueTypes.hpp>
00017 #include <stdair/bom/EventTypes.hpp>
00018
00019 namespace stdair {
00020
00059   class EventQueue : public BomAbstract {
00060     template <typename BOM> friend class FacBom;
00061     friend class FacBomManager;
00062
00063   public:
00064     // ////////// Type definitions ////////////
00068     typedef EventQueueKey Key_T;
00069
00075     typedef std::map<EventType::EN_EventType,
00076                      ProgressStatus> ProgressStatusMap_T;
00077
00078
00079   public:
00080     // ////////// Getters ///////////////
00082     const Key_T& getKey() const {
00083       return _key;
00084     }
00085
00087     BomAbstract* const getParent() const {
00088       return _parent;
00089     }
00090
00092     const HolderMap_T& getHolderMap() const {
00093       return _holderMap;
00094     }
00095
00097     const ProgressStatus& getStatus() const {
00098       return _progressStatus;
00099     }
00101     const Count_T& getCurrentNbOfEvents() const {
00102       return _progressStatus.getCurrentNb();
00103     }
00105     const Count_T& getExpectedTotalNbOfEvents() const {
00106       return _progressStatus.getExpectedNb();
00107     }
00109     const Count_T& getActualTotalNbOfEvents() const {
00110       return _progressStatus.getActualNb();
00111     }
00112
00117     ProgressStatus getStatus (const EventType::EN_EventType&) const;
00118
00120     const Count_T& getCurrentNbOfEvents (const EventType::EN_EventType&) const;
00121
00123     const Count_T& getExpectedTotalNbOfEvents (const EventType::EN_EventType&) co
      nst;
00124
```

```
00126     const Count_T& getActualTotalNbOfEvents (const EventType::EN_EventType&) cons
      t;
00127
00128   public:
00129     // ////////////// Setters ///////////////
00131     void setStatus (const ProgressStatus& iProgressStatus) {
00132       _progressStatus = iProgressStatus;
00133     }
00135     void setStatus (const Count_T& iCurrentNbOfEvents,
00136                     const Count_T& iExpectedTotalNbOfEvents,
00137                     const Count_T& iActualTotalNbOfEvents) {
00138       _progressStatus.setCurrentNb (iCurrentNbOfEvents);
00139       _progressStatus.setExpectedNb (iExpectedTotalNbOfEvents);
00140       _progressStatus.setActualNb (iActualTotalNbOfEvents);
00141     }
00143     void setStatus (const Count_T& iCurrentNbOfEvents,
00144                     const Count_T& iActualTotalNbOfEvents) {
00145       _progressStatus.setCurrentNb (iCurrentNbOfEvents);
00146       _progressStatus.setActualNb (iActualTotalNbOfEvents);
00147     }
00149     void setCurrentNbOfEvents (const Count_T& iCurrentNbOfEvents) {
00150       _progressStatus.setCurrentNb (iCurrentNbOfEvents);
00151     }
00153     void setExpectedTotalNbOfEvents (const Count_T& iExpectedTotalNbOfEvents) {
00154       _progressStatus.setExpectedNb (iExpectedTotalNbOfEvents);
00155     }
00157     void setActualTotalNbOfEvents (const Count_T& iActualTotalNbOfEvents) {
00158       _progressStatus.setActualNb (iActualTotalNbOfEvents);
00159     }
00160
00165     void setStatus (const EventType::EN_EventType& iType,
00166                     const ProgressStatus& iProgressStatus);
00167
00168
00169   public:
00170     // ////////////// Display support methods /////////
00176     void toStream (std::ostream& ioOut) const {
00177       ioOut << toString();
00178     }
00179
00185     void fromStream (std::istream& ioIn) {
00186     }
00187
00191     std::string toString() const;
00192
00196     const std::string describeKey() const {
00197       return _key.toString();
00198     }
00199
00200     /*
00201      * Display the full content of the event queue, with all its
00202      * demand streams.
00203      *
00204      * That method can be very consuming (in time, CPU and memory)
00205      * when there are a lot of demand streams (e.g., several hundreds
00206      * of thousands). Call it only for debug purposes.
00207     */
00208     std::string display() const;
00209
00210
00211   public:
00212     // ////////// Business methods /////////
```

```
00217     void reset();
00218
00232      ProgressStatusSet popEvent (EventStruct&);
00233
00254     bool addEvent (EventStruct&);
00255
00261     bool isQueueDone() const;
00262
00276     void addStatus (const EventType::EN_EventType&,
00277                     const NbOfRequests_T& iExpectedTotalNbOfEvents);
00278
00287     void updateStatus (const EventType::EN_EventType&,
00288                        const ProgressStatus& iProgressStatus);
00289
00303     void updateStatus (const EventType::EN_EventType&,
00304                        const NbOfEvents_T& iActualTotalNbOfEvents);
00305
00316     ProgressPercentage_T calculateProgress() const {
00317       return _progressStatus.progress();
00318     }
00319
00330     ProgressPercentage_T calculateProgress(const EventType::EN_EventType&)const;
00331
00332
00333   public:
00334     // ////////// Debug methods /////////
00336     Count_T getQueueSize() const;
00337
00339     bool isQueueEmpty() const;
00340
00341
00342   protected:
00343     // ////////// Constructors and destructors /////////
00345     EventQueue (const Key_T&);
00347     EventQueue (const EventQueue&);
00349     ~EventQueue();
00350   private:
00352     EventQueue();
00353
00354
00355   protected:
00356     // ////////// Attributes /////////
00360     Key_T _key;
00361
00365     BomAbstract* _parent;
00366
00372     HolderMap_T _holderMap;
00373
00377     EventList_T _eventList;
00378
00382     ProgressStatus _progressStatus;
00383
00389     ProgressStatusMap_T _progressStatusMap;
00390   };
00391
00392 }
00393 #endif // __STDAIR_BOM_EVENTQUEUE_HPP
```

35.243 stdair/bom/EventQueueKey.cpp File Reference

```
#include <sstream>
#include <stdair/bom/EventQueueKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.244 EventQueueKey.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <sstream>
00006 // StdAir
00007 #include <stdair/bom/EventQueueKey.hpp>
00008
00009 namespace stdair {
00010
00011   // ////////////////////////////////////////////////////////////////////
00012   EventQueueKey::EventQueueKey (const EventQueueID_T& iEventQueueID)
00013     : _eventQueueID (iEventQueueID) {
00014   }
00015   // ////////////////////////////////////////////////////////////////////
00016   EventQueueKey::EventQueueKey (const EventQueueKey& iKey)
00017     : _eventQueueID (iKey._eventQueueID) {
00018   }
00019
00020   // ////////////////////////////////////////////////////////////////////
00021   EventQueueKey::~EventQueueKey () {
00022   }
00023
00024   // ////////////////////////////////////////////////////////////////////
00025   void EventQueueKey::toStream (std::ostream& ioOut) const {
00026     ioOut << "EventQueueKey: " << toString() << std::endl;
00027   }
00028
00029   // ////////////////////////////////////////////////////////////////////
00030   void EventQueueKey::fromStream (std::istream& ioIn) {
00031   }
00032
00033   // ////////////////////////////////////////////////////////////////////
00034   const std::string EventQueueKey::toString() const {
00035     std::ostringstream oStr;
00036     oStr << _eventQueueID;
00037     return oStr.str();
00038   }
00039
00040 }
```

35.245 stdair/bom/EventQueueKey.hpp File Reference

```
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_event_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

Classes

- struct stdair::EventQueueKey

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.246 EventQueueKey.hpp

```
00001 #ifndef __STDAIR_BOM_EVENTQUEUEKEY_HPP
00002 #define __STDAIR_BOM_EVENTQUEUEKEY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/stdair_event_types.hpp>
00010 #include <stdair/bom/KeyAbstract.hpp>
00011
00012 namespace stdair {
00013
00015   struct EventQueueKey : public KeyAbstract {
00016
00017   private:
00018     // ////////// Default constructor /////////
00019     EventQueueKey () { }
00020
00021   public:
00022     // ////////// Construction ///////////
00024     EventQueueKey (const EventQueueID_T&);
00025     EventQueueKey (const EventQueueKey&);
00027     ~EventQueueKey ();
00028
00029     // ////////// Getters /////////
00031     const EventQueueID_T& getEventQueueID() const {
00032       return _eventQueueID;
00033     }
00034
00035     // ////////// Display support methods ////////
00038     void toStream (std::ostream& ioOut) const;
00039
00042     void fromStream (std::istream& ioIn);
00043
00049     const std::string toString() const;
00050
```

```
00051
00052   private:
00053     // ////////////// Attributes ////////////////
00055     EventQueueID_T _eventQueueID;
00056   };
00057
00058 }
00059 #endif // __STDAIR_BOM_EVENTQUEUEKEY_HPP
```

35.247 stdair/bom/EventQueueTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< EventQueue * > stdair::EventQueueList_T
- typedef std::map< const MapKey_T, EventQueue * > stdair::EventQueueMap_T

35.248 EventQueueTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_EVENTQUEUETYPES_HPP
00003 #define __STDAIR_BOM_EVENTQUEUETYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // Stdair
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations.
00017   class EventQueue;
00018
00020   typedef std::list<EventQueue*> EventQueueList_T;
00021
00023   typedef std::map<const MapKey_T, EventQueue*> EventQueueMap_T;
00024
00025 }
00026 #endif // __STDAIR_BOM_EVENTQUEUETYPES_HPP
```

35.249 stdair/bom/EventStruct.cpp File Reference

```
#include <cassert>
#include <boost/shared_ptr.hpp>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/basic/BasConst_Event.hpp>
#include <stdair/bom/BookingRequestStruct.hpp>
#include <stdair/bom/OptimisationNotificationStruct.hpp>
#include <stdair/bom/SnapshotStruct.hpp>
#include <stdair/bom/CancellationStruct.hpp>
#include <stdair/bom/RMEventStruct.hpp>
#include <stdair/bom/EventStruct.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.250 EventStruct.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // Boost
00007 #if BOOST_VERSION >= 103900
00008 #include <boost/make_shared.hpp>
00009 #else  // BOOST_VERSION >= 103900
00010 #include <boost/shared_ptr.hpp>
00011 #endif // BOOST_VERSION >= 103900
00012 // StdAir
00013 #include <stdair/basic/BasConst_General.hpp>
00014 #include <stdair/basic/BasConst_Event.hpp>
00015 #include <stdair/bom/BookingRequestStruct.hpp>
00016 #include <stdair/bom/OptimisationNotificationStruct.hpp>
00017 #include <stdair/bom/SnapshotStruct.hpp>
00018 #include <stdair/bom/CancellationStruct.hpp>
00019 #include <stdair/bom/RMEventStruct.hpp>
00020 #include <stdair/bom/EventStruct.hpp>
00021
00022 namespace stdair {
00023
00024   // //////////////////////////////////////////////////////////////////
00025   EventStruct::EventStruct()
00026     : _eventType (EventType::BKG_REQ), _eventTimeStamp (0) {
00027   }
00028
00029   // //////////////////////////////////////////////////////////////////
00030   EventStruct::EventStruct (const EventType::EN_EventType& iEventType,
```

```
00031                               BookingRequestPtr_T ioRequestPtr)
00032     : _eventType (iEventType) {
00033
00034     //
00035     assert (ioRequestPtr != NULL);
00036 #if BOOST_VERSION >= 103900
00037     _bookingRequest = boost::make_shared<BookingRequestStruct> (*ioRequestPtr);
00038 #else  // BOOST_VERSION >= 103900
00039     _bookingRequest = ioRequestPtr;
00040 #endif // BOOST_VERSION >= 103900
00041     assert (_bookingRequest != NULL);
00042
00048     const Duration_T lDuration =
00049       _bookingRequest->getRequestDateTime() - DEFAULT_EVENT_OLDEST_DATETIME;
00050     _eventTimeStamp = lDuration.total_milliseconds();
00051   }
00052
00053   // ////////////////////////////////////////////////////////////////////
00054   EventStruct::EventStruct (const EventType::EN_EventType& iEventType,
00055                               CancellationPtr_T ioCancellationPtr)
00056     : _eventType (iEventType) {
00057
00058     //
00059     assert (ioCancellationPtr != NULL);
00060 #if BOOST_VERSION >= 103900
00061     _cancellation = boost::make_shared<CancellationStruct> (*ioCancellationPtr);
00062 #else  // BOOST_VERSION >= 103900
00063     _cancellation = ioCancellationPtr;
00064 #endif // BOOST_VERSION >= 103900
00065     assert (_cancellation != NULL);
00066
00072     const Duration_T lDuration =
00073       _cancellation->getCancellationDateTime() - DEFAULT_EVENT_OLDEST_DATETIME;
00074     _eventTimeStamp = lDuration.total_milliseconds();
00075   }
00076
00077   // ////////////////////////////////////////////////////////////////////
00078   EventStruct::
00079   EventStruct (const EventType::EN_EventType& iEventType,
00080                const DateTime_T& iDCPDate,
00081                OptimisationNotificationPtr_T ioOptimisationNotificationPtr)
00082     : _eventType (iEventType) {
00083
00084     //
00085     assert (ioOptimisationNotificationPtr != NULL);
00086 #if BOOST_VERSION >= 103900
00087     _optimisationNotification =
00088       boost::make_shared<OptimisationNotificationStruct> (*ioOptimisationNotifica
      tionPtr);
00089 #else  // BOOST_VERSION >= 103900
00090     _optimisationNotification = ioOptimisationNotificationPtr;
00091 #endif // BOOST_VERSION >= 103900
00092     assert (_optimisationNotification != NULL);
00093
00099     const Duration_T lDuration = iDCPDate - DEFAULT_EVENT_OLDEST_DATETIME;
00100     _eventTimeStamp = lDuration.total_milliseconds();
00101   }
00102
00103   // ////////////////////////////////////////////////////////////////////
00104   EventStruct::EventStruct (const EventType::EN_EventType& iEventType,
00105                               SnapshotPtr_T ioSnapshotPtr)
00106     : _eventType (iEventType) {
```

```
00107
00108     //
00109     assert (ioSnapshotPtr != NULL);
00110
00111 #if BOOST_VERSION >= 103900
00112     _snapshot = boost::make_shared<SnapshotStruct> (*ioSnapshotPtr);
00113 #else  // BOOST_VERSION >= 103900
00114     _snapshot = ioSnapshotPtr;
00115 #endif // BOOST_VERSION >= 103900
00116     assert (_snapshot != NULL);
00117
00123     const Duration_T lDuration =
00124       _snapshot->getSnapshotTime() - DEFAULT_EVENT_OLDEST_DATETIME;
00125     _eventTimeStamp = lDuration.total_milliseconds();
00126   }
00127
00128   // ////////////////////////////////////////////////////////////////////
00129   EventStruct::EventStruct (const EventType::EN_EventType& iEventType,
00130                             RMEventPtr_T ioRMEventPtr)
00131     : _eventType (iEventType) {
00132
00133     //
00134     assert (ioRMEventPtr != NULL);
00135
00136 #if BOOST_VERSION >= 103900
00137     _rmEvent = boost::make_shared<RMEventStruct> (*ioRMEventPtr);
00138 #else  // BOOST_VERSION >= 103900
00139     _rmEvent = ioRMEventPtr;
00140 #endif // BOOST_VERSION >= 103900
00141     assert (_rmEvent != NULL);
00142
00148     const Duration_T lDuration =
00149       _rmEvent->getRMEventTime() - DEFAULT_EVENT_OLDEST_DATETIME;
00150     _eventTimeStamp = lDuration.total_milliseconds();
00151   }
00152
00153   // ////////////////////////////////////////////////////////////////////
00154   EventStruct::EventStruct (const EventStruct& iEventStruct)
00155     : _eventType (iEventStruct._eventType),
00156       _eventTimeStamp (iEventStruct._eventTimeStamp) {
00157
00158     //
00159     if (iEventStruct._bookingRequest != NULL) {
00160 #if BOOST_VERSION >= 103900
00161       _bookingRequest =
00162         boost::make_shared<BookingRequestStruct>(*iEventStruct._bookingRequest);
00163 #else  // BOOST_VERSION >= 103900
00164       _bookingRequest = iEventStruct._bookingRequest;
00165 #endif // BOOST_VERSION >= 103900
00166     }
00167
00168     //
00169     if (iEventStruct._cancellation != NULL) {
00170 #if BOOST_VERSION >= 103900
00171       _cancellation =
00172         boost::make_shared<CancellationStruct>(*iEventStruct._cancellation);
00173 #else  // BOOST_VERSION >= 103900
00174       _cancellation = iEventStruct._cancellation;
00175 #endif // BOOST_VERSION >= 103900
00176     }
00177
00178     //
```

```
00179     if (iEventStruct._optimisationNotification != NULL) {
00180 #if BOOST_VERSION >= 103900
00181       _optimisationNotification =
00182         boost::make_shared<OptimisationNotificationStruct> (*iEventStruct._optimi
      sationNotification);
00183 #else  // BOOST_VERSION >= 103900
00184       _optimisationNotification = iEventStruct._optimisationNotification;
00185 #endif // BOOST_VERSION >= 103900
00186     }
00187
00188     //
00189     if (iEventStruct._snapshot != NULL) {
00190 #if BOOST_VERSION >= 103900
00191       _snapshot = boost::make_shared<SnapshotStruct> (*iEventStruct._snapshot);
00192 #else  // BOOST_VERSION >= 103900
00193       _snapshot = iEventStruct._snapshot;
00194 #endif // BOOST_VERSION >= 103900
00195     }
00196
00197     //
00198     if (iEventStruct._rmEvent != NULL) {
00199 #if BOOST_VERSION >= 103900
00200       _rmEvent = boost::make_shared<RMEventStruct> (*iEventStruct._rmEvent);
00201 #else  // BOOST_VERSION >= 103900
00202       _rmEvent = iEventStruct._rmEvent;
00203 #endif // BOOST_VERSION >= 103900
00204     }
00205   }
00206
00207   // ////////////////////////////////////////////////////////////////////
00208   EventStruct::~EventStruct() {
00209   }
00210
00211   // ////////////////////////////////////////////////////////////////////
00212   void EventStruct::fromStream (std::istream& ioIn) {
00213   }
00214
00215   // ////////////////////////////////////////////////////////////////////
00216   const std::string EventStruct::describe() const {
00217     std::ostringstream oStr;
00218
00219     //
00220     const Duration_T lEventDateTimeDelta =
00221       boost::posix_time::milliseconds (_eventTimeStamp);
00222     const DateTime_T lEventDateTime (DEFAULT_EVENT_OLDEST_DATETIME
00223                                      + lEventDateTimeDelta);
00224     oStr << lEventDateTime;
00225
00226     //
00227     switch (_eventType) {
00228     case EventType::BKG_REQ: {
00229       assert (_bookingRequest != NULL);
00230       oStr << ", " << _eventType << ", " << _bookingRequest->describe();
00231       break;
00232     }
00233     case EventType::CX: {
00234       assert (_cancellation != NULL);
00235       oStr << ", " << _eventType << ", " << _cancellation->describe();
00236       break;
00237     }
00238     case EventType::OPT_NOT_4_FD: {
00239       assert (_optimisationNotification != NULL);
```

```
00240       oStr << ", " << _eventType
00241            << ", " << _optimisationNotification->describe();
00242       break;
00243     }
00244     case EventType::SNAPSHOT: {
00245       assert (_snapshot != NULL);
00246       oStr << ", " << _eventType
00247            << ", " << _snapshot->describe();
00248       break;
00249     }
00250     case EventType::RM: {
00251       assert (_rmEvent != NULL);
00252       oStr << ", " << _eventType
00253            << ", " << _rmEvent->describe();
00254       break;
00255     }
00256     default: {
00257       oStr << ", " << _eventType << " (not yet recognised)";
00258       break;
00259     }
00260     }
00261
00262     return oStr.str();
00263   }
00264
00265 }
```

35.251 stdair/bom/EventStruct.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/stdair_event_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/basic/EventType.hpp>
#include <stdair/bom/EventTypes.hpp>
#include <stdair/bom/BookingRequestTypes.hpp>
#include <stdair/bom/OptimisationNotificationTypes.hpp>
#include <stdair/bom/SnapshotTypes.hpp>
#include <stdair/bom/CancellationTypes.hpp>
#include <stdair/bom/RMEventTypes.hpp>
```

Classes

- struct stdair::EventStruct

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.252 EventStruct.hpp

```
00001 #ifndef __STDAIR_BAS_EVENTSTRUCT_HPP
00002 #define __STDAIR_BAS_EVENTSTRUCT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/stdair_date_time_types.hpp>
00013 #include <stdair/stdair_event_types.hpp>
00014 #include <stdair/basic/StructAbstract.hpp>
00015 #include <stdair/basic/EventType.hpp>
00016 #include <stdair/bom/EventTypes.hpp>
00017 #include <stdair/bom/BookingRequestTypes.hpp>
00018 #include <stdair/bom/OptimisationNotificationTypes.hpp>
00019 #include <stdair/bom/SnapshotTypes.hpp>
00020 #include <stdair/bom/CancellationTypes.hpp>
00021 #include <stdair/bom/RMEventTypes.hpp>
00022
00023 namespace stdair {
00024
00035   struct EventStruct : public StructAbstract {
00036     // Friend classes and structures
00037     friend struct EventQueue;
00038
00039     // ////////////// Getters ///////////
00040   public:
00042     const EventType::EN_EventType& getEventType() const {
00043       return _eventType;
00044     }
00045
00052     const BookingRequestStruct& getBookingRequest() const {
00053       assert (_bookingRequest != NULL);
00054       return *_bookingRequest;
00055     }
00056
00063     const CancellationStruct& getCancellation() const {
00064       assert (_cancellation != NULL);
00065       return *_cancellation;
00066     }
00067
00075     const OptimisationNotificationStruct&
00076     getOptimisationNotificationStruct() const {
00077       assert (_optimisationNotification != NULL);
00078       return *_optimisationNotification;
00079     }
00080
00088     const SnapshotStruct& getSnapshotStruct() const {
00089       assert (_snapshot != NULL);
00090       return *_snapshot;
```

```
00091     }
00092
00100     const RMEventStruct& getRMEvent() const {
00101       assert (_rmEvent != NULL);
00102       return *_rmEvent;
00103     }
00104
00105     // ////////// Display methods //////////
00106   public:
00109     void fromStream (std::istream& ioIn);
00110
00112     const std::string describe() const;
00113
00114
00115     // ////////// Constructors and destructors /////////
00116   public:
00118     EventStruct();
00120     EventStruct (const EventType::EN_EventType&, BookingRequestPtr_T);
00122     EventStruct (const EventType::EN_EventType&, CancellationPtr_T);
00124     EventStruct (const EventType::EN_EventType&, const DateTime_T& iDCPDate,
00125                  OptimisationNotificationPtr_T);
00127     EventStruct (const EventType::EN_EventType&, SnapshotPtr_T);
00129     EventStruct (const EventType::EN_EventType&, RMEventPtr_T);
00131     EventStruct (const EventStruct&);
00132
00134     ~EventStruct();
00135
00136
00137     // ////////////////// Attributes /////////////////
00138   private:
00142     EventType::EN_EventType _eventType;
00143
00149     LongDuration_T _eventTimeStamp;
00150
00154     BookingRequestPtr_T _bookingRequest;
00155
00159     CancellationPtr_T _cancellation;
00160
00164     OptimisationNotificationPtr_T _optimisationNotification;
00165
00169     SnapshotPtr_T _snapshot;
00170
00174     RMEventPtr_T _rmEvent;
00175   };
00176
00177 }
00178 #endif // __STDAIR_BAS_EVENTSTRUCT_HPP
```

35.253 stdair/bom/EventTypes.hpp File Reference

```
#include <map>
#include <boost/shared_ptr.hpp>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/stdair_event_types.hpp>
#include <stdair/basic/ProgressStatus.hpp>
```

```
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::pair< const LongDuration_T, EventStruct > stdair::EventListElement_T
- typedef std::map< const LongDuration_T, EventStruct > stdair::EventList_T

35.254 EventTypes.hpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_EVENTTYPES_HPP
00003 #define __STDAIR_BOM_EVENTTYPES_HPP
00004
00005 // //////////////////////////////////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 // Boost Smart Pointers
00011 #include <boost/shared_ptr.hpp>
00012 // StdAir
00013 #include <stdair/stdair_basic_types.hpp>
00014 #include <stdair/stdair_date_time_types.hpp>
00015 #include <stdair/stdair_event_types.hpp>
00016 #include <stdair/basic/ProgressStatus.hpp>
00017 #include <stdair/bom/key_types.hpp>
00018
00019 namespace stdair {
00020
00022   struct EventStruct;
00023
00027   typedef std::pair<const LongDuration_T, EventStruct> EventListElement_T;
00028
00032   typedef std::map<const LongDuration_T, EventStruct> EventList_T;
00033 }
00034 #endif // __STDAIR_BOM_EVENTTYPES_HPP
00035
```

35.255 stdair/bom/FareFamily.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
```

```
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/FareFamily.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.256 FareFamily.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 #include <stdair/bom/FareFamily.hpp>
00014
00015 namespace stdair {
00016
00017   // ////////////////////////////////////////////////////////////////////
00018   FareFamily::FareFamily() : _key (DEFAULT_FARE_FAMILY_CODE), _parent (NULL) {
00019     assert (false);
00020   }
00021
00022   // ////////////////////////////////////////////////////////////////////
00023   FareFamily::FareFamily (const FareFamily&)
00024     : _key (DEFAULT_FARE_FAMILY_CODE), _parent (NULL) {
00025     assert (false);
00026   }
00027
00028   // ////////////////////////////////////////////////////////////////////
00029   FareFamily::FareFamily (const Key_T& iKey) : _key (iKey), _parent (NULL) {
00030   }
00031
00032   // ////////////////////////////////////////////////////////////////////
00033   FareFamily::~FareFamily() {
00034   }
00035
00036   // ////////////////////////////////////////////////////////////////////
00037   std::string FareFamily::toString() const {
00038     std::ostringstream oStr;
00039     oStr << describeKey();
00040     return oStr.str();
00041   }
00042
00043   // ////////////////////////////////////////////////////////////////////
00044   void FareFamily::serialisationImplementationExport() const {
00045     std::ostringstream oStr;
```

```
00046     boost::archive::text_oarchive oa (oStr);
00047     oa << *this;
00048   }
00049
00050   // ////////////////////////////////////////////////////////////////////
00051   void FareFamily::serialisationImplementationImport() {
00052     std::istringstream iStr;
00053     boost::archive::text_iarchive ia (iStr);
00054     ia >> *this;
00055   }
00056
00057   // ////////////////////////////////////////////////////////////////////
00058   template<class Archive>
00059   void FareFamily::serialize (Archive& ioArchive,
00060                               const unsigned int iFileVersion) {
00061     ioArchive & _key;
00062   }
00063
00064 }
00065
00066
```

35.257 stdair/bom/FareFamily.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/FareFamilyKey.hpp>
#include <stdair/bom/FareFamilyTypes.hpp>
```

Classes

- class stdair::FareFamily

  Class representing the actual attributes for a family fare.

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.258 FareFamily.hpp

```
00001 #ifndef __STDAIR_BOM_FAREFAMILY_HPP
00002 #define __STDAIR_BOM_FAREFAMILY_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
```

```
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/bom/BomAbstract.hpp>
00012 #include <stdair/bom/FareFamilyKey.hpp>
00013 #include <stdair/bom/FareFamilyTypes.hpp>
00014
00016 namespace boost {
00017   namespace serialization {
00018     class access;
00019   }
00020 }
00021
00022 namespace stdair {
00023
00027   class FareFamily : public BomAbstract {
00028     template <typename BOM> friend class FacBom;
00029     friend class FacBomManager;
00030     friend class boost::serialization::access;
00031
00032   public:
00033     // ////////// Type definitions ////////////
00037     typedef FareFamilyKey Key_T;
00038
00039
00040   public:
00041     // /////////// Getters ////////////
00043     const Key_T& getKey() const {
00044       return _key;
00045     }
00046
00048     BomAbstract* const getParent() const {
00049       return _parent;
00050     }
00051
00053     const FamilyCode_T& getFamilyCode() const {
00054       return _key.getFamilyCode();
00055     }
00056
00058     const HolderMap_T& getHolderMap() const {
00059       return _holderMap;
00060     }
00061
00062
00063   public:
00064     // /////////// Display support methods /////////
00070     void toStream (std::ostream& ioOut) const {
00071       ioOut << toString();
00072     }
00073
00079     void fromStream (std::istream& ioIn) {
00080     }
00081
00085     std::string toString() const;
00086
00090     const std::string describeKey() const {
00091       return _key.toString();
00092     }
00093
```

```
00094
00095   public:
00096     // ////////////// (Boost) Serialisation support methods /////////
00100     template<class Archive>
00101     void serialize (Archive& ar, const unsigned int iFileVersion);
00102
00103   private:
00108     void serialisationImplementationExport() const;
00109     void serialisationImplementationImport();
00110
00111
00112   protected:
00113     // /////////// Constructors and destructors /////////
00117     FareFamily (const Key_T&);
00118
00122     virtual ~FareFamily();
00123
00124   private:
00128     FareFamily();
00129
00133     FareFamily (const FareFamily&);
00134
00135
00136   public:
00137     // /////////// Attributes /////////
00141     Key_T _key;
00142
00146     BomAbstract* _parent;
00147
00151     HolderMap_T _holderMap;
00152   };
00153
00154 }
00155 #endif // __STDAIR_BOM_FAREFAMILY_HPP
00156
```

35.259 stdair/bom/FareFamilyKey.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/FareFamilyKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Functions

- template void stdair::FareFamilyKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void stdair::FareFamilyKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)

35.260 FareFamilyKey.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 #include <stdair/bom/FareFamilyKey.hpp>
00014
00015 namespace stdair {
00016
00017   // ////////////////////////////////////////////////////////////////////
00018   FareFamilyKey::FareFamilyKey() : _familyCode (DEFAULT_FARE_FAMILY_CODE) {
00019     assert (false);
00020   }
00021
00022   // ////////////////////////////////////////////////////////////////////
00023   FareFamilyKey::FareFamilyKey (const FareFamilyKey& iFareFamilyKey)
00024     : _familyCode (iFareFamilyKey._familyCode) {
00025   }
00026
00027   // ////////////////////////////////////////////////////////////////////
00028   FareFamilyKey::FareFamilyKey (const FamilyCode_T& iFamilyCode)
00029     : _familyCode (iFamilyCode) {
00030   }
00031
00032   // ////////////////////////////////////////////////////////////////////
00033   FareFamilyKey::~FareFamilyKey() {
00034   }
00035
00036   // ////////////////////////////////////////////////////////////////////
00037   void FareFamilyKey::toStream (std::ostream& ioOut) const {
00038     ioOut << "FareFamilyKey: " << toString();
00039   }
00040
00041   // ////////////////////////////////////////////////////////////////////
00042   void FareFamilyKey::fromStream (std::istream& ioIn) {
00043   }
00044
00045   // ////////////////////////////////////////////////////////////////////
00046   const std::string FareFamilyKey::toString() const {
00047     std::ostringstream oStr;
00048     oStr << _familyCode;
00049     return oStr.str();
00050   }
```

```
00051
00052   // ////////////////////////////////////////////////////////////////////
00053   void FareFamilyKey::serialisationImplementationExport() const {
00054     std::ostringstream oStr;
00055     boost::archive::text_oarchive oa (oStr);
00056     oa << *this;
00057   }
00058
00059   // ////////////////////////////////////////////////////////////////////
00060   void FareFamilyKey::serialisationImplementationImport() {
00061     std::istringstream iStr;
00062     boost::archive::text_iarchive ia (iStr);
00063     ia >> *this;
00064   }
00065
00066   // ////////////////////////////////////////////////////////////////////
00067   template<class Archive>
00068   void FareFamilyKey::serialize (Archive& ioArchive,
00069                                  const unsigned int iFileVersion) {
00074     ioArchive & _familyCode;
00075   }
00076
00077   // ////////////////////////////////////////////////////////////////////
00078   // Explicit template instantiation
00079   namespace ba = boost::archive;
00080   template void FareFamilyKey::serialize<ba::text_oarchive> (ba::text_oarchive&,
00081                                                              unsigned int);
00082   template void FareFamilyKey::serialize<ba::text_iarchive> (ba::text_iarchive&,
00083                                                              unsigned int);
00084   // ////////////////////////////////////////////////////////////////////
00085
00086 }
```

35.261 stdair/bom/FareFamilyKey.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

Classes

- struct stdair::FareFamilyKey

  Key of a given fare family, made of a fare family code.

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.262 FareFamilyKey.hpp

```
00001 #ifndef __STDAIR_BOM_FAREFAMILYKEY_HPP
00002 #define __STDAIR_BOM_FAREFAMILYKEY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/bom/KeyAbstract.hpp>
00013
00015 namespace boost {
00016   namespace serialization {
00017     class access;
00018   }
00019 }
00020
00021 namespace stdair {
00022
00026   struct FareFamilyKey : public KeyAbstract {
00027     friend class boost::serialization::access;
00028
00029     // ////////// Constructors and destructors //////////
00030   private:
00034     FareFamilyKey();
00035
00036   public:
00040     FareFamilyKey (const FamilyCode_T& iFamilyCode);
00041
00045     FareFamilyKey (const FareFamilyKey&);
00046
00050     ~FareFamilyKey();
00051
00052
00053   public:
00054     // ////////// Getters //////////
00056     const FamilyCode_T& getFamilyCode () const {
00057       return _familyCode;
00058     }
00059
00060
00061   public:
00062     // ////////// Display support methods /////////
00068     void toStream (std::ostream& ioOut) const;
00069
00075     void fromStream (std::istream& ioIn);
00076
00086     const std::string toString() const;
00087
00088
00089   public:
00090     // ////////// (Boost) Serialisation support methods /////////
00094     template<class Archive>
00095     void serialize (Archive& ar, const unsigned int iFileVersion);
00096
00097   private:
00102     void serialisationImplementationExport() const;
00103     void serialisationImplementationImport();
```

```
00104
00105
00106   private:
00107     // ////////////////// Attributes ///////////////
00111     FamilyCode_T _familyCode;
00112   };
00113
00114 }
00115 #endif // __STDAIR_BOM_FAREFAMILYKEY_HPP
```

35.263 stdair/bom/FareFamilyTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< FareFamily * > stdair::FareFamilyList_T
- typedef std::map< const MapKey_T, FareFamily * > stdair::FareFamilyMap_T

35.264 FareFamilyTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_FAREFAMILYTYPES_HPP
00003 #define __STDAIR_BOM_FAREFAMILYTYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations.
00017   class FareFamily;
00018
00020   typedef std::list<FareFamily*> FareFamilyList_T;
00021
00023   typedef std::map<const MapKey_T, FareFamily*> FareFamilyMap_T;
00024 }
00025 #endif // __STDAIR_BOM_FAREFAMILYTYPES_HPP
```

35.265 stdair/bom/FareFeatures.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_DefaultObject.hpp>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/bom/FareFeatures.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.266 FareFeatures.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_DefaultObject.hpp>
00009 #include <stdair/basic/BasConst_Request.hpp>
00010 #include <stdair/service/Logger.hpp>
00011 #include <stdair/bom/FareFeatures.hpp>
00012
00013 namespace stdair {
00014
00015   // ////////////////////////////////////////////////////////////////////
00016   FareFeatures::FareFeatures()
00017     : _key (TRIP_TYPE_ONE_WAY,
00018             NO_ADVANCE_PURCHASE,
00019             SATURDAY_STAY,
00020             CHANGE_FEES,
00021             NON_REFUNDABLE,
00022             NO_STAY_DURATION),
00023       _parent (NULL)  {
00024     // That constructor is used by the serialisation process
00025   }
00026
00027   // ////////////////////////////////////////////////////////////////////
00028   FareFeatures::FareFeatures (const FareFeatures& iFeatures)
00029     : _key (iFeatures.getKey()), _parent (NULL)  {
00030     assert (false);
00031   }
00032
00033   // ////////////////////////////////////////////////////////////////////
00034   FareFeatures::FareFeatures (const Key_T& iKey)
00035     : _key (iKey), _parent (NULL)  {
00036   }
00037
```

```
00038   // ////////////////////////////////////////////////////////////////////
00039   FareFeatures::~FareFeatures () {
00040   }
00041
00042   // ////////////////////////////////////////////////////////////////////
00043   std::string FareFeatures::toString() const {
00044     std::ostringstream oStr;
00045     oStr << describeKey();
00046     return oStr.str();
00047   }
00048
00049   // ////////////////////////////////////////////////////////////////////
00050   bool FareFeatures::
00051   isTripTypeValid (const TripType_T& iBookingRequestTripType) const {
00052     bool oIsTripTypeValidFlag = true;
00053
00054     const TripType_T& lFareTripType = getTripType();
00055     // Check whether the fare trip type is the same as the booking request
00056     // trip type
00057     if (iBookingRequestTripType == lFareTripType) {
00058       // One way case
00059       return oIsTripTypeValidFlag;
00060     }
00061
00062     if (iBookingRequestTripType == TRIP_TYPE_INBOUND
00063         || iBookingRequestTripType == TRIP_TYPE_OUTBOUND) {
00064       // Round trip case
00065       if (lFareTripType == TRIP_TYPE_ROUND_TRIP) {
00066         return oIsTripTypeValidFlag;
00067       }
00068     }
00069
00070     oIsTripTypeValidFlag = false;
00071     return oIsTripTypeValidFlag;
00072   }
00073
00074   // ////////////////////////////////////////////////////////////////////
00075   bool FareFeatures::
00076   isStayDurationValid (const DayDuration_T& iStayDuration) const {
00077
00078     // Check if the stay duration is lower or equal to the minimum one.
00079     const DayDuration_T& lMinimumDayDuration = getMinimumStay();
00080     if (lMinimumDayDuration > iStayDuration) {
00081       return false;
00082     }
00083
00084     return true;
00085   }
00086
00087   // ////////////////////////////////////////////////////////////////////
00088   bool FareFeatures::
00089   isAdvancePurchaseValid (const DateTime_T& iBookingRequestDateTime,
00090                           const DateTime_T& iFlightDateTime) const {
00091     bool oIsAdvancePurchaseValidFlag = true;
00092
00093     // Check whether the departure date is within the date range.
00094     const DayDuration_T& lAdvancedPurchase = getAdvancePurchase();
00095     const DateOffset_T lMinimumAdvancedPurchase (lAdvancedPurchase);
00096     const DateTime_T lCriticalDate = iFlightDateTime - lMinimumAdvancedPurchase;
00097
00098     if (lCriticalDate < iBookingRequestDateTime) {
00099       oIsAdvancePurchaseValidFlag = false;
```

```
00100       return oIsAdvancePurchaseValidFlag;
00101     }
00102
00103     return true;
00104   }
00105
00106 }
00107
```

35.267 stdair/bom/FareFeatures.hpp File Reference

```
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/FareFeaturesKey.hpp>
#include <stdair/bom/FareFeaturesTypes.hpp>
```

Classes

- class stdair::FareFeatures

  Class representing the actual attributes for a fare date-period.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.268 FareFeatures.hpp

```
00001 #ifndef __STDAIR_BOM_FAREFEATURES_HPP
00002 #define __STDAIR_BOM_FAREFEATURES_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/bom/BomAbstract.hpp>
00009 #include <stdair/bom/FareFeaturesKey.hpp>
00010 #include <stdair/bom/FareFeaturesTypes.hpp>
00011
00012 // Forward declaration
00013 namespace stdair {
00014
00018   class FareFeatures : public BomAbstract {
00019     template <typename BOM> friend class FacBom;
00020     friend class FacBomManager;
00021
00022   public:
00023     // ////////////// Type definitions //////////////
00027     typedef FareFeaturesKey Key_T;
00028
00029   public:
00030     // ////////// Display support methods /////////
00036     void toStream (std::ostream& ioOut) const {
```

```
00037       ioOut << toString();
00038     }
00039
00045     void fromStream (std::istream& ioIn) {
00046     }
00047
00051     std::string toString() const;
00052
00056     const std::string describeKey() const {
00057       return _key.toString();
00058     }
00059
00060
00061   public:
00062     // ////////// Getters ////////////
00066     const Key_T& getKey() const {
00067       return _key;
00068     }
00069
00073     BomAbstract* const getParent() const {
00074       return _parent;
00075     }
00076
00080     const HolderMap_T& getHolderMap() const {
00081       return _holderMap;
00082     }
00083
00087     const TripType_T& getTripType() const {
00088       return _key.getTripType();
00089     }
00090
00094     const DayDuration_T& getAdvancePurchase() const {
00095       return _key.getAdvancePurchase();
00096     }
00097
00101     const SaturdayStay_T& getSaturdayStay() const {
00102       return _key.getSaturdayStay();
00103     }
00104
00108     const ChangeFees_T& getChangeFees() const {
00109       return _key.getChangeFees();
00110     }
00111
00115     const NonRefundable_T& getRefundableOption() const {
00116       return _key.getRefundableOption();
00117     }
00118
00122     const DayDuration_T& getMinimumStay() const {
00123       return _key.getMinimumStay();
00124     }
00125
00126
00127   public:
00128     // ////////////// Business methods ///////////////
00133     bool isTripTypeValid (const TripType_T&) const;
00134
00139     bool isStayDurationValid (const DayDuration_T&) const;
00140
00145     bool isAdvancePurchaseValid (const DateTime_T& iBookingRequestDateTime,
00146                                  const DateTime_T& iFlightDateTime) const;
00147
00148
```

```
00149   protected:
00150     // ////////// Constructors and destructors /////////
00154     FareFeatures (const Key_T&);
00158     virtual ~FareFeatures ();
00159
00160   private:
00164     FareFeatures ();
00168     FareFeatures (const FareFeatures&);
00169
00170   protected:
00171     // ////////////// Attributes /////////////
00175     Key_T _key;
00176
00180     BomAbstract* _parent;
00181
00185     HolderMap_T _holderMap;
00186   };
00187
00188 }
00189 #endif // __STDAIR_BOM_FAREFEATURES_HPP
00190
```

35.269 stdair/bom/FareFeaturesKey.cpp File Reference

```
#include <ostream>
#include <sstream>
#include <stdair/basic/BasConst_DefaultObject.hpp>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/bom/FareFeaturesKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.270 FareFeaturesKey.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <ostream>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_DefaultObject.hpp>
00009 #include <stdair/basic/BasConst_Request.hpp>
00010 #include <stdair/bom/FareFeaturesKey.hpp>
00011
00012 namespace stdair {
00013
00014   // ////////////////////////////////////////////////////////////////////
00015   FareFeaturesKey::FareFeaturesKey()
```

```
00016     : _tripType (TRIP_TYPE_ONE_WAY),
00017       _advancePurchase (NO_ADVANCE_PURCHASE),
00018       _saturdayStay (SATURDAY_STAY),
00019       _changeFees (CHANGE_FEES),
00020       _nonRefundable (NON_REFUNDABLE),
00021       _minimumStay (NO_STAY_DURATION) {
00022     assert (false);
00023   }
00024
00025   // ////////////////////////////////////////////////////////////////////
00026   FareFeaturesKey::FareFeaturesKey (const TripType_T& iTripType,
00027                                     const DayDuration_T& iAdvancePurchase,
00028                                     const SaturdayStay_T& iSaturdayStay,
00029                                     const ChangeFees_T& iChangeFees,
00030                                     const NonRefundable_T& iNonRefundable,
00031                                     const DayDuration_T& iMinimumStay)
00032     : _tripType (iTripType), _advancePurchase (iAdvancePurchase),
00033       _saturdayStay (iSaturdayStay), _changeFees (iChangeFees),
00034       _nonRefundable (iNonRefundable), _minimumStay (iMinimumStay) {
00035   }
00036
00037   // ////////////////////////////////////////////////////////////////////
00038   FareFeaturesKey::FareFeaturesKey (const FareFeaturesKey& iKey)
00039     : _tripType (iKey.getTripType()),
00040       _advancePurchase (iKey.getAdvancePurchase()),
00041       _saturdayStay (iKey.getSaturdayStay()),
00042       _changeFees (iKey.getChangeFees()),
00043       _nonRefundable (iKey.getRefundableOption()),
00044       _minimumStay (iKey.getMinimumStay()) {
00045   }
00046
00047   // ////////////////////////////////////////////////////////////////////
00048   FareFeaturesKey::~FareFeaturesKey() {
00049   }
00050
00051   // ////////////////////////////////////////////////////////////////////
00052   void FareFeaturesKey::toStream (std::ostream& ioOut) const {
00053     ioOut << "FareFeaturesKey: " << toString() << std::endl;
00054   }
00055
00056   // ////////////////////////////////////////////////////////////////////
00057   void FareFeaturesKey::fromStream (std::istream& ioIn) {
00058   }
00059
00060   // ////////////////////////////////////////////////////////////////////
00061   const std::string FareFeaturesKey::toString() const {
00062     std::ostringstream oStr;
00063     oStr << _tripType << " -- " << _advancePurchase << "-"
00064          << _saturdayStay << "-" << _changeFees << "-"
00065          << _nonRefundable << "-" << _minimumStay;
00066     return oStr.str();
00067   }
00068
00069 }
```

35.271 stdair/bom/FareFeaturesKey.hpp File Reference

```
#include <stdair/bom/KeyAbstract.hpp>
#include <stdair/stdair_date_time_types.hpp>
```

```
#include <stdair/stdair_demand_types.hpp>
#include <stdair/stdair_inventory_types.hpp>
```

Classes

- struct stdair::FareFeaturesKey

  Key of date-period.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.272 FareFeaturesKey.hpp

```
00001 #ifndef __STDAIR_BOM_FAREFEATURESKEY_HPP
00002 #define __STDAIR_BOM_FAREFEATURESKEY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/bom/KeyAbstract.hpp>
00009 #include <stdair/stdair_date_time_types.hpp>
00010 #include <stdair/stdair_demand_types.hpp>
00011 #include <stdair/stdair_inventory_types.hpp>
00012
00013 namespace stdair  {
00014
00018   struct FareFeaturesKey : public KeyAbstract {
00019   public:
00020     // ////////// Construction //////////
00022     FareFeaturesKey (const TripType_T&, const DayDuration_T&,
00023                      const SaturdayStay_T&, const ChangeFees_T&,
00024                      const NonRefundable_T&, const DayDuration_T&);
00026     FareFeaturesKey (const FareFeaturesKey&);
00028     ~FareFeaturesKey ();
00029   private:
00031     FareFeaturesKey();
00032
00033
00034   public:
00035     // ////////// Getters //////////
00039     const TripType_T& getTripType() const {
00040       return _tripType;
00041     }
00042
00046     const DayDuration_T& getAdvancePurchase() const {
00047       return _advancePurchase;
00048     }
00049
00053     const SaturdayStay_T& getSaturdayStay() const {
00054       return _saturdayStay;
00055     }
00056
```

```
00060     const ChangeFees_T& getChangeFees() const {
00061       return _changeFees;
00062     }
00063
00067     const NonRefundable_T& getRefundableOption() const {
00068       return _nonRefundable;
00069     }
00070
00074     const DayDuration_T& getMinimumStay() const {
00075       return _minimumStay;
00076     }
00077
00078
00079   public:
00080     // /////////// Display support methods /////////
00086     void toStream (std::ostream& ioOut) const;
00087
00093     void fromStream (std::istream& ioIn);
00094
00100     const std::string toString() const;
00101
00102
00103   private:
00104     // ////////////////// Attributes ////////////////////
00108     TripType_T _tripType;
00109
00113     DayDuration_T _advancePurchase;
00114
00118     SaturdayStay_T _saturdayStay;
00119
00123     ChangeFees_T _changeFees;
00124
00128     NonRefundable_T _nonRefundable;
00129
00133     DayDuration_T _minimumStay;
00134   };
00135
00136 }
00137 #endif // __STDAIR_BOM_FAREFEATURESKEY_HPP
```

35.273 stdair/bom/FareFeaturesTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< FareFeatures * > stdair::FareFeaturesList_T

- typedef std::map< const MapKey_T, FareFeatures * > stdair::FareFeaturesMap_T
- typedef std::pair< MapKey_T, FareFeatures * > stdair::FareFeaturesWithKey_T
- typedef std::list< FareFeaturesWithKey_T > stdair::FareFeaturesDetailedList_T

35.274 FareFeaturesTypes.hpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_FAREFEATURESTYPES_HPP
00003 #define __STDAIR_BOM_FAREFEATURESTYPES_HPP
00004
00005 // //////////////////////////////////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // STDAIR
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations.
00017   class FareFeatures;
00018
00020   typedef std::list<FareFeatures*> FareFeaturesList_T;
00021
00023   typedef std::map<const MapKey_T, FareFeatures*> FareFeaturesMap_T;
00024
00026   typedef std::pair<MapKey_T, FareFeatures*> FareFeaturesWithKey_T;
00027   typedef std::list<FareFeaturesWithKey_T> FareFeaturesDetailedList_T;
00028 }
00029 #endif // __STDAIR_BOM_FAREFEATURESTYPES_HPP
00030
```

35.275 stdair/bom/FareOptionStruct.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_BookingClass.hpp>
#include <stdair/bom/FareOptionStruct.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.276 FareOptionStruct.cpp

```
00001 // //////////////////////////////////////////////////////////////////
```

```
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_BookingClass.hpp>
00009 #include <stdair/bom/FareOptionStruct.hpp>
00010
00011 namespace stdair {
00012
00013   // ////////////////////////////////////////////////////////////////////
00014   FareOptionStruct::FareOptionStruct()
00015     : _fare (DEFAULT_FARE_VALUE), _avl (DEFAULT_AVAILABILITY) {
00016   }
00017
00018   // ////////////////////////////////////////////////////////////////////
00019   FareOptionStruct::FareOptionStruct (const FareOptionStruct& iFO)
00020     : _classPath (iFO._classPath),
00021       _fare (iFO._fare), _avl (iFO._avl), _changeFee (iFO._changeFee),
00022       _nonRefundable (iFO._nonRefundable), _saturdayStay (iFO._saturdayStay) {
00023   }
00024
00025   // ////////////////////////////////////////////////////////////////////
00026   FareOptionStruct::FareOptionStruct (const std::string& iClassPath,
00027                                       const Fare_T& iFare,
00028                                       const ChangeFees_T& iChangeFee,
00029                                       const NonRefundable_T& iNonRefundable,
00030                                       const SaturdayStay_T& iSaturdayNightStay)
00031     : _fare (iFare), _avl (DEFAULT_AVAILABILITY),
00032       _changeFee (iChangeFee), _nonRefundable (iNonRefundable),
00033       _saturdayStay (iSaturdayNightStay) {
00034     _classPath.push_back (iClassPath);
00035   }
00036
00037   // ////////////////////////////////////////////////////////////////////
00038   FareOptionStruct::~FareOptionStruct() {
00039   }
00040
00041   // ////////////////////////////////////////////////////////////////////
00042   void FareOptionStruct::toStream (std::ostream& ioOut) const {
00043     ioOut << describe();
00044   }
00045
00046   // ////////////////////////////////////////////////////////////////////
00047   void FareOptionStruct::fromStream (std::istream& ioIn) {
00048   }
00049
00050   // ////////////////////////////////////////////////////////////////////
00051   const std::string FareOptionStruct::describe() const {
00052     std::ostringstream oStr;
00053
00054     oStr  << "Class path: ";
00055     unsigned short idx = 0;
00056     for (ClassList_StringList_T::const_iterator itClassPath =
00057            _classPath.begin(); itClassPath != _classPath.end();
00058          ++itClassPath, ++idx) {
00059       if (idx != 0) {
00060         oStr << "-";
00061       }
00062       const std::string& lClassPath = *itClassPath;
00063       oStr << lClassPath;
```

```
00064     }
00065
00066     oStr << "; " << _fare << " EUR";
00067     oStr << "; conditions: " << _changeFee  << " " << _nonRefundable
00068          << " " << _saturdayStay;
00069     return oStr.str();
00070   }
00071
00072   // ////////////////////////////////////////////////////////////////////
00073   const std::string FareOptionStruct::display() const {
00074     std::ostringstream oStr;
00075
00076     unsigned short idx = 0;
00077     for (ClassList_StringList_T::const_iterator itClassPath =
00078            _classPath.begin(); itClassPath != _classPath.end();
00079          ++itClassPath, ++idx) {
00080       if (idx != 0) {
00081         oStr << "-";
00082       }
00083       const std::string& lClassPath = *itClassPath;
00084       oStr << lClassPath;
00085     }
00086
00087     oStr << ", " << _fare << ", " << _changeFee  << " " << _nonRefundable
00088          << " " << _saturdayStay;
00089     return oStr.str();
00090   }
00091
00092   // ////////////////////////////////////////////////////////////////////
00093   void FareOptionStruct::addClassList (const std::string iClassCodeList) {
00094     _classPath.push_back (iClassCodeList);
00095   }
00096
00097   // ////////////////////////////////////////////////////////////////////
00098   void FareOptionStruct::emptyClassList () {
00099     _classPath.clear();
00100   }
00101
00102 }
```

35.277 stdair/bom/FareOptionStruct.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/bom/BookingClassTypes.hpp>
```

Classes

- struct stdair::FareOptionStruct

  Structure holding the elements of a fare option.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.278 FareOptionStruct.hpp

```
00001 #ifndef __STDAIR_BOM_FAREOPTIONSTRUCT_HPP
00002 #define __STDAIR_BOM_FAREOPTIONSTRUCT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_types.hpp>
00012 #include <stdair/basic/StructAbstract.hpp>
00013 #include <stdair/bom/BookingClassTypes.hpp>
00014
00015 namespace stdair {
00016
00020   struct FareOptionStruct : public StructAbstract {
00021   public:
00022     // ////////// Getters ///////////////
00024     const ClassList_StringList_T& getClassPath() const {
00025       return _classPath;
00026     }
00027
00029     const Fare_T& getFare() const {
00030       return _fare;
00031     }
00032
00034     const Availability_T& getAvailability() const {
00035       return _avl;
00036     }
00037
00039     const ChangeFees_T getChangeFees() const {
00040       return _changeFee;
00041     }
00042
00044     const NonRefundable_T getNonRefundable() const {
00045       return _nonRefundable;
00046     }
00047
00049     const SaturdayStay_T getSaturdayStay() const {
00050       return _saturdayStay;
00051     }
00052
00053
00054   public:
00055     // ////////// Setters ///////////////
00057     void addClassList (const std::string);
00058
00060     void emptyClassList ();
00061
00063     void setFare (const Fare_T& iFare) {
00064       _fare = iFare;
00065     }
```

```
00066
00068     void setAvailability (const Availability_T& iAvl) {
00069       _avl = iAvl;
00070     }
00071
00073     void setChangeFees (const ChangeFees_T iRes) {
00074       _changeFee = iRes;
00075     }
00076
00078     void setNonRefundable (const NonRefundable_T iRes) {
00079       _nonRefundable = iRes;
00080     }
00081
00083     void setSaturdayStay (const SaturdayStay_T iRes) {
00084       _saturdayStay = iRes;
00085     }
00086
00087
00088   public:
00089     // ////////// Display support method /////////////
00095     void toStream (std::ostream& ioOut) const;
00096
00102     void fromStream (std::istream& ioIn);
00103
00107     const std::string describe() const;
00108
00112     const std::string display() const;
00113
00114
00115   public:
00116     // ////////// Constructors & Destructor ///////////////
00120     FareOptionStruct();
00121
00125     FareOptionStruct (const std::string& iClassPath,
00126                       const Fare_T&, const ChangeFees_T&,
00127                       const NonRefundable_T&, const SaturdayStay_T&);
00128
00132     FareOptionStruct (const FareOptionStruct&);
00133
00137     ~FareOptionStruct();
00138
00139
00140   private:
00141     // ////////////////////// Attributes ////////////////////
00145     ClassList_StringList_T _classPath;
00146
00150     Fare_T _fare;
00151
00155     Availability_T _avl;
00156
00160     ChangeFees_T _changeFee;
00161
00165     NonRefundable_T _nonRefundable;
00166
00170     SaturdayStay_T _saturdayStay;
00171   };
00172
00173 }
00174 #endif // __STDAIR_BOM_FAREOPTIONSTRUCT_HPP
```

35.279 stdair/bom/FareOptionTypes.hpp File Reference

```
#include <list>
#include <map>
#include <stdair/stdair_types.hpp>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< FareOptionStruct > stdair::FareOptionList_T

35.280 FareOptionTypes.hpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_FAREOPTIONTYPES_HPP
00003 #define __STDAIR_BOM_FAREOPTIONTYPES_HPP
00004
00005 // //////////////////////////////////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <list>
00010 #include <map>
00011 // STDAIR
00012 #include <stdair/stdair_types.hpp>
00013 #include <stdair/bom/key_types.hpp>
00014
00015 namespace stdair {
00016
00017   // Forward declarations.
00018   struct FareOptionStruct;
00019
00021   typedef std::list<FareOptionStruct> FareOptionList_T;
00022
00023 }
00024 #endif // __STDAIR_BOM_FAREOPTIONTYPES_HPP
00025
```

35.281 stdair/bom/FlightDate.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_Inventory.hpp>
```

```
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightDate.hpp>
#include <stdair/bom/LegDate.hpp>
#include <stdair/bom/SegmentDate.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.282 FlightDate.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Inventory.hpp>
00009 #include <stdair/bom/BomManager.hpp>
00010 #include <stdair/bom/Inventory.hpp>
00011 #include <stdair/bom/FlightDate.hpp>
00012 #include <stdair/bom/LegDate.hpp>
00013 #include <stdair/bom/SegmentDate.hpp>
00014
00015 namespace stdair {
00016
00017   // ////////////////////////////////////////////////////////////////////
00018   FlightDate::FlightDate()
00019     : _key (DEFAULT_FLIGHT_NUMBER, DEFAULT_DEPARTURE_DATE), _parent (NULL) {
00020     // That constructor is used by the serialisation process
00021   }
00022
00023   // ////////////////////////////////////////////////////////////////////
00024   FlightDate::FlightDate (const FlightDate&)
00025     : _key (DEFAULT_FLIGHT_NUMBER, DEFAULT_DEPARTURE_DATE), _parent (NULL) {
00026     assert (false);
00027   }
00028
00029   // ////////////////////////////////////////////////////////////////////
00030   FlightDate::FlightDate (const Key_T& iKey) : _key (iKey), _parent (NULL) {
00031   }
00032
00033   // ////////////////////////////////////////////////////////////////////
00034   FlightDate::~FlightDate() {
00035   }
00036
00037   // ////////////////////////////////////////////////////////////////////
00038   const AirlineCode_T& FlightDate::getAirlineCode() const {
00039     const Inventory* lInventory_ptr =
00040       static_cast<const Inventory*> (getParent());
00041     assert (lInventory_ptr != NULL);
00042     return lInventory_ptr->getAirlineCode();
```

```
00043   }
00044
00045   // ////////////////////////////////////////////////////////////////////
00046   std::string FlightDate::toString() const {
00047     std::ostringstream oStr;
00048     oStr << describeKey();
00049     return oStr.str();
00050   }
00051
00052   // ////////////////////////////////////////////////////////////////////
00053   LegDate* FlightDate::getLegDate (const std::string& iLegDateKeyStr) const {
00054     LegDate* oLegDate_ptr =
00055       BomManager::getObjectPtr<LegDate> (*this, iLegDateKeyStr);
00056     return oLegDate_ptr;
00057   }
00058
00059   // ////////////////////////////////////////////////////////////////////
00060   LegDate* FlightDate::getLegDate (const LegDateKey& iLegDateKey) const {
00061     return getLegDate (iLegDateKey.toString());
00062   }
00063
00064   // ////////////////////////////////////////////////////////////////////
00065   SegmentDate* FlightDate::
00066   getSegmentDate (const std::string& iSegmentDateKeyStr) const {
00067     SegmentDate* oSegmentDate_ptr =
00068       BomManager::getObjectPtr<SegmentDate> (*this, iSegmentDateKeyStr);
00069     return oSegmentDate_ptr;
00070   }
00071
00072   // ////////////////////////////////////////////////////////////////////
00073   SegmentDate* FlightDate::
00074   getSegmentDate (const SegmentDateKey& iSegmentDateKey) const {
00075     return getSegmentDate (iSegmentDateKey.toString());
00076   }
00077
00078 }
00079
```

35.283 stdair/bom/FlightDate.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/FlightDateKey.hpp>
#include <stdair/bom/FlightDateTypes.hpp>
```

Classes

- class stdair::FlightDate

  Class representing the actual attributes for an airline flight-date.

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.284 FlightDate.hpp

```
00001 #ifndef __STDAIR_BOM_FLIGHTDATE_HPP
00002 #define __STDAIR_BOM_FLIGHTDATE_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/bom/BomAbstract.hpp>
00013 #include <stdair/bom/FlightDateKey.hpp>
00014 #include <stdair/bom/FlightDateTypes.hpp>
00015
00017 namespace boost {
00018   namespace serialization {
00019     class access;
00020   }
00021 }
00022
00023 namespace stdair {
00024
00026   struct LegDateKey;
00027   class LegDate;
00028   struct SegmentDateKey;
00029   class SegmentDate;
00030
00035   class FlightDate : public BomAbstract {
00036     template <typename BOM> friend class FacBom;
00037     friend class FacBomManager;
00038     friend class boost::serialization::access;
00039
00040   public:
00041     // ////////// Type definitions ////////////
00045     typedef FlightDateKey Key_T;
00046
00047
00048   public:
00049     // ////////// Getters ///////////////
00051     const Key_T& getKey() const {
00052       return _key;
00053     }
00054
00056     BomAbstract* const getParent() const {
00057       return _parent;
00058     }
00059
```

```
00061     const FlightNumber_T& getFlightNumber() const {
00062       return _key.getFlightNumber();
00063     }
00064
00066     const Date_T& getDepartureDate() const {
00067       return _key.getDepartureDate();
00068     }
00069
00077     const AirlineCode_T& getAirlineCode() const;
00078
00082     const HolderMap_T& getHolderMap() const {
00083       return _holderMap;
00084     }
00085
00096     LegDate* getLegDate (const std::string& iLegDateKeyStr) const;
00097
00108     LegDate* getLegDate (const LegDateKey&) const;
00109
00120     SegmentDate* getSegmentDate (const std::string& iSegmentDateKeyStr) const;
00121
00132     SegmentDate* getSegmentDate (const SegmentDateKey&) const;
00133
00134   public:
00135     // ////////// Display support methods /////////
00141     void toStream (std::ostream& ioOut) const {
00142       ioOut << toString();
00143     }
00144
00150     void fromStream (std::istream& ioIn) {
00151     }
00152
00156     std::string toString() const;
00157
00161     const std::string describeKey() const {
00162       return _key.toString();
00163     }
00164
00165
00166   public:
00167     // ////////// (Boost) Serialisation support methods /////////
00171     template<class Archive>
00172     void serialize (Archive& ar, const unsigned int iFileVersion);
00173
00174   private:
00182     void serialisationImplementationExport() const;
00183     void serialisationImplementationImport();
00184
00185
00186   protected:
00187     // ////////// Constructors and destructors /////////
00191     FlightDate (const Key_T&);
00192
00196     virtual ~FlightDate();
00197
00198   private:
00202     FlightDate();
00203
00207     FlightDate (const FlightDate&);
00208
00209
00210   protected:
00211     // ////////// Attributes /////////
```

```
00215     Key_T _key;
00216
00220     BomAbstract* _parent;
00221
00225     HolderMap_T _holderMap;
00226   };
00227
00228 }
00229 #endif // __STDAIR_BOM_FLIGHTDATE_HPP
00230
```

35.285 stdair/bom/FlightDateKey.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/date_time/gregorian/formatters.hpp>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/FlightDateKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Functions

- template void stdair::FlightDateKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void stdair::FlightDateKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)

35.286 FlightDateKey.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost Date-Time
00008 #include <boost/date_time/gregorian/formatters.hpp>
00009 // Boost.Serialization
```

```
00010 #include <boost/archive/text_iarchive.hpp>
00011 #include <boost/archive/text_oarchive.hpp>
00012 #include <boost/serialization/access.hpp>
00013 // StdAir
00014 #include <stdair/basic/BasConst_Inventory.hpp>
00015 #include <stdair/basic/BasConst_BomDisplay.hpp>
00016 #include <stdair/bom/FlightDateKey.hpp>
00017
00018 namespace stdair {
00019
00020   // ////////////////////////////////////////////////////////////////////
00021   FlightDateKey::FlightDateKey()
00022     : _flightNumber (DEFAULT_FLIGHT_NUMBER),
00023       _departureDate (DEFAULT_DEPARTURE_DATE) {
00024     assert (false);
00025   }
00026
00027   // ////////////////////////////////////////////////////////////////////
00028   FlightDateKey::FlightDateKey (const FlightNumber_T& iFlightNumber,
00029                                 const Date_T& iFlightDate)
00030     : _flightNumber (iFlightNumber), _departureDate (iFlightDate) {
00031   }
00032
00033   // ////////////////////////////////////////////////////////////////////
00034   FlightDateKey::FlightDateKey (const FlightDateKey& iKey)
00035     : _flightNumber (iKey._flightNumber), _departureDate (iKey._departureDate) {
00036   }
00037
00038   // ////////////////////////////////////////////////////////////////////
00039   FlightDateKey::~FlightDateKey() {
00040   }
00041
00042   // ////////////////////////////////////////////////////////////////////
00043   void FlightDateKey::toStream (std::ostream& ioOut) const {
00044     ioOut << "FlightDateKey: " << toString();
00045   }
00046
00047   // ////////////////////////////////////////////////////////////////////
00048   void FlightDateKey::fromStream (std::istream& ioIn) {
00049   }
00050
00051   // ////////////////////////////////////////////////////////////////////
00052   const std::string FlightDateKey::toString() const {
00053     std::ostringstream oStr;
00054     const std::string& lDepartureDateStr =
00055       boost::gregorian::to_simple_string (_departureDate);
00056     oStr << _flightNumber
00057          << DEFAULT_KEY_SUB_FLD_DELIMITER << " " << lDepartureDateStr;
00058     return oStr.str();
00059   }
00060
00061   // ////////////////////////////////////////////////////////////////////
00062   void FlightDateKey::serialisationImplementationExport() const {
00063     std::ostringstream oStr;
00064     boost::archive::text_oarchive oa (oStr);
00065     oa << *this;
00066   }
00067
00068   // ////////////////////////////////////////////////////////////////////
00069   void FlightDateKey::serialisationImplementationImport() {
00070     std::istringstream iStr;
00071     boost::archive::text_iarchive ia (iStr);
```

```
00072     ia >> *this;
00073   }
00074
00075   // ////////////////////////////////////////////////////////////////////
00076   template<class Archive>
00077   void FlightDateKey::serialize (Archive& ioArchive,
00078                                  const unsigned int iFileVersion) {
00083     std::string lDepartureDateStr =
00084       boost::gregorian::to_simple_string (_departureDate);
00085     ioArchive & _flightNumber & lDepartureDateStr;
00086   }
00087
00088   // ////////////////////////////////////////////////////////////////////
00089   // Explicit template instantiation
00090   namespace ba = boost::archive;
00091   template void FlightDateKey::serialize<ba::text_oarchive> (ba::text_oarchive&,
00092                                                              unsigned int);
00093   template void FlightDateKey::serialize<ba::text_iarchive> (ba::text_iarchive&,
00094                                                              unsigned int);
00095   // ////////////////////////////////////////////////////////////////////
00096
00097 }
```

35.287 stdair/bom/FlightDateKey.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

Classes

- struct stdair::FlightDateKey

  Key of a given flight-date, made of a flight number and a departure date.

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.288 FlightDateKey.hpp

```
00001 #ifndef __STDAIR_BOM_FLIGHTDATEKEY_HPP
00002 #define __STDAIR_BOM_FLIGHTDATEKEY_HPP
00003
```

```
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/stdair_date_time_types.hpp>
00013 #include <stdair/bom/KeyAbstract.hpp>
00014
00016 namespace boost {
00017   namespace serialization {
00018     class access;
00019   }
00020 }
00021
00022 namespace stdair {
00023
00028   struct FlightDateKey : public KeyAbstract {
00029     friend class boost::serialization::access;
00030
00031     // ////////// Constructors and destructors //////////
00032   private:
00036     FlightDateKey();
00037
00038   public:
00042     FlightDateKey (const FlightNumber_T&, const Date_T&);
00043
00047     FlightDateKey (const FlightDateKey&);
00048
00052     ~FlightDateKey();
00053
00054
00055   public:
00056     // ////////// Getters //////////
00058     const FlightNumber_T& getFlightNumber() const {
00059       return _flightNumber;
00060     }
00061
00063     const Date_T& getDepartureDate() const {
00064       return _departureDate;
00065     }
00066
00067
00068   public:
00069     // ////////// Display support methods ////////
00075     void toStream (std::ostream& ioOut) const;
00076
00082     void fromStream (std::istream& ioIn);
00083
00093     const std::string toString() const;
00094
00095
00096   public:
00097     // ////////// (Boost) Serialisation support methods ////////
00101     template<class Archive>
00102     void serialize (Archive& ar, const unsigned int iFileVersion);
00103
00104   private:
00109     void serialisationImplementationExport() const;
00110     void serialisationImplementationImport();
```

```
00111
00112
00113   private:
00114     // ////////////////// Attributes ///////////////
00118     FlightNumber_T _flightNumber;
00119
00123     Date_T _departureDate;
00124   };
00125
00126 }
00127 #endif // __STDAIR_BOM_FLIGHTDATEKEY_HPP
```

35.289 stdair/bom/FlightDateTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< FlightDate * > stdair::FlightDateList_T
- typedef std::map< const MapKey_T, FlightDate * > stdair::FlightDateMap_T

35.290 FlightDateTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_FLIGHTDATETYPES_HPP
00003 #define __STDAIR_BOM_FLIGHTDATETYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations
00017   class FlightDate;
00018
00019   // ////////////////////////// Type definitions ////////////////////////
00021   typedef std::list<FlightDate*> FlightDateList_T;
00022
00024   typedef std::map<const MapKey_T, FlightDate*> FlightDateMap_T;
```

```
00025
00026 }
00027 #endif // __STDAIR_BOM_FLIGHTDATETYPES_HPP
00028
```

35.291 stdair/bom/FlightPeriod.cpp File Reference

```
#include <cassert>
#include <stdair/bom/FlightPeriod.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.292 FlightPeriod.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // STDAIR
00007 #include <stdair/bom/FlightPeriod.hpp>
00008
00009 namespace stdair {
00010
00011   // ////////////////////////////////////////////////////////////////////
00012   FlightPeriod::FlightPeriod (const Key_T& iKey)
00013     : _key (iKey), _parent (NULL) {
00014   }
00015
00016   // ////////////////////////////////////////////////////////////////////
00017   FlightPeriod::~FlightPeriod () {
00018   }
00019
00020   // ////////////////////////////////////////////////////////////////////
00021   std::string FlightPeriod::toString() const {
00022     std::ostringstream oStr;
00023     oStr << describeKey();
00024     return oStr.str();
00025   }
00026
00027 }
00028
```

35.293 stdair/bom/FlightPeriod.hpp File Reference

```
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/FlightPeriodKey.hpp>
#include <stdair/bom/FlightPeriodTypes.hpp>
```

Classes

- class stdair::FlightPeriod

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.294 FlightPeriod.hpp

```
00001 #ifndef __STDAIR_BOM_FLIGHTPERIOD_HPP
00002 #define __STDAIR_BOM_FLIGHTPERIOD_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/BomAbstract.hpp>
00009 #include <stdair/bom/FlightPeriodKey.hpp>
00010 #include <stdair/bom/FlightPeriodTypes.hpp>
00011
00012 namespace stdair {
00013
00015   class FlightPeriod : public BomAbstract {
00016     template <typename BOM> friend class FacBom;
00017     friend class FacBomManager;
00018
00019   public:
00020     // Type definitions.
00022     typedef FlightPeriodKey Key_T;
00023
00024   public:
00025     // ////////// Getters ///////////////
00027     const Key_T& getKey () const { return _key; }
00028
00030     BomAbstract* const getParent() const { return _parent; }
00031
00033     const FlightNumber_T& getFlightNumber () const {
00034       return _key.getFlightNumber();
00035     }
00036
00038     const PeriodStruct& getPeriod () const { return _key.getPeriod(); }
00039
00041     const HolderMap_T& getHolderMap() const { return _holderMap; }
00042
00043
00044   public:
00045     // ////////// Display support methods /////////
00048     void toStream (std::ostream& ioOut) const { ioOut << toString(); }
00049
00052     void fromStream (std::istream& ioIn) { }
00053
00055     std::string toString() const;
00056
00058     const std::string describeKey() const { return _key.toString(); }
00059
00060   protected:
```

```
00062     FlightPeriod (const Key_T&);
00063     FlightPeriod (const FlightPeriod&);
00065     ~FlightPeriod();
00066
00067   protected:
00068     // Attributes
00069     Key_T _key;
00070     BomAbstract* _parent;
00071     HolderMap_T _holderMap;
00072   };
00073
00074 }
00075 #endif // __STDAIR_BOM_FLIGHTPERIOD_HPP
00076
```

35.295 stdair/bom/FlightPeriodKey.cpp File Reference

```
#include <stdair/bom/FlightPeriodKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.296 FlightPeriodKey.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STDAIR
00005 #include <stdair/bom/FlightPeriodKey.hpp>
00006
00007 namespace stdair {
00008
00009   // ////////////////////////////////////////////////////////////////////
00010   FlightPeriodKey::FlightPeriodKey (const FlightNumber_T& iFlightNumber,
00011                                     const PeriodStruct& iPeriod)
00012     : _flightNumber (iFlightNumber), _period (iPeriod) {
00013   }
00014
00015   // ////////////////////////////////////////////////////////////////////
00016   FlightPeriodKey::FlightPeriodKey (const FlightPeriodKey& iKey)
00017     : _flightNumber (iKey._flightNumber), _period (iKey._period) {
00018   }
00019
00020   // ////////////////////////////////////////////////////////////////////
00021   FlightPeriodKey::~FlightPeriodKey () {
00022   }
00023
00024   // ////////////////////////////////////////////////////////////////////
00025   void FlightPeriodKey::toStream (std::ostream& ioOut) const {
00026     ioOut << "FlightPeriodKey: " << toString() << std::endl;
00027   }
00028
00029   // ////////////////////////////////////////////////////////////////////
00030   void FlightPeriodKey::fromStream (std::istream& ioIn) {
```

```
00031   }
00032
00033   // ////////////////////////////////////////////////////////////////////
00034   const std::string FlightPeriodKey::toString() const {
00035     std::ostringstream oStr;
00036     oStr << _flightNumber << ", " << _period.describeShort();
00037     return oStr.str();
00038   }
00039
00040 }
```

35.297 stdair/bom/FlightPeriodKey.hpp File Reference

```
#include <stdair/bom/KeyAbstract.hpp>
#include <stdair/bom/PeriodStruct.hpp>
```

Classes

- struct stdair::FlightPeriodKey

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.298 FlightPeriodKey.hpp

```
00001 #ifndef __STDAIR_BOM_FLIGHTPERIODKEY_HPP
00002 #define __STDAIR_BOM_FLIGHTPERIODKEY_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/KeyAbstract.hpp>
00009 #include <stdair/bom/PeriodStruct.hpp>
00010
00011 namespace stdair {
00013   struct FlightPeriodKey : public KeyAbstract {
00014
00015   private:
00016     // /////////// Default constructor //////////
00017     FlightPeriodKey ();
00018   public:
00019     // /////////// Construction ///////////
00021     FlightPeriodKey (const FlightNumber_T&, const PeriodStruct&);
00022     FlightPeriodKey (const FlightPeriodKey&);
00024     ~FlightPeriodKey ();
00025
00026     // /////////// Getters //////////
00028     const FlightNumber_T& getFlightNumber() const {
00029       return _flightNumber;
00030     }
```

```
00031
00033     const PeriodStruct& getPeriod () const {
00034       return _period;
00035     }
00036
00037     // ////////// Display support methods /////////
00040     void toStream (std::ostream& ioOut) const;
00041
00044     void fromStream (std::istream& ioIn);
00045
00051     const std::string toString() const;
00052
00053   private:
00054     // Attributes
00056     FlightNumber_T _flightNumber;
00057
00059     PeriodStruct _period;
00060
00061   };
00062
00063 }
00064 #endif // __STDAIR_BOM_FLIGHTPERIODKEY_HPP
```

35.299 stdair/bom/FlightPeriodTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< FlightPeriod * > stdair::FlightPeriodList_T
- typedef std::map< const MapKey_T, FlightPeriod * > stdair::FlightPeriodMap_T

35.300 FlightPeriodTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_FLIGHTPERIODTYPES_HPP
00003 #define __STDAIR_BOM_FLIGHTPERIODTYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
```

```
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations.
00017   class FlightPeriod;
00018
00020   typedef std::list<FlightPeriod*> FlightPeriodList_T;
00021
00023   typedef std::map<const MapKey_T, FlightPeriod*> FlightPeriodMap_T;
00024 }
00025 #endif // __STDAIR_BOM_FLIGHTPERIODTYPES_HPP
00026
```

35.301 stdair/bom/GuillotineBlock.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/multi_array.hpp>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/GuillotineBlock.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.302 GuillotineBlock.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost
00008 #include <boost/multi_array.hpp>
00009 // Boost.Serialization
00010 #include <boost/archive/text_iarchive.hpp>
00011 #include <boost/archive/text_oarchive.hpp>
00012 #include <boost/serialization/access.hpp>
00013 // StdAir
00014 #include <stdair/basic/BasConst_Inventory.hpp>
00015 #include <stdair/bom/BomManager.hpp>
00016 #include <stdair/bom/GuillotineBlock.hpp>
```

```
00017
00018 namespace stdair {
00019
00020   // ////////////////////////////////////////////////////////////////////
00021   GuillotineBlock::GuillotineBlock()
00022     : _key (DEFAULT_GUILLOTINE_NUMBER), _parent (NULL) {
00023     assert (false);
00024   }
00025
00026   // ////////////////////////////////////////////////////////////////////
00027   GuillotineBlock::GuillotineBlock (const GuillotineBlock&)
00028     : _key (DEFAULT_GUILLOTINE_NUMBER), _parent (NULL) {
00029     assert (false);
00030   }
00031
00032   // ////////////////////////////////////////////////////////////////////
00033   GuillotineBlock::
00034   GuillotineBlock (const Key_T& iKey) : _key (iKey), _parent (NULL) {
00035   }
00036
00037   // ////////////////////////////////////////////////////////////////////
00038   GuillotineBlock::~GuillotineBlock() {
00039   }
00040
00041   // ////////////////////////////////////////////////////////////////////
00042   std::string GuillotineBlock::toString() const {
00043     std::ostringstream oStr;
00044     oStr << describeKey();
00045     return oStr.str();
00046   }
00047
00048   // ////////////////////////////////////////////////////////////////////
00049   void GuillotineBlock::
00050   initSnapshotBlocks (const SegmentCabinIndexMap_T& iSegmentCabinIndexMap,
00051                       const ValueTypeIndexMap_T& iValueTypeIndexMap) {
00052     _segmentCabinIndexMap = iSegmentCabinIndexMap;
00053     _valueTypesIndexMap = iValueTypeIndexMap;
00054
00055     unsigned int lNumberOfSegmentCabins = _segmentCabinIndexMap.size();
00056     unsigned int lNumberOfValueTypes = _valueTypesIndexMap.size();
00057
00058     // Initialise the snapshot blocks
00059     // Normally, the block includes snapshots from DTD MAX to DTD 0, thus
00060     // DEFAULT_MAX_DTD + 1 values. However, we would like to add the day
00061     // before DTD MAX (this value will be initialised to zero).
00062     _bookingSnapshotBlock.
00063       resize (boost::extents[lNumberOfSegmentCabins*lNumberOfValueTypes]
00064               [DEFAULT_MAX_DTD + 2]);
00065     _cancellationSnapshotBlock.
00066       resize (boost::extents[lNumberOfSegmentCabins*lNumberOfValueTypes]
00067               [DEFAULT_MAX_DTD + 2]);
00068     _productAndPriceOrientedBookingSnapshotBlock.
00069       resize (boost::extents[lNumberOfSegmentCabins*lNumberOfValueTypes]
00070               [DEFAULT_MAX_DTD + 2]);
00071     _availabilitySnapshotBlock.
00072       resize (boost::extents[lNumberOfSegmentCabins*lNumberOfValueTypes]
00073               [DEFAULT_MAX_DTD + 2]);
00074
00075   }
00076
00077   // ////////////////////////////////////////////////////////////////////
00078   const BlockIndex_T& GuillotineBlock::
```

```
00079   getBlockIndex (const MapKey_T& iKey) const {
00080     ValueTypeIndexMap_T::const_iterator itVTIdx =
00081       _valueTypesIndexMap.find (iKey);
00082     assert (itVTIdx != _valueTypesIndexMap.end());
00083     return itVTIdx->second;
00084   }
00085
00086   // ////////////////////////////////////////////////////////////////////
00087   const BlockNumber_T& GuillotineBlock::
00088   getBlockNumber (const SegmentCabin& iSegmentCabin) const {
00089     SegmentCabinIndexMap_T::const_iterator itSCIdx =
00090       _segmentCabinIndexMap.find (&iSegmentCabin);
00091     assert (itSCIdx != _segmentCabinIndexMap.end());
00092     return itSCIdx->second;
00093   }
00094
00095   // ////////////////////////////////////////////////////////////////////
00096   ConstSegmentCabinDTDSnapshotView_T GuillotineBlock::
00097   getConstSegmentCabinDTDBookingSnapshotView (const BlockNumber_T iSCIdxBegin,
00098                                               const BlockNumber_T iSCIdxEnd,
00099                                               const DTD_T iDTD) const {
00100     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00101     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00102     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00103
00104     return _bookingSnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValueIdxB
      egin, lValueIdxEnd)][iDTD] ];
00105   }
00106
00107   // ////////////////////////////////////////////////////////////////////
00108   ConstSegmentCabinDTDRangeSnapshotView_T GuillotineBlock::
00109   getConstSegmentCabinDTDRangeBookingSnapshotView
00110   (const BlockNumber_T iSCIdxBegin, const BlockNumber_T iSCIdxEnd,
00111    const DTD_T iDTDBegin, const DTD_T iDTDEnd) const {
00112     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00113     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00114     const unsigned int lValueIdxEnd = (iSCIdxEnd +1) * lNbOfValueTypes;
00115
00116     return _bookingSnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValueIdxB
      egin, lValueIdxEnd)][SnapshotBlockRange_T(iDTDBegin, iDTDEnd + 1)] ];
00117   }
00118
00119   // ////////////////////////////////////////////////////////////////////
00120   SegmentCabinDTDSnapshotView_T GuillotineBlock::
00121   getSegmentCabinDTDBookingSnapshotView (const BlockNumber_T iSCIdxBegin,
00122                                          const BlockNumber_T iSCIdxEnd,
00123                                          const DTD_T iDTD) {
00124     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00125     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00126     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00127
00128     return _bookingSnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValueIdxB
      egin, lValueIdxEnd)][iDTD] ];
00129   }
00130
00131   // ////////////////////////////////////////////////////////////////////
00132   SegmentCabinDTDRangeSnapshotView_T GuillotineBlock::
00133   getSegmentCabinDTDRangeBookingSnapshotView (const BlockNumber_T iSCIdxBegin,
00134                                               const BlockNumber_T iSCIdxEnd,
00135                                               const DTD_T iDTDBegin,
00136                                               const DTD_T iDTDEnd) {
00137     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
```

```
00138     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00139     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00140
00141     return _bookingSnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValueIdxB
      egin, lValueIdxEnd)][SnapshotBlockRange_T(iDTDBegin, iDTDEnd + 1)] ];
00142   }
00143
00144   // ////////////////////////////////////////////////////////////////////
00145   ConstSegmentCabinDTDSnapshotView_T GuillotineBlock::
00146   getConstSegmentCabinDTDCancellationSnapshotView (const BlockNumber_T iSCIdxBegi
      n,
00147                                                    const BlockNumber_T iSCIdxEnd,
00148                                                    const DTD_T iDTD) const {
00149     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00150     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00151     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00152
00153     return _cancellationSnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValu
      eIdxBegin, lValueIdxEnd)][iDTD] ];
00154   }
00155
00156   // ////////////////////////////////////////////////////////////////////
00157   ConstSegmentCabinDTDRangeSnapshotView_T GuillotineBlock::
00158   getConstSegmentCabinDTDRangeCancellationSnapshotView
00159   (const BlockNumber_T iSCIdxBegin, const BlockNumber_T iSCIdxEnd,
00160    const DTD_T iDTDBegin, const DTD_T iDTDEnd) const {
00161     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00162     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00163     const unsigned int lValueIdxEnd = (iSCIdxEnd +1) * lNbOfValueTypes;
00164
00165     return _cancellationSnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValu
      eIdxBegin, lValueIdxEnd)][SnapshotBlockRange_T(iDTDBegin, iDTDEnd + 1)] ];
00166   }
00167
00168   // ////////////////////////////////////////////////////////////////////
00169   SegmentCabinDTDSnapshotView_T GuillotineBlock::
00170   getSegmentCabinDTDCancellationSnapshotView (const BlockNumber_T iSCIdxBegin,
00171                                               const BlockNumber_T iSCIdxEnd,
00172                                               const DTD_T iDTD) {
00173     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00174     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00175     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00176
00177     return _cancellationSnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValu
      eIdxBegin, lValueIdxEnd)][iDTD] ];
00178   }
00179
00180   // ////////////////////////////////////////////////////////////////////
00181   SegmentCabinDTDRangeSnapshotView_T GuillotineBlock::
00182   getSegmentCabinDTDRangeCancellationSnapshotView(const BlockNumber_T iSCIdxBegin
      ,
00183                                                   const BlockNumber_T iSCIdxEnd,
00184                                                   const DTD_T iDTDBegin,
00185                                                   const DTD_T iDTDEnd) {
00186     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00187     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00188     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00189
00190     return _cancellationSnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValu
      eIdxBegin, lValueIdxEnd)][SnapshotBlockRange_T(iDTDBegin, iDTDEnd + 1)] ];
00191   }
00192
```

```
00193   // ////////////////////////////////////////////////////////////////////
00194   ConstSegmentCabinDTDSnapshotView_T GuillotineBlock::
00195   getConstSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView (const
      BlockNumber_T iSCIdxBegin,
00196                                                 const BlockNumber_T iSCIdxEnd,
00197                                                 const DTD_T iDTD) const {
00198     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00199     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00200     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00201
00202     return _productAndPriceOrientedBookingSnapshotBlock [ boost::indices[
      SnapshotBlockRange_T(lValueIdxBegin, lValueIdxEnd)][iDTD] ];
00203   }
00204
00205   // ////////////////////////////////////////////////////////////////////
00206   ConstSegmentCabinDTDRangeSnapshotView_T GuillotineBlock::
00207   getConstSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView
00208   (const BlockNumber_T iSCIdxBegin, const BlockNumber_T iSCIdxEnd,
00209    const DTD_T iDTDBegin, const DTD_T iDTDEnd) const {
00210     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00211     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00212     const unsigned int lValueIdxEnd = (iSCIdxEnd +1) * lNbOfValueTypes;
00213
00214     return _productAndPriceOrientedBookingSnapshotBlock [ boost::indices[
      SnapshotBlockRange_T(lValueIdxBegin, lValueIdxEnd)][SnapshotBlockRange_T(iDTDBegi
      n, iDTDEnd + 1)] ];
00215   }
00216
00217   // ////////////////////////////////////////////////////////////////////
00218   SegmentCabinDTDSnapshotView_T GuillotineBlock::
00219   getSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView (const
      BlockNumber_T iSCIdxBegin,
00220                                           const BlockNumber_T iSCIdxEnd,
00221                                           const DTD_T iDTD) {
00222     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00223     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00224     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00225
00226     return _productAndPriceOrientedBookingSnapshotBlock [ boost::indices[
      SnapshotBlockRange_T(lValueIdxBegin, lValueIdxEnd)][iDTD] ];
00227   }
00228
00229   // ////////////////////////////////////////////////////////////////////
00230   SegmentCabinDTDRangeSnapshotView_T GuillotineBlock::
00231   getSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView (const
      BlockNumber_T iSCIdxBegin,
00232                                                 const BlockNumber_T iSCIdxEnd,
00233                                                 const DTD_T iDTDBegin,
00234                                                 const DTD_T iDTDEnd) {
00235     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00236     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00237     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00238
00239     return _productAndPriceOrientedBookingSnapshotBlock [ boost::indices[
      SnapshotBlockRange_T(lValueIdxBegin, lValueIdxEnd)][SnapshotBlockRange_T(iDTDBegi
      n, iDTDEnd + 1)] ];
00240   }
00241
00242   // ////////////////////////////////////////////////////////////////////
00243   ConstSegmentCabinDTDSnapshotView_T GuillotineBlock::
00244   getConstSegmentCabinDTDAvailabilitySnapshotView (const BlockNumber_T iSCIdxBegi
      n,
```

```
00245                                                const BlockNumber_T iSCIdxEnd,
00246                                                const DTD_T iDTD) const {
00247     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00248     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00249     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00250
00251     return _availabilitySnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValu
      eIdxBegin, lValueIdxEnd)][iDTD] ];
00252   }
00253
00254   // ////////////////////////////////////////////////////////////////////
00255   ConstSegmentCabinDTDRangeSnapshotView_T GuillotineBlock::
00256   getConstSegmentCabinDTDRangeAvailabilitySnapshotView
00257   (const BlockNumber_T iSCIdxBegin, const BlockNumber_T iSCIdxEnd,
00258    const DTD_T iDTDBegin, const DTD_T iDTDEnd) const {
00259     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00260     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00261     const unsigned int lValueIdxEnd = (iSCIdxEnd +1) * lNbOfValueTypes;
00262
00263     return _availabilitySnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValu
      eIdxBegin, lValueIdxEnd)][SnapshotBlockRange_T(iDTDBegin, iDTDEnd + 1)] ];
00264   }
00265
00266   // ////////////////////////////////////////////////////////////////////
00267   SegmentCabinDTDSnapshotView_T GuillotineBlock::
00268   getSegmentCabinDTDAvailabilitySnapshotView (const BlockNumber_T iSCIdxBegin,
00269                                               const BlockNumber_T iSCIdxEnd,
00270                                               const DTD_T iDTD) {
00271     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00272     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00273     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00274
00275     return _availabilitySnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValu
      eIdxBegin, lValueIdxEnd)][iDTD] ];
00276   }
00277
00278   // ////////////////////////////////////////////////////////////////////
00279   SegmentCabinDTDRangeSnapshotView_T GuillotineBlock::
00280   getSegmentCabinDTDRangeAvailabilitySnapshotView(const BlockNumber_T iSCIdxBegin
      ,
00281                                                   const BlockNumber_T iSCIdxEnd,
00282                                                   const DTD_T iDTDBegin,
00283                                                   const DTD_T iDTDEnd) {
00284     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00285     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00286     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00287
00288     return _availabilitySnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValu
      eIdxBegin, lValueIdxEnd)][SnapshotBlockRange_T(iDTDBegin, iDTDEnd + 1)] ];
00289   }
00290
00291   // ////////////////////////////////////////////////////////////////////
00292   void GuillotineBlock::serialisationImplementationExport() const {
00293     std::ostringstream oStr;
00294     boost::archive::text_oarchive oa (oStr);
00295     oa << *this;
00296   }
00297
00298   // ////////////////////////////////////////////////////////////////////
00299   void GuillotineBlock::serialisationImplementationImport() {
00300     std::istringstream iStr;
00301     boost::archive::text_iarchive ia (iStr);
```

```
00302     ia >> *this;
00303   }
00304
00305   // ////////////////////////////////////////////////////////////////////
00306   template<class Archive>
00307   void GuillotineBlock::serialize (Archive& ioArchive,
00308                                    const unsigned int iFileVersion) {
00309     ioArchive & _key;
00310   }
00311
00312 }
00313
```

35.303 stdair/bom/GuillotineBlock.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/GuillotineBlockKey.hpp>
#include <stdair/bom/GuillotineBlockTypes.hpp>
```

Classes

- class stdair::GuillotineBlock

  Class representing the actual attributes for an airline guillotine-block.

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.304 GuillotineBlock.hpp

```
00001 #ifndef __STDAIR_BOM_GUILLOTINEBLOCK_HPP
00002 #define __STDAIR_BOM_GUILLOTINEBLOCK_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
```

```
00012 #include <stdair/bom/BomAbstract.hpp>
00013 #include <stdair/bom/GuillotineBlockKey.hpp>
00014 #include <stdair/bom/GuillotineBlockTypes.hpp>
00015
00017 namespace boost {
00018   namespace serialization {
00019     class access;
00020   }
00021 }
00022
00023 namespace stdair {
00024   // Forward declarations
00025   class SegmentCabin;
00026
00031   class GuillotineBlock : public BomAbstract {
00032     template <typename BOM> friend class FacBom;
00033     friend class FacBomManager;
00034     friend class boost::serialization::access;
00035
00036   public:
00037     // ////////// Type definitions ////////////
00041     typedef GuillotineBlockKey Key_T;
00042
00043
00044   public:
00045     // /////////// Getters ///////////////
00047     const Key_T& getKey() const {
00048       return _key;
00049     }
00050
00052     BomAbstract* const getParent() const {
00053       return _parent;
00054     }
00055
00057     const GuillotineNumber_T& getGuillotineNumber() const {
00058       return _key.getGuillotineNumber();
00059     }
00060
00064     const HolderMap_T& getHolderMap() const {
00065       return _holderMap;
00066     }
00067
00069     const SegmentCabinIndexMap_T& getSegmentCabinIndexMap() const {
00070       return _segmentCabinIndexMap;
00071     }
00072
00074     const ValueTypeIndexMap_T& getValueTypeIndexMap() const {
00075       return _valueTypesIndexMap;
00076     }
00077
00079     const BlockIndex_T& getBlockIndex (const MapKey_T&) const;
00080
00082     const BlockNumber_T& getBlockNumber (const SegmentCabin&) const;
00083
00086     ConstSegmentCabinDTDSnapshotView_T
00087     getConstSegmentCabinDTDBookingSnapshotView (const BlockNumber_T,
00088                                                 const BlockNumber_T,
00089                                                 const DTD_T) const;
00090
00093     ConstSegmentCabinDTDRangeSnapshotView_T
00094     getConstSegmentCabinDTDRangeBookingSnapshotView (const BlockNumber_T,
00095                                                      const BlockNumber_T,
```

```
00096                                                   const DTD_T,
00097                                                   const DTD_T) const;
00098
00101     SegmentCabinDTDSnapshotView_T
00102     getSegmentCabinDTDBookingSnapshotView (const BlockNumber_T,
00103                                            const BlockNumber_T, const DTD_T);
00104
00107     SegmentCabinDTDRangeSnapshotView_T
00108     getSegmentCabinDTDRangeBookingSnapshotView (const BlockNumber_T,
00109                                                 const BlockNumber_T,
00110                                                 const DTD_T, const DTD_T);
00111
00114     ConstSegmentCabinDTDSnapshotView_T
00115     getConstSegmentCabinDTDCancellationSnapshotView (const BlockNumber_T,
00116                                                      const BlockNumber_T,
00117                                                      const DTD_T) const;
00118
00121     ConstSegmentCabinDTDRangeSnapshotView_T
00122     getConstSegmentCabinDTDRangeCancellationSnapshotView (const BlockNumber_T,
00123                                                           const BlockNumber_T,
00124                                                           const DTD_T,
00125                                                           const DTD_T) const;
00126
00129     SegmentCabinDTDSnapshotView_T
00130     getSegmentCabinDTDCancellationSnapshotView (const BlockNumber_T,
00131                                                 const BlockNumber_T,
00132                                                 const DTD_T);
00133
00136     SegmentCabinDTDRangeSnapshotView_T
00137     getSegmentCabinDTDRangeCancellationSnapshotView (const BlockNumber_T,
00138                                                      const BlockNumber_T,
00139                                                      const DTD_T, const DTD_T);
00140
00143     ConstSegmentCabinDTDSnapshotView_T
00144     getConstSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView
00145     (const BlockNumber_T, const BlockNumber_T, const DTD_T) const;
00146
00149     ConstSegmentCabinDTDRangeSnapshotView_T
00150     getConstSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView
00151     (const BlockNumber_T, const BlockNumber_T, const DTD_T, const DTD_T) const;
00152
00155     SegmentCabinDTDSnapshotView_T
00156     getSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView
00157     (const BlockNumber_T, const BlockNumber_T, const DTD_T);
00158
00161     SegmentCabinDTDRangeSnapshotView_T
00162     getSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView
00163     (const BlockNumber_T, const BlockNumber_T, const DTD_T, const DTD_T);
00164
00167     ConstSegmentCabinDTDSnapshotView_T
00168     getConstSegmentCabinDTDAvailabilitySnapshotView (const BlockNumber_T,
00169                                                      const BlockNumber_T,
00170                                                      const DTD_T) const;
00171
00174     ConstSegmentCabinDTDRangeSnapshotView_T
00175     getConstSegmentCabinDTDRangeAvailabilitySnapshotView (const BlockNumber_T,
00176                                                           const BlockNumber_T,
00177                                                           const DTD_T,
00178                                                           const DTD_T) const;
00179
00182     SegmentCabinDTDSnapshotView_T
00183     getSegmentCabinDTDAvailabilitySnapshotView (const BlockNumber_T,
```

```
00184                                                 const BlockNumber_T,
00185                                                 const DTD_T);
00186
00189     SegmentCabinDTDRangeSnapshotView_T
00190     getSegmentCabinDTDRangeAvailabilitySnapshotView (const BlockNumber_T,
00191                                                      const BlockNumber_T,
00192                                                      const DTD_T, const DTD_T);
00193
00194
00195   public:
00196     // ////////////// Setters //////////////
00199     void initSnapshotBlocks (const SegmentCabinIndexMap_T&,
00200                              const ValueTypeIndexMap_T&);
00201
00202   public:
00203     // /////////// Display support methods /////////
00209     void toStream (std::ostream& ioOut) const {
00210       ioOut << toString();
00211     }
00212
00218     void fromStream (std::istream& ioIn) {
00219     }
00220
00224     std::string toString() const;
00225
00229     const std::string describeKey() const {
00230       return _key.toString();
00231     }
00232
00233
00234   public:
00235     // /////////// (Boost) Serialisation support methods /////////
00239     template<class Archive>
00240     void serialize (Archive& ar, const unsigned int iFileVersion);
00241
00242   private:
00247     void serialisationImplementationExport() const;
00248     void serialisationImplementationImport();
00249
00250
00251   protected:
00252     // ////////// Constructors and destructors /////////
00256     GuillotineBlock (const Key_T&);
00257
00261     virtual ~GuillotineBlock();
00262
00263   private:
00267     GuillotineBlock();
00268
00272     GuillotineBlock (const GuillotineBlock&);
00273
00274
00275   protected:
00276     // ////////// Attributes /////////
00278     Key_T _key;
00279
00281     BomAbstract* _parent;
00282
00284     HolderMap_T _holderMap;
00285
00287     SegmentCabinIndexMap_T _segmentCabinIndexMap;
00288
```

```
00291     ValueTypeIndexMap_T _valueTypesIndexMap;
00292
00294     SnapshotBlock_T _bookingSnapshotBlock;
00295
00297     SnapshotBlock_T _cancellationSnapshotBlock;
00298
00300     SnapshotBlock_T _productAndPriceOrientedBookingSnapshotBlock;
00301
00303     SnapshotBlock_T _availabilitySnapshotBlock;
00304   };
00305
00306 }
00307 #endif // __STDAIR_BOM_GUILLOTINEBLOCK_HPP
00308
```

35.305 stdair/bom/GuillotineBlockKey.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/GuillotineBlockKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Functions

- template void stdair::GuillotineBlockKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void stdair::GuillotineBlockKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)

35.306 GuillotineBlockKey.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
```

```
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 #include <stdair/basic/BasConst_BomDisplay.hpp>
00014 #include <stdair/bom/GuillotineBlockKey.hpp>
00015
00016 namespace stdair {
00017
00018   // ////////////////////////////////////////////////////////////////////
00019   GuillotineBlockKey::GuillotineBlockKey()
00020     : _guillotineNumber (DEFAULT_GUILLOTINE_NUMBER) {
00021     assert (false);
00022   }
00023
00024   // ////////////////////////////////////////////////////////////////////
00025   GuillotineBlockKey::
00026   GuillotineBlockKey (const GuillotineNumber_T& iGuillotineNumber)
00027     : _guillotineNumber (iGuillotineNumber) {
00028   }
00029
00030   // ////////////////////////////////////////////////////////////////////
00031   GuillotineBlockKey::GuillotineBlockKey (const GuillotineBlockKey& iKey)
00032     : _guillotineNumber (iKey._guillotineNumber) {
00033   }
00034
00035   // ////////////////////////////////////////////////////////////////////
00036   GuillotineBlockKey::~GuillotineBlockKey() {
00037   }
00038
00039   // ////////////////////////////////////////////////////////////////////
00040   void GuillotineBlockKey::toStream (std::ostream& ioOut) const {
00041     ioOut << "GuillotineBlockKey: " << toString();
00042   }
00043
00044   // ////////////////////////////////////////////////////////////////////
00045   void GuillotineBlockKey::fromStream (std::istream& ioIn) {
00046   }
00047
00048   // ////////////////////////////////////////////////////////////////////
00049   const std::string GuillotineBlockKey::toString() const {
00050     std::ostringstream oStr;
00051     oStr << _guillotineNumber;
00052     return oStr.str();
00053   }
00054
00055   // ////////////////////////////////////////////////////////////////////
00056   void GuillotineBlockKey::serialisationImplementationExport() const {
00057     std::ostringstream oStr;
00058     boost::archive::text_oarchive oa (oStr);
00059     oa << *this;
00060   }
00061
00062   // ////////////////////////////////////////////////////////////////////
00063   void GuillotineBlockKey::serialisationImplementationImport() {
00064     std::istringstream iStr;
00065     boost::archive::text_iarchive ia (iStr);
00066     ia >> *this;
00067   }
00068
00069   // ////////////////////////////////////////////////////////////////////
```

```
00070   template<class Archive>
00071   void GuillotineBlockKey::serialize (Archive& ioArchive,
00072                                       const unsigned int iFileVersion) {
00077     ioArchive & _guillotineNumber;
00078   }
00079
00080   // //////////////////////////////////////////////////////////////////
00081   // Explicit template instantiation
00082   namespace ba = boost::archive;
00083   template void GuillotineBlockKey::
00084   serialize<ba::text_oarchive> (ba::text_oarchive&, unsigned int);
00085   template void GuillotineBlockKey::
00086   serialize<ba::text_iarchive> (ba::text_iarchive&, unsigned int);
00087   // //////////////////////////////////////////////////////////////////
00088
00089 }
```

35.307 stdair/bom/GuillotineBlockKey.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

Classes

- struct stdair::GuillotineBlockKey

  Key of a given guillotine block, made of a guillotine number.

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.308 GuillotineBlockKey.hpp

```
00001 #ifndef __STDAIR_BOM_GUILLOTINEBLOCKKEY_HPP
00002 #define __STDAIR_BOM_GUILLOTINEBLOCKKEY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
```

```
00012 #include <stdair/bom/KeyAbstract.hpp>
00013
00015 namespace boost {
00016   namespace serialization {
00017     class access;
00018   }
00019 }
00020
00021 namespace stdair {
00022
00026   struct GuillotineBlockKey : public KeyAbstract {
00027     friend class boost::serialization::access;
00028
00029     // ////////// Constructors and destructors //////////
00030   private:
00034     GuillotineBlockKey();
00035
00036   public:
00040     GuillotineBlockKey (const GuillotineNumber_T&);
00041
00045     GuillotineBlockKey (const GuillotineBlockKey&);
00046
00050     ~GuillotineBlockKey();
00051
00052
00053   public:
00054     // ////////// Getters //////////
00056     const GuillotineNumber_T& getGuillotineNumber() const {
00057       return _guillotineNumber;
00058     }
00059
00060
00061   public:
00062     // ////////// Display support methods /////////
00068     void toStream (std::ostream& ioOut) const;
00069
00075     void fromStream (std::istream& ioIn);
00076
00086     const std::string toString() const;
00087
00088
00089   public:
00090     // ////////// (Boost) Serialisation support methods /////////
00094     template<class Archive>
00095     void serialize (Archive& ar, const unsigned int iFileVersion);
00096
00097   private:
00102     void serialisationImplementationExport() const;
00103     void serialisationImplementationImport();
00104
00105
00106   private:
00107     // ////////////////// Attributes ///////////////
00111     GuillotineNumber_T _guillotineNumber;
00112
00113   };
00114
00115 }
00116 #endif // __STDAIR_BOM_GUILLOTINEBLOCKKEY_HPP
```

35.309 stdair/bom/GuillotineBlockTypes.hpp File Reference

```
#include <map>
#include <list>
#include <boost/multi_array.hpp>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< GuillotineBlock * > stdair::GuillotineBlockList_T
- typedef std::map< const MapKey_T, GuillotineBlock * > stdair::GuillotineBlockMap_T
- typedef std::map< const SegmentCabin *, BlockNumber_T > stdair::SegmentCabinIndexMap_T
- typedef std::map< const MapKey_T, BlockIndex_T > stdair::ValueTypeIndexMap_T

35.310 GuillotineBlockTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_GUILLOTINEBLOCKTYPES_HPP
00003 #define __STDAIR_BOM_GUILLOTINEBLOCKTYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // BOOST
00012 #include <boost/multi_array.hpp>
00013 // StdAir
00014 #include <stdair/bom/key_types.hpp>
00015
00016 namespace stdair {
00017
00018   // Forward declarations
00019   class GuillotineBlock;
00020   class SegmentCabin;
00021
00022   // ////////////////////// Type definitions //////////////////////////
00024   typedef std::list<GuillotineBlock*> GuillotineBlockList_T;
00025
00027   typedef std::map<const MapKey_T, GuillotineBlock*> GuillotineBlockMap_T;
00028
00030   typedef std::map<const SegmentCabin*, BlockNumber_T> SegmentCabinIndexMap_T;
```

```
00031
00033   typedef std::map<const MapKey_T, BlockIndex_T> ValueTypeIndexMap_T;
00034
00035 }
00036 #endif // __STDAIR_BOM_GUILLOTINEBLOCKTYPES_HPP
00037
```

35.311 stdair/bom/Inventory.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightDate.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.312 Inventory.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Inventory.hpp>
00009 #include <stdair/bom/BomManager.hpp>
00010 #include <stdair/bom/Inventory.hpp>
00011 #include <stdair/bom/FlightDate.hpp>
00012
00013 namespace stdair {
00014
00015   // ////////////////////////////////////////////////////////////////////
00016   Inventory::Inventory() : _key (DEFAULT_AIRLINE_CODE), _parent (NULL) {
00017     // That constructor is used by the serialisation process
00018   }
00019
00020   // ////////////////////////////////////////////////////////////////////
00021   Inventory::Inventory (const Inventory&)
00022     : _key (DEFAULT_AIRLINE_CODE), _parent (NULL) {
00023     assert (false);
00024   }
00025
00026   // ////////////////////////////////////////////////////////////////////
00027   Inventory::Inventory (const Key_T& iKey) : _key (iKey), _parent (NULL) {
00028   }
```

```
00029
00030   // ////////////////////////////////////////////////////////////////////
00031   Inventory::~Inventory() {
00032   }
00033
00034   // ////////////////////////////////////////////////////////////////////
00035   std::string Inventory::toString() const {
00036     std::ostringstream oStr;
00037     oStr << describeKey();
00038     return oStr.str();
00039   }
00040
00041   // ////////////////////////////////////////////////////////////////////
00042   FlightDate* Inventory::
00043   getFlightDate (const std::string& iFlightDateKeyStr) const {
00044     FlightDate* oFlightDate_ptr =
00045       BomManager::getObjectPtr<FlightDate> (*this, iFlightDateKeyStr);
00046     return oFlightDate_ptr;
00047   }
00048
00049   // ////////////////////////////////////////////////////////////////////
00050   FlightDate* Inventory::
00051   getFlightDate (const FlightDateKey& iFlightDateKey) const {
00052     return getFlightDate (iFlightDateKey.toString());
00053   }
00054
00055 }
00056
```

35.313 stdair/bom/Inventory.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/InventoryKey.hpp>
#include <stdair/bom/InventoryTypes.hpp>
```

Classes

- class stdair::Inventory

  Class representing the actual attributes for an airline inventory.

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.314 Inventory.hpp

```
00001 #ifndef __STDAIR_BOM_INVENTORY_HPP
00002 #define __STDAIR_BOM_INVENTORY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/bom/BomAbstract.hpp>
00013 #include <stdair/bom/InventoryKey.hpp>
00014 #include <stdair/bom/InventoryTypes.hpp>
00015
00017 namespace boost {
00018   namespace serialization {
00019     class access;
00020   }
00021 }
00022
00023 namespace stdair {
00024
00026   class AirlineFeature;
00027   struct FlightDateKey;
00028   class FlightDate;
00029
00033   class Inventory : public BomAbstract {
00034     template <typename BOM> friend class FacBom;
00035     friend class FacBomManager;
00036     friend class boost::serialization::access;
00037
00038   public :
00039     // ////////// Type definitions ////////////
00043     typedef InventoryKey Key_T;
00044
00045
00046   public:
00047     // ////////// Getters ////////////
00049     const Key_T& getKey() const {
00050       return _key;
00051     }
00052
00054     const AirlineCode_T& getAirlineCode() const {
00055       return _key.getAirlineCode();
00056     }
00057
00059     BomAbstract* const getParent() const {
00060       return _parent;
00061     }
00062
00064     const HolderMap_T& getHolderMap() const {
00065       return _holderMap;
00066     }
00067
00078     FlightDate* getFlightDate (const std::string& iFlightDateKeyStr) const;
00079
00090     FlightDate* getFlightDate (const FlightDateKey&) const;
00091
00092
```

```
00093   public:
00094     // ////////////// Setters ////////////
00096     void setAirlineFeature (const AirlineFeature* ioAirlineFeaturePtr) {
00097       _airlineFeature = ioAirlineFeaturePtr;
00098     }
00099
00100
00101   public:
00102     // ////////////// Display support methods /////////
00108     void toStream (std::ostream& ioOut) const {
00109       ioOut << toString();
00110     }
00111
00117     void fromStream (std::istream& ioIn) {
00118     }
00119
00123     std::string toString() const;
00124
00128     const std::string describeKey() const {
00129       return _key.toString();
00130     }
00131
00132
00133   public:
00134     // ////////////// (Boost) Serialisation support methods /////////
00138     template<class Archive>
00139     void serialize (Archive& ar, const unsigned int iFileVersion);
00140
00141   private:
00149     void serialisationImplementationExport() const;
00150     void serialisationImplementationImport();
00151
00152
00153   protected:
00154     // /////////// Constructors and destructors /////////
00158     Inventory (const Key_T&);
00162     ~Inventory();
00163
00164   private:
00168     Inventory();
00172     Inventory (const Inventory&);
00173
00174
00175   protected:
00176     // /////////// Attributes /////////
00180     Key_T _key;
00181
00185     BomAbstract* _parent;
00186
00190     const AirlineFeature* _airlineFeature;
00191
00195     HolderMap_T _holderMap;
00196   };
00197
00198 }
00199 #endif // __STDAIR_BOM_INVENTORY_HPP
00200
```

35.315 stdair/bom/InventoryKey.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/InventoryKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Functions

- template void stdair::InventoryKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void stdair::InventoryKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)

35.316 InventoryKey.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 #include <stdair/bom/InventoryKey.hpp>
00014
00015 namespace stdair {
00016
00017   // ////////////////////////////////////////////////////////////////////
00018   InventoryKey::InventoryKey() : _airlineCode (DEFAULT_AIRLINE_CODE) {
00019     assert (false);
00020   }
00021
00022   // ////////////////////////////////////////////////////////////////////
00023   InventoryKey::InventoryKey (const AirlineCode_T& iAirlineCode)
00024     : _airlineCode (iAirlineCode) {
00025   }
00026
```

```
00027   // ////////////////////////////////////////////////////////////////////
00028   InventoryKey::InventoryKey (const InventoryKey& iKey)
00029     : _airlineCode (iKey._airlineCode) {
00030   }
00031
00032   // ////////////////////////////////////////////////////////////////////
00033   InventoryKey::~InventoryKey() {
00034   }
00035
00036   // ////////////////////////////////////////////////////////////////////
00037   void InventoryKey::toStream (std::ostream& ioOut) const {
00038     ioOut << "InventoryKey: " << toString();
00039   }
00040
00041   // ////////////////////////////////////////////////////////////////////
00042   void InventoryKey::fromStream (std::istream& ioIn) {
00043   }
00044
00045   // ////////////////////////////////////////////////////////////////////
00046   const std::string InventoryKey::toString() const {
00047     std::ostringstream oStr;
00048     oStr << _airlineCode;
00049     return oStr.str();
00050   }
00051
00052   // ////////////////////////////////////////////////////////////////////
00053   void InventoryKey::serialisationImplementationExport() const {
00054     std::ostringstream oStr;
00055     boost::archive::text_oarchive oa (oStr);
00056     oa << *this;
00057   }
00058
00059   // ////////////////////////////////////////////////////////////////////
00060   void InventoryKey::serialisationImplementationImport() {
00061     std::istringstream iStr;
00062     boost::archive::text_iarchive ia (iStr);
00063     ia >> *this;
00064   }
00065
00066   // ////////////////////////////////////////////////////////////////////
00067   template<class Archive>
00068   void InventoryKey::serialize (Archive& ioArchive,
00069                                 const unsigned int iFileVersion) {
00070     ioArchive & _airlineCode;
00071   }
00072
00073   // ////////////////////////////////////////////////////////////////////
00074   // Explicit template instantiation
00075   namespace ba = boost::archive;
00076   template void InventoryKey::serialize<ba::text_oarchive> (ba::text_oarchive&,
00077                                                             unsigned int);
00078   template void InventoryKey::serialize<ba::text_iarchive> (ba::text_iarchive&,
00079                                                             unsigned int);
00080   // ////////////////////////////////////////////////////////////////////
00081
00082 }
```

35.317 stdair/bom/InventoryKey.hpp File Reference

```
#include <iosfwd>
```

```
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

Classes

- struct stdair::InventoryKey

  Key of a given inventory, made of the airline code.

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.318 InventoryKey.hpp

```
00001 #ifndef __STDAIR_BOM_INVENTORYKEY_HPP
00002 #define __STDAIR_BOM_INVENTORYKEY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/bom/KeyAbstract.hpp>
00013
00015 namespace boost {
00016   namespace serialization {
00017     class access;
00018   }
00019 }
00020
00021 namespace stdair {
00022
00026   struct InventoryKey : public KeyAbstract {
00027     friend class boost::serialization::access;
00028
00029     // ////////// Constructors and destructors //////////
00030   private:
00034     InventoryKey();
00035
00036   public:
00037     // ////////// Construction //////////
00041     InventoryKey (const AirlineCode_T& iAirlineCode);
00042
00046     InventoryKey (const InventoryKey&);
00047
```

```
00051     ~InventoryKey();
00052
00053
00054     // ////////// Getters //////////
00058     const AirlineCode_T& getAirlineCode() const {
00059       return _airlineCode;
00060     }
00061
00062
00063   public:
00064     // ////////// Display support methods /////////
00070     void toStream (std::ostream& ioOut) const;
00071
00077     void fromStream (std::istream& ioIn);
00078
00088     const std::string toString() const;
00089
00090
00091   public:
00092     // ////////// (Boost) Serialisation support methods /////////
00096     template<class Archive>
00097     void serialize (Archive& ar, const unsigned int iFileVersion);
00098
00099   private:
00104     void serialisationImplementationExport() const;
00105     void serialisationImplementationImport();
00106
00107
00108   private:
00109     // ////////////////// Attributes ///////////////
00113     AirlineCode_T _airlineCode;
00114   };
00115
00116 }
00117 #endif // __STDAIR_BOM_INVENTORYKEY_HPP
```

35.319 stdair/bom/InventoryTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< Inventory * > stdair::InventoryList_T
- typedef std::map< const MapKey_T, Inventory * > stdair::InventoryMap_T

35.320 InventoryTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_INVENTORYTYPES_HPP
00003 #define __STDAIR_BOM_INVENTORYTYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // Stdair
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations.
00017   class Inventory;
00018
00020   typedef std::list<Inventory*> InventoryList_T;
00021
00023   typedef std::map<const MapKey_T, Inventory*> InventoryMap_T;
00024
00025 }
00026 #endif // __STDAIR_BOM_INVENTORYTYPES_HPP
```

35.321 stdair/bom/key_types.hpp File Reference

```
#include <string>
#include <list>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::string stdair::MapKey_T
- typedef std::list< std::string > stdair::KeyList_T

35.322 key_types.hpp

```
00001 #ifndef __STDAIR_BOM_KEY_TYPES_HPP
00002 #define __STDAIR_BOM_KEY_TYPES_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
```

```
00009 #include <list>
00010
00011 namespace stdair {
00012
00013   // ////////////////////// Type definitions ////////////
00015   typedef std::string MapKey_T;
00016
00018   typedef std::list<std::string> KeyList_T;
00019
00020 }
00021 #endif // __STDAIR_BOM_KEY_TYPES_HPP
```

35.323 stdair/bom/KeyAbstract.hpp File Reference

`#include <iosfwd>`

`#include <string>`

Classes

- struct stdair::KeyAbstract

  Base class for the keys of Business Object Model (BOM) layer.
  Note that that key allows to differentiate two objects at the same level only. For instance, the segment-date key allows to differentiate two segment-dates under a given flight-date, but does not allow to differentiate two segemnt-dates in general.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Functions

- template<class charT , class traits >
  std::basic_ostream< charT, traits > & operator<< (std::basic_ostream< charT, traits > &ioOut, const stdair::KeyAbstract &iKey)
- template<class charT , class traits >
  std::basic_istream< charT, traits > & operator>> (std::basic_istream< charT, traits > &ioIn, stdair::KeyAbstract &ioKey)

35.323.1 Function Documentation

35.323.1.1 template<class charT , class traits > std::basic_ostream<charT, traits>& operator<< (std::basic_ostream< charT, traits > & *ioOut,* const stdair::KeyAbstract & *iKey*) [inline]

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (p653) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 69 of file KeyAbstract.hpp.

References stdair::KeyAbstract::toStream().

35.323.1.2 template<class charT , class traits > std::basic_istream<charT, traits>& operator>> (std::basic_istream< charT, traits > & *ioIn,* stdair::KeyAbstract & *ioKey*) [inline]

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (pp655-657) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 97 of file KeyAbstract.hpp.

References stdair::KeyAbstract::fromStream().

35.324 KeyAbstract.hpp

```
00001
00007 #ifndef __STDAIR_BOM_KEYABSTRACT_HPP
00008 #define __STDAIR_BOM_KEYABSTRACT_HPP
00009
00010 // //////////////////////////////////////////////////////////////////
00011 // Import section
00012 // //////////////////////////////////////////////////////////////////
00013 // STL
00014 #include <iosfwd>
00015 #include <string>
00016
00017 namespace stdair {
00018
00026   struct KeyAbstract {
00027   public:
00028
00029     // ////////// Display support methods /////////
00034     virtual void toStream (std::ostream& ioOut) const {}
00035
00040     virtual void fromStream (std::istream& ioIn) {}
00041
00051     virtual const std::string toString() const { return std::string("Hello!"); }
00052
00056     virtual ~KeyAbstract() {}
00057   };
00058
00059 }
00060
00066 template <class charT, class traits>
00067 inline
00068 std::basic_ostream<charT, traits>&
00069 operator<< (std::basic_ostream<charT, traits>& ioOut,
00070             const stdair::KeyAbstract& iKey) {
00076   std::basic_ostringstream<charT,traits> ostr;
00077   ostr.copyfmt (ioOut);
00078   ostr.width (0);
00079
00080   // Fill string stream
00081   iKey.toStream (ostr);
00082
00083   // Print string stream
```

```
00084   ioOut << ostr.str();
00085
00086   return ioOut;
00087 }
00088
00094 template <class charT, class traits>
00095 inline
00096 std::basic_istream<charT, traits>&
00097 operator>> (std::basic_istream<charT, traits>& ioIn,
00098             stdair::KeyAbstract& ioKey) {
00099   // Fill Key object with input stream
00100   ioKey.fromStream (ioIn);
00101   return ioIn;
00102 }
00103
00104 #endif // __STDAIR_BOM_KEYABSTRACT_HPP
```

35.325 stdair/bom/LegCabin.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_BookingClass.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/LegDate.hpp>
#include <stdair/bom/LegCabin.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.326 LegCabin.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_BookingClass.hpp>
00009 #include <stdair/basic/BasConst_Inventory.hpp>
00010 #include <stdair/basic/BasConst_BomDisplay.hpp>
00011 #include <stdair/bom/BomManager.hpp>
00012 #include <stdair/bom/LegDate.hpp>
00013 #include <stdair/bom/LegCabin.hpp>
00014
00015
```

```
00016 namespace stdair {
00017
00018   // ////////////////////////////////////////////////////////////////////
00019   LegCabin::LegCabin() : _key (DEFAULT_CABIN_CODE), _parent (NULL) {
00020     assert (false);
00021   }
00022
00023   // ////////////////////////////////////////////////////////////////////
00024   LegCabin::LegCabin (const LegCabin&)
00025     : _key (DEFAULT_CABIN_CODE), _parent (NULL) {
00026     assert (false);
00027   }
00028
00029   // ////////////////////////////////////////////////////////////////////
00030   LegCabin::LegCabin (const Key_T& iKey)
00031     : _key (iKey), _parent (NULL),
00032       _offeredCapacity (DEFAULT_CABIN_CAPACITY),
00033       _physicalCapacity (DEFAULT_CABIN_CAPACITY),
00034       _soldSeat (DEFAULT_CLASS_NB_OF_BOOKINGS),
00035       _committedSpace (DEFAULT_COMMITTED_SPACE),
00036       _availabilityPool (DEFAULT_AVAILABILITY),
00037       _availability (DEFAULT_AVAILABILITY),
00038       _currentBidPrice (DEFAULT_BID_PRICE),
00039       _bidPriceVector (DEFAULT_BID_PRICE_VECTOR) {
00040   }
00041
00042   // ////////////////////////////////////////////////////////////////////
00043   LegCabin::~LegCabin() {
00044   }
00045
00046   // ////////////////////////////////////////////////////////////////////
00047   void LegCabin::setCapacities (const CabinCapacity_T& iCapacity) {
00048     _offeredCapacity = iCapacity;
00049     _physicalCapacity = iCapacity;
00050     setAvailabilityPool (iCapacity - _committedSpace);
00051   }
00052
00053   // ////////////////////////////////////////////////////////////////////
00054   const MapKey_T LegCabin::getFullerKey() const {
00055     const LegDate& lLegDate = BomManager::getParent<LegDate> (*this);
00056
00057     const MapKey_T oFullKey =
00058       lLegDate.describeKey() + DEFAULT_KEY_FLD_DELIMITER + getCabinCode();
00059     return oFullKey;
00060   }
00061
00062   // ////////////////////////////////////////////////////////////////////
00063   std::string LegCabin::toString() const {
00064     std::ostringstream oStr;
00065     oStr << describeKey();
00066     return oStr.str();
00067   }
00068
00069   // ////////////////////////////////////////////////////////////////////
00070   const std::string LegCabin::displayVirtualClassList () const {
00071     std::ostringstream oStr;
00072
00073     for (VirtualClassList_T::const_iterator itVC = _virtualClassList.begin();
00074          itVC != _virtualClassList.end(); ++itVC) {
00075       const VirtualClassStruct& lVC = *itVC;
00076       oStr << std::endl << "Yield: " << std::fixed << std::setprecision (2)
00077            << lVC.getYield()
```

```
00078           << ", Protection: " << std::fixed << std::setprecision (2)
00079           << lVC.getCumulatedProtection()
00080           << ", Booking limit: " << std::fixed << std::setprecision (2)
00081           << lVC.getCumulatedBookingLimit();
00082     }
00083
00084     return oStr.str();
00085   }
00086
00087   // ////////////////////////////////////////////////////////////////////
00088   void LegCabin::updateFromReservation (const NbOfBookings_T& iNbOfBookings) {
00089     _committedSpace += iNbOfBookings;
00090     _availabilityPool = _offeredCapacity - _committedSpace;
00091   }
00092
00093   // ////////////////////////////////////////////////////////////////////
00094   void LegCabin::updateCurrentBidPrice() {
00095     const unsigned short lAvailabilityPool =
00096       static_cast<unsigned short> (std::floor (_availabilityPool));
00097
00098     if (lAvailabilityPool >= 1) {
00099       const unsigned short lBidPriceVectorSize = _bidPriceVector.size();
00100       if (lBidPriceVectorSize >= lAvailabilityPool) {
00101         _currentBidPrice = _bidPriceVector.at (lAvailabilityPool - 1);
00102       }
00103     }
00104   }
00105
00106   // ////////////////////////////////////////////////////////////////////
00107   void LegCabin::addDemandInformation (const YieldValue_T& iYield,
00108                                        const MeanValue_T& iMeanValue,
00109                                        const StdDevValue_T& iStdDevValue) {
00110     //
00111     const int lYieldLevel =
00112       static_cast<int> (std::floor (iYield + 0.5));
00113
00114     //
00115     YieldLevelDemandMap_T::iterator itDemand =
00116       _yieldLevelDemandMap.find (lYieldLevel);
00117
00118     if (itDemand == _yieldLevelDemandMap.end()) {
00119       MeanStdDevPair_T lMeanStdDevPair (iMeanValue,iStdDevValue);
00120       const bool hasInsertBeenSuccessful = _yieldLevelDemandMap.
00121         insert (YieldLevelDemandMap_T::value_type (lYieldLevel,
00122                                                    lMeanStdDevPair)).second;
00123       assert (hasInsertBeenSuccessful == true);
00124
00125     } else {
00126       //
00127       MeanStdDevPair_T& lMeanStdDevPair = itDemand->second;
00128       MeanValue_T lMeanValue = iMeanValue + lMeanStdDevPair.first;
00129       StdDevValue_T lStdDevValue = iStdDevValue * iStdDevValue + lMeanStdDevPair.
      second * lMeanStdDevPair.second;
00130       lStdDevValue = std::sqrt (lStdDevValue);
00131
00132       //
00133       lMeanStdDevPair = MeanStdDevPair_T (lMeanValue, lStdDevValue);
00134     }
00135   }
00136
00137 }
00138
```

35.327 stdair/bom/LegCabin.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_maths_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/LegCabinKey.hpp>
#include <stdair/bom/LegCabinTypes.hpp>
#include <stdair/bom/VirtualClassStruct.hpp>
#include <stdair/bom/VirtualClassTypes.hpp>
```

Classes

- class stdair::LegCabin

  Class representing the actual attributes for an airline leg-cabin.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.328 LegCabin.hpp

```
00001 #ifndef __STDAIR_BOM_LEGCABIN_HPP
00002 #define __STDAIR_BOM_LEGCABIN_HPP
00003 // //////////////////////////////////////////////////////////////////
00004 // Import section
00005 // //////////////////////////////////////////////////////////////////
00006 // STL
00007 #include <iosfwd>
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_inventory_types.hpp>
00011 #include <stdair/stdair_maths_types.hpp>
00012 #include <stdair/bom/BomAbstract.hpp>
00013 #include <stdair/bom/LegCabinKey.hpp>
00014 #include <stdair/bom/LegCabinTypes.hpp>
00015 #include <stdair/bom/VirtualClassStruct.hpp>
00016 #include <stdair/bom/VirtualClassTypes.hpp>
00017
00018 namespace stdair {
00019
00024   class LegCabin : public BomAbstract {
00025     template <typename BOM> friend class FacBom;
00026     friend class FacBomManager;
00027
00028   public:
```

```
00029     // ////////// Type definitions ////////////
00033     typedef LegCabinKey Key_T;
00034
00035   public:
00036     // /////////// Getters ////////////
00040     const Key_T& getKey() const {
00041       return _key;
00042     }
00043
00047     BomAbstract* const getParent() const {
00048       return _parent;
00049     }
00050
00054     const CabinCode_T& getCabinCode() const {
00055       return _key.getCabinCode();
00056     }
00057
00065     const MapKey_T getFullerKey() const;
00066
00070     const HolderMap_T& getHolderMap() const {
00071       return _holderMap;
00072     }
00073
00075     const CabinCapacity_T& getOfferedCapacity() const {
00076       return _offeredCapacity;
00077     }
00078
00080     const CabinCapacity_T& getPhysicalCapacity() const {
00081       return _physicalCapacity;
00082     }
00083
00085     const NbOfSeats_T& getSoldSeat() const {
00086       return _soldSeat;
00087     }
00088
00090     const CommittedSpace_T& getCommittedSpace() const {
00091       return _committedSpace;
00092     }
00093
00095     const Availability_T& getAvailabilityPool() const {
00096       return _availabilityPool;
00097     }
00098
00100     const Availability_T& getAvailability() const {
00101       return _availability;
00102     }
00103
00105     const BidPrice_T& getCurrentBidPrice() const {
00106       return _currentBidPrice;
00107     }
00108
00110     const BidPrice_T& getPreviousBidPrice() const {
00111       return _previousBidPrice;
00112     }
00113
00115     const BidPriceVector_T& getBidPriceVector() const {
00116       return _bidPriceVector;
00117     }
00118
00120     const CapacityAdjustment_T& getRegradeAdjustment() const {
00121       return _dcsRegrade;
00122     }
```

```
00123
00125     const AuthorizationLevel_T& getAuthorizationLevel() const {
00126       return _au;
00127     }
00128
00130     const UPR_T& getUPR() const {
00131       return _upr;
00132     }
00133
00135     const Availability_T& getNetAvailability() const {
00136       return _nav;
00137     }
00138
00140     const Availability_T& getGrossAvailability() const {
00141       return _gav;
00142     }
00143
00145     const OverbookingRate_T& getAvgCancellationPercentage() const {
00146       return _acp;
00147     }
00148
00150     const NbOfSeats_T& getETB() const {
00151       return _etb;
00152     }
00153
00155     const NbOfSeats_T& getStaffNbOfSeats() const {
00156       return _staffNbOfBookings;
00157     }
00158
00160     const NbOfSeats_T& getWLNbOfSeats() const {
00161       return _wlNbOfBookings;
00162     }
00163
00165     const NbOfSeats_T& getGroupNbOfSeats() const {
00166       return _groupNbOfBookings;
00167     }
00168
00170     VirtualClassList_T& getVirtualClassList() {
00171       return _virtualClassList;
00172     }
00173
00175     BidPriceVector_T& getBidPriceVector() {
00176       return _bidPriceVector;
00177     }
00178
00179
00181     const YieldLevelDemandMap_T getYieldLevelDemandMap() {
00182       return _yieldLevelDemandMap;
00183     }
00184
00185
00186   public:
00187     // ////////////// Setters ///////////////
00189     void setCapacities (const CabinCapacity_T& iCapacity);
00190
00192     void setSoldSeat (const NbOfSeats_T& iSoldSeat) {
00193       _soldSeat = iSoldSeat;
00194     }
00195
00197     void setCommittedSpace (const CommittedSpace_T& iCommittedSpace) {
00198       _committedSpace = iCommittedSpace;
00199     }
```

```
00200
00202     void setAvailabilityPool (const Availability_T& iAvailabilityPool) {
00203       _availabilityPool = iAvailabilityPool;
00204     }
00205
00207     void setAvailability (const Availability_T& iAvailability) {
00208       _availability = iAvailability;
00209     }
00210
00212     void setCurrentBidPrice (const BidPrice_T& iBidPrice) {
00213       _currentBidPrice = iBidPrice;
00214     }
00215
00217     void setPreviousBidPrice (const BidPrice_T& iBidPrice) {
00218       _previousBidPrice = iBidPrice;
00219     }
00220
00222     void updatePreviousBidPrice () {
00223       _previousBidPrice = _currentBidPrice;
00224     }
00225
00227     void setRegradeAdjustment (const CapacityAdjustment_T& iRegradeAdjustment) {
00228       _dcsRegrade = iRegradeAdjustment;
00229     }
00230
00232     void setAuthorizationLevel (const AuthorizationLevel_T& iAU) {
00233       _au = iAU;
00234     }
00235
00237     void setUPR (const UPR_T& iUPR) {
00238       _upr = iUPR;
00239     }
00240
00242     void setNetAvailability (const Availability_T& iNAV) {
00243       _nav = iNAV;
00244     }
00245
00247     void setGrossAvailability (const Availability_T& iGAV) {
00248       _gav = iGAV;
00249     }
00250
00252     void setAvgCancellationPercentage (const OverbookingRate_T& iACP) {
00253       _acp = iACP;
00254     }
00255
00257     void setETB (const NbOfSeats_T& iETB) {
00258       _etb = iETB;
00259     }
00260
00262     void setStaffNbOfSeats (const NbOfSeats_T& iStaffSeats) {
00263       _staffNbOfBookings = iStaffSeats;
00264     }
00265
00267     void setWLNbOfSeats (const NbOfSeats_T& iWLSeats) {
00268       _wlNbOfBookings = iWLSeats;
00269     }
00270
00272     void setGroupNbOfSeats (const NbOfSeats_T& iGroupSeats) {
00273       _groupNbOfBookings = iGroupSeats;
00274     }
00275
00277     void updateCurrentBidPrice();
```

```
00278
00279
00280   public:
00281     // ////////// Display support methods /////////
00286     void toStream (std::ostream& ioOut) const {
00287       ioOut << toString();
00288     }
00289
00294     void fromStream (std::istream& ioIn) {
00295     }
00296
00300     std::string toString() const;
00301
00305     const std::string describeKey() const {
00306       return _key.toString();
00307     }
00308
00312     const std::string displayVirtualClassList() const;
00313
00314
00315   public:
00316     // ////////// Business methods //////////
00320     void updateFromReservation (const NbOfBookings_T&);
00321
00325     void addVirtualClass (const VirtualClassStruct& iVC) {
00326       _virtualClassList.push_back (iVC);
00327     }
00328
00332     void emptyVirtualClassList() {
00333       _virtualClassList.clear();
00334     }
00335
00339     void emptyBidPriceVector() {
00340       _bidPriceVector.clear();
00341     }
00342
00346     void addDemandInformation (const YieldValue_T&, const MeanValue_T&,
00347                                const StdDevValue_T&);
00348
00352     void emptyYieldLevelDemandMap() {
00353       _yieldLevelDemandMap.clear();
00354     }
00355
00356
00357   protected:
00358     // ////////// Constructors and destructors /////////
00362     LegCabin (const Key_T&);
00366     ~LegCabin();
00367
00368   private:
00372     LegCabin();
00376     LegCabin (const LegCabin&);
00377
00378
00379
00380   protected:
00381     // ////////// Attributes /////////
00385     Key_T _key;
00386
00390     BomAbstract* _parent;
00391
00395     HolderMap_T _holderMap;
```

```
00396
00398     CabinCapacity_T _offeredCapacity;
00399
00401     CabinCapacity_T _physicalCapacity;
00402
00404     NbOfSeats_T  _soldSeat;
00405
00406     /* Committed space. */
00407     CommittedSpace_T  _committedSpace;
00408
00410     Availability_T _availabilityPool;
00411
00413     Availability_T _availability;
00414
00416     BidPrice_T _currentBidPrice;
00417
00419     BidPrice_T _previousBidPrice;
00420
00422     BidPriceVector_T _bidPriceVector;
00423
00425     VirtualClassList_T _virtualClassList;
00426
00428     YieldLevelDemandMap_T _yieldLevelDemandMap;
00429
00430
00431   public:
00433     CapacityAdjustment_T _dcsRegrade;
00434
00436     AuthorizationLevel_T _au;
00437
00439     UPR_T _upr;
00440
00442     Availability_T _nav;
00443
00445     Availability_T _gav;
00446
00448     OverbookingRate_T _acp;
00449
00451     NbOfSeats_T _etb;
00452
00454     NbOfSeats_T _staffNbOfBookings;
00455
00457     NbOfSeats_T _wlNbOfBookings;
00458
00460     NbOfSeats_T _groupNbOfBookings;
00461   };
00462
00463 }
00464 #endif // __STDAIR_BOM_LEGCABIN_HPP
00465
```

35.329 stdair/bom/LegCabinKey.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
```

```
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/LegCabinKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.330 LegCabinKey.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 #include <stdair/bom/LegCabinKey.hpp>
00014
00015 namespace stdair {
00016
00017   // ////////////////////////////////////////////////////////////////////
00018   LegCabinKey::LegCabinKey() : _cabinCode (DEFAULT_CABIN_CODE) {
00019     assert (false);
00020   }
00021
00022   // ////////////////////////////////////////////////////////////////////
00023   LegCabinKey::LegCabinKey (const CabinCode_T& iCabinCode)
00024     : _cabinCode (iCabinCode) {
00025   }
00026
00027   // ////////////////////////////////////////////////////////////////////
00028   LegCabinKey::LegCabinKey (const LegCabinKey& iKey)
00029     : _cabinCode (iKey._cabinCode) {
00030   }
00031
00032   // ////////////////////////////////////////////////////////////////////
00033   LegCabinKey::~LegCabinKey () {
00034   }
00035
00036   // ////////////////////////////////////////////////////////////////////
00037   void LegCabinKey::toStream (std::ostream& ioOut) const {
00038     ioOut << "LegCabinKey: " << toString() << std::endl;
00039   }
00040
00041   // ////////////////////////////////////////////////////////////////////
00042   void LegCabinKey::fromStream (std::istream& ioIn) {
00043   }
00044
00045   // ////////////////////////////////////////////////////////////////////
```

```
00046   const std::string LegCabinKey::toString() const {
00047     std::ostringstream oStr;
00048     oStr << _cabinCode;
00049     return oStr.str();
00050   }
00051
00052   // ////////////////////////////////////////////////////////////////////
00053   void LegCabinKey::serialisationImplementationExport() const {
00054     std::ostringstream oStr;
00055     boost::archive::text_oarchive oa (oStr);
00056     oa << *this;
00057   }
00058
00059   // ////////////////////////////////////////////////////////////////////
00060   void LegCabinKey::serialisationImplementationImport() {
00061     std::istringstream iStr;
00062     boost::archive::text_iarchive ia (iStr);
00063     ia >> *this;
00064   }
00065
00066   // ////////////////////////////////////////////////////////////////////
00067   template<class Archive>
00068   void LegCabinKey::serialize (Archive& ioArchive,
00069                                const unsigned int iFileVersion) {
00074     ioArchive & _cabinCode;
00075   }
00076
00077 }
```

35.331 stdair/bom/LegCabinKey.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

Classes

- struct stdair::LegCabinKey

  Key of a given leg-cabin, made of a cabin code (only).

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.332 LegCabinKey.hpp

```
00001 #ifndef __STDAIR_BOM_LEGCABINKEY_HPP
00002 #define __STDAIR_BOM_LEGCABINKEY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/bom/KeyAbstract.hpp>
00013
00015 namespace boost {
00016   namespace serialization {
00017     class access;
00018   }
00019 }
00020
00021 namespace stdair {
00022
00026   struct LegCabinKey : public KeyAbstract {
00027     friend class boost::serialization::access;
00028
00029     // ////////// Constructors and destructors //////////
00030   private:
00034     LegCabinKey();
00035
00036   public:
00040     LegCabinKey (const CabinCode_T& iCabinCode);
00041
00045     LegCabinKey (const LegCabinKey&);
00046
00050     ~LegCabinKey();
00051
00052
00053   public:
00054     // ////////// Getters //////////
00056     const CabinCode_T& getCabinCode() const {
00057       return _cabinCode;
00058     }
00059
00060
00061   public:
00062     // ////////// Display support methods /////////
00068     void toStream (std::ostream& ioOut) const;
00069
00075     void fromStream (std::istream& ioIn);
00076
00086     const std::string toString() const;
00087
00088
00089   public:
00090     // ////////// (Boost) Serialisation support methods /////////
00094     template<class Archive>
00095     void serialize (Archive& ar, const unsigned int iFileVersion);
00096
00097   private:
00102     void serialisationImplementationExport() const;
00103     void serialisationImplementationImport();
```

```
00104
00105
00106   private:
00107     // ////////////////// Attributes ///////////////
00111     CabinCode_T _cabinCode;
00112   };
00113
00114 }
00115 #endif // __STDAIR_BOM_LEGCABINKEY_HPP
```

35.333 stdair/bom/LegCabinTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< LegCabin * > stdair::LegCabinList_T
- typedef std::map< const MapKey_T, LegCabin * > stdair::LegCabinMap_T

35.334 LegCabinTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_LEGCABINTYPES_HPP
00003 #define __STDAIR_BOM_LEGCABINTYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations.
00017   class LegCabin;
00018
00020   typedef std::list<LegCabin*> LegCabinList_T;
00021
00023   typedef std::map<const MapKey_T, LegCabin*> LegCabinMap_T;
00024
00025 }
00026 #endif // __STDAIR_BOM_LEGCABINTYPES_HPP
```

```
00027
```

35.335 stdair/bom/LegDate.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/FlightDate.hpp>
#include <stdair/bom/LegCabin.hpp>
#include <stdair/bom/LegDate.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.336 LegDate.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_General.hpp>
00009 #include <stdair/basic/BasConst_Inventory.hpp>
00010 #include <stdair/bom/BomManager.hpp>
00011 #include <stdair/bom/FlightDate.hpp>
00012 #include <stdair/bom/LegCabin.hpp>
00013 #include <stdair/bom/LegDate.hpp>
00014
00015 namespace stdair {
00016
00017   // ////////////////////////////////////////////////////////////////////
00018   LegDate::LegDate() : _key (DEFAULT_ORIGIN), _parent (NULL) {
00019     assert (false);
00020   }
00021
00022   // ////////////////////////////////////////////////////////////////////
00023   LegDate::LegDate (const LegDate&) : _key (DEFAULT_ORIGIN), _parent (NULL) {
00024     assert (false);
00025   }
00026
00027   // ////////////////////////////////////////////////////////////////////
00028   LegDate::LegDate (const Key_T& iKey)
00029     : _key (iKey), _parent (NULL), _distance (DEFAULT_DISTANCE_VALUE),
00030       _capacity (DEFAULT_CABIN_CAPACITY) {
```

```
00031   }
00032
00033   // ////////////////////////////////////////////////////////////////////
00034   LegDate::~LegDate () {
00035   }
00036
00037   // ////////////////////////////////////////////////////////////////////
00038   const AirlineCode_T& LegDate::getAirlineCode() const {
00039     const FlightDate* lFlightDate_ptr =
00040       static_cast<const FlightDate*> (getParent());
00041     assert (lFlightDate_ptr != NULL);
00042     return lFlightDate_ptr->getAirlineCode();
00043   }
00044
00045   // ////////////////////////////////////////////////////////////////////
00046   std::string LegDate::toString() const {
00047     std::ostringstream oStr;
00048     oStr << describeKey();
00049     return oStr.str();
00050   }
00051
00052   // ////////////////////////////////////////////////////////////////////
00053   LegCabin* LegDate::getLegCabin (const std::string& iLegCabinKeyStr) const {
00054     LegCabin* oLegCabin_ptr =
00055       BomManager::getObjectPtr<LegCabin> (*this, iLegCabinKeyStr);
00056     return oLegCabin_ptr;
00057   }
00058
00059   // ////////////////////////////////////////////////////////////////////
00060   LegCabin* LegDate::getLegCabin (const LegCabinKey& iLegCabinKey) const {
00061     return getLegCabin (iLegCabinKey.toString());
00062   }
00063
00064   // ////////////////////////////////////////////////////////////////////
00065   const Duration_T LegDate::getTimeOffset() const {
00066     // TimeOffset = (OffTime - BoardingTime) + (OffDate - BoardingDate) * 24
00067     //              - ElapsedTime
00068     Duration_T oTimeOffset = (_offTime - _boardingTime);
00069
00070     const DateOffset_T& lDateOffset = getDateOffset();
00071
00072     const Duration_T lDateOffsetInHours (lDateOffset.days() * 24, 0, 0);
00073
00074     oTimeOffset += lDateOffsetInHours - _elapsedTime;
00075
00076     return oTimeOffset;
00077   }
00078
00079   // ////////////////////////////////////////////////////////////////////
00080   void LegDate::setElapsedTime (const Duration_T& iElapsedTime) {
00081     // Set Elapsed time
00082     _elapsedTime = iElapsedTime;
00083
00084     // Update distance according to the mean plane speed
00085     updateDistanceFromElapsedTime();
00086   }
00087
00088   // ////////////////////////////////////////////////////////////////////
00089   void LegDate::updateDistanceFromElapsedTime() {
00090     //
00091     const double lElapseInHours =
00092       static_cast<const double> (_elapsedTime.hours());
```

```
00093
00094     // Normally, Distance_T is an unsigned long int
00095     const Distance_T lDistance =
00096       static_cast<const Distance_T> (DEFAULT_FLIGHT_SPEED * lElapseInHours);
00097
00098     _distance = lDistance;
00099   }
00100
00101 }
00102
```

35.337 stdair/bom/LegDate.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/LegDateKey.hpp>
#include <stdair/bom/LegDateTypes.hpp>
```

Classes

- class stdair::LegDate

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.338 LegDate.hpp

```
00001 #ifndef __STDAIR_BOM_LEGDATE_HPP
00002 #define __STDAIR_BOM_LEGDATE_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/bom/BomAbstract.hpp>
00013 #include <stdair/bom/LegDateKey.hpp>
00014 #include <stdair/bom/LegDateTypes.hpp>
00015
00016 namespace stdair {
00017
00019   struct LegCabinKey;
00020   class LegCabin;
```

```
00021
00025   class LegDate : public BomAbstract {
00026     template <typename BOM> friend class FacBom;
00027     friend class FacBomManager;
00028
00029   public:
00030     // ////////// Type definitions ////////////
00032     typedef LegDateKey Key_T;
00033
00034
00035   public:
00036     // ////////// Getters ////////////
00038     const Key_T& getKey() const {
00039       return _key;
00040     }
00041
00043     BomAbstract* const getParent() const {
00044       return _parent;
00045     }
00046
00048     const AirportCode_T& getBoardingPoint() const {
00049       return _key.getBoardingPoint();
00050     }
00051
00059     const AirlineCode_T& getAirlineCode() const;
00060
00064     const HolderMap_T& getHolderMap() const {
00065       return _holderMap;
00066     }
00067
00078     LegCabin* getLegCabin (const std::string& iLegCabinKeyStr) const;
00079
00090     LegCabin* getLegCabin (const LegCabinKey&) const;
00091
00093     const AirportCode_T& getOffPoint() const {
00094       return _offPoint;
00095     }
00096
00098     const Date_T& getBoardingDate() const {
00099       return _boardingDate;
00100     }
00101
00103     const Duration_T& getBoardingTime() const {
00104       return _boardingTime;
00105     }
00106
00108     const Date_T& getOffDate() const {
00109       return _offDate;
00110     }
00111
00113     const Duration_T& getOffTime() const {
00114       return _offTime;
00115     }
00116
00118     const Duration_T& getElapsedTime() const {
00119       return _elapsedTime;
00120     }
00121
00123     const Distance_T& getDistance() const {
00124       return _distance;
00125     }
00126
```

```
00128     const CabinCapacity_T& getCapacity() const {
00129       return _capacity;
00130     }
00131
00133     const DateOffset_T getDateOffset() const {
00134       return _offDate - _boardingDate;
00135     }
00136
00141     const Duration_T getTimeOffset() const;
00142
00143
00144   public:
00145     // ////////// Setters //////////
00147     void setOffPoint (const AirportCode_T& iOffPoint) {
00148       _offPoint = iOffPoint;
00149     }
00150
00152     void setBoardingDate (const Date_T& iBoardingDate) {
00153       _boardingDate = iBoardingDate;
00154     }
00155
00157     void setBoardingTime (const Duration_T& iBoardingTime) {
00158       _boardingTime = iBoardingTime;
00159     }
00160
00162     void setOffDate (const Date_T& iOffDate) {
00163       _offDate = iOffDate;
00164     }
00165
00167     void setOffTime (const Duration_T& iOffTime) {
00168       _offTime = iOffTime;
00169     }
00170
00172     void setElapsedTime (const Duration_T&);
00173
00174   private:
00176     void updateDistanceFromElapsedTime();
00177
00178
00179   public:
00180     // /////////// Display support methods /////////
00183     void toStream (std::ostream& ioOut) const {
00184       ioOut << toString();
00185     }
00186
00189     void fromStream (std::istream& ioIn) {
00190     }
00191
00193     std::string toString() const;
00194
00196     const std::string describeKey() const {
00197       return _key.toString();
00198     }
00199
00200
00201   protected:
00202     // ////////// Constructors and destructors /////////
00204     LegDate (const Key_T&);
00206     virtual ~LegDate();
00207
00208   private:
00210     LegDate();
```

```
00212     LegDate (const LegDate&);
00213
00214
00215   protected:
00216     // ////////// Attributes /////////
00218     Key_T _key;
00219
00221     BomAbstract* _parent;
00222
00224     HolderMap_T _holderMap;
00225
00227     AirportCode_T _offPoint;
00228
00230     Date_T _boardingDate;
00231
00233     Duration_T _boardingTime;
00234
00236     Date_T _offDate;
00237
00239     Duration_T _offTime;
00240
00242     Duration_T _elapsedTime;
00243
00245     Distance_T _distance;
00246
00248     CabinCapacity_T _capacity;
00249   };
00250
00251 }
00252 #endif // __STDAIR_BOM_LEGDATE_HPP
00253
```

35.339 stdair/bom/LegDateKey.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/LegDateKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.340 LegDateKey.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
```

```
00008 #include <stdair/basic/BasConst_Inventory.hpp>
00009 #include <stdair/bom/LegDateKey.hpp>
00010
00011 namespace stdair {
00012
00013   // ////////////////////////////////////////////////////////////////////
00014   LegDateKey::LegDateKey() : _boardingPoint (DEFAULT_ORIGIN) {
00015     assert (false);
00016   }
00017
00018   // ////////////////////////////////////////////////////////////////////
00019   LegDateKey::LegDateKey (const AirportCode_T& iBoardingPoint)
00020     : _boardingPoint (iBoardingPoint) {
00021   }
00022
00023   // ////////////////////////////////////////////////////////////////////
00024   LegDateKey::LegDateKey (const LegDateKey& iKey)
00025     : _boardingPoint (iKey._boardingPoint) {
00026   }
00027
00028   // ////////////////////////////////////////////////////////////////////
00029   LegDateKey::~LegDateKey () {
00030   }
00031
00032   // ////////////////////////////////////////////////////////////////////
00033   void LegDateKey::toStream (std::ostream& ioOut) const {
00034     ioOut << "LegDateKey: " << toString();
00035   }
00036
00037   // ////////////////////////////////////////////////////////////////////
00038   void LegDateKey::fromStream (std::istream& ioIn) {
00039   }
00040
00041   // ////////////////////////////////////////////////////////////////////
00042   const std::string LegDateKey::toString() const {
00043     std::ostringstream oStr;
00044     oStr << _boardingPoint;
00045     return oStr.str();
00046   }
00047
00048 }
```

35.341 stdair/bom/LegDateKey.hpp File Reference

```
#include <stdair/stdair_basic_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

Classes

- struct stdair::LegDateKey

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.342 LegDateKey.hpp

```
00001 #ifndef __STDAIR_BOM_LEGDATEKEY_HPP
00002 #define __STDAIR_BOM_LEGDATEKEY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/bom/KeyAbstract.hpp>
00010
00011 namespace stdair {
00012
00016   struct LegDateKey : public KeyAbstract {
00017
00018     // ////////// Constructors and destructors //////////
00019   private:
00021     LegDateKey();
00022
00023   public:
00025     LegDateKey (const AirportCode_T& iBoardingPoint);
00027     LegDateKey (const LegDateKey&);
00029     ~LegDateKey();
00030
00031
00032     // ////////// Getters //////////
00034     const AirportCode_T& getBoardingPoint() const {
00035       return _boardingPoint;
00036     }
00037
00038
00039     // ////////// Display support methods /////////
00042     void toStream (std::ostream& ioOut) const;
00043
00046     void fromStream (std::istream& ioIn);
00047
00053     const std::string toString() const;
00054
00055
00056   private:
00057     // ////////////////// Attributes ///////////////
00059     AirportCode_T _boardingPoint;
00060   };
00061
00062 }
00063 #endif // __STDAIR_BOM_LEGDATEKEY_HPP
```

35.343 stdair/bom/LegDateTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< LegDate * > stdair::LegDateList_T
- typedef std::map< const MapKey_T, LegDate * > stdair::LegDateMap_T

35.344 LegDateTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_LEGDATETYPES_HPP
00003 #define __STDAIR_BOM_LEGDATETYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations.
00017   class LegDate;
00018
00020   typedef std::list<LegDate*> LegDateList_T;
00021
00023   typedef std::map<const MapKey_T, LegDate*> LegDateMap_T;
00024 }
00025 #endif // __STDAIR_BOM_LEGDATETYPES_HPP
00026
```

35.345 stdair/bom/OnDDate.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/OnDDate.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.346 OnDDate.cpp

```
00001 // //////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Inventory.hpp>
00009 #include <stdair/basic/BasConst_General.hpp>
00010 #include <stdair/bom/BomManager.hpp>
00011 #include <stdair/bom/Inventory.hpp>
00012 #include <stdair/bom/OnDDate.hpp>
00013
00014 namespace stdair {
00015
00016   // //////////////////////////////////////////////////////////////////////
00017   OnDDate::OnDDate()
00018     : _key (DEFAULT_OND_STRING_LIST), _parent (NULL) {
00019     assert (false);
00020   }
00021
00022   // //////////////////////////////////////////////////////////////////////
00023   OnDDate::OnDDate (const OnDDate& iOnDDate)
00024     : _key (iOnDDate.getKey()), _parent (NULL) {
00025     assert (false);
00026   }
00027
00028   // //////////////////////////////////////////////////////////////////////
00029   OnDDate::OnDDate (const Key_T& iKey)
00030   : _key (iKey), _parent (NULL) {
00031   }
00032
00033   // //////////////////////////////////////////////////////////////////////
00034   OnDDate::~OnDDate() {
00035   }
00036
00037   // //////////////////////////////////////////////////////////////////////
00038   std::string OnDDate::toString() const {
00039     std::ostringstream oStr;
00040     oStr << describeKey();
00041     return oStr.str();
00042   }
00043
00044   // //////////////////////////////////////////////////////////////////////
00045   const AirlineCode_T& OnDDate::getAirlineCode() const {
00046     const Inventory* lInventory_ptr =
00047       static_cast<const Inventory*> (getParent());
00048     assert (lInventory_ptr != NULL);
00049     return lInventory_ptr->getAirlineCode();
00050   }
00051
00052   // //////////////////////////////////////////////////////////////////////
00053   void OnDDate::
```

```
00054   setDemandInformation (const CabinClassPairList_T& iCabinClassPairList,
00055                         const YieldDemandPair_T& iYieldDemandPair) {
00056     std::ostringstream oStr;
00057     for(CabinClassPairList_T::const_iterator itCCP = iCabinClassPairList.begin();
00058         itCCP != iCabinClassPairList.end(); ++itCCP) {
00059       oStr << itCCP->first << ":" << itCCP->second << ";";
00060     }
00061     std::string lCabinClassPath = oStr.str();
00062     StringDemandStructMap_T::iterator it =
00063       _classPathDemandMap.find(lCabinClassPath);
00064     if (it == _classPathDemandMap.end()) {
00065       const StringDemandStructPair_T lPairStringDemandChar (lCabinClassPath,
00066                                                             iYieldDemandPair);
00067       _classPathDemandMap.insert (lPairStringDemandChar);
00068       const StringCabinClassPair_T lStringCabinClassPair (lCabinClassPath,
00069                                                           iCabinClassPairList);
00070       _stringCabinClassPairListMap.insert (lStringCabinClassPair);
00071     } else {
00072         it->second = iYieldDemandPair;
00073     }
00074   }
00075
00076   // ////////////////////////////////////////////////////////////////////
00077   void OnDDate::setTotalForecast (const CabinCode_T& iCabinCode,
00078                                   const WTPDemandPair_T& iWTPDemandPair) {
00079
00080     CabinForecastMap_T::iterator it =
00081       _cabinForecastMap.find (iCabinCode);
00082     if (it == _cabinForecastMap.end()) {
00083       const CabinForecastPair_T lPairCabinForecastChar (iCabinCode,
00084                                                         iWTPDemandPair);
00085       _cabinForecastMap.insert (lPairCabinForecastChar);
00086     } else {
00087       assert (false);
00088     }
00089   }
00090
00091 }
```

35.347 stdair/bom/OnDDate.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_maths_types.hpp>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/stdair_rm_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/OnDDateKey.hpp>
#include <stdair/bom/OnDDateTypes.hpp>
```

Classes

- class stdair::OnDDate

  Class representing the actual attributes for an airline flight-date.

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.348 OnDDate.hpp

```
00001 #ifndef __STDAIR_BOM_ONDDATE_HPP
00002 #define __STDAIR_BOM_ONDDATE_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/stdair_maths_types.hpp>
00013 #include <stdair/stdair_basic_types.hpp>
00014 #include <stdair/stdair_demand_types.hpp>
00015 #include <stdair/stdair_rm_types.hpp>
00016 #include <stdair/bom/BomAbstract.hpp>
00017 #include <stdair/bom/OnDDateKey.hpp>
00018 #include <stdair/bom/OnDDateTypes.hpp>
00019
00021 namespace boost {
00022   namespace serialization {
00023     class access;
00024   }
00025 }
00026
00027 namespace stdair {
00028
00033   class OnDDate : public BomAbstract {
00034     template <typename BOM> friend class FacBom;
00035     friend class FacBomManager;
00036     friend class boost::serialization::access;
00037
00038   public:
00039     // ////////// Type definitions ////////////
00043     typedef OnDDateKey Key_T;
00044
00045
00046   public:
00047     // ////////// Getters ///////////////
00049     const Key_T& getKey() const {
00050       return _key;
```

```
00051     }
00052
00054     BomAbstract* const getParent() const {
00055       return _parent;
00056     }
00057
00065     const AirlineCode_T& getAirlineCode() const;
00066
00067
00069     const stdair::Date_T getDate() const {
00070       return _key.getDate();
00071     }
00072
00074     const stdair::AirportCode_T getOrigin() const {
00075       return _key.getOrigin();
00076     }
00077
00079     const stdair::AirportCode_T getDestination() const {
00080       return _key.getDestination();
00081     }
00082
00086     const HolderMap_T& getHolderMap() const {
00087       return _holderMap;
00088     }
00089
00093     const StringDemandStructMap_T& getDemandInfoMap () const {
00094       return _classPathDemandMap;
00095     }
00096
00100     const CabinForecastMap_T& getTotalForecastMap () const {
00101       return _cabinForecastMap;
00102     }
00103
00107     const WTPDemandPair_T& getTotalForecast (const CabinCode_T& iCC) const {
00108       assert (_cabinForecastMap.find(iCC)!=_cabinForecastMap.end());
00109       return _cabinForecastMap.find(iCC)->second;
00110     }
00111
00115     const CabinClassPairList_T& getCabinClassPairList (const std::string& iStr) c
      onst {
00116       assert (_stringCabinClassPairListMap.find(iStr)!=
      _stringCabinClassPairListMap.end());
00117       return _stringCabinClassPairListMap.find(iStr)->second;
00118     }
00119
00123     const short getNbOfSegments () const {
00124       return _key.getNbOfSegments();
00125     }
00126
00127   public:
00128     // ////////// Setters ///////////////
00130     void setDemandInformation (const CabinClassPairList_T&,
00131                                const YieldDemandPair_T&);
00132
00133
00135     void setTotalForecast (const CabinCode_T&,
00136                            const WTPDemandPair_T&);
00137
00138
00139   public:
00140     // ////////// Display support methods /////////
00146     void toStream (std::ostream& ioOut) const {
```

```
00147       ioOut << toString();
00148     }
00149
00155     void fromStream (std::istream& ioIn) {
00156     }
00157
00161     std::string toString() const;
00162
00166     const std::string describeKey() const {
00167       return _key.toString();
00168     }
00169
00170
00171   public:
00172     // ////////////// (Boost) Serialisation support methods /////////
00176     template<class Archive>
00177     void serialize (Archive& ar, const unsigned int iFileVersion);
00178
00179   private:
00184     void serialisationImplementation();
00185
00186
00187   protected:
00188     // /////////// Constructors and destructors /////////
00192     OnDDate (const Key_T&);
00193
00197     virtual ~OnDDate();
00198
00199   private:
00203     OnDDate();
00204
00208     OnDDate (const OnDDate&);
00209
00210
00211   protected:
00212     // /////////// Attributes /////////
00216     Key_T _key;
00217
00221     BomAbstract* _parent;
00222
00226     HolderMap_T _holderMap;
00227
00231     StringDemandStructMap_T _classPathDemandMap;
00232
00236     StringCabinClassPairListMap_T _stringCabinClassPairListMap;
00237
00241     CabinForecastMap_T _cabinForecastMap;
00242   };
00243
00244 }
00245 #endif // __STDAIR_BOM_ONDDATE_HPP
```

35.349 stdair/bom/OnDDateKey.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/date_time/gregorian/formatters.hpp>
#include <boost/archive/text_iarchive.hpp>
```

```
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/bom/OnDDateKey.hpp>
#include <stdair/bom/BomKeyManager.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightDate.hpp>
#include <stdair/bom/SegmentDate.hpp>
#include <stdair/bom/BomDisplay.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Functions

- template void stdair::OnDDateKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void stdair::OnDDateKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)

35.350 OnDDateKey.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost Date-Time
00008 #include <boost/date_time/gregorian/formatters.hpp>
00009 // Boost.Serialization
00010 #include <boost/archive/text_iarchive.hpp>
00011 #include <boost/archive/text_oarchive.hpp>
00012 #include <boost/serialization/access.hpp>
00013 // StdAir
00014 #include <stdair/basic/BasConst_Inventory.hpp>
00015 #include <stdair/basic/BasConst_BomDisplay.hpp>
00016 #include <stdair/basic/BasConst_General.hpp>
00017 #include <stdair/bom/OnDDateKey.hpp>
00018 #include <stdair/bom/BomKeyManager.hpp>
00019 #include <stdair/bom/Inventory.hpp>
00020 #include <stdair/bom/FlightDate.hpp>
00021 #include <stdair/bom/SegmentDate.hpp>
```

```
00022 #include <stdair/bom/BomDisplay.hpp>
00023
00024 namespace stdair {
00025
00026   // ////////////////////////////////////////////////////////////////////
00027   OnDDateKey::OnDDateKey()
00028     : _OnDStringList (DEFAULT_OND_STRING_LIST) {
00029     assert (false);
00030   }
00031
00032   // ////////////////////////////////////////////////////////////////////
00033   OnDDateKey::OnDDateKey (const OnDStringList_T& iOnDStringList)
00034     : _OnDStringList (iOnDStringList) {
00035   }
00036
00037   // ////////////////////////////////////////////////////////////////////
00038   OnDDateKey::OnDDateKey (const OnDDateKey& iKey)
00039     : _OnDStringList (iKey._OnDStringList) {
00040   }
00041
00042   // ////////////////////////////////////////////////////////////////////
00043   OnDDateKey::~OnDDateKey() {
00044   }
00045
00046   // ////////////////////////////////////////////////////////////////////
00047   const Date_T OnDDateKey::getDate() const {
00048     assert(_OnDStringList.empty() == false);
00049     const OnDString_T& lFrontOnDString = _OnDStringList.front();
00050     return BomKeyManager::extractFlightDateKey (lFrontOnDString).
      getDepartureDate();
00051   }
00052
00053   // ////////////////////////////////////////////////////////////////////
00054   const AirportCode_T OnDDateKey::getOrigin() const {
00055     assert(_OnDStringList.empty() == false);
00056     const OnDString_T& lFrontOnDString = _OnDStringList.front();
00057     return BomKeyManager::extractSegmentDateKey (lFrontOnDString).
      getBoardingPoint();
00058   }
00059
00060   // ////////////////////////////////////////////////////////////////////
00061   const AirportCode_T OnDDateKey::getDestination() const {
00062     assert(_OnDStringList.empty() == false);
00063     const OnDString_T& lLastOnDString = _OnDStringList.back();
00064     return BomKeyManager::extractSegmentDateKey (lLastOnDString).getOffPoint();
00065   }
00066
00067   // ////////////////////////////////////////////////////////////////////
00068   void OnDDateKey::toStream (std::ostream& ioOut) const {
00069     ioOut << "OnDDateKey: " << toString();
00070   }
00071
00072   // ////////////////////////////////////////////////////////////////////
00073   void OnDDateKey::fromStream (std::istream& ioIn) {
00074   }
00075
00076   // ////////////////////////////////////////////////////////////////////
00077   const std::string OnDDateKey::toString() const {
00078     std::ostringstream oStr;
00079     for (OnDStringList_T::const_iterator itOnDString = _OnDStringList.begin();
00080          itOnDString != _OnDStringList.end(); ++itOnDString){
00081       oStr << *itOnDString << " ";
```

```
00082     }
00083     return oStr.str();
00084   }
00085
00086   // ////////////////////////////////////////////////////////////////////
00087   void OnDDateKey::serialisationImplementationExport() const {
00088     std::ostringstream oStr;
00089     boost::archive::text_oarchive oa (oStr);
00090     oa << *this;
00091   }
00092
00093   // ////////////////////////////////////////////////////////////////////
00094   void OnDDateKey::serialisationImplementationImport() {
00095     std::istringstream iStr;
00096     boost::archive::text_iarchive ia (iStr);
00097     ia >> *this;
00098   }
00099
00100   // ////////////////////////////////////////////////////////////////////
00101   template<class Archive>
00102   void OnDDateKey::serialize (Archive& ioArchive,
00103                               const unsigned int iFileVersion) {
00109   }
00110
00111   // ////////////////////////////////////////////////////////////////////
00112   // Explicit template instantiation
00113   namespace ba = boost::archive;
00114   template void OnDDateKey::serialize<ba::text_oarchive> (ba::text_oarchive&,
00115                                                           unsigned int);
00116   template void OnDDateKey::serialize<ba::text_iarchive> (ba::text_iarchive&,
00117                                                           unsigned int);
00118   // ////////////////////////////////////////////////////////////////////
00119
00120 }
```

35.351 stdair/bom/OnDDateKey.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

Classes

- struct stdair::OnDDateKey

  Key of a given O&D-date, made of a list of OnD strings. a OnD string contains the airline code, the flight number, the date and the segment (origin and destination).

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.352 OnDDateKey.hpp

```
00001 #ifndef __STDAIR_BOM_ONDDATEKEY_HPP
00002 #define __STDAIR_BOM_ONDDATEKEY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/stdair_demand_types.hpp>
00013 #include <stdair/stdair_date_time_types.hpp>
00014 #include <stdair/bom/KeyAbstract.hpp>
00015
00016 namespace stdair {
00017
00023   struct OnDDateKey : public KeyAbstract {
00024     friend class boost::serialization::access;
00025
00026     // ////////// Constructors and destructors //////////
00027   private:
00031     OnDDateKey();
00032
00033   public:
00037     OnDDateKey (const OnDStringList_T&);
00038
00042     OnDDateKey (const OnDDateKey&);
00043
00047     ~OnDDateKey();
00048
00049
00050   public:
00051     // ////////// Getters //////////
00055     const Date_T getDate() const;
00056
00060     const AirportCode_T getOrigin() const;
00061
00065     const AirportCode_T getDestination() const;
00066
00070     const short getNbOfSegments () const {
00071       return _OnDStringList.size();
00072     }
00073
00074   public:
00075     // ////////// Display support methods ////////
00081     void toStream (std::ostream& ioOut) const;
00082
00088     void fromStream (std::istream& ioIn);
00089
00099     const std::string toString() const;
00100
00101
```

```
00102   public:
00103     // ////////////// (Boost) Serialisation support methods /////////
00107     template<class Archive>
00108     void serialize (Archive& ar, const unsigned int iFileVersion);
00109
00110   private:
00115     void serialisationImplementationExport() const;
00116     void serialisationImplementationImport();
00117
00118
00119   private:
00120     // ////////////////// Attributes ///////////////
00121     OnDStringList_T _OnDStringList;
00122
00123   };
00124
00125 }
00126 #endif // __STDAIR_BOM_ONDDATEKEY_HPP
```

35.353 stdair/bom/OnDDateTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
#include <stdair/stdair_maths_types.hpp>
#include <stdair/stdair_demand_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< OnDDate * > stdair::OnDDateList_T
- typedef std::map< const MapKey_T, OnDDate * > stdair::OnDDateMap_T
- typedef std::pair< std::string, YieldDemandPair_T > stdair::StringDemandStructPair_T
- typedef std::map< std::string, YieldDemandPair_T > stdair::StringDemandStructMap_T
- typedef std::map< std::string, CabinClassPairList_T > stdair::StringCabinClassPairListMap_T
- typedef std::pair< std::string, CabinClassPairList_T > stdair::StringCabinClassPair_T
- typedef std::map< CabinCode_T, WTPDemandPair_T > stdair::CabinForecastMap_T
- typedef std::pair< CabinCode_T, WTPDemandPair_T > stdair::CabinForecastPair_T

35.354 OnDDateTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_ONDDATETYPES_HPP
00003 #define __STDAIR_BOM_ONDDATETYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // Stdair
00012 #include <stdair/bom/key_types.hpp>
00013 #include <stdair/stdair_maths_types.hpp>
00014 #include <stdair/stdair_demand_types.hpp>
00015
00016 namespace stdair {
00017
00018   // Forward declarations.
00019   class OnDDate;
00020
00022   typedef std::list<OnDDate*> OnDDateList_T;
00023
00025   typedef std::map<const MapKey_T, OnDDate*> OnDDateMap_T;
00026
00032   typedef std::pair<std::string, YieldDemandPair_T> StringDemandStructPair_T;
00033   typedef std::map<std::string, YieldDemandPair_T> StringDemandStructMap_T;
00034
00041   typedef std::map<std::string, CabinClassPairList_T>
      StringCabinClassPairListMap_T;
00042   typedef std::pair<std::string, CabinClassPairList_T> StringCabinClassPair_T;
00043
00048   typedef std::map<CabinCode_T, WTPDemandPair_T> CabinForecastMap_T;
00049   typedef std::pair<CabinCode_T, WTPDemandPair_T> CabinForecastPair_T;
00050
00051 }
00052 #endif // __STDAIR_BOM_ONDDATETYPES_HPP
```

35.355 stdair/bom/OptimisationNotificationStruct.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/bom/OptimisationNotificationStruct.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.356 OptimisationNotificationStruct.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
```

```
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/bom/OptimisationNotificationStruct.hpp>
00009
00010 namespace stdair {
00011
00012   // ////////////////////////////////////////////////////////////////////
00013   OptimisationNotificationStruct::OptimisationNotificationStruct()
00014     :  _partySize (0), _stayDuration (0), _wtp (0.0), _valueOfTime (0.0) {
00015     assert (false);
00016   }
00017
00018   // ////////////////////////////////////////////////////////////////////
00019   OptimisationNotificationStruct::
00020   OptimisationNotificationStruct (const OptimisationNotificationStruct& iOptimisa
      tionNotification)
00021     : _origin (iOptimisationNotification._origin),
00022       _destination (iOptimisationNotification._destination),
00023       _pos (iOptimisationNotification._pos),
00024       _preferredDepartureDate (iOptimisationNotification._preferredDepartureDate)
      ,
00025       _notificationDateTime (iOptimisationNotification._notificationDateTime),
00026       _preferredCabin (iOptimisationNotification._preferredCabin),
00027       _partySize (iOptimisationNotification._partySize),
00028       _channel (iOptimisationNotification._channel),
00029       _tripType (iOptimisationNotification._tripType),
00030       _stayDuration (iOptimisationNotification._stayDuration),
00031       _frequentFlyerType (iOptimisationNotification._frequentFlyerType),
00032       _preferredDepartureTime (iOptimisationNotification._preferredDepartureTime)
      ,
00033       _wtp (iOptimisationNotification._wtp),
00034       _valueOfTime (iOptimisationNotification._valueOfTime) {
00035   }
00036
00037   // ////////////////////////////////////////////////////////////////////
00038   OptimisationNotificationStruct::
00039   OptimisationNotificationStruct (const AirportCode_T& iOrigin,
00040                         const AirportCode_T& iDestination,
00041                         const CityCode_T& iPOS,
00042                         const Date_T& iDepartureDate,
00043                         const DateTime_T& iNotificationDateTime,
00044                         const CabinCode_T& iPreferredCabin,
00045                         const NbOfSeats_T& iPartySize,
00046                         const ChannelLabel_T& iChannel,
00047                         const TripType_T& iTripType,
00048                         const DayDuration_T& iStayDuration,
00049                         const FrequentFlyer_T& iFrequentFlyerType,
00050                         const Duration_T& iPreferredDepartureTime,
00051                         const WTP_T& iWTP,
00052                         const PriceValue_T& iValueOfTime)
00053     : _origin (iOrigin), _destination (iDestination),
00054       _pos (iPOS), _preferredDepartureDate (iDepartureDate),
00055       _notificationDateTime (iNotificationDateTime),
00056       _preferredCabin (iPreferredCabin), _partySize (iPartySize),
00057       _channel (iChannel), _tripType (iTripType),
00058       _stayDuration (iStayDuration), _frequentFlyerType (iFrequentFlyerType),
00059       _preferredDepartureTime (iPreferredDepartureTime), _wtp (iWTP),
00060       _valueOfTime (iValueOfTime) {
00061   }
```

```
00062
00063   // //////////////////////////////////////////////////////////////////
00064   OptimisationNotificationStruct::~OptimisationNotificationStruct() {
00065   }
00066
00067   // //////////////////////////////////////////////////////////////////
00068   void OptimisationNotificationStruct::toStream (std::ostream& ioOut) const {
00069     ioOut << describe();
00070   }
00071
00072   // //////////////////////////////////////////////////////////////////
00073   void OptimisationNotificationStruct::fromStream (std::istream& ioIn) {
00074   }
00075
00076   // //////////////////////////////////////////////////////////////////
00077   const std::string OptimisationNotificationStruct::describe() const {
00078     std::ostringstream oStr;
00079     oStr << "At " << _notificationDateTime
00080          << ", for (" << _pos << ") " << _origin << "-" << _destination
00081          << " " << _preferredDepartureDate << " " << _preferredCabin
00082          << " " << _partySize << " " << _channel << " " << _tripType
00083          << " " << _stayDuration << " " << _frequentFlyerType
00084          << " " << _preferredDepartureTime << " " << _wtp
00085          << " " << _valueOfTime;
00086     return oStr.str();
00087   }
00088
00089 }
```

35.357 stdair/bom/OptimisationNotificationStruct.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/bom/OptimisationNotificationTypes.hpp>
```

Classes

- struct stdair::OptimisationNotificationStruct

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.358 OptimisationNotificationStruct.hpp

```
00001 #ifndef __STDAIR_BOM_OPTIMISATIONNOTIFICATIONSTRUCT_HPP
```

```
00002 #define __STDAIR_BOM_OPTIMISATIONNOTIFICATIONSTRUCT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/stdair_demand_types.hpp>
00013 #include <stdair/basic/StructAbstract.hpp>
00014 #include <stdair/bom/OptimisationNotificationTypes.hpp>
00015
00016 namespace stdair {
00017
00019   struct OptimisationNotificationStruct : public StructAbstract {
00020   public:
00021     // ///////////////// Getters /////////////////
00023     const AirportCode_T& getOrigin() const {
00024       return _origin;
00025     }
00026
00028     const AirportCode_T& getDestination() const {
00029       return _destination;
00030     }
00031
00033     const CityCode_T& getPOS() const {
00034       return _pos;
00035     }
00036
00038     const Date_T& getPreferedDepartureDate() const {
00039       return _preferredDepartureDate;
00040     }
00041
00043     const DateTime_T& getNotificationDateTime() const {
00044       return _notificationDateTime;
00045     }
00046
00048     const CabinCode_T& getPreferredCabin() const {
00049       return _preferredCabin;
00050     }
00051
00053     const NbOfSeats_T& getPartySize() const {
00054       return _partySize;
00055     }
00056
00058     const ChannelLabel_T& getOptimisationChannel() const {
00059       return _channel;
00060     }
00061
00063     const TripType_T& getTripType() const {
00064       return _tripType;
00065     }
00066
00068     const DayDuration_T& getStayDuration() const {
00069       return _stayDuration;
00070     }
00071
00073     const FrequentFlyer_T& getFrequentFlyerType() const {
00074       return _frequentFlyerType;
00075     }
```

```
00076
00078     const Duration_T& getPreferredDepartureTime() const {
00079       return _preferredDepartureTime;
00080     }
00081
00083     const WTP_T& getWTP() const {
00084       return _wtp;
00085     }
00086
00088     const PriceValue_T& getValueOfTime () const {
00089       return _valueOfTime;
00090     }
00091
00092     // ////////////// Display support method /////////////
00095     void toStream (std::ostream& ioOut) const;
00096
00099     void fromStream (std::istream& ioIn);
00100
00102     const std::string describe() const;
00103
00104
00105     // ///////////////// Constructors and Destructors /////////////////
00106   public:
00108     OptimisationNotificationStruct (const AirportCode_T& iOrigin,
00109                                     const AirportCode_T& iDestination,
00110                                     const CityCode_T& iPOS,
00111                                     const Date_T& iDepartureDate,
00112                                     const DateTime_T& iNotificationDateTime,
00113                                     const CabinCode_T& iPreferredCabin,
00114                                     const NbOfSeats_T& iPartySize,
00115                                     const ChannelLabel_T& iChannel,
00116                                     const TripType_T& iTripType,
00117                                     const DayDuration_T& iStayDuration,
00118                                     const FrequentFlyer_T& iFrequentFlyerType,
00119                                     const Duration_T& iPreferredDepartureTime,
00120                                     const WTP_T& iWTP,
00121                                     const PriceValue_T& iValueOfTime);
00122
00124     OptimisationNotificationStruct (const OptimisationNotificationStruct&);
00125
00126   private:
00129     OptimisationNotificationStruct ();
00130
00131   public:
00133     ~OptimisationNotificationStruct();
00134
00135
00136   private:
00137     // ///////////////// Attributes /////////////////
00139     const AirportCode_T _origin;
00140
00142     const AirportCode_T _destination;
00143
00145     const CityCode_T _pos;
00146
00148     const Date_T _preferredDepartureDate;
00149
00151     const DateTime_T _notificationDateTime;
00152
00154     const CabinCode_T _preferredCabin;
00155
00157     const NbOfSeats_T _partySize;
```

```
00158
00160     const ChannelLabel_T _channel;
00161
00164     const TripType_T _tripType;
00165
00167     const DayDuration_T _stayDuration;
00168
00170     const FrequentFlyer_T _frequentFlyerType;
00171
00173     const Duration_T _preferredDepartureTime;
00174
00176     const WTP_T _wtp;
00177
00179     const PriceValue_T _valueOfTime;
00180   };
00181
00182 }
00183 #endif // __STDAIR_BOM_OPTIMISATIONNOTIFICATIONSTRUCT_HPP
```

35.359 stdair/bom/OptimisationNotificationTypes.hpp File Reference

```
#include <boost/shared_ptr.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef boost::shared_ptr< OptimisationNotificationStruct > stdair::OptimisationNotificationPtr_T

35.360 OptimisationNotificationTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_OPTIMISATIONNOTIFICATIONTYPES_HPP
00003 #define __STDAIR_BOM_OPTIMISATIONNOTIFICATIONTYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // Boost
00009 #include <boost/shared_ptr.hpp>
00010
00011 namespace stdair {
00012
00013   // Forward declarations
00014   struct OptimisationNotificationStruct;
00015
00016   // ////////////// Type definitions //////////////
00018   typedef boost::
00019   shared_ptr<OptimisationNotificationStruct> OptimisationNotificationPtr_T;
00020
```

```
00021 }
00022 #endif // __STDAIR_BOM_OPTIMISATIONNOTIFICATIONTYPES_HPP
00023
```

35.361 stdair/bom/ParsedKey.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/tokenizer.hpp>
#include <boost/lexical_cast.hpp>
#include <boost/date_time/gregorian/parsers.hpp>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/InventoryKey.hpp>
#include <stdair/bom/FlightDateKey.hpp>
#include <stdair/bom/SegmentDateKey.hpp>
#include <stdair/bom/ParsedKey.hpp>
#include <stdair/service/Logger.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Functions

- const boost::char_separator< char > stdair::TokeniserDashSeparator ("-")
- const boost::char_separator< char > stdair::TokeniserTimeSeparator (":")

35.362 ParsedKey.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost
00008 #include <boost/tokenizer.hpp>
00009 #include <boost/lexical_cast.hpp>
00010 #include <boost/date_time/gregorian/parsers.hpp>
00011 // StdAir
```

```
00012 #include <stdair/stdair_exceptions.hpp>
00013 #include <stdair/basic/BasConst_Inventory.hpp>
00014 #include <stdair/basic/BasConst_BomDisplay.hpp>
00015 #include <stdair/bom/InventoryKey.hpp>
00016 #include <stdair/bom/FlightDateKey.hpp>
00017 #include <stdair/bom/SegmentDateKey.hpp>
00018 #include <stdair/bom/ParsedKey.hpp>
00019 #include <stdair/service/Logger.hpp>
00020
00021 namespace stdair {
00022
00023   // ////////////// Tokenising support ///////////////
00027   typedef boost::tokenizer<boost::char_separator<char> > Tokeniser_T;
00028
00032   const boost::char_separator<char> TokeniserDashSeparator ("-");
00033
00037   const boost::char_separator<char> TokeniserTimeSeparator (":");
00038
00039   // ////////////////////////////////////////////////////////////////////
00040   ParsedKey::ParsedKey() : _fullKey (""), _airlineCode (""), _flightNumber (""),
00041                            _departureDate (""), _boardingPoint (""),
00042                            _offPoint (""), _boardingTime ("") {
00043   }
00044
00045   // ////////////////////////////////////////////////////////////////////
00046   ParsedKey::~ParsedKey() {
00047   }
00048
00049   // ////////////////////////////////////////////////////////////////////
00050   InventoryKey ParsedKey::getInventoryKey() const {
00051     if (_airlineCode.size() < 2 || _airlineCode.size() > 3) {
00052       STDAIR_LOG_ERROR ("No airline code can be found in '" << _fullKey << "'");
00053       STDAIR_LOG_DEBUG ("Parsed key: " << toString());
00054       throw KeyNotFoundException ("No airline code can be found in '"
00055                                   + _fullKey + "'");
00056     }
00057     return _airlineCode;
00058   }
00059
00060   // ////////////////////////////////////////////////////////////////////
00061   FlightDateKey ParsedKey::getFlightDateKey() const {
00062     // Check whether the departure date has been parsed correctly.
00063     Tokeniser_T lDateTokens (_departureDate, TokeniserDashSeparator);
00064
00065     if (lDateTokens.begin() == lDateTokens.end()) {
00066       STDAIR_LOG_ERROR ("No date can be found in '" << _fullKey << "'");
00067       STDAIR_LOG_DEBUG ("Parsed key: " << toString());
00068       throw KeyNotFoundException ("No date can be found in '" + _fullKey + "'");
00069     }
00070
00071     const FlightNumber_T lFlightNumber =
00072       boost::lexical_cast<FlightNumber_T> (_flightNumber);
00073
00074     const Date_T lDepartureDate =
00075       boost::gregorian::from_simple_string (_departureDate);
00076
00077     const FlightDateKey oFlightDateKey (lFlightNumber, lDepartureDate);
00078
00079     return oFlightDateKey;
00080   }
00081
00082   // ////////////////////////////////////////////////////////////////////
```

```
00083   SegmentDateKey ParsedKey::getSegmentKey() const {
00084     if (_boardingPoint.size() != 3 || _offPoint.size() != 3) {
00085       STDAIR_LOG_ERROR ("No airport code can be found in '" << _fullKey << "'");
00086       STDAIR_LOG_DEBUG ("Parsed key: " << toString());
00087       throw KeyNotFoundException ("No airport code can be found in '"
00088                                   + _fullKey + "'");
00089     }
00090
00091     const SegmentDateKey oSegmentDateKey (_boardingPoint, _offPoint);
00092
00093     return oSegmentDateKey;
00094   }
00095
00096   // ////////////////////////////////////////////////////////////////////
00097   const Duration_T ParsedKey::getBoardingTime() const {
00098     // Check whether the boarding time has been parsed correctly.
00099     Tokeniser_T lTimeTokens (_boardingTime, TokeniserTimeSeparator);
00100
00101     if (lTimeTokens.begin() == lTimeTokens.end()) {
00102       STDAIR_LOG_ERROR ("No boarding time can be found in '" << _fullKey << "'");

00103       STDAIR_LOG_DEBUG ("Parsed key: " << toString());
00104       throw KeyNotFoundException ("No boarding time can be found in '"
00105                                   + _fullKey + "'");
00106     }
00107
00108     const Duration_T oBoardingTime (boost::posix_time::
00109                                     duration_from_string (_boardingTime));
00110
00111     return oBoardingTime;
00112   }
00113
00114   // ////////////////////////////////////////////////////////////////////
00115   void ParsedKey::toStream (std::ostream& ioOut) const {
00116     ioOut << "ParsedKey: " << toString();
00117   }
00118
00119   // ////////////////////////////////////////////////////////////////////
00120   void ParsedKey::fromStream (std::istream& ioIn) {
00121   }
00122
00123   // ////////////////////////////////////////////////////////////////////
00124   const std::string ParsedKey::toString() const {
00125     std::ostringstream oStr;
00126
00127     oStr << _airlineCode
00128          << DEFAULT_KEY_FLD_DELIMITER << " "
00129          << _flightNumber
00130          << DEFAULT_KEY_SUB_FLD_DELIMITER << " "
00131          << _departureDate
00132          << DEFAULT_KEY_FLD_DELIMITER << " "
00133          << _boardingPoint
00134          << DEFAULT_KEY_SUB_FLD_DELIMITER << " "
00135          << _offPoint
00136          << DEFAULT_KEY_FLD_DELIMITER << " "
00137          << _boardingTime;
00138
00139     return oStr.str();
00140   }
00141
00142 }
```

35.363 stdair/bom/ParsedKey.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

Classes

- struct stdair::ParsedKey

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.364 ParsedKey.hpp

```
00001 #ifndef __STDAIR_BOM_PARSEDKEY_HPP
00002 #define __STDAIR_BOM_PARSEDKEY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_date_time_types.hpp>
00012 #include <stdair/bom/KeyAbstract.hpp>
00013
00014 namespace stdair {
00016   struct InventoryKey;
00017   struct FlightDateKey;
00018   struct SegmentDateKey;
00019
00021   struct ParsedKey : public KeyAbstract{
00022
00023     // ////////////// Getter //////////////
00025     InventoryKey getInventoryKey () const;
00026
00028     FlightDateKey getFlightDateKey () const;
00029
00031     SegmentDateKey getSegmentKey () const;
00032
00034     const Duration_T getBoardingTime () const;
00035
00036   public:
00037     // ////////// Display support methods /////////
00043     void toStream (std::ostream& ioOut) const;
00044
00050     void fromStream (std::istream& ioIn);
00051
```

```
00061     const std::string toString() const;
00062
00063   public:
00064     // ////////////// Constructor and destructor. //////////////
00065     // Default constructor
00066     ParsedKey ();
00067     // Defaut destructor
00068     ~ParsedKey ();
00069
00070   public:
00071     // ////////////// Attributes ///////////////
00072     std::string _fullKey;
00073     std::string _airlineCode;
00074     std::string _flightNumber;
00075     std::string _departureDate;
00076     std::string _boardingPoint;
00077     std::string _offPoint;
00078     std::string _boardingTime;
00079   };
00080
00081 }
00082 #endif // __STDAIR_BOM_PARSEDKEY_HPP
```

35.365 stdair/bom/PeriodStruct.cpp File Reference

```
#include <sstream>
#include <cassert>
#include <stdair/basic/BasConst_Period_BOM.hpp>
#include <stdair/bom/PeriodStruct.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.366 PeriodStruct.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <sstream>
00006 #include <cassert>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Period_BOM.hpp>
00009 #include <stdair/bom/PeriodStruct.hpp>
00010
00011 namespace stdair {
00012
00013   // ////////////////////////////////////////////////////////////////////
00014   PeriodStruct::PeriodStruct ()
00015     : _dateRange (BOOST_DEFAULT_DATE_PERIOD), _dow () {
00016   }
```

```
00017
00018   // //////////////////////////////////////////////////////////////////
00019   PeriodStruct::PeriodStruct (const DatePeriod_T& iDateRange,
00020                               const DoWStruct& iDoW)
00021     : _dateRange (iDateRange), _dow (iDoW) {
00022   }
00023
00024   // //////////////////////////////////////////////////////////////////
00025   PeriodStruct::PeriodStruct (const PeriodStruct& iPeriodStruct)
00026     : _dateRange (iPeriodStruct._dateRange), _dow (iPeriodStruct._dow) {
00027
00028   }
00029
00030   // //////////////////////////////////////////////////////////////////
00031   const std::string PeriodStruct::describeShort() const {
00032     std::ostringstream ostr;
00033     ostr << _dateRange << ", " << _dow.describeShort ();
00034     return ostr.str();
00035   }
00036
00037   // //////////////////////////////////////////////////////////////////
00038   const std::string PeriodStruct::describe() const {
00039     std::ostringstream ostr;
00040     ostr << _dateRange << ", " << _dow.describe ();
00041     return ostr.str();
00042   }
00043
00044   // //////////////////////////////////////////////////////////////////
00045   PeriodStruct PeriodStruct::
00046   addDateOffset (const DateOffset_T& iDateOffset) const {
00047     // Create a new date range by shifting the date range of this object with
00048     // iDateOffset.
00049     DatePeriod_T lNewDateRange = getDateRange();
00050     lNewDateRange.shift (iDateOffset);
00051
00052     // Create a new DoWStruct by shifting the DoWStruct of this object with
00053     // iDateOffset.
00054     const long lNbOfDaysOffset = iDateOffset.days();
00055     const DoWStruct& lDoW = getDoW();
00056     const DoWStruct lNewDoW = lDoW.shift (lNbOfDaysOffset);
00057
00058     return PeriodStruct (lNewDateRange, lNewDoW);
00059   }
00060
00061   // //////////////////////////////////////////////////////////////////
00062   PeriodStruct PeriodStruct::
00063   intersection (const PeriodStruct& iPeriodStruct) const {
00064     const DatePeriod_T lNewDateRange =
00065       _dateRange.intersection (iPeriodStruct._dateRange);
00066     const DoWStruct lNewDoW = _dow.intersection (iPeriodStruct._dow);
00067
00068     return PeriodStruct (lNewDateRange, lNewDoW);
00069   }
00070
00071   // //////////////////////////////////////////////////////////////////
00072   const bool PeriodStruct::isValid () const {
00073     if (_dateRange.is_null() == false && _dow.isValid()) {
00074       return true;
00075     }
00076     return false;
00077   }
00078
```

```
00079 }
```

35.367 stdair/bom/PeriodStruct.hpp File Reference

```
#include <string>
#include <vector>
#include <stdair/stdair_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/bom/DoWStruct.hpp>
```

Classes

- struct stdair::PeriodStruct

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.368 PeriodStruct.hpp

```
00001 #ifndef __STDAIR_BOM_PERIODSTRUCT_HPP
00002 #define __STDAIR_BOM_PERIODSTRUCT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <vector>
00010 // StdAir
00011 #include <stdair/stdair_types.hpp>
00012 #include <stdair/basic/StructAbstract.hpp>
00013 #include <stdair/bom/DoWStruct.hpp>
00014
00015 namespace stdair {
00016
00019   struct PeriodStruct : public StructAbstract {
00020   public:
00021     // ////////// Getters //////////////
00023     const DatePeriod_T& getDateRange () const {
00024       return _dateRange;
00025     }
00026     const DoWStruct& getDoW () const {
00027       return _dow;
00028     }
00029
00030   public:
00031     // /////////// Setters ////////////
00033     void setDateRange (const DatePeriod_T& iDateRange) {
```

```
00034       _dateRange = iDateRange;
00035     }
00036     void setDoW (const DoWStruct& iDoW) { _dow = iDoW; }
00037
00038   public:
00040     const std::string describe() const;
00041
00043     const std::string describeShort() const;
00044
00045   public:
00046     // ////////////// Business Methods //////////////
00048     PeriodStruct addDateOffset (const DateOffset_T&) const;
00049
00052     PeriodStruct intersection (const PeriodStruct&) const;
00053
00055     const bool isValid () const;
00056
00057   public:
00059     PeriodStruct (const DatePeriod_T&, const DoWStruct&);
00061     PeriodStruct ();
00062     PeriodStruct (const PeriodStruct&);
00064     ~PeriodStruct () { }
00065
00066   private:
00067     // Attributes
00068     DatePeriod_T _dateRange;
00069     DoWStruct _dow;
00070   };
00071
00072 }
00073 #endif // __STDAIR_BOM_PERIODSTRUCT_HPP
```

35.369 stdair/bom/PosChannel.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/bom/PosChannel.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.370 PosChannel.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
```

```
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Request.hpp>
00009 #include <stdair/service/Logger.hpp>
00010 #include <stdair/bom/PosChannel.hpp>
00011
00012 namespace stdair {
00013
00014   // ////////////////////////////////////////////////////////////////////
00015   PosChannel::PosChannel()
00016     : _key (DEFAULT_POS,
00017             DEFAULT_CHANNEL),
00018       _parent (NULL)  {
00019     // That constructor is used by the serialisation process
00020   }
00021
00022   // ////////////////////////////////////////////////////////////////////
00023   PosChannel::PosChannel (const PosChannel& iPosChannel)
00024     : _key (iPosChannel.getKey()), _parent (NULL)  {
00025     assert (false);
00026   }
00027
00028   // ////////////////////////////////////////////////////////////////////
00029   PosChannel::PosChannel (const Key_T& iKey)
00030     : _key (iKey), _parent (NULL)  {
00031   }
00032
00033   // ////////////////////////////////////////////////////////////////////
00034   PosChannel::~PosChannel () {
00035   }
00036
00037   // ////////////////////////////////////////////////////////////////////
00038   std::string PosChannel::toString() const {
00039     std::ostringstream oStr;
00040     oStr << describeKey();
00041     return oStr.str();
00042   }
00043 }
```

35.371 stdair/bom/PosChannel.hpp File Reference

```
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/PosChannelKey.hpp>
#include <stdair/bom/PosChannelTypes.hpp>
```

Classes

- class stdair::PosChannel

  Class representing the actual attributes for a fare point of sale.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.372 PosChannel.hpp

```
00001 #ifndef __STDAIR_BOM_POSCHANNEL_HPP
00002 #define __STDAIR_BOM_POSCHANNEL_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/BomAbstract.hpp>
00009 #include <stdair/bom/PosChannelKey.hpp>
00010 #include <stdair/bom/PosChannelTypes.hpp>
00011
00012 // Forward declaration
00013 namespace stdair {
00014
00019   class PosChannel : public BomAbstract {
00020     template <typename BOM> friend class FacBom;
00021     friend class FacBomManager;
00022
00023   public:
00024     // /////// Type definitions
00028     typedef PosChannelKey Key_T;
00029
00030   public:
00031     // ////////// Display support methods /////////
00037     void toStream (std::ostream& ioOut) const {
00038       ioOut << toString();
00039     }
00040
00046     void fromStream (std::istream& ioIn) {
00047     }
00048
00052     std::string toString() const;
00053
00057     const std::string describeKey() const {
00058       return _key.toString();
00059     }
00060
00061   public:
00062     // ////////// Getters ////////////
00066     const Key_T& getKey() const {
00067       return _key;
00068     }
00069
00073     BomAbstract* const getParent() const {
00074       return _parent;
00075     }
00076
00080     const  stdair::HolderMap_T& getHolderMap() const {
00081       return _holderMap;
00082     }
00083
00087     const CityCode_T& getPos() const {
00088       return _key.getPos();
00089     }
00090
00094     const ChannelLabel_T& getChannel() const {
00095       return _key.getChannel();
00096     }
00097
00098   protected:
```

```
00099     // ////////// Constructors and destructors /////////
00103     PosChannel (const Key_T&);
00104
00108     virtual ~PosChannel();
00109
00110   private:
00114     PosChannel ();
00115
00119     PosChannel (const PosChannel&);
00120
00121   protected:
00122     // ////////// Attributes /////////
00126     Key_T _key;
00127
00131     BomAbstract* _parent;
00132
00136     HolderMap_T _holderMap;
00137
00138   };
00139
00140 }
00141 #endif // __STDAIR_BOM_POSCHANNEL_HPP
00142
```

35.373 stdair/bom/PosChannelKey.cpp File Reference

```
#include <ostream>
#include <sstream>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/bom/PosChannelKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.374 PosChannelKey.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <ostream>
00006 #include <sstream>
00007 // STDAIR
00008 #include <stdair/basic/BasConst_BomDisplay.hpp>
00009 #include <stdair/basic/BasConst_Request.hpp>
00010 #include <stdair/bom/PosChannelKey.hpp>
00011
00012 namespace stdair {
00013
```

```
00014   // ////////////////////////////////////////////////////////////////////
00015   PosChannelKey::PosChannelKey()
00016     : _pos (DEFAULT_POS),
00017       _channel (DEFAULT_CHANNEL) {
00018     assert (false);
00019   }
00020
00021   // ////////////////////////////////////////////////////////////////////
00022   PosChannelKey::PosChannelKey (const CityCode_T& iPos,
00023                                 const ChannelLabel_T& iChannel)
00024     : _pos (iPos), _channel(iChannel) {
00025   }
00026
00027   // ////////////////////////////////////////////////////////////////////
00028   PosChannelKey::PosChannelKey (const PosChannelKey& iKey)
00029     : _pos (iKey._pos), _channel (iKey._channel) {
00030   }
00031
00032   // ////////////////////////////////////////////////////////////////////
00033   PosChannelKey::~PosChannelKey () {
00034   }
00035
00036   // ////////////////////////////////////////////////////////////////////
00037   void PosChannelKey::toStream (std::ostream& ioOut) const {
00038     ioOut << "PosChannelKey: " << toString() << std::endl;
00039   }
00040
00041   // ////////////////////////////////////////////////////////////////////
00042   void PosChannelKey::fromStream (std::istream& ioIn) {
00043   }
00044
00045   // ////////////////////////////////////////////////////////////////////
00046   const std::string PosChannelKey::toString() const {
00047     std::ostringstream oStr;
00048     oStr << _pos << DEFAULT_KEY_SUB_FLD_DELIMITER
00049          << " " << _channel;
00050     return oStr.str();
00051   }
00052
00053 }
```

35.375 stdair/bom/PosChannelKey.hpp File Reference

```
#include <stdair/bom/KeyAbstract.hpp>
#include <stdair/stdair_types.hpp>
```

Classes

- struct stdair::PosChannelKey

  Key of point of sale and channel.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.376 PosChannelKey.hpp

```
00001 #ifndef __STDAIR_BOM_POSCHANNELKEY_HPP
00002 #define __STDAIR_BOM_POSCHANNELKEY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // SIMFQT
00008 #include <stdair/bom/KeyAbstract.hpp>
00009 #include <stdair/stdair_types.hpp>
00010
00011 namespace stdair  {
00015   struct PosChannelKey : public KeyAbstract {
00016
00017   public:
00018     // ////////// Construction //////////
00022     PosChannelKey (const stdair::CityCode_T&, const stdair::ChannelLabel_T&);
00026     PosChannelKey (const PosChannelKey&);
00030     ~PosChannelKey ();
00031   private:
00035     PosChannelKey ();
00036
00037   public:
00038     // ////////// Getters //////////
00039
00043     const stdair::CityCode_T& getPos() const {
00044       return _pos;
00045     }
00046
00050     const stdair::ChannelLabel_T& getChannel() const {
00051       return _channel;
00052     }
00053
00054   public:
00055     // ////////// Display support methods /////////
00060     void toStream (std::ostream& ioOut) const;
00061
00066     void fromStream (std::istream& ioIn);
00067
00072     const std::string toString() const;
00073
00074   private:
00075     // ///////////////// Attributes /////////////////
00079     CityCode_T _pos;
00080
00085     ChannelLabel_T _channel;
00086
00087   };
00088
00089 }
00090 #endif // __STDAIR_BOM_POSCHANNELKEY_HPP
```

35.377 stdair/bom/PosChannelTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< PosChannel * > stdair::PosChannelList_T
- typedef std::map< const MapKey_T, PosChannel * > stdair::PosChannelMap_T
- typedef std::pair< MapKey_T, PosChannel * > stdair::PosChannelWithKey_T
- typedef std::list< PosChannelWithKey_T > stdair::PosChannelDetailedList_T

35.378 PosChannelTypes.hpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_POSCHANNELTYPES_HPP
00003 #define __STDAIR_BOM_POSCHANNELTYPES_HPP
00004
00005 // //////////////////////////////////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // STDAIR
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations.
00017   class PosChannel;
00018
00020   typedef std::list<PosChannel*> PosChannelList_T;
00021
00023   typedef std::map<const MapKey_T, PosChannel*> PosChannelMap_T;
00024
00026   typedef std::pair<MapKey_T, PosChannel*> PosChannelWithKey_T;
00027   typedef std::list<PosChannelWithKey_T> PosChannelDetailedList_T;
00028 }
00029 #endif // __STDAIR_BOM_POSCHANNELTYPES_HPP
```

35.379 stdair/bom/RMEventStruct.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/bom/RMEventStruct.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.380 RMEventStruct.cpp

```
00001 // //////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/bom/RMEventStruct.hpp>
00009
00010 namespace stdair {
00011
00012   // //////////////////////////////////////////////////////////////////////
00013   RMEventStruct::RMEventStruct() {
00014     assert (false);
00015   }
00016
00017   // //////////////////////////////////////////////////////////////////////
00018   RMEventStruct::
00019   RMEventStruct (const RMEventStruct& iRMEvent)
00020     : _airlineCode (iRMEvent._airlineCode),
00021       _flightDateDescription (iRMEvent._flightDateDescription),
00022       _snapshotTime (iRMEvent._snapshotTime) {
00023   }
00024
00025   // //////////////////////////////////////////////////////////////////////
00026   RMEventStruct::
00027   RMEventStruct (const AirlineCode_T& iAirlineCode,
00028                  const KeyDescription_T& iFlightDateDescription,
00029                  const DateTime_T& iRMEventTime)
00030     : _airlineCode (iAirlineCode),
00031       _flightDateDescription (iFlightDateDescription),
00032       _snapshotTime (iRMEventTime) {
00033   }
00034
00035   // //////////////////////////////////////////////////////////////////////
00036   RMEventStruct::~RMEventStruct() {
00037   }
00038
00039   // //////////////////////////////////////////////////////////////////////
00040   void RMEventStruct::toStream (std::ostream& ioOut) const {
00041     ioOut << describe();
00042   }
00043
00044   // //////////////////////////////////////////////////////////////////////
00045   void RMEventStruct::fromStream (std::istream& ioIn) {
00046   }
00047
00048   // //////////////////////////////////////////////////////////////////////
00049   const std::string RMEventStruct::describe() const {
00050     std::ostringstream oStr;
00051     oStr << _airlineCode << ", " << _flightDateDescription << ", "
00052          << _snapshotTime;
00053     return oStr.str();
00054   }
00055
00056 }
```

35.381 stdair/bom/RMEventStruct.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/bom/RMEventTypes.hpp>
```

Classes

- struct stdair::RMEventStruct

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.382 RMEventStruct.hpp

```
00001 #ifndef __STDAIR_BOM_RMEVENTSTRUCT_HPP
00002 #define __STDAIR_BOM_RMEVENTSTRUCT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/stdair_demand_types.hpp>
00013 #include <stdair/basic/StructAbstract.hpp>
00014 #include <stdair/bom/RMEventTypes.hpp>
00015
00016 namespace stdair {
00017
00019   struct RMEventStruct : public StructAbstract {
00020   public:
00021     // ///////////////// Getters /////////////////
00023     const AirlineCode_T& getAirlineCode() const {
00024       return _airlineCode;
00025     }
00026
00028     const KeyDescription_T& getFlightDateDescription() const {
00029       return _flightDateDescription;
00030     }
00031
00033     const DateTime_T& getRMEventTime() const {
00034       return _snapshotTime;
00035     }
```

```
00036
00037     // ////////////// Display support method /////////////
00040     void toStream (std::ostream& ioOut) const;
00041
00044     void fromStream (std::istream& ioIn);
00045
00047     const std::string describe() const;
00048
00049
00050     // ///////////////// Constructors and Destructors /////////////////
00051   public:
00053     RMEventStruct (const AirlineCode_T&, const KeyDescription_T&,
00054                    const DateTime_T&);
00055
00057     RMEventStruct (const RMEventStruct&);
00058
00061     RMEventStruct ();
00062
00063   public:
00065     ~RMEventStruct();
00066
00067
00068   private:
00069     // ///////////////// Attributes /////////////////
00071     const AirlineCode_T _airlineCode;
00072
00074     const KeyDescription_T _flightDateDescription;
00075
00077     const DateTime_T _snapshotTime;
00078   };
00079
00080 }
00081 #endif // __STDAIR_BOM_RMEVENTSTRUCT_HPP
```

35.383 stdair/bom/RMEventTypes.hpp File Reference

```
#include <list>
#include <boost/shared_ptr.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef boost::shared_ptr< RMEventStruct > stdair::RMEventPtr_T
- typedef std::list< RMEventStruct > stdair::RMEventList_T

35.384 RMEventTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_RMEVENTTYPES_HPP
```

```
00003 #define __STDAIR_BOM_RMEVENTTYPES_HPP
00004
00005 // //////////////////////////////////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <list>
00010 // Boost
00011 #include <boost/shared_ptr.hpp>
00012
00013 namespace stdair {
00014
00015   // Forward declarations
00016   struct RMEventStruct;
00017
00018   // ////////////// Type definitions //////////////
00020   typedef boost::shared_ptr<RMEventStruct> RMEventPtr_T;
00021
00023   typedef std::list<RMEventStruct> RMEventList_T;
00024
00025 }
00026 #endif // __STDAIR_BOM_RMEVENTTYPES_HPP
00027
```

35.385 stdair/bom/SegmentCabin.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_BookingClass.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/SegmentDate.hpp>
#include <stdair/bom/SegmentCabin.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.386 SegmentCabin.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_BookingClass.hpp>
```

```
00009 #include <stdair/basic/BasConst_Inventory.hpp>
00010 #include <stdair/basic/BasConst_BomDisplay.hpp>
00011 #include <stdair/bom/BomManager.hpp>
00012 #include <stdair/bom/SegmentDate.hpp>
00013 #include <stdair/bom/SegmentCabin.hpp>
00014
00015 namespace stdair {
00016
00017   // ////////////////////////////////////////////////////////////////////
00018   SegmentCabin::SegmentCabin() : _key (DEFAULT_CABIN_CODE), _parent (NULL) {
00019     assert (false);
00020   }
00021
00022   // ////////////////////////////////////////////////////////////////////
00023   SegmentCabin::SegmentCabin (const SegmentCabin&)
00024     : _key (DEFAULT_CABIN_CODE), _parent (NULL) {
00025     assert (false);
00026   }
00027
00028   // ////////////////////////////////////////////////////////////////////
00029   SegmentCabin::SegmentCabin (const Key_T& iKey)
00030     : _key (iKey), _parent (NULL),
00031       _capacity (DEFAULT_CABIN_CAPACITY),
00032       _blockSpace (DEFAULT_BLOCK_SPACE),
00033       _bookingCounter (DEFAULT_CLASS_NB_OF_BOOKINGS),
00034       _committedSpace (DEFAULT_COMMITTED_SPACE),
00035       _availabilityPool (DEFAULT_AVAILABILITY),
00036       _bidPriceVector (DEFAULT_BID_PRICE_VECTOR),
00037       _currentBidPrice (DEFAULT_BID_PRICE),
00038       _fareFamilyActivation (false) {
00039   }
00040
00041   // ////////////////////////////////////////////////////////////////////
00042   SegmentCabin::~SegmentCabin() {
00043   }
00044
00045   // ////////////////////////////////////////////////////////////////////
00046   const MapKey_T SegmentCabin::getFullerKey() const {
00047     const SegmentDate& lSegmentDate = BomManager::getParent<SegmentDate>(*this);
00048
00049     const MapKey_T oFullKey =
00050       lSegmentDate.describeKey() + DEFAULT_KEY_FLD_DELIMITER + getCabinCode();
00051     return oFullKey;
00052   }
00053
00054   // ////////////////////////////////////////////////////////////////////
00055   std::string SegmentCabin::toString() const {
00056     std::ostringstream oStr;
00057     oStr << describeKey();
00058     return oStr.str();
00059   }
00060
00061   // ////////////////////////////////////////////////////////////////////
00062   void SegmentCabin::
00063   updateFromReservation (const NbOfBookings_T& iNbOfBookings) {
00064     _committedSpace += iNbOfBookings;
00065   }
00066
00067 }
00068
```

35.387 stdair/bom/SegmentCabin.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/SegmentCabinKey.hpp>
#include <stdair/bom/SegmentCabinTypes.hpp>
```

Classes

- class stdair::SegmentCabin

  Class representing the actual attributes for an airline segment-cabin.

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.388 SegmentCabin.hpp

```
00001 #ifndef __STDAIR_BOM_SEGMENTCABIN_HPP
00002 #define __STDAIR_BOM_SEGMENTCABIN_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/bom/BomAbstract.hpp>
00013 #include <stdair/bom/SegmentCabinKey.hpp>
00014 #include <stdair/bom/SegmentCabinTypes.hpp>
00015
00017 namespace boost {
00018   namespace serialization {
00019     class access;
00020   }
00021 }
00022
00023 namespace stdair {
00024   // Forward declarations
00025   class GuillotineBlock;
00026
```

```
00031   class SegmentCabin : public BomAbstract {
00032     template <typename BOM> friend class FacBom;
00033     friend class FacBomManager;
00034     friend class boost::serialization::access;
00035
00036   public:
00037     // ////////// Type definitions ////////////
00041     typedef SegmentCabinKey Key_T;
00042
00043
00044   public:
00045     // ////////// Getters ////////////
00049     const Key_T& getKey() const {
00050       return _key;
00051     }
00052
00056     BomAbstract* const getParent() const {
00057       return _parent;
00058     }
00059
00063     const HolderMap_T& getHolderMap() const {
00064       return _holderMap;
00065     }
00066
00070     const CabinCode_T& getCabinCode() const {
00071       return _key.getCabinCode();
00072     }
00073
00082     const MapKey_T getFullerKey() const;
00083
00085     const GuillotineBlock& getGuillotineBlock() const {
00086       assert (_guillotineBlock != NULL);
00087       return *_guillotineBlock;
00088     }
00089
00091     const CabinCapacity_T& getCapacity() const {
00092       return _capacity;
00093     }
00094
00096     const BlockSpace_T& getBlockSpace() const {
00097       return _blockSpace;
00098     }
00099
00101     const BlockSpace_T& getMIN() const {
00102       return _min;
00103     }
00104
00106     const UPR_T& getUPR() const {
00107       return _upr;
00108     }
00109
00111     const NbOfBookings_T& getBookingCounter() const {
00112       return _bookingCounter;
00113     }
00114
00116     const CommittedSpace_T& getCommittedSpace() const {
00117       return _committedSpace;
00118     }
00119
00121     const Availability_T& getAvailabilityPool() const {
00122       return _availabilityPool;
00123     }
```

```
00124
00126     const BidPrice_T& getCurrentBidPrice() const {
00127       return _currentBidPrice;
00128     }
00129
00131     const BidPriceVector_T& getBidPriceVector() const {
00132       return _bidPriceVector;
00133     }
00134
00136     const bool getFareFamilyStatus() const {
00137       return _fareFamilyActivation;
00138     }
00139
00140   public:
00141     // ///////// Setters //////////
00143     void setGuillotineBlock (GuillotineBlock& ioGuillotine) {
00144       _guillotineBlock = &ioGuillotine;
00145     }
00146
00148     void setCapacity (const CabinCapacity_T& iCapacity) {
00149       _capacity = iCapacity;
00150     }
00151
00153     void setBlockSpace (const BlockSpace_T& iBlockSpace) {
00154       _blockSpace = iBlockSpace;
00155     }
00156
00158     void setMIN (const BlockSpace_T& iMIN) {
00159       _min = iMIN;
00160     }
00161
00163     void setUPR (const UPR_T& iUPR) {
00164       _upr = iUPR;
00165     }
00166
00168     void setBookingCounter (const NbOfBookings_T& iBookingCounter) {
00169       _bookingCounter = iBookingCounter;
00170     }
00171
00173     void setCommittedSpace (const CommittedSpace_T& iCommittedSpace) {
00174       _committedSpace = iCommittedSpace;
00175     }
00176
00178     void setAvailabilityPool (const Availability_T& iAvailabilityPool) {
00179       _availabilityPool = iAvailabilityPool;
00180     }
00181
00183     void setBidPriceVector (const BidPriceVector_T& iBPV) {
00184       _bidPriceVector = iBPV;
00185     }
00186
00188     void activateFareFamily () {
00189       _fareFamilyActivation = true;
00190     }
00191
00192   public:
00193     // /////////// Business methods //////////
00195     void updateFromReservation (const NbOfBookings_T&);
00196
00197
00198   public:
00199     // /////////// Display support methods /////////
```

```
00205     void toStream (std::ostream& ioOut) const {
00206       ioOut << toString();
00207     }
00208
00214     void fromStream (std::istream& ioIn) {
00215     }
00216
00220     std::string toString() const;
00221
00225     const std::string describeKey() const {
00226       return _key.toString();
00227     }
00228
00229
00230   public:
00231     // /////////// (Boost) Serialisation support methods /////////
00235     template<class Archive>
00236     void serialize (Archive& ar, const unsigned int iFileVersion);
00237
00238   private:
00246     void serialisationImplementationExport() const;
00247     void serialisationImplementationImport();
00248
00249
00250   protected:
00251     // /////////// Constructors and destructors /////////
00255     SegmentCabin (const Key_T&);
00256
00260     virtual ~SegmentCabin();
00261
00262   private:
00266     SegmentCabin();
00267
00271     SegmentCabin (const SegmentCabin&);
00272
00273
00274   protected:
00275     // /////////// Attributes /////////
00279     Key_T _key;
00280
00284     BomAbstract* _parent;
00285
00289     HolderMap_T _holderMap;
00290
00294     GuillotineBlock* _guillotineBlock;
00295
00297     CabinCapacity_T _capacity;
00298
00300     BlockSpace_T _blockSpace;
00301
00303     BlockSpace_T _min;
00304
00306     UPR_T _upr;
00307
00309     NbOfBookings_T _bookingCounter;
00310
00312     CommittedSpace_T _committedSpace;
00313
00315     Availability_T _availabilityPool;
00316
00318     BidPriceVector_T _bidPriceVector;
00319
```

```
00321     BidPrice_T _currentBidPrice;
00322
00324     bool _fareFamilyActivation;
00325   };
00326
00327 }
00328 #endif // __STDAIR_BOM_SEGMENTCABIN_HPP
00329
```

35.389 stdair/bom/SegmentCabinKey.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/SegmentCabinKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Functions

- template void stdair::SegmentCabinKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void stdair::SegmentCabinKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)

35.390 SegmentCabinKey.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 #include <stdair/bom/SegmentCabinKey.hpp>
00014
00015 namespace stdair {
```

```
00016
00017   // //////////////////////////////////////////////////////////////////
00018   SegmentCabinKey::SegmentCabinKey() : _cabinCode (DEFAULT_CABIN_CODE) {
00019     assert (false);
00020   }
00021
00022   // //////////////////////////////////////////////////////////////////
00023   SegmentCabinKey::SegmentCabinKey (const CabinCode_T& iCabinCode)
00024     : _cabinCode (iCabinCode) {
00025   }
00026
00027   // //////////////////////////////////////////////////////////////////
00028   SegmentCabinKey::SegmentCabinKey (const SegmentCabinKey& iKey)
00029     : _cabinCode (iKey._cabinCode) {
00030   }
00031
00032   // //////////////////////////////////////////////////////////////////
00033   SegmentCabinKey::~SegmentCabinKey () {
00034   }
00035
00036   // //////////////////////////////////////////////////////////////////
00037   void SegmentCabinKey::toStream (std::ostream& ioOut) const {
00038     ioOut << "SegmentCabinKey: " << toString();
00039   }
00040
00041   // //////////////////////////////////////////////////////////////////
00042   void SegmentCabinKey::fromStream (std::istream& ioIn) {
00043   }
00044
00045   // //////////////////////////////////////////////////////////////////
00046   const std::string SegmentCabinKey::toString() const {
00047     std::ostringstream oStr;
00048     oStr << _cabinCode;
00049     return oStr.str();
00050   }
00051
00052   // //////////////////////////////////////////////////////////////////
00053   void SegmentCabinKey::serialisationImplementationExport() const {
00054     std::ostringstream oStr;
00055     boost::archive::text_oarchive oa (oStr);
00056     oa << *this;
00057   }
00058
00059   // //////////////////////////////////////////////////////////////////
00060   void SegmentCabinKey::serialisationImplementationImport() {
00061     std::istringstream iStr;
00062     boost::archive::text_iarchive ia (iStr);
00063     ia >> *this;
00064   }
00065
00066   // //////////////////////////////////////////////////////////////////
00067   template<class Archive>
00068   void SegmentCabinKey::serialize (Archive& ioArchive,
00069                                    const unsigned int iFileVersion) {
00074     ioArchive & _cabinCode;
00075   }
00076
00077   // //////////////////////////////////////////////////////////////////
00078   // Explicit template instantiation
00079   namespace ba = boost::archive;
00080   template void SegmentCabinKey::
00081   serialize<ba::text_oarchive> (ba::text_oarchive&, unsigned int);
```

```
00082   template void SegmentCabinKey::
00083   serialize<ba::text_iarchive> (ba::text_iarchive&, unsigned int);
00084   // //////////////////////////////////////////////////////////////////
00085
00086 }
```

35.391 stdair/bom/SegmentCabinKey.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

Classes

- struct stdair::SegmentCabinKey

  Key of a given segment-cabin, made of a cabin code (only).

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.392 SegmentCabinKey.hpp

```
00001 #ifndef __STDAIR_BOM_SEGMENTCABINKEY_HPP
00002 #define __STDAIR_BOM_SEGMENTCABINKEY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/bom/KeyAbstract.hpp>
00013
00015 namespace boost {
00016   namespace serialization {
00017     class access;
00018   }
00019 }
00020
00021 namespace stdair {
00022
00026   struct SegmentCabinKey : public KeyAbstract {
```

```
00027     friend class boost::serialization::access;
00028
00029     // ////////////// Constructors and destructors ///////////
00030   private:
00034     SegmentCabinKey();
00035
00036   public:
00040     SegmentCabinKey (const CabinCode_T& iCabinCode);
00041
00045     SegmentCabinKey (const SegmentCabinKey&);
00046
00050     ~SegmentCabinKey();
00051
00052
00053   public:
00054     // ////////////// Getters ///////////
00056     const CabinCode_T& getCabinCode() const {
00057       return _cabinCode;
00058     }
00059
00060
00061   public:
00062     // ////////////// Display support methods /////////
00068     void toStream (std::ostream& ioOut) const;
00069
00075     void fromStream (std::istream& ioIn);
00076
00086     const std::string toString() const;
00087
00088
00089   public:
00090     // ////////////// (Boost) Serialisation support methods /////////
00094     template<class Archive>
00095     void serialize (Archive& ar, const unsigned int iFileVersion);
00096
00097   private:
00102     void serialisationImplementationExport() const;
00103     void serialisationImplementationImport();
00104
00105
00106   private:
00107     // ////////////////// Attributes ///////////////
00111     CabinCode_T _cabinCode;
00112   };
00113
00114 }
00115 #endif // __STDAIR_BOM_SEGMENTCABINKEY_HPP
```

35.393 stdair/bom/SegmentCabinTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

Handle on the StdAir library context.

Typedefs

- typedef std::list< SegmentCabin * > stdair::SegmentCabinList_T
- typedef std::map< const MapKey_T, SegmentCabin * > stdair::SegmentCabinMap_T

35.394 SegmentCabinTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_SEGMENTCABINTYPES_HPP
00003 #define __STDAIR_BOM_SEGMENTCABINTYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations.
00017   class SegmentCabin;
00018
00020   typedef std::list<SegmentCabin*> SegmentCabinList_T;
00021
00023   typedef std::map<const MapKey_T, SegmentCabin*> SegmentCabinMap_T;
00024
00025 }
00026 #endif // __STDAIR_BOM_SEGMENTCABINTYPES_HPP
00027
```

35.395 stdair/bom/SegmentDate.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_BookingClass.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/SegmentDate.hpp>
#include <stdair/bom/SegmentCabin.hpp>
```

Namespaces

- namespace stdair

Handle on the StdAir library context.

35.396 SegmentDate.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_BookingClass.hpp>
00009 #include <stdair/basic/BasConst_Inventory.hpp>
00010 #include <stdair/bom/BomManager.hpp>
00011 #include <stdair/bom/SegmentDate.hpp>
00012 #include <stdair/bom/SegmentCabin.hpp>
00013
00014 namespace stdair {
00015
00016   // //////////////////////////////////////////////////////////////////
00017   SegmentDate::SegmentDate()
00018     : _key (DEFAULT_ORIGIN, DEFAULT_DESTINATION), _parent (NULL),
00019       _operatingSegmentDate (NULL) {
00020     assert (false);
00021   }
00022
00023   // //////////////////////////////////////////////////////////////////
00024   SegmentDate::SegmentDate (const SegmentDate&)
00025     : _key (DEFAULT_ORIGIN, DEFAULT_DESTINATION), _parent (NULL),
00026       _operatingSegmentDate (NULL) {
00027     assert (false);
00028   }
00029
00030   // //////////////////////////////////////////////////////////////////
00031   SegmentDate::SegmentDate (const Key_T& iKey)
00032     : _key (iKey), _parent (NULL) ,
00033       _operatingSegmentDate (NULL) {
00034   }
00035
00036   // //////////////////////////////////////////////////////////////////
00037   SegmentDate::~SegmentDate() {
00038   }
00039
00040   // //////////////////////////////////////////////////////////////////
00041   std::string SegmentDate::toString() const {
00042     std::ostringstream oStr;
00043     oStr << describeKey();
00044     return oStr.str();
00045   }
00046
00047   // //////////////////////////////////////////////////////////////////
00048   const Duration_T SegmentDate::getTimeOffset() const {
00049     // TimeOffset = (OffTime - BoardingTime) + (OffDate - BoardingDate) * 24
00050     //              - ElapsedTime
00051     Duration_T oTimeOffset = (_offTime - _boardingTime);
00052     const DateOffset_T& lDateOffset = getDateOffset();
00053     const Duration_T lDateOffsetInHours (lDateOffset.days() * 24, 0, 0);
00054     oTimeOffset += lDateOffsetInHours - _elapsedTime;
00055     return oTimeOffset;
00056   }
```

```
00057 }
00058
```

35.397 stdair/bom/SegmentDate.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/SegmentDateKey.hpp>
#include <stdair/bom/SegmentDateTypes.hpp>
```

Classes

- class stdair::SegmentDate

  Class representing the actual attributes for an airline segment-date.

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.398 SegmentDate.hpp

```
00001 #ifndef __STDAIR_BOM_SEGMENTDATE_HPP
00002 #define __STDAIR_BOM_SEGMENTDATE_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/bom/BomAbstract.hpp>
00013 #include <stdair/bom/SegmentDateKey.hpp>
00014 #include <stdair/bom/SegmentDateTypes.hpp>
00015
00017 namespace boost {
00018   namespace serialization {
00019     class access;
00020   }
00021 }
00022
```

```
00023 namespace stdair {
00024
00026   struct SegmentCabinKey;
00027   class SegmentCabin;
00028
00033   class SegmentDate : public BomAbstract {
00034     template <typename BOM> friend class FacBom;
00035     friend class FacBomManager;
00036     friend class boost::serialization::access;
00037
00038   public:
00039     // ////////// Type definitions ////////////
00043     typedef SegmentDateKey Key_T;
00044
00045
00046   public:
00047     // ////////// Getters ////////////
00049     const Key_T& getKey() const {
00050       return _key;
00051     }
00052
00054     BomAbstract* const getParent() const {
00055       return _parent;
00056     }
00057
00059     const AirportCode_T& getBoardingPoint() const {
00060       return _key.getBoardingPoint();
00061     }
00062
00064     const AirportCode_T& getOffPoint() const {
00065       return _key.getOffPoint();
00066     }
00067
00069     const HolderMap_T& getHolderMap() const {
00070       return _holderMap;
00071     }
00072
00074     const Date_T& getBoardingDate() const {
00075       return _boardingDate;
00076     }
00077
00079     const Duration_T& getBoardingTime() const {
00080       return _boardingTime;
00081     }
00082
00084     const Date_T& getOffDate() const {
00085       return _offDate;
00086     }
00087
00089     const Duration_T& getOffTime() const {
00090       return _offTime;
00091     }
00092
00094     const Duration_T& getElapsedTime() const {
00095       return _elapsedTime;
00096     }
00097
00099     const Distance_T& getDistance() const {
00100       return _distance;
00101     }
00102
00104     const DateOffset_T getDateOffset() const {
```

```
00105       return _offDate - _boardingDate;
00106     }
00107
00116     const Duration_T getTimeOffset() const;
00117
00121     SegmentDate* getOperatingSegmentDate () const {
00122       return _operatingSegmentDate;
00123     }
00124
00128     const SegmentDateList_T& getMarketingSegmentDateList () const {
00129       return _marketingSegmentDateList;
00130     }
00131
00132   public:
00133     // ///////// Setters //////////
00135     void setBoardingDate (const Date_T& iBoardingDate) {
00136       _boardingDate = iBoardingDate;
00137     }
00138
00140     void setBoardingTime (const Duration_T& iBoardingTime) {
00141       _boardingTime = iBoardingTime;
00142     }
00143
00145     void setOffDate (const Date_T& iOffDate) {
00146       _offDate = iOffDate;
00147     }
00148
00150     void setOffTime (const Duration_T& iOffTime) {
00151       _offTime = iOffTime;
00152     }
00153
00155     void setElapsedTime (const Duration_T& iElapsedTime) {
00156       _elapsedTime = iElapsedTime;
00157     }
00158
00160     void setDistance (const Distance_T& iDistance) {
00161       _distance = iDistance;
00162     }
00163
00165     void linkWithOperating (SegmentDate& iSegmentDate) {
00166       _operatingSegmentDate = &iSegmentDate;
00167     }
00168
00169   public:
00170     // /////////// Display support methods /////////
00176     void toStream (std::ostream& ioOut) const {
00177       ioOut << toString();
00178     }
00179
00185     void fromStream (std::istream& ioIn) {
00186     }
00187
00191     std::string toString() const;
00192
00196     const std::string describeKey() const {
00197       return _key.toString();
00198     }
00199
00200
00201   public:
00202     // /////////// (Boost) Serialisation support methods /////////
00206     template<class Archive>
```

```
00207     void serialize (Archive& ar, const unsigned int iFileVersion);
00208
00209   private:
00217     void serialisationImplementationExport() const;
00218     void serialisationImplementationImport();
00219
00220
00221   protected:
00222     // ////////// Constructors and destructors /////////
00226     SegmentDate (const Key_T&);
00227
00231     virtual ~SegmentDate();
00232
00233   private:
00237     SegmentDate();
00238
00242     SegmentDate (const SegmentDate&);
00243
00244
00245   protected:
00246     // ////////// Attributes /////////
00250     Key_T _key;
00251
00255     BomAbstract* _parent;
00256
00260     HolderMap_T _holderMap;
00261
00268     SegmentDate* _operatingSegmentDate;
00269
00276     SegmentDateList_T _marketingSegmentDateList;
00277
00281     Date_T _boardingDate;
00282
00286     Duration_T _boardingTime;
00287
00291     Date_T _offDate;
00292
00296     Duration_T _offTime;
00297
00301     Duration_T _elapsedTime;
00302
00306     Distance_T _distance;
00307   };
00308
00309 }
00310 #endif // __STDAIR_BOM_SEGMENTDATE_HPP
00311
```

35.399 stdair/bom/SegmentDateKey.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
```

```
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/SegmentDateKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Functions

- template void stdair::SegmentDateKey::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void stdair::SegmentDateKey::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)

35.400 SegmentDateKey.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 #include <stdair/basic/BasConst_BomDisplay.hpp>
00014 #include <stdair/bom/SegmentDateKey.hpp>
00015
00016 namespace stdair {
00017
00018   // //////////////////////////////////////////////////////////////////
00019   SegmentDateKey::SegmentDateKey()
00020     : _boardingPoint (DEFAULT_ORIGIN), _offPoint (DEFAULT_DESTINATION) {
00021     assert (false);
00022   }
00023
00024   // //////////////////////////////////////////////////////////////////
00025   SegmentDateKey::SegmentDateKey (const AirportCode_T& iBoardingPoint,
00026                                   const AirportCode_T& iOffPoint)
00027     : _boardingPoint (iBoardingPoint), _offPoint (iOffPoint) {
00028   }
00029
00030   // //////////////////////////////////////////////////////////////////
00031   SegmentDateKey::SegmentDateKey (const SegmentDateKey& iKey)
00032     : _boardingPoint (iKey._boardingPoint), _offPoint (iKey._offPoint) {
00033   }
00034
00035   // //////////////////////////////////////////////////////////////////
00036   SegmentDateKey::~SegmentDateKey() {
00037   }
```

```
00038
00039   // ////////////////////////////////////////////////////////////////////
00040   void SegmentDateKey::toStream (std::ostream& ioOut) const {
00041     ioOut << "SegmentDateKey: " << toString() << std::endl;
00042   }
00043
00044   // ////////////////////////////////////////////////////////////////////
00045   void SegmentDateKey::fromStream (std::istream& ioIn) {
00046   }
00047
00048   // ////////////////////////////////////////////////////////////////////
00049   const std::string SegmentDateKey::toString() const {
00050     std::ostringstream oStr;
00051     oStr << _boardingPoint
00052          << DEFAULT_KEY_SUB_FLD_DELIMITER << " " << _offPoint;
00053     return oStr.str();
00054   }
00055
00056   // ////////////////////////////////////////////////////////////////////
00057   void SegmentDateKey::serialisationImplementationExport() const {
00058     std::ostringstream oStr;
00059     boost::archive::text_oarchive oa (oStr);
00060     oa << *this;
00061   }
00062
00063   // ////////////////////////////////////////////////////////////////////
00064   void SegmentDateKey::serialisationImplementationImport() {
00065     std::istringstream iStr;
00066     boost::archive::text_iarchive ia (iStr);
00067     ia >> *this;
00068   }
00069
00070   // ////////////////////////////////////////////////////////////////////
00071   template<class Archive>
00072   void SegmentDateKey::serialize (Archive& ioArchive,
00073                                   const unsigned int iFileVersion) {
00074     ioArchive & _boardingPoint & _offPoint;
00075   }
00076
00077   // ////////////////////////////////////////////////////////////////////
00078   // Explicit template instantiation
00079   namespace ba = boost::archive;
00080   template void SegmentDateKey::serialize<ba::text_oarchive>(ba::text_oarchive&,
00081                                                              unsigned int);
00082   template void SegmentDateKey::serialize<ba::text_iarchive>(ba::text_iarchive&,
00083                                                              unsigned int);
00084   // ////////////////////////////////////////////////////////////////////
00085
00086 }
```

35.401 stdair/bom/SegmentDateKey.hpp File Reference

```
#include <stdair/stdair_basic_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

Classes

- struct stdair::SegmentDateKey

Key of a given segment-date, made of an origin and a destination airports.

Namespaces

- namespace boost

  Forward declarations.
- namespace boost::serialization
- namespace stdair

  Handle on the StdAir library context.

35.402 SegmentDateKey.hpp

```
00001 #ifndef __STDAIR_BOM_SEGMENTDATEKEY_HPP
00002 #define __STDAIR_BOM_SEGMENTDATEKEY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/bom/KeyAbstract.hpp>
00010
00012 namespace boost {
00013   namespace serialization {
00014     class access;
00015   }
00016 }
00017
00018 namespace stdair {
00019
00024   struct SegmentDateKey : public KeyAbstract {
00025     friend class boost::serialization::access;
00026
00027     // ////////// Constructors and destructors //////////
00028   private:
00032     SegmentDateKey();
00033
00034   public:
00038     SegmentDateKey (const AirportCode_T&, const AirportCode_T&);
00042     SegmentDateKey (const SegmentDateKey&);
00046     ~SegmentDateKey();
00047
00048
00049     // ////////// Getters //////////
00051     const AirportCode_T& getBoardingPoint() const {
00052       return _boardingPoint;
00053     }
00054
00056     const AirportCode_T& getOffPoint() const {
00057       return _offPoint;
00058     }
00059
00060
00061     // ////////// Display support methods /////////
00067     void toStream (std::ostream& ioOut) const;
00068
00074     void fromStream (std::istream& ioIn);
```

```
00075
00085     const std::string toString() const;
00086
00087
00088   public:
00089     // ////////////// (Boost) Serialisation support methods /////////
00093     template<class Archive>
00094     void serialize (Archive& ar, const unsigned int iFileVersion);
00095
00096   private:
00101     void serialisationImplementationExport() const;
00102     void serialisationImplementationImport();
00103
00104
00105   private:
00106     // ////////////////// Attributes ///////////////
00110     AirportCode_T _boardingPoint;
00111
00115     AirportCode_T _offPoint;
00116   };
00117
00118 }
00119 #endif // __STDAIR_BOM_SEGMENTDATEKEY_HPP
```

35.403 stdair/bom/SegmentDateTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< SegmentDate * > stdair::SegmentDateList_T
- typedef std::map< const MapKey_T, SegmentDate * > stdair::SegmentDateMap_-T

35.404 SegmentDateTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_SEGMENTDATETYPES_HPP
00003 #define __STDAIR_BOM_SEGMENTDATETYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
```

```
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations.
00017   class SegmentDate;
00018
00020   typedef std::list<SegmentDate*> SegmentDateList_T;
00021
00023   typedef std::map<const MapKey_T, SegmentDate*> SegmentDateMap_T;
00024 }
00025
00026 #endif // __STDAIR_BOM_SEGMENTDATETYPES_HPP
00027
```

35.405 stdair/bom/SegmentPeriod.cpp File Reference

```
#include <cassert>
#include <stdair/basic/BasConst_BookingClass.hpp>
#include <stdair/bom/SegmentPeriod.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.406 SegmentPeriod.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // STDAIR
00007 #include <stdair/basic/BasConst_BookingClass.hpp>
00008 #include <stdair/bom/SegmentPeriod.hpp>
00009
00010 namespace stdair {
00011
00012   // ////////////////////////////////////////////////////////////////////
00013   SegmentPeriod::SegmentPeriod (const Key_T& iKey)
00014     : _key (iKey), _parent (NULL),  _boardingDateOffset (0), _offDateOffset (0) {

00015   }
00016
00017   // ////////////////////////////////////////////////////////////////////
00018   SegmentPeriod::~SegmentPeriod () {
00019   }
00020
00021   // ////////////////////////////////////////////////////////////////////
00022   std::string SegmentPeriod::toString() const {
00023     std::ostringstream oStr;
```

```
00024     oStr << describeKey();
00025     return oStr.str();
00026   }
00027
00028   // ////////////////////////////////////////////////////////////////////
00029   void SegmentPeriod::
00030   addCabinBookingClassList (const CabinCode_T& iCabinCode,
00031                             const ClassList_String_T& iClassCodeList) {
00032     const bool insert = _cabinBookingClassMap.
00033       insert (CabinBookingClassMap_T::value_type (iCabinCode,
00034                                                   iClassCodeList)).second;
00035     assert (insert == true);
00036   }
00037
00038 }
```

35.407 stdair/bom/SegmentPeriod.hpp File Reference

```
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/SegmentPeriodKey.hpp>
#include <stdair/bom/SegmentPeriodTypes.hpp>
```

Classes

- class stdair::SegmentPeriod

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.408 SegmentPeriod.hpp

```
00001 #ifndef __STDAIR_BOM_SEGMENTPERIOD_HPP
00002 #define __STDAIR_BOM_SEGMENTPERIOD_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/BomAbstract.hpp>
00009 #include <stdair/bom/SegmentPeriodKey.hpp>
00010 #include <stdair/bom/SegmentPeriodTypes.hpp>
00011
00012 namespace stdair {
00013
00015   class SegmentPeriod : public BomAbstract {
00016     template <typename BOM> friend class FacBom;
00017     friend class FacBomManager;
00018
00019   public:
00020     // Type definitions.
```

```
00022     typedef SegmentPeriodKey Key_T;
00023
00024   public:
00025     // ////////////// Getters //////////////
00027     const Key_T& getKey() const { return _key; }
00028
00030     BomAbstract* const getParent() const { return _parent; }
00031
00033     const AirportCode_T& getBoardingPoint () const {
00034       return _key.getBoardingPoint();
00035     }
00036
00038     const AirportCode_T& getOffPoint () const { return _key.getOffPoint(); }
00039
00041     const Duration_T& getBoardingTime () const { return _boardingTime; }
00042
00044     const Duration_T& getOffTime () const { return _offTime; }
00045
00047     const DateOffset_T& getBoardingDateOffset () const {
00048       return _boardingDateOffset;
00049     }
00050
00052     const DateOffset_T& getOffDateOffset () const { return _offDateOffset; }
00053
00055     const Duration_T& getElapsedTime() const { return _elapsedTime; }
00056
00058     const CabinBookingClassMap_T& getCabinBookingClassMap () const {
00059       return _cabinBookingClassMap;
00060     }
00061
00063     const HolderMap_T& getHolderMap() const { return _holderMap; }
00064
00065   public:
00066     // ///////// Setters //////////
00068     void setBoardingTime (const Duration_T& iBoardingTime) {
00069       _boardingTime = iBoardingTime;
00070     }
00071
00073     void setOffTime (const Duration_T& iOffTime) { _offTime = iOffTime; }
00074
00076     void setBoardingDateOffset (const DateOffset_T& iDateOffset) {
00077       _boardingDateOffset = iDateOffset;
00078     }
00079
00081     void setOffDateOffset (const DateOffset_T& iDateOffset) {
00082       _offDateOffset = iDateOffset;
00083     }
00084
00086     void setElapsedTime (const Duration_T& iElapsedTime) {
00087       _elapsedTime = iElapsedTime;
00088     }
00089
00092     void addCabinBookingClassList (const CabinCode_T&,
00093                                    const ClassList_String_T&);
00094
00095   public:
00096     // ////////////// Display support methods /////////
00099     void toStream (std::ostream& ioOut) const { ioOut << toString(); }
00100
00103     void fromStream (std::istream& ioIn) { }
00104
00106     std::string toString() const;
```

```
00107
00109     const std::string describeKey() const { return _key.toString(); }
00110
00111   protected:
00113     SegmentPeriod (const Key_T&);
00114     SegmentPeriod (const SegmentPeriod&);
00116     ~SegmentPeriod();
00117
00118   protected:
00119     // Attributes
00120     Key_T _key;
00121     BomAbstract* _parent;
00122     Duration_T _boardingTime;
00123     Duration_T _offTime;
00124     DateOffset_T _boardingDateOffset;
00125     DateOffset_T _offDateOffset;
00126     Duration_T _elapsedTime;
00127     CabinBookingClassMap_T _cabinBookingClassMap;
00128     HolderMap_T _holderMap;
00129   };
00130
00131 }
00132 #endif // __STDAIR_BOM_SEGMENTPERIOD_HPP
00133
```

35.409 stdair/bom/SegmentPeriodKey.cpp File Reference

```
#include <sstream>
#include <stdair/bom/SegmentPeriodKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.410 SegmentPeriodKey.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <sstream>
00006 // StdAir
00007 #include <stdair/bom/SegmentPeriodKey.hpp>
00008
00009 namespace stdair {
00010
00011   // //////////////////////////////////////////////////////////////////
00012   SegmentPeriodKey::SegmentPeriodKey (const AirportCode_T& iBoardingPoint,
00013                                       const AirportCode_T& iOffPoint)
00014     : _boardingPoint (iBoardingPoint), _offPoint (iOffPoint) {
00015   }
00016
00017   // //////////////////////////////////////////////////////////////////
00018   SegmentPeriodKey::SegmentPeriodKey (const SegmentPeriodKey& iKey)
```

```
00019     : _boardingPoint (iKey._boardingPoint), _offPoint (iKey._offPoint) {
00020   }
00021
00022   // ////////////////////////////////////////////////////////////////////
00023   SegmentPeriodKey::~SegmentPeriodKey () {
00024   }
00025
00026   // ////////////////////////////////////////////////////////////////////
00027   void SegmentPeriodKey::toStream (std::ostream& ioOut) const {
00028     ioOut << "SegmentPeriodKey: " << toString() << std::endl;
00029   }
00030
00031   // ////////////////////////////////////////////////////////////////////
00032   void SegmentPeriodKey::fromStream (std::istream& ioIn) {
00033   }
00034
00035   // ////////////////////////////////////////////////////////////////////
00036   const std::string SegmentPeriodKey::toString() const {
00037     std::ostringstream oStr;
00038     oStr << _boardingPoint << "-" << _offPoint;
00039     return oStr.str();
00040   }
00041
00042 }
```

35.411 stdair/bom/SegmentPeriodKey.hpp File Reference

```
#include <stdair/stdair_basic_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

Classes

- struct stdair::SegmentPeriodKey

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.412 SegmentPeriodKey.hpp

```
00001 #ifndef __STDAIR_BOM_SEGMENTPERIODKEY_HPP
00002 #define __STDAIR_BOM_SEGMENTPERIODKEY_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/bom/KeyAbstract.hpp>
00010
00011 namespace stdair {
00012
```

```
00014   struct SegmentPeriodKey : public KeyAbstract {
00015
00016   private:
00017     // ////////// Default constructor //////////
00018     SegmentPeriodKey () { };
00019   public:
00020     // ////////// Construction //////////
00022     SegmentPeriodKey (const AirportCode_T&, const AirportCode_T&);
00023     SegmentPeriodKey (const SegmentPeriodKey&);
00025     ~SegmentPeriodKey ();
00026
00027     // ////////// Getters //////////
00029     const AirportCode_T& getBoardingPoint() const {
00030       return _boardingPoint;
00031     }
00032
00034     const AirportCode_T& getOffPoint() const {
00035       return _offPoint;
00036     }
00037
00038     // ////////// Display support methods /////////
00041     void toStream (std::ostream& ioOut) const;
00042
00045     void fromStream (std::istream& ioIn);
00046
00052     const std::string toString() const;
00053
00054   private:
00055     // Attributes
00057     AirportCode_T _boardingPoint;
00058
00060     AirportCode_T _offPoint;
00061   };
00062
00063 }
00064 #endif // __STDAIR_BOM_SEGMENTPERIODKEY_HPP
```

35.413 stdair/bom/SegmentPeriodTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< SegmentPeriod * > stdair::SegmentPeriodList_T
- typedef std::map< const MapKey_T, SegmentPeriod * > stdair::SegmentPeriodMap_T

- typedef std::pair< MapKey_T, SegmentPeriod * > stdair::SegmentPeriodWithKey_T
- typedef std::list< SegmentPeriodWithKey_T > stdair::SegmentPeriodDetailedList_T

35.414 SegmentPeriodTypes.hpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_SEGMENTPERIODTYPES_HPP
00003 #define __STDAIR_BOM_SEGMENTPERIODTYPES_HPP
00004
00005 // //////////////////////////////////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations.
00017   class SegmentPeriod;
00018
00020   typedef std::list<SegmentPeriod*> SegmentPeriodList_T;
00021
00023   typedef std::map<const MapKey_T, SegmentPeriod*> SegmentPeriodMap_T;
00024
00026   typedef std::pair<MapKey_T, SegmentPeriod*> SegmentPeriodWithKey_T;
00027   typedef std::list<SegmentPeriodWithKey_T> SegmentPeriodDetailedList_T;
00028 }
00029 #endif // __STDAIR_BOM_SEGMENTPERIODTYPES_HPP
00030
```

35.415 stdair/bom/SnapshotStruct.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/bom/SnapshotStruct.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.416 SnapshotStruct.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
```

```
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/bom/SnapshotStruct.hpp>
00009
00010 namespace stdair {
00011
00012   // ////////////////////////////////////////////////////////////////////
00013   SnapshotStruct::SnapshotStruct() {
00014     assert (false);
00015   }
00016
00017   // ////////////////////////////////////////////////////////////////////
00018   SnapshotStruct::
00019   SnapshotStruct (const SnapshotStruct& iSnapshot)
00020     : _airlineCode (iSnapshot._airlineCode),
00021       _snapshotTime (iSnapshot._snapshotTime) {
00022   }
00023
00024   // ////////////////////////////////////////////////////////////////////
00025   SnapshotStruct::
00026   SnapshotStruct (const AirlineCode_T& iAirlineCode,
00027                   const DateTime_T& iSnapshotTime)
00028     : _airlineCode (iAirlineCode), _snapshotTime (iSnapshotTime) {
00029   }
00030
00031   // ////////////////////////////////////////////////////////////////////
00032   SnapshotStruct::~SnapshotStruct() {
00033   }
00034
00035   // ////////////////////////////////////////////////////////////////////
00036   void SnapshotStruct::toStream (std::ostream& ioOut) const {
00037     ioOut << describe();
00038   }
00039
00040   // ////////////////////////////////////////////////////////////////////
00041   void SnapshotStruct::fromStream (std::istream& ioIn) {
00042   }
00043
00044   // ////////////////////////////////////////////////////////////////////
00045   const std::string SnapshotStruct::describe() const {
00046     std::ostringstream oStr;
00047     oStr << _airlineCode << ", " << _snapshotTime;
00048     return oStr.str();
00049   }
00050
00051 }
```

35.417 stdair/bom/SnapshotStruct.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
```

`#include <stdair/bom/SnapshotTypes.hpp>`

Classes

- struct stdair::SnapshotStruct

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.418 SnapshotStruct.hpp

```
00001 #ifndef __STDAIR_BOM_SNAPSHOTSTRUCT_HPP
00002 #define __STDAIR_BOM_SNAPSHOTSTRUCT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/stdair_demand_types.hpp>
00013 #include <stdair/basic/StructAbstract.hpp>
00014 #include <stdair/bom/SnapshotTypes.hpp>
00015
00016 namespace stdair {
00017
00019   struct SnapshotStruct : public StructAbstract {
00020   public:
00021     // ///////////////// Getters /////////////////
00023     const AirlineCode_T& getAirlineCode() const {
00024       return _airlineCode;
00025     }
00026
00028     const DateTime_T& getSnapshotTime() const {
00029       return _snapshotTime;
00030     }
00031
00032     // ////////// Display support method /////////////
00035     void toStream (std::ostream& ioOut) const;
00036
00039     void fromStream (std::istream& ioIn);
00040
00042     const std::string describe() const;
00043
00044
00045     // ///////////////// Constructors and Destructors /////////////////
00046   public:
00048     SnapshotStruct (const AirlineCode_T&, const DateTime_T&);
00049
00051     SnapshotStruct (const SnapshotStruct&);
00052
00053   private:
```

```
00056     SnapshotStruct ();
00057
00058   public:
00060     ~SnapshotStruct();
00061
00062
00063   private:
00064     // ///////////////// Attributes /////////////////
00066     const AirlineCode_T _airlineCode;
00067
00069     const DateTime_T _snapshotTime;
00070   };
00071
00072 }
00073 #endif // __STDAIR_BOM_SNAPSHOTSTRUCT_HPP
```

35.419 stdair/bom/SnapshotTypes.hpp File Reference

`#include <boost/shared_ptr.hpp>`

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef boost::shared_ptr< SnapshotStruct > stdair::SnapshotPtr_T

35.420 SnapshotTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_SNAPSHOTTYPES_HPP
00003 #define __STDAIR_BOM_SNAPSHOTTYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // Boost
00009 #include <boost/shared_ptr.hpp>
00010
00011 namespace stdair {
00012
00013   // Forward declarations
00014   struct SnapshotStruct;
00015
00016   // ////////////// Type definitions //////////////
00018   typedef boost::shared_ptr<SnapshotStruct> SnapshotPtr_T;
00019
00020 }
00021 #endif // __STDAIR_BOM_SNAPSHOTTYPES_HPP
00022
```

35.421 stdair/bom/TimePeriod.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/bom/TimePeriod.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.422 TimePeriod.cpp

```
00001 // //////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_General.hpp>
00009 #include <stdair/service/Logger.hpp>
00010 #include <stdair/bom/TimePeriod.hpp>
00011
00012 namespace stdair {
00013
00014   // //////////////////////////////////////////////////////////////////////
00015   TimePeriod::TimePeriod()
00016     : _key (DEFAULT_EPSILON_DURATION, DEFAULT_EPSILON_DURATION),
00017       _parent (NULL)  {
00018     // That constructor is used by the serialisation process
00019   }
00020
00021   // //////////////////////////////////////////////////////////////////////
00022   TimePeriod::TimePeriod (const TimePeriod& iTimePeriod)
00023     : _key (iTimePeriod.getKey()), _parent (NULL)  {
00024     assert (false);
00025   }
00026
00027   // //////////////////////////////////////////////////////////////////////
00028   TimePeriod::TimePeriod (const Key_T& iKey)
00029     : _key (iKey), _parent (NULL)  {
00030   }
00031
00032   // //////////////////////////////////////////////////////////////////////
00033   TimePeriod::~TimePeriod () {
00034   }
00035
00036   // //////////////////////////////////////////////////////////////////////
00037   std::string TimePeriod::toString() const {
00038     std::ostringstream oStr;
00039     oStr << describeKey();
```

```
00040     return oStr.str();
00041   }
00042
00043   // ////////////////////////////////////////////////////////////////////
00044   bool TimePeriod::
00045   isDepartureTimeValid (const Time_T& iFlightTime) const {
00046
00047     const Time_T& lTimeRangeStart = getTimeRangeStart();
00048     const Time_T& lTimeRangeEnd = getTimeRangeEnd();
00049
00050     // Check if the departure time is within the time range.
00051     if (lTimeRangeStart >= iFlightTime) {
00052       // DEBUG
00053       STDAIR_LOG_DEBUG ("Time range begin: " << lTimeRangeStart << ", "
00054                         << "time: " << iFlightTime);
00055       return false;
00056     }
00057     if (lTimeRangeEnd <= iFlightTime) {
00058       // DEBUG
00059       STDAIR_LOG_DEBUG ("Time range end: " << lTimeRangeEnd << ", "
00060                         << "time: " << iFlightTime);
00061       return false;
00062     }
00063
00064     return true;
00065   }
00066
00067 }
00068
```

35.423 stdair/bom/TimePeriod.hpp File Reference

```
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/TimePeriodKey.hpp>
#include <stdair/bom/TimePeriodTypes.hpp>
```

Classes

- class stdair::TimePeriod

  Class representing the actual attributes for a fare time-period.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.424 TimePeriod.hpp

```
00001 #ifndef __STDAIR_BOM_FARETIMEPERIOD_HPP
00002 #define __STDAIR_BOM_FARETIMEPERIOD_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
```

```
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/BomAbstract.hpp>
00009 #include <stdair/bom/TimePeriodKey.hpp>
00010 #include <stdair/bom/TimePeriodTypes.hpp>
00011
00012 // Forward declaration
00013 namespace stdair {
00014
00018   class TimePeriod : public BomAbstract {
00019     template <typename BOM> friend class FacBom;
00020     friend class FacBomManager;
00021
00022   public:
00023     // ////////////// Type definitions //////////////
00027     typedef TimePeriodKey Key_T;
00028
00029   public:
00030     // /////////// Display support methods /////////
00031     // /////////// Display support methods /////////
00037     void toStream (std::ostream& ioOut) const {
00038       ioOut << toString();
00039     }
00040
00046     void fromStream (std::istream& ioIn) {
00047     }
00048
00052     std::string toString() const;
00053
00057     const std::string describeKey() const {
00058       return _key.toString();
00059     }
00060
00061   public:
00062     // ////////// Getters ////////////
00066     const Key_T& getKey() const {
00067       return _key;
00068     }
00069
00073     BomAbstract* const getParent() const {
00074       return _parent;
00075     }
00076
00080     const HolderMap_T& getHolderMap() const {
00081       return _holderMap;
00082     }
00083
00087     const Time_T& getTimeRangeStart() const {
00088       return _key.getTimeRangeStart();
00089     }
00090
00094     const Time_T& getTimeRangeEnd() const {
00095       return _key.getTimeRangeEnd();
00096     }
00097
00098   public:
00099     // ////////////// Business methods ///////////////
00104     bool isDepartureTimeValid (const Time_T&) const;
00105
00106   protected:
00107     // ////////// Constructors and destructors /////////
```

```
00111     TimePeriod (const Key_T&);
00115     virtual ~TimePeriod();
00116
00117   private:
00121     TimePeriod();
00125     TimePeriod (const TimePeriod&);
00126
00127   protected:
00128     // ////////////// Attributes /////////////
00132     Key_T _key;
00133
00137     BomAbstract* _parent;
00138
00142     HolderMap_T _holderMap;
00143
00144   };
00145
00146 }
00147 #endif // __STDAIR_BOM_FARETIMEPERIOD_HPP
00148
```

35.425 stdair/bom/TimePeriodKey.cpp File Reference

```
#include <ostream>
#include <sstream>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/bom/TimePeriodKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.426 TimePeriodKey.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <ostream>
00006 #include <sstream>
00007 // STDAIR
00008 #include <stdair/basic/BasConst_General.hpp>
00009 #include <stdair/bom/TimePeriodKey.hpp>
00010
00011 namespace stdair {
00012
00013   // ////////////////////////////////////////////////////////////////////
00014   TimePeriodKey::TimePeriodKey ()
00015     : _timeRangeStart (DEFAULT_EPSILON_DURATION),
00016       _timeRangeEnd (DEFAULT_EPSILON_DURATION) {
00017     assert (false);
00018   }
```

```
00019
00020   // //////////////////////////////////////////////////////////////////
00021   TimePeriodKey::TimePeriodKey (const Time_T& iTimeRangeStart,
00022                                 const Time_T& iTimeRangeEnd)
00023     : _timeRangeStart(iTimeRangeStart),
00024       _timeRangeEnd(iTimeRangeEnd) {
00025   }
00026
00027   // //////////////////////////////////////////////////////////////////
00028   TimePeriodKey::TimePeriodKey (const TimePeriodKey& iKey)
00029     : _timeRangeStart(iKey.getTimeRangeStart()),
00030       _timeRangeEnd(iKey.getTimeRangeEnd())  {
00031   }
00032
00033   // //////////////////////////////////////////////////////////////////
00034   TimePeriodKey::~TimePeriodKey () {
00035   }
00036
00037   // //////////////////////////////////////////////////////////////////
00038   void TimePeriodKey::toStream (std::ostream& ioOut) const {
00039     ioOut << "TimePeriodKey: " << toString() << std::endl;
00040   }
00041
00042   // //////////////////////////////////////////////////////////////////
00043   void TimePeriodKey::fromStream (std::istream& ioIn) {
00044   }
00045
00046   // //////////////////////////////////////////////////////////////////
00047   const std::string TimePeriodKey::toString() const {
00048     std::ostringstream oStr;
00049     oStr << _timeRangeStart << "-" << _timeRangeEnd;
00050     return oStr.str();
00051   }
00052
00053 }
```

35.427 stdair/bom/TimePeriodKey.hpp File Reference

```
#include <stdair/bom/KeyAbstract.hpp>
#include <stdair/stdair_date_time_types.hpp>
```

Classes

- struct stdair::TimePeriodKey

  Key of time-period.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.428 TimePeriodKey.hpp

```
00001 #ifndef __STDAIR_BOM_TIMEPERIODKEY_HPP
00002 #define __STDAIR_BOM_TIMEPERIODKEY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/KeyAbstract.hpp>
00009 #include <stdair/stdair_date_time_types.hpp>
00010
00011 namespace stdair {
00015   struct TimePeriodKey : public KeyAbstract {
00016
00017   public:
00018     // ////////// Construction //////////
00020     TimePeriodKey (const Time_T&,
00021                    const Time_T&);
00023     TimePeriodKey (const TimePeriodKey&);
00025     ~TimePeriodKey ();
00026   private:
00028     TimePeriodKey ();
00029
00030   public:
00031     // ////////// Getter //////////
00035     const Time_T& getTimeRangeStart() const {
00036       return _timeRangeStart;
00037     }
00038
00042     const Time_T& getTimeRangeEnd() const {
00043       return _timeRangeEnd;
00044     }
00045
00046     // ////////// Display support methods /////////
00052     void toStream (std::ostream& ioOut) const;
00053
00059     void fromStream (std::istream& ioIn);
00060
00066     const std::string toString() const;
00067
00068   private:
00069     // ////////////////// Attributes ////////////////////
00073     Time_T _timeRangeStart;
00074
00078     Time_T _timeRangeEnd;
00079
00080   };
00081
00082 }
00083 #endif // __STDAIR_BOM_TIMEPERIODKEY_HPP
```

35.429 stdair/bom/TimePeriodTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< TimePeriod * > stdair::TimePeriodList_T
- typedef std::map< const MapKey_T, TimePeriod * > stdair::TimePeriodMap_T
- typedef std::pair< MapKey_T, TimePeriod * > stdair::TimePeriodWithKey_T
- typedef std::list< TimePeriodWithKey_T > stdair::TimePeriodDetailedList_T

35.430 TimePeriodTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_TIMEPERIODTYPES_HPP
00003 #define __STDAIR_BOM_TIMEPERIODTYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // STDAIR
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations.
00017   class TimePeriod;
00018
00020   typedef std::list<TimePeriod*> TimePeriodList_T;
00021
00023   typedef std::map<const MapKey_T, TimePeriod*> TimePeriodMap_T;
00024
00026   typedef std::pair<MapKey_T, TimePeriod*> TimePeriodWithKey_T;
00027   typedef std::list<TimePeriodWithKey_T> TimePeriodDetailedList_T;
00028 }
00029 #endif // __STDAIR_BOM_TIMEPERIODTYPES_HPP
00030
```

35.431 stdair/bom/TravelSolutionStruct.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_BookingClass.hpp>
#include <stdair/bom/TravelSolutionStruct.hpp>
#include <stdair/bom/BomKeyManager.hpp>
#include <stdair/bom/ParsedKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.432 TravelSolutionStruct.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_BookingClass.hpp>
00009 #include <stdair/bom/TravelSolutionStruct.hpp>
00010 #include <stdair/bom/BomKeyManager.hpp>
00011 #include <stdair/bom/ParsedKey.hpp>
00012
00013 namespace stdair {
00014   // //////////////////////////////////////////////////////////////////
00015   TravelSolutionStruct::TravelSolutionStruct() : _chosenFareOption (NULL) {
00016   }
00017
00018   // //////////////////////////////////////////////////////////////////
00019   TravelSolutionStruct::~TravelSolutionStruct() {
00020   }
00021
00022   // //////////////////////////////////////////////////////////////////
00023   void TravelSolutionStruct::toStream (std::ostream& ioOut) const {
00024     ioOut << describe();
00025   }
00026
00027   // //////////////////////////////////////////////////////////////////
00028   void TravelSolutionStruct::fromStream (std::istream& ioIn) {
00029   }
00030
00031   // //////////////////////////////////////////////////////////////////
00032   const std::string TravelSolutionStruct::describe() const {
00033     std::ostringstream oStr;
00034
00035     //
00036     oStr << "Segment path: ";
00037     unsigned short idx = 0;
00038     for (SegmentPath_T::const_iterator lItSegmentPath = _segmentPath.begin();
00039          lItSegmentPath != _segmentPath.end(); ++lItSegmentPath, ++idx) {
00040       if (idx != 0) {
00041         oStr << "-";
00042       }
00043       const std::string& lSegmentPathString = *lItSegmentPath;
00044       const stdair::ParsedKey& lSegmentParsedKey =
00045         stdair::BomKeyManager::extractKeys (lSegmentPathString);
00046       const std::string& lSegmentKey = lSegmentParsedKey.toString();
00047       oStr << lSegmentKey;
00048     }
00049     oStr << " ### ";
00050
00051     //
00052     if (_chosenFareOption != NULL) {
00053       oStr << "Chosen fare option: " << _chosenFareOption->describe()
```

```
00054           << " ## Among: ";
00055     } else {
00056       oStr << "Fare options: ";
00057     }
00058
00059     //
00060     idx = 0;
00061     for (FareOptionList_T::const_iterator lItFareOption= _fareOptionList.begin();
00062          lItFareOption != _fareOptionList.end(); ++lItFareOption, ++idx) {
00063       if (idx != 0) {
00064         oStr << " , ";
00065       }
00066       const FareOptionStruct& lFareOption = *lItFareOption;
00067       oStr << lFareOption.describe();
00068     }
00069
00070     return oStr.str();
00071   }
00072
00073   // ////////////////////////////////////////////////////////////////////
00074   const std::string TravelSolutionStruct::display() const {
00075     std::ostringstream oStr;
00076
00077     // List of segment keys (one per segment)
00078     unsigned short idx = 0;
00079     for (SegmentPath_T::const_iterator itSegPath = _segmentPath.begin();
00080          itSegPath != _segmentPath.end(); ++itSegPath, ++idx) {
00081       if (idx != 0) {
00082         oStr << " ; ";
00083       }
00084       const std::string& lSegmentPathString = *itSegPath;
00085       const stdair::ParsedKey& lSegmentParsedKey =
00086         stdair::BomKeyManager::extractKeys (lSegmentPathString);
00087       const std::string& lSegmentKey = lSegmentParsedKey.toString();
00088       oStr << "[" << idx << "] " << lSegmentKey;
00089     }
00090
00091     // List of fare options (for the whole O&D)
00092     oStr << " --- ";
00093     idx = 0;
00094     for (FareOptionList_T::const_iterator itFareOption = _fareOptionList.begin();
00095          itFareOption != _fareOptionList.end(); ++itFareOption, ++idx) {
00096       if (idx != 0) {
00097         oStr << " , ";
00098       }
00099       const FareOptionStruct& lFareOption = *itFareOption;
00100       oStr << lFareOption.display();
00101     }
00102
00103     // List of booking class availability maps: one map per segment
00104     oStr << " --- ";
00105     idx = 0;
00106     for (ClassAvailabilityMapHolder_T::const_iterator itSegMap =
00107           _classAvailabilityMapHolder.begin();
00108          itSegMap != _classAvailabilityMapHolder.end(); ++itSegMap, ++idx) {
00109       if (idx != 0) {
00110         oStr << " ; ";
00111       }
00112       // Retrieve the booking class availability map
00113       const ClassAvailabilityMap_T& lClassAvlMap = *itSegMap;
```

```
00114       oStr << "[" << idx << "] ";
00115
00116       // List (map) of booking class availabilities
00117       unsigned short jdx = 0;
00118       for (ClassAvailabilityMap_T::const_iterator itClass = lClassAvlMap.begin();

00119            itClass != lClassAvlMap.end(); ++itClass, ++jdx) {
00120         if (jdx != 0) {
00121           oStr << " ";
00122         }
00123         const ClassCode_T& lClassCode = itClass->first;
00124         const Availability_T& lAvl = itClass->second;
00125         oStr << lClassCode << ":" << lAvl;
00126       }
00127     }
00128
00129     return oStr.str();
00130   }
00131
00132   // ////////////////////////////////////////////////////////////////////
00133   void TravelSolutionStruct::addSegment (const std::string& iKey) {
00134     _segmentPath.push_back (iKey);
00135   }
00136
00137   // ////////////////////////////////////////////////////////////////////
00138   void TravelSolutionStruct::
00139   addClassAvailabilityMap (const ClassAvailabilityMap_T& iMap) {
00140     _classAvailabilityMapHolder.push_back (iMap);
00141   }
00142
00143   // ////////////////////////////////////////////////////////////////////
00144   void TravelSolutionStruct::
00145   addClassYieldMap (const ClassYieldMap_T& iMap) {
00146     _classYieldMapHolder.push_back (iMap);
00147   }
00148
00149   // ////////////////////////////////////////////////////////////////////
00150   void TravelSolutionStruct::
00151   addBidPriceVector (const BidPriceVector_T& iBpv) {
00152     _bidPriceVectorHolder.push_back (iBpv);
00153   }
00154
00155   // ////////////////////////////////////////////////////////////////////
00156   void TravelSolutionStruct::
00157   addClassBpvMap (const ClassBpvMap_T& iMap) {
00158     _classBpvMapHolder.push_back (iMap);
00159   }
00160
00161   // ////////////////////////////////////////////////////////////////////
00162   void TravelSolutionStruct::
00163   addFareOption (const FareOptionStruct& iFareOption) {
00164     _fareOptionList.push_back (iFareOption);
00165   }
00166
00167 }
```

35.433 stdair/bom/TravelSolutionStruct.hpp File Reference

```
#include <iosfwd>
```

```
#include <string>
#include <vector>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/bom/BookingClassTypes.hpp>
#include <stdair/bom/FareOptionStruct.hpp>
#include <stdair/bom/FareOptionTypes.hpp>
#include <stdair/bom/TravelSolutionTypes.hpp>
```

Classes

- struct stdair::TravelSolutionStruct

  Structure holding the elements of a travel solution.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.434 TravelSolutionStruct.hpp

```
00001 #ifndef __STDAIR_BOM_TRAVELSOLUTIONSTRUCT_HPP
00002 #define __STDAIR_BOM_TRAVELSOLUTIONSTRUCT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 #include <vector>
00011 // StdAir
00012 #include <stdair/stdair_basic_types.hpp>
00013 #include <stdair/basic/StructAbstract.hpp>
00014 #include <stdair/bom/BookingClassTypes.hpp>
00015 #include <stdair/bom/FareOptionStruct.hpp>
00016 #include <stdair/bom/FareOptionTypes.hpp>
00017 #include <stdair/bom/TravelSolutionTypes.hpp>
00018
00019 namespace stdair {
00020
00024   struct TravelSolutionStruct : public StructAbstract {
00025   public:
00026     // ////////// Getters ///////////////
00028     const SegmentPath_T& getSegmentPath() const {
00029       return _segmentPath;
00030     }
00031
00033     const ClassAvailabilityMapHolder_T& getClassAvailabilityMapHolder() const {
00034       return _classAvailabilityMapHolder;
```

```
00035     }
00036
00038     const ClassYieldMapHolder_T& getClassYieldMapHolder() const {
00039       return _classYieldMapHolder;
00040     }
00041
00043     const BidPriceVectorHolder_T& getBidPriceVectorHolder() const {
00044       return _bidPriceVectorHolder;
00045     }
00046
00048     const ClassBpvMapHolder_T& getClassBpvMapHolder() const {
00049       return _classBpvMapHolder;
00050     }
00051
00053     const FareOptionList_T& getFareOptionList() const {
00054       return _fareOptionList;
00055     }
00056
00058     FareOptionList_T& getFareOptionListRef() {
00059       return _fareOptionList;
00060     }
00061
00063     const FareOptionStruct& getChosenFareOption() const {
00064       assert (_chosenFareOption != NULL);
00065       return *_chosenFareOption;
00066     }
00067
00068   public:
00069     // ////////// Setters ///////////////
00071     void addSegment (const std::string&);
00072
00074     void addClassAvailabilityMap (const ClassAvailabilityMap_T&);
00075
00077     void addClassYieldMap (const ClassYieldMap_T&);
00078
00080     void addBidPriceVector (const BidPriceVector_T&);
00081
00083     void addClassBpvMap (const ClassBpvMap_T&);
00084
00086     void addFareOption (const FareOptionStruct&);
00087
00089     void setChosenFareOption (const FareOptionStruct& iChosenFO) {
00090       _chosenFareOption = &iChosenFO;
00091     }
00092
00093
00094   public:
00095     // ////////// Display support method /////////////
00101     void toStream (std::ostream& ioOut) const;
00102
00107     void fromStream (std::istream& ioIn);
00108
00112     const std::string describe() const;
00113
00117     const std::string display() const;
00118
00119
00120   public:
00121     // ////////// Constructors & Destructor ///////////////
00125     TravelSolutionStruct();
00126
00130     ~TravelSolutionStruct();
```

```
00131
00132
00133   private:
00134     // ////////////////////// Attributes ///////////////////////
00138     SegmentPath_T _segmentPath;
00139
00143     ClassAvailabilityMapHolder_T _classAvailabilityMapHolder;
00144
00148     ClassYieldMapHolder_T _classYieldMapHolder;
00149
00153     BidPriceVectorHolder_T _bidPriceVectorHolder;
00154
00158     ClassBpvMapHolder_T _classBpvMapHolder;
00159
00163     FareOptionList_T _fareOptionList;
00164
00168     const FareOptionStruct* _chosenFareOption;
00169   };
00170
00171 }
00172 #endif // __STDAIR_BOM_TRAVELSOLUTIONSTRUCT_HPP
```

35.435 stdair/bom/TravelSolutionTypes.hpp File Reference

```
#include <list>
#include <map>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/bom/key_types.hpp>
#include <stdair/stdair_inventory_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< TravelSolutionStruct > stdair::TravelSolutionList_T
- typedef KeyList_T stdair::SegmentPath_T
- typedef std::list< SegmentPath_T > stdair::SegmentPathList_T
- typedef std::map< const ClassCode_T, Availability_T > stdair::ClassAvailabilityMap_T
- typedef std::list< ClassAvailabilityMap_T > stdair::ClassAvailabilityMapHolder_T
- typedef std::map< const ClassCode_T, YieldValue_T > stdair::ClassYieldMap_T
- typedef std::list< ClassYieldMap_T > stdair::ClassYieldMapHolder_T
- typedef std::list< BidPriceVector_T > stdair::BidPriceVectorHolder_T
- typedef std::map< const ClassCode_T, const BidPriceVector_T * > stdair::ClassBpvMap_T
- typedef std::list< ClassBpvMap_T > stdair::ClassBpvMapHolder_T

35.436 TravelSolutionTypes.hpp

```
00001 // //////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_TRAVELSOLUTIONTYPES_HPP
00003 #define __STDAIR_BOM_TRAVELSOLUTIONTYPES_HPP
00004
00005 // //////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <list>
00010 #include <map>
00011 // StdAir
00012 #include <stdair/stdair_basic_types.hpp>
00013 #include <stdair/bom/key_types.hpp>
00014 #include <stdair/stdair_inventory_types.hpp> // bid price related types.
00015
00016 namespace stdair {
00017
00018   // Forward declarations.
00019   struct TravelSolutionStruct;
00020
00022   typedef std::list<TravelSolutionStruct> TravelSolutionList_T;
00023
00025   typedef KeyList_T SegmentPath_T;
00026
00028   typedef std::list<SegmentPath_T> SegmentPathList_T;
00029
00031   typedef std::map<const ClassCode_T, Availability_T> ClassAvailabilityMap_T;
00032
00034   typedef std::list<ClassAvailabilityMap_T> ClassAvailabilityMapHolder_T;
00035
00037   typedef std::map<const ClassCode_T, YieldValue_T> ClassYieldMap_T;
00038
00040   typedef std::list<ClassYieldMap_T> ClassYieldMapHolder_T;
00041
00043   typedef std::list<BidPriceVector_T> BidPriceVectorHolder_T;
00044
00046   typedef std::map<const ClassCode_T, const BidPriceVector_T*> ClassBpvMap_T;
00047
00049   typedef std::list<ClassBpvMap_T> ClassBpvMapHolder_T;
00050 }
00051 #endif // __STDAIR_BOM_TRAVELSOLUTIONTYPES_HPP
00052
```

35.437 stdair/bom/VirtualClassStruct.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/bom/VirtualClassStruct.hpp>
#include <stdair/bom/BookingClass.hpp>
```

Namespaces

- namespace stdair

Handle on the StdAir library context.

35.438 VirtualClassStruct.cpp

```
00001 // //////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/bom/VirtualClassStruct.hpp>
00009 #include <stdair/bom/BookingClass.hpp>
00010
00011 namespace stdair {
00012
00013   // //////////////////////////////////////////////////////////////////////
00014   VirtualClassStruct::VirtualClassStruct() : _bookingClass (NULL) {
00015     assert (false);
00016   }
00017
00018   // //////////////////////////////////////////////////////////////////////
00019   VirtualClassStruct::VirtualClassStruct (const VirtualClassStruct& iVC)
00020     : _bookingClass (iVC._bookingClass), _yield (iVC._yield),
00021       _mean (iVC._mean), _stdDev (iVC._stdDev) {
00022   }
00023
00024   // //////////////////////////////////////////////////////////////////////
00025   VirtualClassStruct::VirtualClassStruct (BookingClass& ioBookingClass) {
00026     _bookingClass = &ioBookingClass;
00027   }
00028
00029   // //////////////////////////////////////////////////////////////////////
00030   VirtualClassStruct::~VirtualClassStruct() {
00031     _bookingClass = NULL;
00032   }
00033
00034   // //////////////////////////////////////////////////////////////////////
00035   void VirtualClassStruct::toStream (std::ostream& ioOut) const {
00036     ioOut << describe();
00037   }
00038
00039   // //////////////////////////////////////////////////////////////////////
00040   void VirtualClassStruct::fromStream (std::istream& ioIn) {
00041   }
00042
00043   // //////////////////////////////////////////////////////////////////////
00044   const std::string VirtualClassStruct::describe() const {
00045     std::ostringstream oStr;
00046     oStr << "Yield: " << _yield
00047          << ", Demand N (" << _mean << ", " << _stdDev << ")";
00048     return oStr.str();
00049   }
00050
00051   // //////////////////////////////////////////////////////////////////////
00052   const GeneratedDemandVector_T& VirtualClassStruct::
00053   getGeneratedDemandVector() const  {
00054       assert (_bookingClass != NULL);
00055       return _bookingClass->getGeneratedDemandVector();
00056   }
```

```
00057 }
```

35.439 stdair/bom/VirtualClassStruct.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <vector>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_maths_types.hpp>
#include <stdair/stdair_rm_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
```

Classes

- struct stdair::VirtualClassStruct

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.440 VirtualClassStruct.hpp

```
00001 #ifndef __STDAIR_BOM_VIRTUALCLASSSTRUCT_HPP
00002 #define __STDAIR_BOM_VIRTUALCLASSSTRUCT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 #include <vector>
00011 // StdAir
00012 #include <stdair/stdair_basic_types.hpp>
00013 #include <stdair/stdair_inventory_types.hpp>
00014 #include <stdair/stdair_maths_types.hpp>
00015 #include <stdair/stdair_rm_types.hpp>
00016 #include <stdair/basic/StructAbstract.hpp>
00017
00018 namespace stdair {
00019   // Forward declarations.
00020   class BookingClass;
00021
00023   struct VirtualClassStruct : public StructAbstract {
00024   public:
00025     // ////////// Getters ///////////////
```

```
00027     const Yield_T& getYield() const {
00028       return _yield;
00029     }
00030
00032     const MeanValue_T& getMean() const {
00033       return _mean;
00034     }
00035
00037     const StdDevValue_T& getStdDev() const {
00038       return _stdDev;
00039     }
00040
00042     const BookingLimit_T& getCumulatedBookingLimit () const {
00043       return _cumulatedBookingLimit;
00044     }
00045
00047     const ProtectionLevel_T& getCumulatedProtection () const {
00048       return _cumulatedProtection;
00049     }
00050
00052     const GeneratedDemandVector_T& getGeneratedDemandVector () const;
00053
00054   public:
00055     // ////////////// Setters ////////////////
00057     void setYield (const Yield_T& iYield) {
00058       _yield = iYield;
00059     }
00060
00062     void setMean (const MeanValue_T& iMean) {
00063       _mean = iMean;
00064     }
00065
00067     void setStdDev (const StdDevValue_T& iStdDev) {
00068       _stdDev = iStdDev;
00069     }
00070
00072     void setCumulatedBookingLimit (const BookingLimit_T& iBL) {
00073       _cumulatedBookingLimit = iBL;
00074     }
00075
00077     void setCumulatedProtection (const ProtectionLevel_T& iP) {
00078       _cumulatedProtection = iP;
00079     }
00080
00081   public:
00082     // ////////////// Display support method /////////////
00085     void toStream (std::ostream& ioOut) const;
00086
00089     void fromStream (std::istream& ioIn);
00090
00092     const std::string describe() const;
00093
00094
00095   public:
00096     // ////////////// Constructors & Destructor ///////////////
00098     VirtualClassStruct (const VirtualClassStruct&);
00100     VirtualClassStruct (BookingClass&);
00102     ~VirtualClassStruct();
00103
00104   private:
00106     VirtualClassStruct();
00107
```

```
00108
00109   private:
00110     // ////////////////////// Attributes ///////////////////////
00112     BookingClass* _bookingClass;
00113
00115     Yield_T _yield;
00116
00118     MeanValue_T _mean;
00119
00121     StdDevValue_T _stdDev;
00122
00124     BookingLimit_T _cumulatedBookingLimit;
00125
00127     ProtectionLevel_T _cumulatedProtection;
00128   };
00129
00130 }
00131 #endif // __STDAIR_BOM_VIRTUALCLASSSTRUCT_HPP
```

35.441 stdair/bom/VirtualClassTypes.hpp File Reference

```
#include <list>
#include <map>
#include <stdair/stdair_basic_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< VirtualClassStruct > stdair::VirtualClassList_T
- typedef std::map< const Yield_T, VirtualClassStruct > stdair::VirtualClassMap_T

35.442 VirtualClassTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_VIRTUALCLASSTYPES_HPP
00003 #define __STDAIR_BOM_VIRTUALCLASSTYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <list>
00010 #include <map>
00011 // STDAIR
00012 #include <stdair/stdair_basic_types.hpp>
00013
00014 namespace stdair {
```

```
00015
00016   // Forward declarations.
00017   struct VirtualClassStruct;
00018
00020   typedef std::list<VirtualClassStruct> VirtualClassList_T;
00021
00023   typedef std::map<const Yield_T, VirtualClassStruct> VirtualClassMap_T;
00024 }
00025 #endif // __STDAIR_BOM_VIRTUALCLASSTYPES_HPP
00026
```

35.443 stdair/bom/YieldFeatures.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/bom/YieldFeatures.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.444 YieldFeatures.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Request.hpp>
00009 #include <stdair/service/Logger.hpp>
00010 #include <stdair/bom/YieldFeatures.hpp>
00011
00012 namespace stdair {
00013
00014   // ////////////////////////////////////////////////////////////////////
00015   YieldFeatures::YieldFeatures()
00016     : _key (TRIP_TYPE_ONE_WAY,
00017             DEFAULT_PREFERRED_CABIN),
00018       _parent (NULL)  {
00019     // That constructor is used by the serialisation process
00020   }
00021
00022   // ////////////////////////////////////////////////////////////////////
00023   YieldFeatures::YieldFeatures (const YieldFeatures& iFeatures)
00024     : _key (iFeatures.getKey()), _parent (NULL)  {
00025     assert (false);
00026   }
```

```
00027
00028   // ////////////////////////////////////////////////////////////////////
00029   YieldFeatures::YieldFeatures (const Key_T& iKey)
00030     : _key (iKey), _parent (NULL)  {
00031   }
00032
00033   // ////////////////////////////////////////////////////////////////////
00034   YieldFeatures::~YieldFeatures () {
00035   }
00036
00037   // ////////////////////////////////////////////////////////////////////
00038   std::string YieldFeatures::toString() const {
00039     std::ostringstream oStr;
00040     oStr << describeKey();
00041     return oStr.str();
00042   }
00043
00044   // ////////////////////////////////////////////////////////////////////
00045   bool YieldFeatures::
00046   isTripTypeValid (const TripType_T& iBookingRequestTripType) const {
00047     bool oIsTripTypeValidFlag = true;
00048
00049     // Check whether the yield trip type is the same as the booking request
00050     // trip type
00051     const TripType_T& lYieldTripType = getTripType();
00052     if (iBookingRequestTripType == lYieldTripType) {
00053       // One way case
00054       return oIsTripTypeValidFlag;
00055     }
00056
00057     if (iBookingRequestTripType == TRIP_TYPE_INBOUND ||
00058         iBookingRequestTripType == TRIP_TYPE_OUTBOUND) {
00059       // Round trip case.
00060       if (lYieldTripType == TRIP_TYPE_ROUND_TRIP) {
00061         return oIsTripTypeValidFlag;
00062       }
00063     }
00064
00065     oIsTripTypeValidFlag = false;
00066     return false;
00067   }
00068
00069 }
00070
```

35.445 stdair/bom/YieldFeatures.hpp File Reference

```
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/YieldFeaturesKey.hpp>
#include <stdair/bom/YieldFeaturesTypes.hpp>
```

Classes

- class stdair::YieldFeatures

  Class representing the actual attributes for a yield date-period.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.446 YieldFeatures.hpp

```
00001 #ifndef __STDAIR_BOM_YIELDFEATURES_HPP
00002 #define __STDAIR_BOM_YIELDFEATURES_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/bom/BomAbstract.hpp>
00009 #include <stdair/bom/YieldFeaturesKey.hpp>
00010 #include <stdair/bom/YieldFeaturesTypes.hpp>
00011
00012 // Forward declaration
00013 namespace stdair {
00014
00019   class YieldFeatures : public BomAbstract {
00020     template <typename BOM> friend class FacBom;
00021     friend class FacBomManager;
00022
00023   public:
00024     // /////// Type definitions
00028     typedef YieldFeaturesKey Key_T;
00029
00030   public:
00031     // /////////// Display support methods /////////
00037     void toStream (std::ostream& ioOut) const {
00038       ioOut << toString();
00039     }
00040
00046     void fromStream (std::istream& ioIn) {
00047     }
00048
00052     std::string toString() const;
00053
00057     const std::string describeKey() const {
00058       return _key.toString();
00059     }
00060
00061   public:
00062     // ////////// Getters ////////////
00066     const Key_T& getKey() const {
00067       return _key;
00068     }
00069
00073     BomAbstract* const getParent() const {
00074       return _parent;
00075     }
00076
00080     const HolderMap_T& getHolderMap() const {
00081       return _holderMap;
00082     }
00083
00087     const CabinCode_T& getCabinCode() const {
00088       return _key.getCabinCode();
```

```
00089     }
00090
00094     const TripType_T& getTripType() const {
00095       return _key.getTripType();
00096     }
00097
00098
00099   public:
00100     // ///////////// Business methods ///////////////
00105     bool isTripTypeValid (const TripType_T&) const;
00106
00107
00108   protected:
00109     // ////////// Constructors and destructors /////////
00113     YieldFeatures (const Key_T&);
00114
00118     virtual ~YieldFeatures();
00119
00120   private:
00124     YieldFeatures();
00125
00129     YieldFeatures (const YieldFeatures&);
00130
00131
00132   protected:
00133     // ////////// Attributes /////////
00137     Key_T _key;
00138
00142     BomAbstract* _parent;
00143
00147     HolderMap_T _holderMap;
00148   };
00149
00150 }
00151 #endif // __STDAIR_BOM_YIELDFEATURES_HPP
00152
```

35.447 stdair/bom/YieldFeaturesKey.cpp File Reference

```
#include <ostream>
#include <sstream>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/bom/YieldFeaturesKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.448 YieldFeaturesKey.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
```

```
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <ostream>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Request.hpp>
00009 #include <stdair/bom/YieldFeaturesKey.hpp>
00010
00011 namespace stdair {
00012
00013   // ////////////////////////////////////////////////////////////////////
00014   YieldFeaturesKey::YieldFeaturesKey()
00015     : _tripType (TRIP_TYPE_ONE_WAY),
00016       _cabinCode (DEFAULT_PREFERRED_CABIN) {
00017     assert (false);
00018   }
00019
00020   // ////////////////////////////////////////////////////////////////////
00021   YieldFeaturesKey::YieldFeaturesKey (const stdair::TripType_T& iTripType,
00022                                       const stdair::CabinCode_T& iCabin)
00023     : _tripType (iTripType), _cabinCode (iCabin) {
00024   }
00025
00026   // ////////////////////////////////////////////////////////////////////
00027   YieldFeaturesKey::YieldFeaturesKey (const YieldFeaturesKey& iKey)
00028     : _tripType (iKey.getTripType()), _cabinCode (iKey.getCabinCode()) {
00029   }
00030
00031   // ////////////////////////////////////////////////////////////////////
00032   YieldFeaturesKey::~YieldFeaturesKey () {
00033   }
00034
00035   // ////////////////////////////////////////////////////////////////////
00036   void YieldFeaturesKey::toStream (std::ostream& ioOut) const {
00037     ioOut << "YieldFeaturesKey: " << toString() << std::endl;
00038   }
00039
00040   // ////////////////////////////////////////////////////////////////////
00041   void YieldFeaturesKey::fromStream (std::istream& ioIn) {
00042   }
00043
00044   // ////////////////////////////////////////////////////////////////////
00045   const std::string YieldFeaturesKey::toString() const {
00046     std::ostringstream oStr;
00047     oStr << _tripType << " -- " << _cabinCode;
00048     return oStr.str();
00049   }
00050
00051 }
```

35.449 stdair/bom/YieldFeaturesKey.hpp File Reference

```
#include <stdair/bom/KeyAbstract.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/stdair_inventory_types.hpp>
```

Classes

- struct stdair::YieldFeaturesKey

  Key of date-period.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.450 YieldFeaturesKey.hpp

```
00001 #ifndef __STDAIR_BOM_YIELDFEATURESKEY_HPP
00002 #define __STDAIR_BOM_YIELDFEATURESKEY_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/bom/KeyAbstract.hpp>
00009 #include <stdair/stdair_date_time_types.hpp>
00010 #include <stdair/stdair_demand_types.hpp>
00011 #include <stdair/stdair_inventory_types.hpp>
00012
00013 namespace stdair  {
00014
00018   struct YieldFeaturesKey : public KeyAbstract {
00019   public:
00020     // ////////// Construction //////////
00024     YieldFeaturesKey (const TripType_T&, const CabinCode_T&);
00028     YieldFeaturesKey (const YieldFeaturesKey&);
00032     ~YieldFeaturesKey ();
00033   private:
00037     YieldFeaturesKey ();
00038
00039   public:
00040     // ////////// Getters //////////
00044     const TripType_T& getTripType() const {
00045       return _tripType;
00046     }
00047
00051     const CabinCode_T& getCabinCode() const {
00052       return _cabinCode;
00053     }
00054
00055   public:
00056     // ////////// Display support methods /////////
00061     void toStream (std::ostream& ioOut) const;
00062
00067     void fromStream (std::istream& ioIn);
00068
00074     const std::string toString() const;
00075
00076   private:
00077     // ////////////////// Attributes ////////////////////
00081     TripType_T _tripType;
00082
```

```
00086     CabinCode_T _cabinCode;
00087   };
00088
00089 }
00090 #endif // __STDAIR_BOM_YIELDFEATURESKEY_HPP
```

35.451 stdair/bom/YieldFeaturesTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< YieldFeatures * > stdair::YieldFeaturesList_T
- typedef std::map< const MapKey_T, YieldFeatures * > stdair::YieldFeaturesMap_T
- typedef std::pair< MapKey_T, YieldFeatures * > stdair::YieldFeaturesWithKey_T
- typedef std::list< YieldFeaturesWithKey_T > stdair::YieldFeaturesDetailedList_T

35.452 YieldFeaturesTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_YIELDFEATURESTYPES_HPP
00003 #define __STDAIR_BOM_YIELDFEATURESTYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // STDAIR
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016   // Forward declarations.
00017   class YieldFeatures;
00018
00020   typedef std::list<YieldFeatures*> YieldFeaturesList_T;
00021
00023   typedef std::map<const MapKey_T, YieldFeatures*> YieldFeaturesMap_T;
00024
00026   typedef std::pair<MapKey_T, YieldFeatures*> YieldFeaturesWithKey_T;
00027   typedef std::list<YieldFeaturesWithKey_T> YieldFeaturesDetailedList_T;
```

```
00028 }
00029 #endif // __STDAIR_BOM_YIELDFEATURESTYPES_HPP
00030
```

35.453 stdair/bom/YieldStore.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/bom/YieldStore.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.454 YieldStore.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/bom/YieldStore.hpp>
00009
00010 namespace stdair {
00011
00012   // ////////////////////////////////////////////////////////////////////
00013   YieldStore::YieldStore (const Key_T& iKey) : _key (iKey), _parent (NULL) {
00014   }
00015
00016   // ////////////////////////////////////////////////////////////////////
00017   YieldStore::~YieldStore () {
00018   }
00019
00020   // ////////////////////////////////////////////////////////////////////
00021   std::string YieldStore::toString() const {
00022     std::ostringstream oStr;
00023     oStr << _key.toString();
00024     return oStr.str();
00025   }
00026
00027 }
00028
```

35.455 stdair/bom/YieldStore.hpp File Reference

```
#include <string>
#include <stdair/stdair_inventory_types.hpp>
```

```
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/YieldStoreKey.hpp>
#include <stdair/bom/YieldStoreTypes.hpp>
```

Classes

- class stdair::YieldStore

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.456 YieldStore.hpp

```
00001 #ifndef __STDAIR_BOM_YIELDSTORE_HPP
00002 #define __STDAIR_BOM_YIELDSTORE_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_inventory_types.hpp>
00011 #include <stdair/bom/BomAbstract.hpp>
00012 #include <stdair/bom/YieldStoreKey.hpp>
00013 #include <stdair/bom/YieldStoreTypes.hpp>
00014
00015 namespace stdair {
00016
00018   class YieldStore : public BomAbstract {
00019     template <typename BOM> friend class FacBom;
00020     friend class FacBomManager;
00021
00022   public :
00023     // Type definitions
00025     typedef YieldStoreKey Key_T;
00026
00027   public:
00028     // ////////// Display support methods /////////
00031     void toStream (std::ostream& ioOut) const { ioOut << toString(); }
00032
00034     BomAbstract* const getParent() const { return _parent; }
00035
00038     void fromStream (std::istream& ioIn) { }
00039
00041     std::string toString() const;
00042
00044     const std::string describeKey() const { return _key.toString(); }
00045
00046   public:
00047     // ////////// Getters ////////////
00049     const Key_T& getKey() const { return _key; }
```

```
00050
00052     const AirlineCode_T& getAirlineCode () const {
00053       return _key.getAirlineCode();
00054     }
00055
00056   protected:
00058     YieldStore (const Key_T&);
00059     YieldStore (const YieldStore&);
00061     ~YieldStore();
00062
00063   protected:
00064     // Attributes
00066     Key_T _key;
00067     BomAbstract* _parent;
00068   };
00069
00070 }
00071 #endif // __STDAIR_BOM_YIELDSTORE_HPP
00072
```

35.457 stdair/bom/YieldStoreKey.cpp File Reference

```
#include <stdair/bom/YieldStoreKey.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.458 YieldStoreKey.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // StdAir
00005 #include <stdair/bom/YieldStoreKey.hpp>
00006
00007 namespace stdair {
00008
00009   // ////////////////////////////////////////////////////////////////////
00010   YieldStoreKey::YieldStoreKey (const AirlineCode_T& iAirlineCode)
00011     : _airlineCode (iAirlineCode) {
00012   }
00013   // ////////////////////////////////////////////////////////////////////
00014   YieldStoreKey::YieldStoreKey (const YieldStoreKey& iKey)
00015     : _airlineCode (iKey._airlineCode) {
00016   }
00017
00018   // ////////////////////////////////////////////////////////////////////
00019   YieldStoreKey::~YieldStoreKey () {
00020   }
00021
00022   // ////////////////////////////////////////////////////////////////////
00023   void YieldStoreKey::toStream (std::ostream& ioOut) const {
00024     ioOut << "YieldStoreKey: " << toString() << std::endl;
00025   }
```

```
00026
00027   // ////////////////////////////////////////////////////////////////////
00028   void YieldStoreKey::fromStream (std::istream& ioIn) {
00029   }
00030
00031   // ////////////////////////////////////////////////////////////////////
00032   const std::string YieldStoreKey::toString() const {
00033     std::ostringstream oStr;
00034     oStr << _airlineCode;
00035     return oStr.str();
00036   }
00037
00038 }
```

35.459 stdair/bom/YieldStoreKey.hpp File Reference

```
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

Classes

- struct stdair::YieldStoreKey

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.460 YieldStoreKey.hpp

```
00001 #ifndef __STDAIR_BOM_YIELDSTOREKEY_HPP
00002 #define __STDAIR_BOM_YIELDSTOREKEY_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_inventory_types.hpp>
00009 #include <stdair/bom/KeyAbstract.hpp>
00010
00011 namespace stdair {
00012
00014   struct YieldStoreKey : public KeyAbstract {
00015
00016   private:
00017     // ////////// Default constructor //////////
00018     YieldStoreKey () { };
00019
00020   public:
00021     // ////////// Construction //////////
00023     YieldStoreKey (const AirlineCode_T& iAirlineCode);
00024     YieldStoreKey (const YieldStoreKey&);
00026     ~YieldStoreKey ();
```

```
00027
00028     // ////////////// Getters ///////////
00030     const AirlineCode_T& getAirlineCode() const {
00031       return _airlineCode;
00032     }
00033
00034     // ////////////// Display support methods /////////
00037     void toStream (std::ostream& ioOut) const;
00038
00041     void fromStream (std::istream& ioIn);
00042
00048     const std::string toString() const;
00049
00050   private:
00051     // Attributes
00053     AirlineCode_T _airlineCode;
00054   };
00055
00056 }
00057 #endif // __STDAIR_BOM_YIELDSTOREKEY_HPP
```

35.461 stdair/bom/YieldStoreTypes.hpp File Reference

```
#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::list< YieldStore * > stdair::YieldStoreList_T
- typedef std::map< const MapKey_T, YieldStore * > stdair::YieldStoreMap_T

35.462 YieldStoreTypes.hpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_YIELDSTORETYPES_HPP
00003 #define __STDAIR_BOM_YIELDSTORETYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
```

```
00014 namespace stdair {
00015
00016   // Forward declarations.
00017   class YieldStore;
00018
00020   typedef std::list<YieldStore*> YieldStoreList_T;
00021
00023   typedef std::map<const MapKey_T, YieldStore*> YieldStoreMap_T;
00024
00025 }
00026 #endif // __STDAIR_BOM_YIELDSTORETYPES_HPP
00027
```

35.463 stdair/command/CmdAbstract.cpp File Reference

```
#include <stdair/command/CmdAbstract.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.464 CmdAbstract.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // StdAir
00005 #include <stdair/command/CmdAbstract.hpp>
00006
00007 namespace stdair {
00008
00009 }
```

35.465 stdair/command/CmdAbstract.hpp File Reference

Classes

- class stdair::CmdAbstract

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.466 CmdAbstract.hpp

```
00001 #ifndef __STDAIR_CMD_CMDABSTRACT_HPP
00002 #define __STDAIR_CMD_CMDABSTRACT_HPP
```

```
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007
00008 namespace stdair {
00009
00011   class CmdAbstract {
00012   public:
00013
00014   };
00015
00016 }
00017 #endif // __STDAIR_CMD_CMDABSTRACT_HPP
```

35.467 stdair/command/CmdBomManager.cpp File Reference

35.468 CmdBomManager.cpp

```
00001
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <cassert>
00010 #include <sstream>
00011 // StdAir
00012 #include <stdair/basic/BasConst_General.hpp>
00013 #include <stdair/basic/BasConst_DefaultObject.hpp>
00014 #include <stdair/basic/BasConst_Request.hpp>
00015 #include <stdair/basic/BasConst_Inventory.hpp>
00016 #include <stdair/bom/BomRetriever.hpp>
00017 #include <stdair/bom/BomRoot.hpp>
00018 #include <stdair/bom/Inventory.hpp>
00019 #include <stdair/bom/FlightDate.hpp>
00020 #include <stdair/bom/LegDate.hpp>
00021 #include <stdair/bom/LegCabin.hpp>
00022 #include <stdair/bom/SegmentDate.hpp>
00023 #include <stdair/bom/SegmentCabin.hpp>
00024 #include <stdair/bom/FareFamily.hpp>
00025 #include <stdair/bom/BookingClass.hpp>
00026 #include <stdair/bom/AirportPair.hpp>
00027 #include <stdair/bom/PosChannel.hpp>
00028 #include <stdair/bom/DatePeriod.hpp>
00029 #include <stdair/bom/TimePeriod.hpp>
00030 #include <stdair/bom/FareFeatures.hpp>
00031 #include <stdair/bom/YieldFeatures.hpp>
00032 #include <stdair/bom/AirlineClassList.hpp>
00033 #include <stdair/bom/BomManager.hpp>
00034 #include <stdair/bom/TravelSolutionStruct.hpp>
00035 #include <stdair/bom/BookingRequestStruct.hpp>
00036 #include <stdair/factory/FacBomManager.hpp>
00037 #include <stdair/factory/FacBom.hpp>
00038 #include <stdair/command/CmdBomManager.hpp>
00039 #include <stdair/service/Logger.hpp>
00040 #include <stdair/bom/OnDDate.hpp>
00041 #include <stdair/bom/SegmentPeriod.hpp>
00042 #include <stdair/bom/FlightPeriod.hpp>
00043
00044 namespace stdair {
```

```
00045
00046   // ////////////////////////////////////////////////////////////////////
00047   void CmdBomManager::buildSampleBom (BomRoot& ioBomRoot) {
00048
00049     // DEBUG
00050     STDAIR_LOG_DEBUG ("StdAir is building the BOM tree from built-in "
00051                       << "specifications.");
00052
00053     // ////// Basic Bom Tree ///////
00054     // Build the inventory (flight-dates) and the schedule (flight period) parts.
00055     buildSampleInventorySchedule (ioBomRoot);
00056
00057     // Build the pricing (fare rules) and revenue accounting (yields) parts.
00058     buildSamplePricing (ioBomRoot);
00059
00060     // ////// Partnership Bom Tree ///////
00061     // Build the inventory (flight-dates) and the schedule (flight period) parts.
00062     buildPartnershipsSampleInventoryAndRM (ioBomRoot);
00063
00064     // Build the pricing (fare rules) and revenue accounting (yields) parts.
00065     buildPartnershipsSamplePricing (ioBomRoot);
00066
00067     // Build a dummy inventory, needed by RMOL.
00068     buildCompleteDummyInventory (ioBomRoot);
00069   }
00070
00071   // ////////////////////////////////////////////////////////////////////
00072   void CmdBomManager::buildSampleInventorySchedule (BomRoot& ioBomRoot) {
00073
00074     // Inventory
00075     // Step 0.1: Inventory level
00076     // Create an Inventory for BA
00077     const InventoryKey lBAKey ("BA");
00078     Inventory& lBAInv = FacBom<Inventory>::instance().create (lBAKey);
00079     FacBomManager::addToListAndMap (ioBomRoot, lBAInv);
00080     FacBomManager::linkWithParent (ioBomRoot, lBAInv);
00081
00082     // Create an Inventory for AF
00083     const InventoryKey lAFKey ("AF");
00084     Inventory& lAFInv = FacBom<Inventory>::instance().create (lAFKey);
00085     FacBomManager::addToListAndMap (ioBomRoot, lAFInv);
00086     FacBomManager::linkWithParent (ioBomRoot, lAFInv);
00087
00088     // BA
00089     // Step 0.2: Flight-date level
00090     // Create a FlightDate (BA9/10-JUN-2011) for BA's Inventory
00091     FlightNumber_T lFlightNumber = 9;
00092     Date_T lDate (2011, 6, 10);
00093     FlightDateKey lFlightDateKey (lFlightNumber, lDate);
00094
00095     FlightDate& lBA9_20110610_FD =
00096       FacBom<FlightDate>::instance().create (lFlightDateKey);
00097     FacBomManager::addToListAndMap (lBAInv, lBA9_20110610_FD);
00098     FacBomManager::linkWithParent (lBAInv, lBA9_20110610_FD);
00099
00100    // Display the flight-date
00101    // STDAIR_LOG_DEBUG ("FlightDate: " << lBA9_20110610_FD.toString());
00102
00103    // Step 0.3: Segment-date level
00104    // Create a first SegmentDate (LHR-SYD) for BA's Inventory
```

```
00105     // See http://www.britishairways.com/travel/flightinformation/public/fr_fr?&C
      arrier=BA&FlightNumber=0009&from=LHR&to=SYD&depDate=100611&SellingClass=O
00106     const AirportCode_T lLHR ("LHR");
00107     const AirportCode_T lSYD ("SYD");
00108     const DateOffset_T l1Day (1);
00109     const DateOffset_T l2Days (2);
00110     const Duration_T l2135 (21, 45, 0);
00111     const Duration_T l0610 (6, 10, 0);
00112     const Duration_T l2205 (22, 05, 0);
00113     SegmentDateKey lSegmentDateKey (lLHR, lSYD);
00114
00115     SegmentDate& lLHRSYDSegment =
00116       FacBom<SegmentDate>::instance().create (lSegmentDateKey);
00117     FacBomManager::addToListAndMap (lBA9_20110610_FD, lLHRSYDSegment);
00118     FacBomManager::linkWithParent (lBA9_20110610_FD, lLHRSYDSegment);
00119
00120     // Fill the SegmentDate content
00121     lLHRSYDSegment.setBoardingDate (lDate);
00122     lLHRSYDSegment.setOffDate (lDate + l2Days);
00123     lLHRSYDSegment.setBoardingTime (l2135);
00124     lLHRSYDSegment.setOffTime (l0610);
00125     lLHRSYDSegment.setElapsedTime (l2135);
00126
00127     // Display the segment-date
00128     // STDAIR_LOG_DEBUG ("SegmentDate: " << lLHRSYDSegment);
00129
00130     // Create a second SegmentDate (LHR-BKK) for BA's Inventory
00131     // See http://www.britishairways.com/travel/flightinformation/public/fr_fr?&C
      arrier=BA&FlightNumber=0009&from=LHR&to=BKK&depDate=100611&SellingClass=O
00132     const AirportCode_T lBKK ("BKK");
00133     const Duration_T l1540 (15, 40, 0);
00134     const Duration_T l1105 (11, 5, 0);
00135     lSegmentDateKey = SegmentDateKey (lLHR, lBKK);
00136
00137     SegmentDate& lLHRBKKSegment =
00138       FacBom<SegmentDate>::instance().create (lSegmentDateKey);
00139     FacBomManager::addToListAndMap (lBA9_20110610_FD, lLHRBKKSegment);
00140     FacBomManager::linkWithParent (lBA9_20110610_FD, lLHRBKKSegment);
00141
00142     // Fill the SegmentDate content
00143     lLHRBKKSegment.setBoardingDate (lDate);
00144     lLHRBKKSegment.setOffDate (lDate + l1Day);
00145     lLHRBKKSegment.setBoardingTime (l2135);
00146     lLHRBKKSegment.setOffTime (l1540);
00147     lLHRBKKSegment.setElapsedTime (l1105);
00148
00149     // Display the segment-date
00150     // STDAIR_LOG_DEBUG ("SegmentDate: " << lLHRBKKSegment);
00151
00152     // Create a third SegmentDate (BKK-SYD) for BA's Inventory
00153     // See http://www.britishairways.com/travel/flightinformation/public/fr_fr?&C
      arrier=BA&FlightNumber=0009&from=BKK&to=SYD&depDate=110611&SellingClass=O
00154     const Duration_T l1705 (17, 5, 0);
00155     const Duration_T l0905 (9, 5, 0);
00156     lSegmentDateKey = SegmentDateKey (lBKK, lSYD);
00157
00158     SegmentDate& lBKKSYDSegment =
00159       FacBom<SegmentDate>::instance().create (lSegmentDateKey);
00160     FacBomManager::addToListAndMap (lBA9_20110610_FD, lBKKSYDSegment);
00161     FacBomManager::linkWithParent (lBA9_20110610_FD, lBKKSYDSegment);
00162
00163     // Fill the SegmentDate content
```

```
00164     lBKKSYDSegment.setBoardingDate (lDate + l1Day);
00165     lBKKSYDSegment.setOffDate (lDate + l2Days);
00166     lBKKSYDSegment.setBoardingTime (l1705);
00167     lBKKSYDSegment.setOffTime (l1540);
00168     lBKKSYDSegment.setElapsedTime (l0905);
00169
00170     // Display the segment-date
00171     // STDAIR_LOG_DEBUG ("SegmentDate: " << lBKKSYDSegment);
00172
00173     // Step 0.4: Leg-date level
00174     // Create a first LegDate (LHR) for BA's Inventory
00175     LegDateKey lLegDateKey (lLHR);
00176
00177     LegDate& lLHRLeg = FacBom<LegDate>::instance().create (lLegDateKey);
00178     FacBomManager::addToListAndMap (lBA9_20110610_FD, lLHRLeg);
00179     FacBomManager::linkWithParent (lBA9_20110610_FD, lLHRLeg);
00180
00181     // Fill the LegDate content
00182     lLHRLeg.setOffPoint (lBKK);
00183     lLHRLeg.setBoardingDate (lDate);
00184     lLHRLeg.setOffDate (lDate + l1Day);
00185     lLHRLeg.setBoardingTime (l2135);
00186     lLHRLeg.setOffTime (l1540);
00187     lLHRLeg.setElapsedTime (l1105);
00188
00189     // Display the leg-date
00190     // STDAIR_LOG_DEBUG ("LegDate: " << lLHRLeg.toString());
00191
00192     // Create a second LegDate (BKK)
00193     lLegDateKey = LegDateKey (lBKK);
00194
00195     LegDate& lBKKLeg = FacBom<LegDate>::instance().create (lLegDateKey);
00196     FacBomManager::addToListAndMap (lBA9_20110610_FD, lBKKLeg);
00197     FacBomManager::linkWithParent (lBA9_20110610_FD, lBKKLeg);
00198
00199     // Display the leg-date
00200     // STDAIR_LOG_DEBUG ("LegDate: " << lBKKLeg.toString());
00201
00202     // Fill the LegDate content
00203     lBKKLeg.setOffPoint (lSYD);
00204     lBKKLeg.setBoardingDate (lDate + l1Day);
00205     lBKKLeg.setOffDate (lDate + l2Days);
00206     lBKKLeg.setBoardingTime (l1705);
00207     lBKKLeg.setOffTime (l1540);
00208     lBKKLeg.setElapsedTime (l0905);
00209
00210     // Link the segment-dates with the leg-dates
00211     FacBomManager::addToListAndMap (lLHRLeg, lLHRSYDSegment);
00212     FacBomManager::addToListAndMap (lLHRLeg, lLHRBKKSegment);
00213     FacBomManager::addToListAndMap (lBKKLeg, lLHRSYDSegment);
00214     FacBomManager::addToListAndMap (lBKKLeg, lBKKSYDSegment);
00215     FacBomManager::addToListAndMap (lLHRSYDSegment, lLHRLeg);
00216     FacBomManager::addToListAndMap (lLHRBKKSegment, lLHRLeg);
00217     FacBomManager::addToListAndMap (lLHRSYDSegment, lBKKLeg);
00218     FacBomManager::addToListAndMap (lBKKSYDSegment, lBKKLeg);
00219
00220
00221     // Step 0.5: segment-cabin level
00222     // Create a SegmentCabin (Y) for the Segment LHR-BKK of BA's Inventory
00223     const CabinCode_T lY ("Y");
00224     SegmentCabinKey lYSegmentCabinKey (lY);
00225
```

```
00226     SegmentCabin& lLHRBKKSegmentYCabin =
00227       FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
00228     FacBomManager::addToListAndMap (lLHRBKKSegment, lLHRBKKSegmentYCabin);
00229     FacBomManager::linkWithParent (lLHRBKKSegment, lLHRBKKSegmentYCabin);
00230
00231     // Display the segment-cabin
00232     // STDAIR_LOG_DEBUG ("SegmentCabin: " << lLHRBKKSegmentYCabin.toString());
00233
00234     // Create a SegmentCabin (Y) of the Segment BKK-SYD;
00235     SegmentCabin& lBKKSYDSegmentYCabin =
00236       FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
00237     FacBomManager::addToListAndMap (lBKKSYDSegment, lBKKSYDSegmentYCabin);
00238     FacBomManager::linkWithParent (lBKKSYDSegment, lBKKSYDSegmentYCabin);
00239
00240
00241     // Display the segment-cabin
00242     // STDAIR_LOG_DEBUG ("SegmentCabin: " << lBKKSYDSegmentYCabin.toString());
00243
00244     // Create a SegmentCabin (Y) of the Segment LHR-SYD;
00245     SegmentCabin& lLHRSYDSegmentYCabin =
00246       FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
00247     FacBomManager::addToListAndMap (lLHRSYDSegment, lLHRSYDSegmentYCabin);
00248     FacBomManager::linkWithParent (lLHRSYDSegment, lLHRSYDSegmentYCabin);
00249
00250     // Display the segment-cabin
00251     // STDAIR_LOG_DEBUG ("SegmentCabin: " << lLHRSYDSegmentYCabin.toString());
00252
00253     // Step 0.6: leg-cabin level
00254     // Create a LegCabin (Y) for the Leg LHR-BKK on BA's Inventory
00255     LegCabinKey lYLegCabinKey (lY);
00256
00257     LegCabin& lLHRLegYCabin =
00258       FacBom<LegCabin>::instance().create (lYLegCabinKey);
00259     FacBomManager::addToListAndMap (lLHRLeg, lLHRLegYCabin);
00260     FacBomManager::linkWithParent (lLHRLeg, lLHRLegYCabin);
00261
00262     // Display the leg-cabin
00263     // STDAIR_LOG_DEBUG ("LegCabin: " << lLHRLegYCabin.toString());
00264
00265     // Create a LegCabin (Y) for the Leg BKK-SYD
00266     LegCabin& lBKKLegYCabin =
00267       FacBom<LegCabin>::instance().create (lYLegCabinKey);
00268     FacBomManager::addToListAndMap (lBKKLeg, lBKKLegYCabin);
00269     FacBomManager::linkWithParent (lBKKLeg, lBKKLegYCabin);
00270     // Display the leg-cabin
00271     // STDAIR_LOG_DEBUG ("LegCabin: " << lBKKLegYCabin.toString());
00272
00283     FacBomManager::addToListAndMap (lLHRLegYCabin, lLHRSYDSegmentYCabin,
00284                                     lLHRSYDSegmentYCabin.getFullerKey());
00285     FacBomManager::addToListAndMap (lLHRLegYCabin, lLHRBKKSegmentYCabin,
00286                                     lLHRBKKSegmentYCabin.getFullerKey());
00287     FacBomManager::addToListAndMap (lBKKLegYCabin, lLHRSYDSegmentYCabin,
00288                                     lLHRSYDSegmentYCabin.getFullerKey());
00289     FacBomManager::addToListAndMap (lBKKLegYCabin, lBKKSYDSegmentYCabin,
00290     lBKKSYDSegmentYCabin.getFullerKey());
00291
00302     FacBomManager::addToListAndMap (lLHRSYDSegmentYCabin, lLHRLegYCabin,
00303                                     lLHRLegYCabin.getFullerKey());
00304     FacBomManager::addToListAndMap (lLHRBKKSegmentYCabin, lLHRLegYCabin,
00305                                     lLHRLegYCabin.getFullerKey());
00306     FacBomManager::addToListAndMap (lLHRSYDSegmentYCabin, lBKKLegYCabin,
00307                                     lBKKLegYCabin.getFullerKey());
```

```
00308     FacBomManager::addToListAndMap (lBKKSYDSegmentYCabin, lBKKLegYCabin,
00309                                     lBKKLegYCabin.getFullerKey());
00310
00311
00312     // Step 0.7: fare family level
00313     // Create a FareFamily (1) for the Segment LHR-BKK, cabin Y on BA's Inv
00314     const FamilyCode_T l1 ("EcoSaver");
00315     FareFamilyKey l1FareFamilyKey (l1);
00316
00317     FareFamily& lLHRBKKSegmentYCabin1Family =
00318       FacBom<FareFamily>::instance().create (l1FareFamilyKey);
00319     FacBomManager::addToListAndMap (lLHRBKKSegmentYCabin,
00320                                     lLHRBKKSegmentYCabin1Family);
00321     FacBomManager::linkWithParent (lLHRBKKSegmentYCabin,
00322                                    lLHRBKKSegmentYCabin1Family);
00323
00324     // Display the booking class
00325     // STDAIR_LOG_DEBUG ("FareFamily: "
00326     //                   << lLHRBKKSegmentYCabin1Family.toString());
00327
00328     // Create a FareFamily (1)  for the Segment BKK-SYD, cabin Y on BA's Inv
00329     FareFamily& lBKKSYDSegmentYCabin1Family =
00330       FacBom<FareFamily>::instance().create (l1FareFamilyKey);
00331     FacBomManager::addToListAndMap (lBKKSYDSegmentYCabin,
00332                                     lBKKSYDSegmentYCabin1Family);
00333     FacBomManager::linkWithParent (lBKKSYDSegmentYCabin,
00334                                    lBKKSYDSegmentYCabin1Family);
00335
00336     // Display the booking class
00337     // STDAIR_LOG_DEBUG ("FareFamily: "
00338     //                   << lLHRBKKSegmentYCabin1Family.toString());
00339
00340     // Create a FareFamily (1)  for the Segment LHR-SYD, cabin Y on BA's Inv
00341     FareFamily& lLHRSYDSegmentYCabin1Family =
00342       FacBom<FareFamily>::instance().create (l1FareFamilyKey);
00343     FacBomManager::addToListAndMap (lLHRSYDSegmentYCabin,
00344                                     lLHRSYDSegmentYCabin1Family);
00345     FacBomManager::linkWithParent (lLHRSYDSegmentYCabin,
00346                                    lLHRSYDSegmentYCabin1Family);
00347
00348     // Display the booking class
00349     // STDAIR_LOG_DEBUG ("FareFamily: "
00350     //                   << lLHRBKKSegmentYCabin1Family.toString());
00351
00352
00353     // Step 0.8: booking class level
00354     // Create a BookingClass (Q) for the Segment LHR-BKK, cabin Y,
00355     // fare family 1 on BA's Inv
00356     const ClassCode_T lQ ("Q");
00357     BookingClassKey lQBookingClassKey (lQ);
00358
00359     BookingClass& lLHRBKKSegmentYCabin1FamilyQClass =
00360       FacBom<BookingClass>::instance().create (lQBookingClassKey);
00361     FacBomManager::addToListAndMap (lLHRBKKSegmentYCabin1Family,
00362                                     lLHRBKKSegmentYCabin1FamilyQClass);
00363     FacBomManager::linkWithParent (lLHRBKKSegmentYCabin1Family,
00364                                    lLHRBKKSegmentYCabin1FamilyQClass);
00365
00366     FacBomManager::addToListAndMap (lLHRBKKSegmentYCabin,
00367                                     lLHRBKKSegmentYCabin1FamilyQClass);
00368     FacBomManager::addToListAndMap (lLHRBKKSegment,
00369                                     lLHRBKKSegmentYCabin1FamilyQClass);
```

```
00370
00371     // Display the booking class
00372     // STDAIR_LOG_DEBUG ("BookingClass: "
00373     //                   << lLHRBKKSegmentYCabin1FamilyQClass.toString());
00374
00375     // Create a BookingClass (Q) for the Segment BKK-SYD, cabin Y,
00376     // fare family 1 on BA's Inv
00377     BookingClass& lBKKSYDSegmentYCabin1FamilyQClass =
00378       FacBom<BookingClass>::instance().create (lQBookingClassKey);
00379     FacBomManager::addToListAndMap (lBKKSYDSegmentYCabin1Family,
00380                                     lBKKSYDSegmentYCabin1FamilyQClass);
00381     FacBomManager::linkWithParent (lBKKSYDSegmentYCabin1Family,
00382                                    lBKKSYDSegmentYCabin1FamilyQClass);
00383
00384     FacBomManager::addToListAndMap (lBKKSYDSegmentYCabin,
00385                                     lBKKSYDSegmentYCabin1FamilyQClass);
00386     FacBomManager::addToListAndMap (lBKKSYDSegment,
00387                                     lBKKSYDSegmentYCabin1FamilyQClass);
00388
00389     // Display the booking class
00390     // STDAIR_LOG_DEBUG ("BookingClass: "
00391     //                   << lLHRBKKSegmentYCabin1FamilyQClass.toString());
00392
00393     // Create a BookingClass (Q) for the Segment LHR-SYD, cabin Y,
00394     // fare family 1 on BA's Inv
00395     BookingClass& lLHRSYDSegmentYCabin1FamilyQClass =
00396       FacBom<BookingClass>::instance().create (lQBookingClassKey);
00397     FacBomManager::addToListAndMap (lLHRSYDSegmentYCabin1Family,
00398                                     lLHRSYDSegmentYCabin1FamilyQClass);
00399     FacBomManager::linkWithParent (lLHRSYDSegmentYCabin1Family,
00400                                    lLHRSYDSegmentYCabin1FamilyQClass);
00401
00402     FacBomManager::addToListAndMap (lLHRSYDSegmentYCabin,
00403                                     lLHRSYDSegmentYCabin1FamilyQClass);
00404     FacBomManager::addToListAndMap (lLHRSYDSegment,
00405                                     lLHRSYDSegmentYCabin1FamilyQClass);
00406
00407     // Display the booking class
00408     // STDAIR_LOG_DEBUG ("BookingClass: "
00409     //                   << lLHRBKKSegmentYCabin1FamilyQClass.toString());
00410
00411
00412     // ////// AF ///////
00413     // Step 0.2: Flight-date level
00414     // Create a FlightDate (AF084/20-MAR-2011) for AF's Inventory
00415     lFlightNumber = 84;
00416     lDate = Date_T (2011, 3, 20);
00417     lFlightDateKey = FlightDateKey (lFlightNumber, lDate);
00418
00419     FlightDate& lAF084_20110320_FD =
00420       FacBom<FlightDate>::instance().create (lFlightDateKey);
00421     FacBomManager::addToListAndMap (lAFInv, lAF084_20110320_FD);
00422     FacBomManager::linkWithParent (lAFInv, lAF084_20110320_FD);
00423
00424     // Display the flight-date
00425     // STDAIR_LOG_DEBUG ("FlightDate: " << lAF084_20110320_FD.toString());
00426
00427     // Step 0.3: Segment-date level
00428     // Create a SegmentDate (CDG-SFO) for AF's Inventory
00429     const AirportCode_T lCDG ("CDG");
00430     const AirportCode_T lSFO ("SFO");
00431     const Duration_T l1040 (10, 40, 0);
```

```
00432     const Duration_T l1250 (12, 50, 0);
00433     const Duration_T l1110 (11, 10, 0);
00434     lSegmentDateKey = SegmentDateKey (lCDG, lSFO);
00435
00436     SegmentDate& lCDGSFOSegment =
00437       FacBom<SegmentDate>::instance().create (lSegmentDateKey);
00438     FacBomManager::addToListAndMap (lAF084_20110320_FD, lCDGSFOSegment);
00439     FacBomManager::linkWithParent (lAF084_20110320_FD, lCDGSFOSegment);
00440
00441     // Display the segment-date
00442     // STDAIR_LOG_DEBUG ("SegmentDate: " << lCDGSFOSegment.toString());
00443
00444     // Fill the SegmentDate content
00445     lCDGSFOSegment.setBoardingDate (lDate);
00446     lCDGSFOSegment.setOffDate (lDate);
00447     lCDGSFOSegment.setBoardingTime (l1040);
00448     lCDGSFOSegment.setOffTime (l1250);
00449     lCDGSFOSegment.setElapsedTime (l1110);
00450
00451     // Step 0.4: Leg-date level
00452     // Create a LegDate (CDG) for AF's Inventory
00453     lLegDateKey = LegDateKey (lCDG);
00454
00455     LegDate& lCDGLeg = FacBom<LegDate>::instance().create (lLegDateKey);
00456     FacBomManager::addToListAndMap (lAF084_20110320_FD, lCDGLeg);
00457     FacBomManager::linkWithParent (lAF084_20110320_FD, lCDGLeg);
00458
00459     // Fill the LegDate content
00460     lCDGLeg.setOffPoint (lSFO);
00461     lCDGLeg.setBoardingDate (lDate);
00462     lCDGLeg.setOffDate (lDate);
00463     lCDGLeg.setBoardingTime (l1040);
00464     lCDGLeg.setOffTime (l1250);
00465     lCDGLeg.setElapsedTime (l1110);
00466
00467     // Display the leg-date
00468     // STDAIR_LOG_DEBUG ("LegDate: " << lCDGLeg.toString());
00469
00470     // Link the segment-dates with the leg-dates
00471     FacBomManager::addToListAndMap (lCDGLeg, lCDGSFOSegment);
00472     FacBomManager::addToListAndMap (lCDGSFOSegment, lCDGLeg);
00473
00474
00475     // Step 0.5: segment-cabin level
00476     // Create a SegmentCabin (Y) for the Segment CDG-SFO of AF's Inventory
00477     SegmentCabin& lCDGSFOSegmentYCabin =
00478       FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
00479     FacBomManager::addToListAndMap (lCDGSFOSegment, lCDGSFOSegmentYCabin);
00480     FacBomManager::linkWithParent (lCDGSFOSegment, lCDGSFOSegmentYCabin);
00481
00482     // Display the segment-cabin
00483     // STDAIR_LOG_DEBUG ("SegmentCabin: " << lCDGSFOSegmentYCabin.toString());
00484
00485     // Step 0.6: leg-cabin level
00486     // Create a LegCabin (Y) for the Leg CDG-SFO on AF's Inventory
00487     LegCabin& lCDGLegYCabin =
00488       FacBom<LegCabin>::instance().create (lYLegCabinKey);
00489     FacBomManager::addToListAndMap (lCDGLeg, lCDGLegYCabin);
00490     FacBomManager::linkWithParent (lCDGLeg, lCDGLegYCabin);
00491
00492     // Display the leg-cabin
00493     // STDAIR_LOG_DEBUG ("LegCabin: " << lLHRLegYCabin.toString());
```

```
00494
00495     // Link the segment-dates with the leg-dates
00496     FacBomManager::addToListAndMap (lCDGLegYCabin, lCDGSFOSegmentYCabin,
00497                                     lCDGSFOSegmentYCabin.getFullerKey());
00498     FacBomManager::addToListAndMap (lCDGSFOSegmentYCabin, lCDGLegYCabin,
00499                                     lCDGLegYCabin.getFullerKey());
00500
00501
00502     // Step 0.7: fare family level
00503     // Create a fareFamily (1) for the Segment CDG-SFO, cabin Y on AF's Inv
00504     FareFamily& lCDGSFOSegmentYCabin1Family =
00505       FacBom<FareFamily>::instance().create (l1FareFamilyKey);
00506     FacBomManager::addToListAndMap (lCDGSFOSegmentYCabin,
00507                                     lCDGSFOSegmentYCabin1Family);
00508     FacBomManager::linkWithParent (lCDGSFOSegmentYCabin,
00509                                    lCDGSFOSegmentYCabin1Family);
00510
00511     // Display the fare family
00512     // STDAIR_LOG_DEBUG ("fareFamily: "
00513     //
00514     //                   << lCDGSFOSegmentYCabin1Family.toString());
00515
00516     // Step 0.8: booking class level Create a BookingClass (Q) for the
00517     // Segment CDG-SFO, cabin Y, fare family 1 on AF's Inv
00518     BookingClass& lCDGSFOSegmentYCabin1FamilyQClass =
00519       FacBom<BookingClass>::instance().create (lQBookingClassKey);
00520     FacBomManager::addToListAndMap (lCDGSFOSegmentYCabin1Family,
00521                                     lCDGSFOSegmentYCabin1FamilyQClass);
00522     FacBomManager::linkWithParent (lCDGSFOSegmentYCabin1Family,
00523                                    lCDGSFOSegmentYCabin1FamilyQClass);
00524
00525     FacBomManager::addToListAndMap (lCDGSFOSegmentYCabin,
00526                                     lCDGSFOSegmentYCabin1FamilyQClass);
00527     FacBomManager::addToListAndMap (lCDGSFOSegment,
00528                                     lCDGSFOSegmentYCabin1FamilyQClass);
00529
00530     // Display the booking class
00531     // STDAIR_LOG_DEBUG ("BookingClass: "
00532     //                   << lCDGSFOSegmentYCabin1FamilyQClass.toString());
00533
00534     /*=============================================================================
      =====
00535       ===========================================================================
      =====
00536       ===========================================================================
      =====*/
00537     // Schedule:
00538     // BA:
00539     // Step 1: flight period level
00540     // Create a flight period for BA9:
00541     const DoWStruct lDoWSrtuct ("1111111");
00542     const Date_T lBA9DateRangeStart (2010, boost::gregorian::Jun, 6);
00543     const Date_T lBA9DateRangeEnd (2010, boost::gregorian::Jun, 7);
00544     const DatePeriod_T lBA9DatePeriod (lBA9DateRangeStart, lBA9DateRangeEnd);
00545     const PeriodStruct lBA9PeriodStruct (lBA9DatePeriod, lDoWSrtuct);
00546
00547     lFlightNumber = FlightNumber_T (9);
00548
00549     FlightPeriodKey lBA9FlightPeriodKey (lFlightNumber, lBA9PeriodStruct);
00550
00551     FlightPeriod& lBA9FlightPeriod =
00552       FacBom<FlightPeriod>::instance().create (lBA9FlightPeriodKey);
```

```
00553     FacBomManager::addToListAndMap (lBAInv, lBA9FlightPeriod);
00554     FacBomManager::linkWithParent (lBAInv, lBA9FlightPeriod);
00555
00556     // Step 2: segment period level
00557     // Create a segment period for SIN-BKK:
00558
00559     SegmentPeriodKey lLHRSYDSegmentPeriodKey (lLHR, lSYD);
00560
00561     SegmentPeriod& lLHRSYDSegmentPeriod =
00562       FacBom<SegmentPeriod>::instance().create (lLHRSYDSegmentPeriodKey);
00563     FacBomManager::addToListAndMap (lBA9FlightPeriod, lLHRSYDSegmentPeriod);
00564     FacBomManager::linkWithParent (lBA9FlightPeriod, lLHRSYDSegmentPeriod);
00565
00566     lLHRSYDSegmentPeriod.setBoardingTime (l2135);
00567     lLHRSYDSegmentPeriod.setOffTime (l1540);
00568     lLHRSYDSegmentPeriod.setElapsedTime (l1105);
00569     ClassList_String_T lYM ("YM");
00570     lLHRSYDSegmentPeriod.addCabinBookingClassList (lY,lYM);
00571
00572     // AF:
00573     // Step 1: flight period level
00574     // Create a flight period for AF84:
00575     const Date_T lAF84DateRangeStart (2011, boost::gregorian::Mar, 20);
00576     const Date_T lAF84DateRangeEnd (2011, boost::gregorian::Mar, 21);
00577     const DatePeriod_T lAF84DatePeriod (lAF84DateRangeStart, lAF84DateRangeEnd);
00578     const PeriodStruct lAF84PeriodStruct (lAF84DatePeriod, lDoWSrtuct);
00579
00580     lFlightNumber = FlightNumber_T (84);
00581
00582     FlightPeriodKey lAF84FlightPeriodKey (lFlightNumber, lAF84PeriodStruct);
00583
00584     FlightPeriod& lAF84FlightPeriod =
00585       FacBom<FlightPeriod>::instance().create (lAF84FlightPeriodKey);
00586     FacBomManager::addToListAndMap (lAFInv, lAF84FlightPeriod);
00587     FacBomManager::linkWithParent (lAFInv, lAF84FlightPeriod);
00588
00589     // Step 2: segment period level
00590     // Create a segment period for SIN-BKK:
00591
00592     SegmentPeriodKey lCDGSFOSegmentPeriodKey (lCDG, lSFO);
00593
00594     SegmentPeriod& lCDGSFOSegmentPeriod =
00595       FacBom<SegmentPeriod>::instance().create (lCDGSFOSegmentPeriodKey);
00596     FacBomManager::addToListAndMap (lAF84FlightPeriod, lCDGSFOSegmentPeriod);
00597     FacBomManager::linkWithParent (lAF84FlightPeriod, lCDGSFOSegmentPeriod);
00598
00599     lCDGSFOSegmentPeriod.setBoardingTime (l1040);
00600     lCDGSFOSegmentPeriod.setOffTime (l1250);
00601     lCDGSFOSegmentPeriod.setElapsedTime (l1110);
00602     lCDGSFOSegmentPeriod.addCabinBookingClassList (lY,lYM);
00603
00604     /*================================================================================
    =====
00605       ================================================================================
    =====
00606       ================================================================================
    =====*/
00607     // O&D
00608     // Create an O&D Date (BA;9,2010-Jun-06;LHR,SYD) for BA's Inventory
00609     OnDString_T  lBALHRSYDOnDStr = "BA;9,2010-Jun-06;LHR,SYD";
00610     OnDStringList_T lBAOnDStrList;
00611     lBAOnDStrList.push_back (lBALHRSYDOnDStr);
```

```
00612
00613     OnDDateKey lBAOnDDateKey (lBAOnDStrList);
00614     OnDDate& lBA_LHRSYD_OnDDate =
00615       FacBom<OnDDate>::instance().create (lBAOnDDateKey);
00616     // Link to the inventory
00617     FacBomManager::addToListAndMap (lBAInv, lBA_LHRSYD_OnDDate);
00618     FacBomManager::linkWithParent (lBAInv, lBA_LHRSYD_OnDDate);
00619
00620     // Add the segment
00621     FacBomManager::addToListAndMap (lBA_LHRSYD_OnDDate, lLHRSYDSegment);
00622
00623     // Add total forecast info for cabin Y.
00624     const MeanStdDevPair_T lMean60StdDev6 (60.0, 6.0);
00625     const WTP_T lWTP750 = 750.0;
00626     const WTPDemandPair_T lWTP750Mean60StdDev6 (lWTP750, lMean60StdDev6);
00627     lBA_LHRSYD_OnDDate.setTotalForecast (lY, lWTP750Mean60StdDev6);
00628
00629     // Create an O&D Date (AF;84,2011-Mar-21;CDG,SFO) for AF's Inventory
00630     OnDString_T lAFLHRSYDOnDStr = "AF;9,2011-Mar-20;CDG,SFO";
00631     OnDStringList_T lAFOnDStrList;
00632     lAFOnDStrList.push_back (lAFLHRSYDOnDStr);
00633
00634     OnDDateKey lAFOnDDateKey (lAFOnDStrList);
00635     OnDDate& lAF_LHRSYD_OnDDate =
00636       FacBom<OnDDate>::instance().create (lAFOnDDateKey);
00637     // Link to the inventory
00638     FacBomManager::addToListAndMap (lAFInv, lAF_LHRSYD_OnDDate);
00639     FacBomManager::linkWithParent (lAFInv, lAF_LHRSYD_OnDDate);
00640
00641     // Add the segment
00642     FacBomManager::addToListAndMap (lAF_LHRSYD_OnDDate, lLHRSYDSegment);
00643
00644     // Add total forecast info for cabin Y.
00645     lAF_LHRSYD_OnDDate.setTotalForecast (lY, lWTP750Mean60StdDev6);
00646
00647   }
00648   // ////////////////////////////////////////////////////////////////////
00649   void CmdBomManager::buildCompleteDummyInventory  (BomRoot& ioBomRoot) {
00650
00651     // Build a dummy inventory, containing a dummy flight-date with a
00652     // single segment-cabin and a single leg-cabin.
00653     const CabinCapacity_T lCapacity = DEFAULT_CABIN_CAPACITY;
00654     buildDummyInventory (ioBomRoot, lCapacity);
00655
00656     // Retrieve the (sample) segment-cabin.
00657     SegmentCabin& lDummySegmentCabin =
00658       BomRetriever::retrieveDummySegmentCabin (ioBomRoot);
00659
00660     // Retrieve the (sample) leg-cabin.
00661     LegCabin& lDummyLegCabin =
00662       BomRetriever::retrieveDummyLegCabin (ioBomRoot);
00663
00664     // Add some booking classes to the dummy segment-cabin and some
00665     // virtual ones to the dummy leg-cabin.
00666     // First booking class yield and demand information.
00667     Yield_T lYield = 100;
00668     MeanValue_T lMean = 20;
00669     StdDevValue_T lStdDev= 9;
00670     BookingClassKey lBCKey (DEFAULT_CLASS_CODE);
00671
00672     BookingClass& lDummyBookingClass =
00673       FacBom<BookingClass>::instance().create (lBCKey);
```

```
00674     lDummyBookingClass.setYield (lYield);
00675     lDummyBookingClass.setMean (lMean);
00676     lDummyBookingClass.setStdDev (lStdDev);
00677     // Add a booking class to the segment-cabin.
00678     FacBomManager::addToList (lDummySegmentCabin, lDummyBookingClass);
00679
00680     VirtualClassStruct lDummyVirtualClass (lDummyBookingClass);
00681     lDummyVirtualClass.setYield (lYield);
00682     lDummyVirtualClass.setMean (lMean);
00683     lDummyVirtualClass.setStdDev (lStdDev);
00684     // Add the corresponding virtual class to the leg-cabin.
00685     lDummyLegCabin.addVirtualClass (lDummyVirtualClass);
00686
00687     // Second booking class yield and demand information.
00688     lYield = 70;
00689     lMean = 45;
00690     lStdDev= 12;
00691     lDummyBookingClass.setYield (lYield);
00692     lDummyBookingClass.setMean (lMean);
00693     lDummyBookingClass.setStdDev (lStdDev);
00694     // Add a booking class to the segment-cabin.
00695     FacBomManager::addToList (lDummySegmentCabin, lDummyBookingClass);
00696
00697     lDummyVirtualClass.setYield (lYield);
00698     lDummyVirtualClass.setMean (lMean);
00699     lDummyVirtualClass.setStdDev (lStdDev);
00700     // Add the corresponding virtual class to the leg-cabin.
00701     lDummyLegCabin.addVirtualClass (lDummyVirtualClass);
00702
00703     // Third booking class yield and demand information.
00704     lYield = 42;
00705     lMean = 80;
00706     lStdDev= 16;
00707     lDummyBookingClass.setYield (lYield);
00708     lDummyBookingClass.setMean (lMean);
00709     lDummyBookingClass.setStdDev (lStdDev);
00710     // Add a booking class to the segment-cabin.
00711     FacBomManager::addToList (lDummySegmentCabin, lDummyBookingClass);
00712
00713     lDummyVirtualClass.setYield (lYield);
00714     lDummyVirtualClass.setMean (lMean);
00715     lDummyVirtualClass.setStdDev (lStdDev);
00716     // Add the corresponding virtual class to the leg-cabin.
00717     lDummyLegCabin.addVirtualClass (lDummyVirtualClass);
00718
00719   }
00720
00721   // ////////////////////////////////////////////////////////////////////
00722   void CmdBomManager::buildDummyInventory (BomRoot& ioBomRoot,
00723                                            const CabinCapacity_T& iCapacity) {
00724     // Inventory
00725     const InventoryKey lInventoryKey (DEFAULT_AIRLINE_CODE);
00726     Inventory& lInv = FacBom<Inventory>::instance().create (lInventoryKey);
00727     FacBomManager::addToListAndMap (ioBomRoot, lInv);
00728     FacBomManager::linkWithParent (ioBomRoot, lInv);
00729
00730     // Flight-date
00731     FlightDateKey lFlightDateKey(DEFAULT_FLIGHT_NUMBER, DEFAULT_DEPARTURE_DATE);
00732     FlightDate& lFlightDate =
00733       FacBom<FlightDate>::instance().create (lFlightDateKey);
00734     FacBomManager::addToListAndMap (lInv, lFlightDate);
00735     FacBomManager::linkWithParent (lInv, lFlightDate);
```

```
00736
00737     // Leg-date
00738     LegDateKey lLegDateKey (DEFAULT_ORIGIN);
00739     LegDate& lLeg = FacBom<LegDate>::instance().create (lLegDateKey);
00740     FacBomManager::addToListAndMap (lFlightDate, lLeg);
00741     FacBomManager::linkWithParent (lFlightDate, lLeg);
00742
00743     // Fill the LegDate content
00744     lLeg.setOffPoint (DEFAULT_DESTINATION);
00745     lLeg.setBoardingDate (DEFAULT_DEPARTURE_DATE);
00746     lLeg.setOffDate (DEFAULT_DEPARTURE_DATE);
00747     lLeg.setBoardingTime (Duration_T (14, 0, 0));
00748     lLeg.setOffTime (Duration_T (16, 0, 0));
00749     lLeg.setElapsedTime (Duration_T (8, 0, 0));
00750
00751     // Leg-cabin
00752     LegCabinKey lLegCabinKey (DEFAULT_CABIN_CODE);
00753     LegCabin& lLegCabin = FacBom<LegCabin>::instance().create (lLegCabinKey);
00754     FacBomManager::addToListAndMap (lLeg, lLegCabin);
00755     FacBomManager::linkWithParent (lLeg, lLegCabin);
00756
00757     lLegCabin.setCapacities (iCapacity);
00758     lLegCabin.setAvailabilityPool (iCapacity);
00759
00760     // Segment-date
00761     SegmentDateKey lSegmentDateKey (DEFAULT_ORIGIN, DEFAULT_DESTINATION);
00762     SegmentDate& lSegment =
00763       FacBom<SegmentDate>::instance().create (lSegmentDateKey);
00764     FacBomManager::addToListAndMap (lFlightDate, lSegment);
00765     FacBomManager::linkWithParent (lFlightDate, lSegment);
00766
00767     // Links between the segment-date and the leg-date
00768     FacBomManager::addToListAndMap (lLeg, lSegment);
00769     FacBomManager::addToListAndMap (lSegment, lLeg);
00770
00771     // Fill the SegmentDate content
00772     lSegment.setBoardingDate (DEFAULT_DEPARTURE_DATE);
00773     lSegment.setOffDate (DEFAULT_DEPARTURE_DATE);
00774     lSegment.setBoardingTime (Duration_T (14, 0, 0));
00775     lSegment.setOffTime (Duration_T (16, 0, 0));
00776     lSegment.setElapsedTime (Duration_T (8, 0, 0));
00777
00778     // Segment-cabin
00779     SegmentCabinKey lSegmentCabinKey (DEFAULT_CABIN_CODE);
00780     SegmentCabin& lSegmentCabin =
00781       FacBom<SegmentCabin>::instance().create (lSegmentCabinKey);
00782     FacBomManager::addToListAndMap (lSegment, lSegmentCabin);
00783     FacBomManager::linkWithParent (lSegment, lSegmentCabin);
00784
00785     // Links between the segment-cabin and the leg-cabin
00786     FacBomManager::addToListAndMap (lLegCabin, lSegmentCabin,
00787                                     lSegmentCabin.getFullerKey());
00788     FacBomManager::addToListAndMap (lSegmentCabin, lLegCabin,
00789                                     lLegCabin.getFullerKey());
00790
00791     // Create a FareFamily (1) for the Segment LHR-BKK, cabin Y on BA's Inv
00792     const FamilyCode_T l1 ("EcoSaver");
00793     FareFamilyKey l1FareFamilyKey (l1);
00794
00795     FareFamily& lSegmentYCabin1Family =
00796       FacBom<FareFamily>::instance().create (l1FareFamilyKey);
00797     FacBomManager::addToListAndMap (lSegmentCabin, lSegmentYCabin1Family);
```

```
00798     FacBomManager::linkWithParent (lSegmentCabin, lSegmentYCabin1Family);
00799
00800     // Create a booking-class
00801     const ClassCode_T lQ ("Q");
00802     BookingClassKey lQBookingClassKey (lQ);
00803
00804     BookingClass& lSegmentYCabin1FamilyQClass =
00805       FacBom<BookingClass>::instance().create (lQBookingClassKey);
00806     FacBomManager::addToListAndMap (lSegmentYCabin1Family,
00807                                     lSegmentYCabin1FamilyQClass);
00808     FacBomManager::linkWithParent (lSegmentYCabin1Family,
00809                                    lSegmentYCabin1FamilyQClass);
00810
00811     FacBomManager::addToListAndMap (lSegmentCabin, lSegmentYCabin1FamilyQClass);
00812     FacBomManager::addToListAndMap (lSegment, lSegmentYCabin1FamilyQClass);
00813
00814     /*================================================================================
    =====
00815       ================================================================================
    =====
00816       ================================================================================
    =====*/
00817     // Schedule:
00818     // XX:
00819     // Step 1: flight period level
00820     // Create a flight period for XX:
00821     const DoWStruct lDoWSrtuct ("1111111");
00822     const Date_T lXXDateRangeStart (DEFAULT_DEPARTURE_DATE);
00823     const Date_T lXXDateRangeEnd (DEFAULT_DEPARTURE_DATE);
00824     const DatePeriod_T lXXDatePeriod (lXXDateRangeStart, lXXDateRangeEnd);
00825     const PeriodStruct lXXPeriodStruct (lXXDatePeriod, lDoWSrtuct);
00826
00827     FlightPeriodKey lXXFlightPeriodKey (DEFAULT_FLIGHT_NUMBER, lXXPeriodStruct);
00828
00829     FlightPeriod& lXXFlightPeriod =
00830       FacBom<FlightPeriod>::instance().create (lXXFlightPeriodKey);
00831     FacBomManager::addToListAndMap (lInv, lXXFlightPeriod);
00832     FacBomManager::linkWithParent (lInv, lXXFlightPeriod);
00833
00834     // Step 2: segment period level
00835     // Create a segment period
00836
00837     SegmentPeriodKey lXXSegmentPeriodKey (DEFAULT_ORIGIN, DEFAULT_DESTINATION);
00838
00839     SegmentPeriod& lXXSegmentPeriod =
00840       FacBom<SegmentPeriod>::instance().create (lXXSegmentPeriodKey);
00841     FacBomManager::addToListAndMap (lXXFlightPeriod, lXXSegmentPeriod);
00842     FacBomManager::linkWithParent (lXXFlightPeriod, lXXSegmentPeriod);
00843
00844     lXXSegmentPeriod.setBoardingTime (Duration_T (14, 0, 0));
00845     lXXSegmentPeriod.setOffTime (Duration_T (16, 0, 0));
00846     lXXSegmentPeriod.setElapsedTime (Duration_T (8, 0, 0));
00847     const CabinCode_T lY ("Y");
00848     const ClassList_String_T lYQ ("YQ");
00849     lXXSegmentPeriod.addCabinBookingClassList (lY,lYQ);
00850
00851
00852   }
00853
00854   // ////////////////////////////////////////////////////////////////////
00855   void CmdBomManager::buildSamplePricing (BomRoot& ioBomRoot) {
00856
```

```
00857     // Set the airport-pair primary key.
00858     const AirportPairKey lAirportPairKey (AIRPORT_LHR, AIRPORT_SYD);
00859
00860     // Create the AirportPairKey object and link it to the BOM tree root.
00861     AirportPair& lAirportPair =
00862       FacBom<AirportPair>::instance().create (lAirportPairKey);
00863     FacBomManager::addToListAndMap (ioBomRoot, lAirportPair);
00864     FacBomManager::linkWithParent (ioBomRoot, lAirportPair);
00865
00866     // Set the fare date-period primary key.
00867     const Date_T lDateRangeStart (2011, boost::gregorian::Jan, 15);
00868     const Date_T lDateRangeEnd (2011, boost::gregorian::Dec, 31);
00869     const DatePeriod_T lDateRange (lDateRangeStart, lDateRangeEnd);
00870     const DatePeriodKey lDatePeriodKey (lDateRange);
00871
00872     // Create the DatePeriodKey object and link it to the PosChannel object.
00873     DatePeriod& lDatePeriod =
00874       FacBom<DatePeriod>::instance().create (lDatePeriodKey);
00875     FacBomManager::addToListAndMap (lAirportPair, lDatePeriod);
00876     FacBomManager::linkWithParent (lAirportPair, lDatePeriod);
00877
00878     // Set the point-of-sale-channel primary key.
00879     const PosChannelKey lPosChannelKey (POS_LHR, CHANNEL_DN);
00880
00881     // Create the PositionKey object and link it to the AirportPair object.
00882     PosChannel& lPosChannel =
00883       FacBom<PosChannel>::instance().create (lPosChannelKey);
00884     FacBomManager::addToListAndMap (lDatePeriod, lPosChannel);
00885     FacBomManager::linkWithParent (lDatePeriod, lPosChannel);
00886
00887     // Set the fare time-period primary key.
00888     const Time_T lTimeRangeStart (0, 0, 0);
00889     const Time_T lTimeRangeEnd (23, 0, 0);
00890     const TimePeriodKey lTimePeriodKey (lTimeRangeStart, lTimeRangeEnd);
00891
00892     // Create the TimePeriodKey and link it to the DatePeriod object.
00893     TimePeriod& lTimePeriod =
00894       FacBom<TimePeriod>::instance().create (lTimePeriodKey);
00895     FacBomManager::addToListAndMap (lPosChannel, lTimePeriod);
00896     FacBomManager::linkWithParent (lPosChannel, lTimePeriod);
00897
00898     // Pricing -- Generate the FareRule
00899     const FareFeaturesKey lFareFeaturesKey (TRIP_TYPE_ROUND_TRIP,
00900                                             NO_ADVANCE_PURCHASE,
00901                                             SATURDAY_STAY,
00902                                             CHANGE_FEES,
00903                                             NON_REFUNDABLE,
00904                                             NO_STAY_DURATION);
00905
00906     // Create the FareFeaturesKey and link it to the TimePeriod object.
00907     FareFeatures& lFareFeatures =
00908       FacBom<FareFeatures>::instance().create (lFareFeaturesKey);
00909     FacBomManager::addToListAndMap (lTimePeriod, lFareFeatures);
00910     FacBomManager::linkWithParent (lTimePeriod, lFareFeatures);
00911
00912     // Revenue Accounting -- Generate the YieldRule
00913     const YieldFeaturesKey lYieldFeaturesKey (TRIP_TYPE_ROUND_TRIP,
00914                                               CABIN_Y);
00915
00916     // Create the YieldFeaturesKey and link it to the TimePeriod object.
00917     YieldFeatures& lYieldFeatures =
00918       FacBom<YieldFeatures>::instance().create (lYieldFeaturesKey);
```

```
00919     FacBomManager::addToListAndMap (lTimePeriod, lYieldFeatures);
00920     FacBomManager::linkWithParent (lTimePeriod, lYieldFeatures);
00921
00922     // Generate Segment Features and link them to their respective
00923     // fare and yield rules.
00924     AirlineCodeList_T lAirlineCodeList;
00925     lAirlineCodeList.push_back (AIRLINE_CODE_BA);
00926     ClassList_StringList_T lClassCodeList;
00927     lClassCodeList.push_back (CLASS_CODE_Y);
00928     const AirlineClassListKey lAirlineClassListKey (lAirlineCodeList,
00929                                                     lClassCodeList);
00930
00931     // Create the AirlineClassList
00932     AirlineClassList& lAirlineClassList =
00933       FacBom<AirlineClassList>::instance().create (lAirlineClassListKey);
00934     // Link the AirlineClassList to the FareFeatures object
00935     lAirlineClassList.setFare (900);
00936     FacBomManager::addToListAndMap (lFareFeatures, lAirlineClassList);
00937     FacBomManager::linkWithParent (lFareFeatures, lAirlineClassList);
00938
00939     // Link the AirlineClassList to the YieldFeatures object
00940     lAirlineClassList.setYield (900);
00941     FacBomManager::addToListAndMap (lYieldFeatures, lAirlineClassList);
00942     // \todo (gsabatier): the following calls overrides the parent for
00943     //       lAirlineClassList. Check that it is what is actually wanted.
00944     FacBomManager::linkWithParent (lYieldFeatures, lAirlineClassList);
00945   }
00946
00947   // ////////////////////////////////////////////////////////////////////
00948   void CmdBomManager::
00949   buildSampleTravelSolutionForPricing (TravelSolutionList_T& ioTravelSolutionList
      ) {
00950
00951     // Clean the list
00952     ioTravelSolutionList.clear();
00953
00954     //
00955     const std::string lBA9_SegmentDateKey ("BA, 9, 2011-06-10, LHR, SYD, 21:45");

00956
00957     // Add the segment date key to the travel solution
00958     TravelSolutionStruct lTS;
00959     lTS.addSegment (lBA9_SegmentDateKey);
00960
00961     // Add the travel solution to the list
00962     ioTravelSolutionList.push_back (lTS);
00963   }
00964
00965   // ////////////////////////////////////////////////////////////////////
00966   void CmdBomManager::
00967   buildSampleTravelSolutions (TravelSolutionList_T& ioTravelSolutionList) {
00968
00969     // Clean the list
00970     ioTravelSolutionList.clear();
00971
00972     //
00973     const std::string lBA9_SegmentDateKey ("BA, 9, 2011-06-10, LHR, SYD, 21:45");

00974
00975     // Add the segment date key to the travel solution
00976     TravelSolutionStruct lTS;
00977     lTS.addSegment (lBA9_SegmentDateKey);
```

```
00978
00979     // Fare option
00980     const ClassCode_T lClassPath (CLASS_CODE_Q);
00981     const Fare_T lFare (900);
00982     const ChangeFees_T lChangeFee (CHANGE_FEES);
00983     const NonRefundable_T isNonRefundable (NON_REFUNDABLE);
00984     const SaturdayStay_T lSaturdayStay (SATURDAY_STAY);
00985     const FareOptionStruct lFareOption (lClassPath, lFare, lChangeFee,
00986                                         isNonRefundable, lSaturdayStay);
00987
00988     // Add (a copy of) the fare option
00989     lTS.addFareOption (lFareOption);
00990
00991     // Map of class availabilities: set the availability for the Q
00992     // booking class (the one corresponding to the fare option) to 8.
00993     ClassAvailabilityMap_T lClassAvailabilityMap;
00994     const Availability_T lAvl (8);
00995     const bool hasInsertBeenSuccessful = lClassAvailabilityMap.
00996       insert (ClassAvailabilityMap_T::value_type (lClassPath, lAvl)).second;
00997     assert (hasInsertBeenSuccessful == true);
00998     // Add the map to the dedicated list held by the travel solution
00999     lTS.addClassAvailabilityMap (lClassAvailabilityMap);
01000
01001     // Add the travel solution to the list
01002     ioTravelSolutionList.push_back (lTS);
01003   }
01004
01005   // ////////////////////////////////////////////////////////////////////
01006   BookingRequestStruct CmdBomManager::buildSampleBookingRequest() {
01007     // Origin
01008     const AirportCode_T lOrigin (AIRPORT_LHR);
01009
01010     // Destination
01011     const AirportCode_T lDestination (AIRPORT_SYD);
01012
01013     // Point of Sale (POS)
01014     const CityCode_T lPOS (POS_LHR);
01015
01016     // Preferred departure date (10-JUN-2011)
01017     const Date_T lPreferredDepartureDate (2011, boost::gregorian::Jun, 10);
01018
01019     // Preferred departure time (08:00)
01020     const Duration_T lPreferredDepartureTime (8, 0, 0);
01021
01022     // Date of the request (15-MAY-2011)
01023     const Date_T lRequestDate (2011, boost::gregorian::May, 15);
01024
01025     // Time of the request (10:00)
01026     const Duration_T lRequestTime (10, 0, 0);
01027
01028     // Date-time of the request (made of the date and time above)
01029     const DateTime_T lRequestDateTime (lRequestDate, lRequestTime);
01030
01031     // Preferred cabin (also named class of service sometimes)
01032     const CabinCode_T lPreferredCabin (CABIN_ECO);
01033
01034     // Number of persons in the party
01035     const PartySize_T lPartySize (3);
01036
01037     // Channel (direct/indirect, on-line/off-line)
01038     const ChannelLabel_T lChannel (CHANNEL_DN);
01039
```

```
01040     // Type of the trip (one-way, inbound/outbound of a return trip)
01041     const TripType_T lTripType (TRIP_TYPE_INBOUND);
01042
01043     // Duration of the stay (expressed as a number of days)
01044     const DayDuration_T lStayDuration (DEFAULT_STAY_DURATION);
01045
01046     // Frequent flyer tier (member, silver, gold, platinum, senator, etc)
01047     const FrequentFlyer_T lFrequentFlyerType (FREQUENT_FLYER_MEMBER);
01048
01049     // Maximum willing-to-pay (WTP, expressed in monetary unit, e.g., EUR)
01050     const WTP_T lWTP (DEFAULT_WTP);
01051
01052     // Value of time, for the customer (expressed in monetary unit per
01053     // unit of time, e.g., EUR/hour)
01054     const PriceValue_T lValueOfTime (DEFAULT_VALUE_OF_TIME);
01055
01056     // Creation of the booking request structure
01057     BookingRequestStruct oBookingRequest (lOrigin, lDestination, lPOS,
01058                                           lPreferredDepartureDate,
01059                                           lRequestDateTime,
01060                                           lPreferredCabin,
01061                                           lPartySize, lChannel,
01062                                           lTripType, lStayDuration,
01063                                           lFrequentFlyerType,
01064                                           lPreferredDepartureTime,
01065                                           lWTP, lValueOfTime);
01066
01067     return oBookingRequest;
01068   }
01069
01070   // ////////////////////////////////////////////////////////////////////
01071   BookingRequestStruct CmdBomManager::buildSampleBookingRequestForCRS() {
01072     // Origin
01073     const AirportCode_T lOrigin (AIRPORT_SIN);
01074
01075     // Destination
01076     const AirportCode_T lDestination (AIRPORT_BKK);
01077
01078     // Point of Sale (POS)
01079     const CityCode_T lPOS (POS_SIN);
01080
01081     // Preferred departure date (30-JAN-2010)
01082     const Date_T lPreferredDepartureDate (2010, boost::gregorian::Jan, 30);
01083
01084     // Preferred departure time (10:00)
01085     const Duration_T lPreferredDepartureTime (10, 0, 0);
01086
01087     // Date of the request (22-JAN-2010)
01088     const Date_T lRequestDate (2010, boost::gregorian::Jan, 22);
01089
01090     // Time of the request (10:00)
01091     const Duration_T lRequestTime (10, 0, 0);
01092
01093     // Date-time of the request (made of the date and time above)
01094     const DateTime_T lRequestDateTime (lRequestDate, lRequestTime);
01095
01096     // Preferred cabin (also named class of service sometimes)
01097     const CabinCode_T lPreferredCabin (CABIN_ECO);
01098
01099     // Number of persons in the party
01100     const PartySize_T lPartySize (3);
01101
```

```
01102     // Channel (direct/indirect, on-line/off-line)
01103     const ChannelLabel_T lChannel (CHANNEL_IN);
01104
01105     // Type of the trip (one-way, inbound/outbound of a return trip)
01106     const TripType_T lTripType (TRIP_TYPE_INBOUND);
01107
01108     // Duration of the stay (expressed as a number of days)
01109     const DayDuration_T lStayDuration (DEFAULT_STAY_DURATION);
01110
01111     // Frequent flyer tier (member, silver, gold, platinum, senator, etc)
01112     const FrequentFlyer_T lFrequentFlyerType (FREQUENT_FLYER_MEMBER);
01113
01114     // Maximum willing-to-pay (WTP, expressed in monetary unit, e.g., EUR)
01115     const WTP_T lWTP (DEFAULT_WTP);
01116
01117     // Value of time, for the customer (expressed in monetary unit per
01118     // unit of time, e.g., EUR/hour)
01119     const PriceValue_T lValueOfTime (DEFAULT_VALUE_OF_TIME);
01120
01121     // Creation of the booking request structure
01122     BookingRequestStruct oBookingRequest (lOrigin,
01123                                           lDestination,
01124                                           lPOS,
01125                                           lPreferredDepartureDate,
01126                                           lRequestDateTime,
01127                                           lPreferredCabin,
01128                                           lPartySize, lChannel,
01129                                           lTripType, lStayDuration,
01130                                           lFrequentFlyerType,
01131                                           lPreferredDepartureTime,
01132                                           lWTP, lValueOfTime);
01133
01134     return oBookingRequest;
01135   }
01136
01137   // ////////////////////////////////////////////////////////////////////
01138   void CmdBomManager::buildPartnershipsSampleInventoryAndRM (BomRoot& ioBomRoot)
      {
01139
01140     // Step 0.1: Inventory level
01141     // Create an Inventory for SQ
01142     const InventoryKey lSQKey ("SQ");
01143     Inventory& lSQInv = FacBom<Inventory>::instance().create (lSQKey);
01144     FacBomManager::addToListAndMap (ioBomRoot, lSQInv);
01145     FacBomManager::linkWithParent (ioBomRoot, lSQInv);
01146
01147     // Create an Inventory for CX
01148     const InventoryKey lCXKey ("CX");
01149     Inventory& lCXInv = FacBom<Inventory>::instance().create (lCXKey);
01150     FacBomManager::addToListAndMap (ioBomRoot, lCXInv);
01151     FacBomManager::linkWithParent (ioBomRoot, lCXInv);
01152
01153
01154     // ////// SQ ///////
01155     // Step 0.2: Flight-date level
01156     // Create a FlightDate (SQ11/08-FEB-2010) for SQ's Inventory
01157     FlightNumber_T lFlightNumber = 11;
01158     Date_T lDate (2010, 2, 8);
01159     FlightDateKey lFlightDateKey (lFlightNumber, lDate);
01160
01161     FlightDate& lSQ11_20100208_FD =
01162       FacBom<FlightDate>::instance().create (lFlightDateKey);
```

```
01163     FacBomManager::addToListAndMap (lSQInv, lSQ11_20100208_FD);
01164     FacBomManager::linkWithParent (lSQInv, lSQ11_20100208_FD);
01165
01166     // Create a (mkt) FlightDate (SQ1200/08-FEB-2010) for SQ's Inventory
01167     FlightNumber_T lMktFlightNumber = 1200;
01168     //lDate = Date_T (2010, 2, 8);
01169     FlightDateKey lMktFlightDateKey (lMktFlightNumber, lDate);
01170
01171     FlightDate& lSQ1200_20100208_FD =
01172       FacBom<FlightDate>::instance().create (lMktFlightDateKey);
01173     FacBomManager::addToListAndMap (lSQInv, lSQ1200_20100208_FD);
01174     FacBomManager::linkWithParent (lSQInv, lSQ1200_20100208_FD);
01175
01176     // Display the flight-date
01177     // STDAIR_LOG_DEBUG ("FlightDate: " << lBA9_20110610_FD.toString());
01178
01179     // Step 0.3: Segment-date level
01180     // Create a first SegmentDate (SIN-BKK) for SQ's Inventory
01181     const AirportCode_T lSIN ("SIN");
01182     const AirportCode_T lBKK ("BKK");
01183     const DateOffset_T l1Day (1);
01184     const DateOffset_T l2Days (2);
01185     const Duration_T l0820 (8, 20, 0);
01186     const Duration_T l1100 (11, 0, 0);
01187     const Duration_T l0340 (3, 40, 0);
01188     SegmentDateKey lSegmentDateKey (lSIN, lBKK);
01189
01190     SegmentDate& lSINBKKSegment =
01191       FacBom<SegmentDate>::instance().create (lSegmentDateKey);
01192     FacBomManager::addToListAndMap (lSQ11_20100208_FD, lSINBKKSegment);
01193     FacBomManager::linkWithParent (lSQ11_20100208_FD, lSINBKKSegment);
01194
01195     // Fill the SegmentDate content
01196     lSINBKKSegment.setBoardingDate (lDate);
01197     lSINBKKSegment.setOffDate (lDate);
01198     lSINBKKSegment.setBoardingTime (l0820);
01199     lSINBKKSegment.setOffTime (l1100);
01200     lSINBKKSegment.setElapsedTime (l0340);
01201
01202     // Create a second (mkt) SegmentDate (BKK-HKG) for SQ's Inventory
01203     const AirportCode_T lHKG ("HKG");
01204     const Duration_T l1200 (12, 0, 0);
01205     const Duration_T l1540 (15, 40, 0);
01206     const Duration_T l0240 (2, 40, 0);
01207     SegmentDateKey lMktSegmentDateKey (lBKK, lHKG);
01208
01209     SegmentDate& lMktBKKHKGSegment =
01210       FacBom<SegmentDate>::instance().create (lMktSegmentDateKey);
01211     FacBomManager::addToListAndMap (lSQ1200_20100208_FD, lMktBKKHKGSegment);
01212     FacBomManager::linkWithParent (lSQ1200_20100208_FD, lMktBKKHKGSegment);
01213
01214     // Fill the (mkt) SegmentDate content
01215     lMktBKKHKGSegment.setBoardingDate (lDate);
01216     lMktBKKHKGSegment.setOffDate (lDate);
01217     lMktBKKHKGSegment.setBoardingTime (l1200);
01218     lMktBKKHKGSegment.setOffTime (l1540);
01219     lMktBKKHKGSegment.setElapsedTime (l0240);
01220
01221     // Step 0.4: Leg-date level
01222     // Create a first LegDate (SIN) for SQ's Inventory
01223     LegDateKey lLegDateKey (lSIN);
01224
```

```
01225     LegDate& lSINLeg = FacBom<LegDate>::instance().create (lLegDateKey);
01226     FacBomManager::addToListAndMap (lSQ11_20100208_FD, lSINLeg);
01227     FacBomManager::linkWithParent (lSQ11_20100208_FD, lSINLeg);
01228
01229     // Fill the LegDate content
01230     lSINLeg.setOffPoint (lBKK);
01231     lSINLeg.setBoardingDate (lDate);
01232     lSINLeg.setOffDate (lDate);
01233     lSINLeg.setBoardingTime (l0820);
01234     lSINLeg.setOffTime (l1100);
01235     lSINLeg.setElapsedTime (l0340);
01236
01237
01238     // Link the segment-dates with the leg-dates
01239     FacBomManager::addToListAndMap (lSINLeg, lSINBKKSegment);
01240     FacBomManager::addToListAndMap (lSINBKKSegment, lSINLeg);
01241
01242     // Step 0.5: segment-cabin level
01243     // Create a SegmentCabin (Y) for the Segment SIN-BKK of SQ's Inventory
01244     const CabinCode_T lY ("Y");
01245     SegmentCabinKey lYSegmentCabinKey (lY);
01246
01247     SegmentCabin& lSINBKKSegmentYCabin =
01248       FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
01249     FacBomManager::addToListAndMap (lSINBKKSegment, lSINBKKSegmentYCabin);
01250     FacBomManager::linkWithParent (lSINBKKSegment, lSINBKKSegmentYCabin);
01251
01252     // Create a SegmentCabin (Y) for the (mkt) Segment BKK-HKG of SQ's Inventory
01253     SegmentCabin& lMktBKKHKGSegmentYCabin =
01254       FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
01255     FacBomManager::addToListAndMap (lMktBKKHKGSegment, lMktBKKHKGSegmentYCabin);
01256     FacBomManager::linkWithParent (lMktBKKHKGSegment, lMktBKKHKGSegmentYCabin);
01257
01258
01259     // Step 0.6: leg-cabin level
01260     // Create a LegCabin (Y) for the Leg SIN-BKK on SQ's Inventory
01261     LegCabinKey lYLegCabinKey (lY);
01262
01263     LegCabin& lSINLegYCabin =
01264       FacBom<LegCabin>::instance().create (lYLegCabinKey);
01265     FacBomManager::addToListAndMap (lSINLeg, lSINLegYCabin);
01266     FacBomManager::linkWithParent (lSINLeg, lSINLegYCabin);
01267
01268     CabinCapacity_T lCapacity (100);
01269     lSINLegYCabin.setCapacities (lCapacity);
01270     lSINLegYCabin.setAvailabilityPool (lCapacity);
01271
01283       FacBomManager::addToListAndMap (lSINLegYCabin, lSINBKKSegmentYCabin,
01284                                       lSINBKKSegmentYCabin.getFullerKey());
01285
01296       FacBomManager::addToListAndMap (lSINBKKSegmentYCabin, lSINLegYCabin,
01297                                       lSINLegYCabin.getFullerKey());
01298
01299
01300     // Step 0.7: fare family level
01301     // Create a FareFamily (1) for the Segment SIN-BKK, cabin Y on SQ's Inv
01302     const FamilyCode_T l1 ("EcoSaver");
01303     FareFamilyKey l1FareFamilyKey (l1);
01304
01305     FareFamily& lSINBKKSegmentYCabin1Family =
01306       FacBom<FareFamily>::instance().create (l1FareFamilyKey);
01307     FacBomManager::addToListAndMap (lSINBKKSegmentYCabin,
```

```
01308                                   lSINBKKSegmentYCabin1Family);
01309     FacBomManager::linkWithParent (lSINBKKSegmentYCabin,
01310                                    lSINBKKSegmentYCabin1Family);
01311
01312     // Create a FareFamily (1) for the (mkt) Segment BKK-HKG, cabin Y on SQ's Inv

01313     FareFamily& lMktBKKHKGSegmentYCabin1Family =
01314       FacBom<FareFamily>::instance().create (l1FareFamilyKey);
01315     FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabin,
01316                                     lMktBKKHKGSegmentYCabin1Family);
01317     FacBomManager::linkWithParent (lMktBKKHKGSegmentYCabin,
01318                                    lMktBKKHKGSegmentYCabin1Family);
01319
01320     // Step 0.8: booking class level
01321     // Create a BookingClass (Y) for the Segment SIN-BKK, cabin Y,
01322     // fare family 1 on SQ's Inv
01323     BookingClassKey lYBookingClassKey (lY);
01324
01325     BookingClass& lSINBKKSegmentYCabin1FamilyYClass =
01326       FacBom<BookingClass>::instance().create (lYBookingClassKey);
01327     FacBomManager::addToListAndMap (lSINBKKSegmentYCabin1Family,
01328                                     lSINBKKSegmentYCabin1FamilyYClass);
01329     FacBomManager::linkWithParent (lSINBKKSegmentYCabin1Family,
01330                                    lSINBKKSegmentYCabin1FamilyYClass);
01331
01332     FacBomManager::addToListAndMap (lSINBKKSegmentYCabin,
01333                                     lSINBKKSegmentYCabin1FamilyYClass);
01334     FacBomManager::addToListAndMap (lSINBKKSegment,
01335                                     lSINBKKSegmentYCabin1FamilyYClass);
01336
01337     lSINBKKSegmentYCabin1FamilyYClass.setYield(700);
01338
01339     // Create a BookingClass (Y) for the (mkt) Segment BKK-HKG, cabin Y,
01340     // fare family 1 on SQ's Inv
01341     BookingClass& lMktBKKHKGSegmentYCabin1FamilyYClass =
01342       FacBom<BookingClass>::instance().create (lYBookingClassKey);
01343     FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabin1Family,
01344                                     lMktBKKHKGSegmentYCabin1FamilyYClass);
01345     FacBomManager::linkWithParent (lMktBKKHKGSegmentYCabin1Family,
01346                                    lMktBKKHKGSegmentYCabin1FamilyYClass);
01347
01348     FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabin,
01349                                     lMktBKKHKGSegmentYCabin1FamilyYClass);
01350     FacBomManager::addToListAndMap (lMktBKKHKGSegment,
01351                                     lMktBKKHKGSegmentYCabin1FamilyYClass);
01352
01353     lMktBKKHKGSegmentYCabin1FamilyYClass.setYield(700);
01354
01355
01356     // Create a BookingClass (M) for the Segment SIN-BKK, cabin Y,
01357     // fare family 1 on SQ's Inv
01358     const ClassCode_T lM ("M");
01359     BookingClassKey lMBookingClassKey (lM);
01360
01361     BookingClass& lSINBKKSegmentYCabin1FamilyMClass =
01362       FacBom<BookingClass>::instance().create (lMBookingClassKey);
01363     FacBomManager::addToListAndMap (lSINBKKSegmentYCabin1Family,
01364                                     lSINBKKSegmentYCabin1FamilyMClass);
01365     FacBomManager::linkWithParent (lSINBKKSegmentYCabin1Family,
01366                                    lSINBKKSegmentYCabin1FamilyMClass);
01367
01368     FacBomManager::addToListAndMap (lSINBKKSegmentYCabin,
```

```
01369                                     lSINBKKSegmentYCabin1FamilyMClass);
01370     FacBomManager::addToListAndMap (lSINBKKSegment,
01371                                     lSINBKKSegmentYCabin1FamilyMClass);
01372
01373     lSINBKKSegmentYCabin1FamilyMClass.setYield(500);
01374
01375     // Create a BookingClass (M) for the (mkt) Segment BKK-HKG, cabin Y,
01376     // fare family 1 on SQ's Inv
01377     BookingClass& lMktBKKHKGSegmentYCabin1FamilyMClass =
01378       FacBom<BookingClass>::instance().create (lMBookingClassKey);
01379     FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabin1Family,
01380                                     lMktBKKHKGSegmentYCabin1FamilyMClass);
01381     FacBomManager::linkWithParent (lMktBKKHKGSegmentYCabin1Family,
01382                                    lMktBKKHKGSegmentYCabin1FamilyMClass);
01383
01384     FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabin,
01385                                     lMktBKKHKGSegmentYCabin1FamilyMClass);
01386     FacBomManager::addToListAndMap (lMktBKKHKGSegment,
01387                                     lMktBKKHKGSegmentYCabin1FamilyMClass);
01388
01389     lMktBKKHKGSegmentYCabin1FamilyMClass.setYield(500);
01390
01391     /* ================================================================================
      ========= */
01392     // Step 0.9: Partner Inventory
01393     // Create a partner Inventory CX for SQ
01394     const InventoryKey lPartnerCXKey ("CX");
01395     Inventory& lPartnerCXInv = FacBom<Inventory>::instance().create (lPartnerCXKe
      y);
01396     FacBomManager::addToListAndMap (lSQInv, lPartnerCXInv);
01397     FacBomManager::linkWithParent (lSQInv, lPartnerCXInv);
01398
01399     // Step 0.9.2 : Flight-date level
01400     lFlightNumber = 12;
01401     lFlightDateKey = FlightDateKey (lFlightNumber, lDate);
01402
01403     FlightDate& lPartnerCX12_20100208_FD =
01404       FacBom<FlightDate>::instance().create (lFlightDateKey);
01405     FacBomManager::addToListAndMap (lPartnerCXInv, lPartnerCX12_20100208_FD);
01406     FacBomManager::linkWithParent (lPartnerCXInv, lPartnerCX12_20100208_FD);
01407
01408     lFlightNumber = 1100;
01409     lMktFlightDateKey = FlightDateKey (lFlightNumber, lDate);
01410
01411     FlightDate& lPartnerCX1100_20100208_FD =
01412       FacBom<FlightDate>::instance().create (lMktFlightDateKey);
01413     FacBomManager::addToListAndMap (lPartnerCXInv, lPartnerCX1100_20100208_FD);
01414     FacBomManager::linkWithParent (lPartnerCXInv, lPartnerCX1100_20100208_FD);
01415
01416     // Step 0.9.3: Segment-date level
01417     lSegmentDateKey = SegmentDateKey (lBKK, lHKG);
01418
01419     SegmentDate& lPartnerBKKHKGSegment =
01420       FacBom<SegmentDate>::instance().create (lSegmentDateKey);
01421     FacBomManager::addToListAndMap (lPartnerCX12_20100208_FD, lPartnerBKKHKGSegme
      nt);
01422     FacBomManager::linkWithParent (lPartnerCX12_20100208_FD, lPartnerBKKHKGSegmen
      t);
01423
01424     lPartnerBKKHKGSegment.setBoardingDate (lDate);
01425     lPartnerBKKHKGSegment.setOffDate (lDate);
01426     lPartnerBKKHKGSegment.setBoardingTime (l1200);
```

```
01427     lPartnerBKKHKGSegment.setOffTime (l1540);
01428     lPartnerBKKHKGSegment.setElapsedTime (l0240);
01429
01430     lMktSegmentDateKey = SegmentDateKey (lSIN, lBKK);
01431
01432     SegmentDate& lPartnerMktSINBKKSegment =
01433       FacBom<SegmentDate>::instance().create (lMktSegmentDateKey);
01434     FacBomManager::addToListAndMap (lPartnerCX1100_20100208_FD, lPartnerMktSINBKK
      Segment);
01435     FacBomManager::linkWithParent (lPartnerCX1100_20100208_FD, lPartnerMktSINBKKS
      egment);
01436
01437     lPartnerMktSINBKKSegment.setBoardingDate (lDate);
01438     lPartnerMktSINBKKSegment.setOffDate (lDate);
01439     lPartnerMktSINBKKSegment.setBoardingTime (l0820);
01440     lPartnerMktSINBKKSegment.setOffTime (l1100);
01441     lPartnerMktSINBKKSegment.setElapsedTime (l0340);
01442
01443     // Step 0.9.4: Leg-date level
01444     lLegDateKey = LegDateKey (lBKK);
01445
01446     LegDate& lPartnerBKKLeg = FacBom<LegDate>::instance().create (lLegDateKey);
01447     FacBomManager::addToListAndMap (lPartnerCX12_20100208_FD, lPartnerBKKLeg);
01448     FacBomManager::linkWithParent (lPartnerCX12_20100208_FD, lPartnerBKKLeg);
01449
01450     lPartnerBKKLeg.setOffPoint (lHKG);
01451     lPartnerBKKLeg.setBoardingDate (lDate);
01452     lPartnerBKKLeg.setOffDate (lDate);
01453     lPartnerBKKLeg.setBoardingTime (l1200);
01454     lPartnerBKKLeg.setOffTime (l1540);
01455     lPartnerBKKLeg.setElapsedTime (l0240);
01456
01457     FacBomManager::addToListAndMap (lPartnerBKKLeg, lPartnerBKKHKGSegment);
01458     FacBomManager::addToListAndMap (lPartnerBKKHKGSegment, lPartnerBKKLeg);
01459
01460     // Step 9.0.5: segment-cabin level
01461
01462     SegmentCabin& lPartnerBKKHKGSegmentYCabin =
01463       FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
01464     FacBomManager::addToListAndMap (lPartnerBKKHKGSegment, lPartnerBKKHKGSegmentY
      Cabin);
01465     FacBomManager::linkWithParent (lPartnerBKKHKGSegment, lPartnerBKKHKGSegmentYC
      abin);
01466
01467     SegmentCabin& lPartnerMktSINBKKSegmentYCabin =
01468       FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
01469     FacBomManager::addToListAndMap (lPartnerMktSINBKKSegment, lPartnerMktSINBKKSe
      gmentYCabin);
01470     FacBomManager::linkWithParent (lPartnerMktSINBKKSegment, lPartnerMktSINBKKSeg
      mentYCabin);
01471
01472     // Step 9.0.6: leg-cabin level
01473
01474     LegCabin& lPartnerBKKLegYCabin =
01475       FacBom<LegCabin>::instance().create (lYLegCabinKey);
01476     FacBomManager::addToListAndMap (lPartnerBKKLeg, lPartnerBKKLegYCabin);
01477     FacBomManager::linkWithParent (lPartnerBKKLeg, lPartnerBKKLegYCabin);
01478
01479     lCapacity = CabinCapacity_T(999);
01480     lPartnerBKKLegYCabin.setCapacities (lCapacity);
01481     lPartnerBKKLegYCabin.setAvailabilityPool (lCapacity);
01482
```

```
01483     FacBomManager::addToListAndMap (lPartnerBKKLegYCabin, lPartnerBKKHKGSegmentYC
      abin,
01484                                     lPartnerBKKHKGSegmentYCabin.getFullerKey());
01485     FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin, lPartnerBKKLegYC
      abin,
01486                                     lPartnerBKKLegYCabin.getFullerKey());
01487
01488     // Step 9.0.7: fare family level
01489
01490     FareFamily& lPartnerBKKHKGSegmentYCabin1Family =
01491       FacBom<FareFamily>::instance().create (l1FareFamilyKey);
01492     FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin,
01493                                     lPartnerBKKHKGSegmentYCabin1Family);
01494     FacBomManager::linkWithParent (lPartnerBKKHKGSegmentYCabin,
01495                                    lPartnerBKKHKGSegmentYCabin1Family);
01496
01497     FareFamily& lPartnerMktSINBKKSegmentYCabin1Family =
01498       FacBom<FareFamily>::instance().create (l1FareFamilyKey);
01499     FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabin,
01500                                     lPartnerMktSINBKKSegmentYCabin1Family);
01501     FacBomManager::linkWithParent (lPartnerMktSINBKKSegmentYCabin,
01502                                    lPartnerMktSINBKKSegmentYCabin1Family);
01503
01504     // Step 9.0.8: booking class level
01505
01506     BookingClass& lPartnerBKKHKGSegmentYCabin1FamilyYClass =
01507       FacBom<BookingClass>::instance().create (lYBookingClassKey);
01508     FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin1Family,
01509                                     lPartnerBKKHKGSegmentYCabin1FamilyYClass);
01510     FacBomManager::linkWithParent (lPartnerBKKHKGSegmentYCabin1Family,
01511                                    lPartnerBKKHKGSegmentYCabin1FamilyYClass);
01512
01513     FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin,
01514                                     lPartnerBKKHKGSegmentYCabin1FamilyYClass);
01515     FacBomManager::addToListAndMap (lPartnerBKKHKGSegment,
01516                                     lPartnerBKKHKGSegmentYCabin1FamilyYClass);
01517
01518     BookingClass& lPartnerMktSINBKKSegmentYCabin1FamilyYClass =
01519       FacBom<BookingClass>::instance().create (lYBookingClassKey);
01520     FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabin1Family,
01521                                     lPartnerMktSINBKKSegmentYCabin1FamilyYClass);

01522     FacBomManager::linkWithParent (lPartnerMktSINBKKSegmentYCabin1Family,
01523                                    lPartnerMktSINBKKSegmentYCabin1FamilyYClass);
01524
01525     FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabin,
01526                                     lPartnerMktSINBKKSegmentYCabin1FamilyYClass);

01527     FacBomManager::addToListAndMap (lPartnerMktSINBKKSegment,
01528                                     lPartnerMktSINBKKSegmentYCabin1FamilyYClass);

01529
01530     BookingClass& lPartnerBKKHKGSegmentYCabin1FamilyMClass =
01531       FacBom<BookingClass>::instance().create (lMBookingClassKey);
01532     FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin1Family,
01533                                     lPartnerBKKHKGSegmentYCabin1FamilyMClass);
01534     FacBomManager::linkWithParent (lPartnerBKKHKGSegmentYCabin1Family,
01535                                    lPartnerBKKHKGSegmentYCabin1FamilyMClass);
01536
01537     FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin,
01538                                     lPartnerBKKHKGSegmentYCabin1FamilyMClass);
01539     FacBomManager::addToListAndMap (lPartnerBKKHKGSegment,
```

```
01540                                     lPartnerBKKHKGSegmentYCabin1FamilyMClass);
01541
01542     BookingClass& lPartnerMktSINBKKSegmentYCabin1FamilyMClass =
01543       FacBom<BookingClass>::instance().create (lMBookingClassKey);
01544     FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabin1Family,
01545                                     lPartnerMktSINBKKSegmentYCabin1FamilyMClass);

01546     FacBomManager::linkWithParent (lPartnerMktSINBKKSegmentYCabin1Family,
01547                                    lPartnerMktSINBKKSegmentYCabin1FamilyMClass);
01548
01549     FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabin,
01550                                     lPartnerMktSINBKKSegmentYCabin1FamilyMClass);

01551     FacBomManager::addToListAndMap (lPartnerMktSINBKKSegment,
01552                                     lPartnerMktSINBKKSegmentYCabin1FamilyMClass);

01553
01554     // Step 9.0.9: link SQ inventory objects to Partner CX inventory objects
01555
01556     FacBomManager::addToList (lSINBKKSegment, lPartnerMktSINBKKSegment);
01557
01558     lMktBKKHKGSegment.linkWithOperating (lPartnerBKKHKGSegment);
01559
01560     /* ================================================================================
      ========= */
01561
01562     // Step 1.0: O&D level
01563     // Create an O&D Date (SQ11/08-FEB-2010/SIN-BKK-SQ1200/08-FEB-2010/BKK-HKG) f
      or SQ's Inventory
01564     OnDString_T lSQSINBKKOnDStr = "SQ;11,2010-Feb-08;SIN,BKK";
01565     OnDString_T lMktSQBKKHKGOnDStr = "SQ;1200,2010-Feb-08;BKK,HKG";
01566     OnDStringList_T lOnDStringList;
01567     lOnDStringList.push_back (lSQSINBKKOnDStr);
01568     lOnDStringList.push_back (lMktSQBKKHKGOnDStr);
01569
01570     OnDDateKey lOnDDateKey (lOnDStringList);
01571     OnDDate& lSQ_SINHKG_OnDDate =
01572       FacBom<OnDDate>::instance().create (lOnDDateKey);
01573     // Link to the inventory
01574     FacBomManager::addToListAndMap (lSQInv, lSQ_SINHKG_OnDDate);
01575     FacBomManager::linkWithParent (lSQInv, lSQ_SINHKG_OnDDate);
01576
01577     // Add the segments
01578     FacBomManager::addToListAndMap (lSQ_SINHKG_OnDDate, lSINBKKSegment);
01579     FacBomManager::addToListAndMap (lSQ_SINHKG_OnDDate, lMktBKKHKGSegment);
01580
01581     // Add total forecast info for cabin Y.
01582     const MeanStdDevPair_T lMean60StdDev6 (60.0, 6.0);
01583     const WTP_T lWTP750 = 750.0;
01584     const WTPDemandPair_T lWTP750Mean60StdDev6 (lWTP750, lMean60StdDev6);
01585     lSQ_SINHKG_OnDDate.setTotalForecast (lY, lWTP750Mean60StdDev6);
01586
01587     // Add demand info (optional).
01588     // 2 legs here, so 2 CabinClassPair to add in the list.
01589     // Fist leg: cabin Y, class M.
01590     CabinClassPair_T lCC_YM1 (lY,lM);
01591     // Second leg: cabin Y, class M too.
01592     CabinClassPair_T lCC_YM2 (lY,lM);
01593     CabinClassPairList_T lCabinClassPairList;
01594     lCabinClassPairList.push_back(lCC_YM1);
01595     lCabinClassPairList.push_back(lCC_YM2);
01596     const MeanStdDevPair_T lMean20StdDev2 (20.0, 2.0);
```

```
01597     const Yield_T lYield850 = 850.0;
01598     const YieldDemandPair_T lYield850Mean20StdDev2 (lYield850, lMean20StdDev2);
01599     lSQ_SINHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield850Mean20
      StdDev2);
01600
01601     CabinClassPair_T lCC_YY1 (lY,lY);
01602     CabinClassPair_T lCC_YY2 (lY,lY);
01603     lCabinClassPairList.clear();
01604     lCabinClassPairList.push_back(lCC_YY1);
01605     lCabinClassPairList.push_back(lCC_YY2);
01606     const MeanStdDevPair_T lMean10StdDev1 (10.0, 1.0);
01607     const Yield_T lYield1200 = 1200.0;
01608     const YieldDemandPair_T lYield1200Mean10StdDev1 (lYield1200, lMean10StdDev1);

01609     lSQ_SINHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield1200Mean1
      0StdDev1);
01610
01611     // Create an O&D Date (SQ11/08-FEB-2010/SIN-BKK) for SQ's Inventory
01612     lOnDStringList.clear();
01613     lOnDStringList.push_back (lSQSINBKKOnDStr);
01614
01615     lOnDDateKey = OnDDateKey(lOnDStringList);
01616     OnDDate& lSQ_SINBKK_OnDDate =
01617       FacBom<OnDDate>::instance().create (lOnDDateKey);
01618     // Link to the inventory
01619     FacBomManager::addToListAndMap (lSQInv, lSQ_SINBKK_OnDDate);
01620     FacBomManager::linkWithParent (lSQInv, lSQ_SINBKK_OnDDate);
01621
01622     // Add the segments
01623     FacBomManager::addToListAndMap (lSQ_SINBKK_OnDDate, lSINBKKSegment);
01624
01625     // Add total forecast info for cabin Y.
01626     const WTP_T lWTP400 = 400.0;
01627     const WTPDemandPair_T lWTP400Mean60StdDev6 (lWTP400, lMean60StdDev6);
01628     lSQ_SINBKK_OnDDate.setTotalForecast (lY, lWTP400Mean60StdDev6);
01629
01630     // Add demand info (optional).
01631     lCabinClassPairList.clear();
01632     lCabinClassPairList.push_back(lCC_YM1);
01633     const MeanStdDevPair_T lMean20StdDev1 (20.0, 1.0);
01634     const Yield_T lYield500 = 500.0;
01635     const YieldDemandPair_T lYield500Mean20StdDev1 (lYield500, lMean20StdDev1);
01636     lSQ_SINBKK_OnDDate.setDemandInformation (lCabinClassPairList, lYield500Mean20
      StdDev1);
01637
01638     lCabinClassPairList.clear();
01639     lCabinClassPairList.push_back(lCC_YY1);
01640     const Yield_T lYield700 = 700.0;
01641     const YieldDemandPair_T lYield700Mean20StdDev1 (lYield700, lMean10StdDev1 );
01642     lSQ_SINBKK_OnDDate.setDemandInformation (lCabinClassPairList, lYield700Mean20
      StdDev1);
01643
01644     /*************************************************************************
      ***
01645     // Create an O&D Date (SQ1200/08-FEB-2010/BKK-HKG) for SQ's Inventory
01646     lFullKeyList.clear();
01647     lFullKeyList.push_back (lMktSQBKKHKGFullKeyStr);
01648
01649     lOnDDateKey = OnDDateKey(lFullKeyList);
01650     OnDDate& lMktSQ_BKKHKG_OnDDate =
01651       FacBom<OnDDate>::instance().create (lOnDDateKey);
01652     // Link to the inventory
```

```
01653     FacBomManager::addToListAndMap (lSQInv, lMktSQ_BKKHKG_OnDDate);
01654     FacBomManager::linkWithParent (lSQInv, lMktSQ_BKKHKG_OnDDate);
01655
01656     // Add the segments
01657     FacBomManager::addToListAndMap (lMktSQ_BKKHKG_OnDDate, lMktBKKHKGSegment);
01658
01659     // Demand info is not added for purely marketed O&Ds
01660     // Add demand info
01661     // lCabinClassPairList.clear();
01662     // lCabinClassPairList.push_back(lCC_YM2);
01663     // lMktSQ_BKKHKG_OnDDate.setDemandInformation (lCabinClassPairList, 500.0, 20
      .0, 1.0);
01664     ************************************************************************
      ******/
01665
01666
01667     // ////// CX ///////
01668     // Step 0.2: Flight-date level
01669     // Create a FlightDate (CX12/08-FEB-2010) for CX's Inventory
01670     lFlightNumber = 12;
01671     //lDate = Date_T (2010, 2, 8);
01672     lFlightDateKey = FlightDateKey (lFlightNumber, lDate);
01673
01674     FlightDate& lCX12_20100208_FD =
01675       FacBom<FlightDate>::instance().create (lFlightDateKey);
01676     FacBomManager::addToListAndMap (lCXInv, lCX12_20100208_FD);
01677     FacBomManager::linkWithParent (lCXInv, lCX12_20100208_FD);
01678
01679     // Create a (mkt) FlightDate (CX1100/08-FEB-2010) for CX's Inventory
01680     lFlightNumber = 1100;
01681     //lDate = Date_T (2010, 2, 8);
01682     lMktFlightDateKey = FlightDateKey (lFlightNumber, lDate);
01683
01684     FlightDate& lCX1100_20100208_FD =
01685       FacBom<FlightDate>::instance().create (lMktFlightDateKey);
01686     FacBomManager::addToListAndMap (lCXInv, lCX1100_20100208_FD);
01687     FacBomManager::linkWithParent (lCXInv, lCX1100_20100208_FD);
01688
01689     // Display the flight-date
01690     // STDAIR_LOG_DEBUG ("FlightDate: " << lAF084_20110320_FD.toString());
01691
01692     // Step 0.3: Segment-date level
01693     // Create a SegmentDate BKK-HKG for CX's Inventory
01694
01695     lSegmentDateKey = SegmentDateKey (lBKK, lHKG);
01696
01697     SegmentDate& lBKKHKGSegment =
01698       FacBom<SegmentDate>::instance().create (lSegmentDateKey);
01699     FacBomManager::addToListAndMap (lCX12_20100208_FD, lBKKHKGSegment);
01700     FacBomManager::linkWithParent (lCX12_20100208_FD, lBKKHKGSegment);
01701
01702     // Fill the SegmentDate content
01703     lBKKHKGSegment.setBoardingDate (lDate);
01704     lBKKHKGSegment.setOffDate (lDate);
01705     lBKKHKGSegment.setBoardingTime (l1200);
01706     lBKKHKGSegment.setOffTime (l1540);
01707     lBKKHKGSegment.setElapsedTime (l0240);
01708
01709     // Create a second (mkt) SegmentDate (SIN-BKK) for CX's Inventory
01710     lMktSegmentDateKey = SegmentDateKey (lSIN, lBKK);
01711
01712     SegmentDate& lMktSINBKKSegment =
```

```
01713       FacBom<SegmentDate>::instance().create (lMktSegmentDateKey);
01714     FacBomManager::addToListAndMap (lCX1100_20100208_FD, lMktSINBKKSegment);
01715     FacBomManager::linkWithParent (lCX1100_20100208_FD, lMktSINBKKSegment);
01716
01717     // Fill the (mkt) SegmentDate content
01718     lMktSINBKKSegment.setBoardingDate (lDate);
01719     lMktSINBKKSegment.setOffDate (lDate);
01720     lMktSINBKKSegment.setBoardingTime (l0820);
01721     lMktSINBKKSegment.setOffTime (l1100);
01722     lMktSINBKKSegment.setElapsedTime (l0340);
01723
01724     // Step 0.4: Leg-date level
01725     // Create a LegDate (BKK) for CX's Inventory
01726     lLegDateKey = LegDateKey (lBKK);
01727
01728     LegDate& lBKKLeg = FacBom<LegDate>::instance().create (lLegDateKey);
01729     FacBomManager::addToListAndMap (lCX12_20100208_FD, lBKKLeg);
01730     FacBomManager::linkWithParent (lCX12_20100208_FD, lBKKLeg);
01731
01732     // Fill the LegDate content
01733     lBKKLeg.setOffPoint (lHKG);
01734     lBKKLeg.setBoardingDate (lDate);
01735     lBKKLeg.setOffDate (lDate);
01736     lBKKLeg.setBoardingTime (l1200);
01737     lBKKLeg.setOffTime (l1540);
01738     lBKKLeg.setElapsedTime (l0240);
01739
01740     // Display the leg-date
01741     // STDAIR_LOG_DEBUG ("LegDate: " << lCDGLeg.toString());
01742
01743     // Link the segment-dates with the leg-dates
01744     FacBomManager::addToListAndMap (lBKKLeg, lBKKHKGSegment);
01745     FacBomManager::addToListAndMap (lBKKHKGSegment, lBKKLeg);
01746
01747     // Step 0.5: segment-cabin level
01748     // Create a SegmentCabin (Y) for the Segment BKK-HKG of CX's Inventory
01749     SegmentCabin& lBKKHKGSegmentYCabin =
01750       FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
01751     FacBomManager::addToListAndMap (lBKKHKGSegment, lBKKHKGSegmentYCabin);
01752     FacBomManager::linkWithParent (lBKKHKGSegment, lBKKHKGSegmentYCabin);
01753
01754     // Create a SegmentCabin (Y) for the (mkt) Segment SIN-BKK of CX's Inventory
01755     SegmentCabin& lMktSINBKKSegmentYCabin =
01756       FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
01757     FacBomManager::addToListAndMap (lMktSINBKKSegment, lMktSINBKKSegmentYCabin);
01758     FacBomManager::linkWithParent (lMktSINBKKSegment, lMktSINBKKSegmentYCabin);
01759
01760     // Step 0.6: leg-cabin level
01761     // Create a LegCabin (Y) for the Leg BKK-HKG on CX's Inventory
01762     LegCabin& lBKKLegYCabin =
01763       FacBom<LegCabin>::instance().create (lYLegCabinKey);
01764     FacBomManager::addToListAndMap (lBKKLeg, lBKKLegYCabin);
01765     FacBomManager::linkWithParent (lBKKLeg, lBKKLegYCabin);
01766
01767     lCapacity = CabinCapacity_T(100);
01768     lBKKLegYCabin.setCapacities (lCapacity);
01769     lBKKLegYCabin.setAvailabilityPool (lCapacity);
01770
01771     // Link the segment-dates with the leg-dates
01772     FacBomManager::addToListAndMap (lBKKLegYCabin, lBKKHKGSegmentYCabin,
01773                                     lBKKHKGSegmentYCabin.getFullerKey());
01774     FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin, lBKKLegYCabin,
```

```
01775                                     lBKKLegYCabin.getFullerKey());
01776
01777     // Step 0.7: fare family level
01778     // Create a fareFamily (1) for the Segment BKK-HKG, cabin Y on CX's Inv
01779     FareFamily& lBKKHKGSegmentYCabin1Family =
01780       FacBom<FareFamily>::instance().create (l1FareFamilyKey);
01781     FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin,
01782                                     lBKKHKGSegmentYCabin1Family);
01783     FacBomManager::linkWithParent (lBKKHKGSegmentYCabin,
01784                                    lBKKHKGSegmentYCabin1Family);
01785
01786     // Create a FareFamily (1) for the (mkt) Segment SIN-BKK, cabin Y on CX's Inv

01787     FareFamily& lMktSINBKKSegmentYCabin1Family =
01788       FacBom<FareFamily>::instance().create (l1FareFamilyKey);
01789     FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabin,
01790                                     lMktSINBKKSegmentYCabin1Family);
01791     FacBomManager::linkWithParent (lMktSINBKKSegmentYCabin,
01792                                    lMktSINBKKSegmentYCabin1Family);
01793
01794
01795     // Step 0.8: booking class level
01796     // Create a BookingClass (Y) for the
01797     // Segment BKK-HKG, cabin Y, fare family 1 on CX's Inv
01798     BookingClass& lBKKHKGSegmentYCabin1FamilyYClass =
01799       FacBom<BookingClass>::instance().create (lYBookingClassKey);
01800     FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin1Family,
01801                                     lBKKHKGSegmentYCabin1FamilyYClass);
01802     FacBomManager::linkWithParent (lBKKHKGSegmentYCabin1Family,
01803                                    lBKKHKGSegmentYCabin1FamilyYClass);
01804
01805     FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin,
01806                                     lBKKHKGSegmentYCabin1FamilyYClass);
01807     FacBomManager::addToListAndMap (lBKKHKGSegment,
01808                                     lBKKHKGSegmentYCabin1FamilyYClass);
01809
01810     lBKKHKGSegmentYCabin1FamilyYClass.setYield(700);
01811
01812     // Create a BookingClass (Y) for the (mkt) Segment SIN-BKK, cabin Y,
01813     // fare family 1 on CX's Inv
01814     BookingClass& lMktSINBKKSegmentYCabin1FamilyYClass =
01815       FacBom<BookingClass>::instance().create (lYBookingClassKey);
01816     FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabin1Family,
01817                                     lMktSINBKKSegmentYCabin1FamilyYClass);
01818     FacBomManager::linkWithParent (lMktSINBKKSegmentYCabin1Family,
01819                                    lMktSINBKKSegmentYCabin1FamilyYClass);
01820
01821     FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabin,
01822                                     lMktSINBKKSegmentYCabin1FamilyYClass);
01823     FacBomManager::addToListAndMap (lMktSINBKKSegment,
01824                                     lMktSINBKKSegmentYCabin1FamilyYClass);
01825
01826     lMktSINBKKSegmentYCabin1FamilyYClass.setYield(700);
01827
01828     //Create a BookingClass (M) for the
01829     // Segment BKK-HKG, cabin Y, fare family 1 on CX's Inv
01830     BookingClass& lBKKHKGSegmentYCabin1FamilyMClass =
01831       FacBom<BookingClass>::instance().create (lMBookingClassKey);
01832     FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin1Family,
01833                                     lBKKHKGSegmentYCabin1FamilyMClass);
01834     FacBomManager::linkWithParent (lBKKHKGSegmentYCabin1Family,
01835                                    lBKKHKGSegmentYCabin1FamilyMClass);
```

```
01836
01837     FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin,
01838                                     lBKKHKGSegmentYCabin1FamilyMClass);
01839     FacBomManager::addToListAndMap (lBKKHKGSegment,
01840                                     lBKKHKGSegmentYCabin1FamilyMClass);
01841
01842     lBKKHKGSegmentYCabin1FamilyMClass.setYield(500);
01843
01844     // Create a BookingClass (M) for the (mkt) Segment SIN-BKK, cabin Y,
01845     // fare family 1 on CX's Inv
01846     BookingClass& lMktSINBKKSegmentYCabin1FamilyMClass =
01847       FacBom<BookingClass>::instance().create (lMBookingClassKey);
01848     FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabin1Family,
01849                                     lMktSINBKKSegmentYCabin1FamilyMClass);
01850     FacBomManager::linkWithParent (lMktSINBKKSegmentYCabin1Family,
01851                                    lMktSINBKKSegmentYCabin1FamilyMClass);
01852
01853     FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabin,
01854                                     lMktSINBKKSegmentYCabin1FamilyMClass);
01855     FacBomManager::addToListAndMap (lMktSINBKKSegment,
01856                                     lMktSINBKKSegmentYCabin1FamilyMClass);
01857
01858     lMktSINBKKSegmentYCabin1FamilyMClass.setYield(500);
01859
01860     /* ================================================================================
      ========= */
01861     // Step 0.9: Partner Inventory
01862     // Create a partner Inventory SQ for CX
01863     const InventoryKey lPartnerSQKey ("SQ");
01864     Inventory& lPartnerSQInv = FacBom<Inventory>::instance().create (lPartnerSQKe
      y);
01865     FacBomManager::addToListAndMap (lCXInv, lPartnerSQInv);
01866     FacBomManager::linkWithParent (lCXInv, lPartnerSQInv);
01867
01868     // Step 0.9.2 : Flight-date level
01869     lFlightNumber = 11;
01870     lFlightDateKey = FlightDateKey (lFlightNumber, lDate);
01871
01872     FlightDate& lPartnerSQ11_20100208_FD =
01873       FacBom<FlightDate>::instance().create (lFlightDateKey);
01874     FacBomManager::addToListAndMap (lPartnerSQInv, lPartnerSQ11_20100208_FD);
01875     FacBomManager::linkWithParent (lPartnerSQInv, lPartnerSQ11_20100208_FD);
01876
01877     lFlightNumber = 1200;
01878     lMktFlightDateKey = FlightDateKey (lFlightNumber, lDate);
01879
01880     FlightDate& lPartnerSQ1200_20100208_FD =
01881       FacBom<FlightDate>::instance().create (lMktFlightDateKey);
01882     FacBomManager::addToListAndMap (lPartnerSQInv, lPartnerSQ1200_20100208_FD);
01883     FacBomManager::linkWithParent (lPartnerSQInv, lPartnerSQ1200_20100208_FD);
01884
01885     // Step 0.9.3: Segment-date level
01886     lSegmentDateKey = SegmentDateKey (lSIN, lBKK);
01887
01888     SegmentDate& lPartnerSINBKKSegment =
01889       FacBom<SegmentDate>::instance().create (lSegmentDateKey);
01890     FacBomManager::addToListAndMap (lPartnerSQ11_20100208_FD, lPartnerSINBKKSegme
      nt);
01891     FacBomManager::linkWithParent (lPartnerSQ11_20100208_FD, lPartnerSINBKKSegmen
      t);
01892
01893     lPartnerSINBKKSegment.setBoardingDate (lDate);
```

```
01894     lPartnerSINBKKSegment.setOffDate (lDate);
01895     lPartnerSINBKKSegment.setBoardingTime (l0820);
01896     lPartnerSINBKKSegment.setOffTime (l1100);
01897     lPartnerSINBKKSegment.setElapsedTime (l0340);
01898
01899     lMktSegmentDateKey = SegmentDateKey (lBKK, lHKG);
01900
01901     SegmentDate& lPartnerMktBKKHKGSegment =
01902       FacBom<SegmentDate>::instance().create (lMktSegmentDateKey);
01903     FacBomManager::addToListAndMap (lPartnerSQ1200_20100208_FD, lPartnerMktBKKHKG
      Segment);
01904     FacBomManager::linkWithParent (lPartnerSQ1200_20100208_FD, lPartnerMktBKKHKGS
      egment);
01905
01906     lPartnerMktBKKHKGSegment.setBoardingDate (lDate);
01907     lPartnerMktBKKHKGSegment.setOffDate (lDate);
01908     lPartnerMktBKKHKGSegment.setBoardingTime (l1200);
01909     lPartnerMktBKKHKGSegment.setOffTime (l1540);
01910     lPartnerMktBKKHKGSegment.setElapsedTime (l0240);
01911
01912     // Step 0.9.4: Leg-date level
01913     lLegDateKey = LegDateKey (lSIN);
01914
01915     LegDate& lPartnerSINLeg = FacBom<LegDate>::instance().create (lLegDateKey);
01916     FacBomManager::addToListAndMap (lPartnerSQ11_20100208_FD, lPartnerSINLeg);
01917     FacBomManager::linkWithParent (lPartnerSQ11_20100208_FD, lPartnerSINLeg);
01918
01919     lPartnerSINLeg.setOffPoint (lBKK);
01920     lPartnerSINLeg.setBoardingDate (lDate);
01921     lPartnerSINLeg.setOffDate (lDate);
01922     lPartnerSINLeg.setBoardingTime (l0820);
01923     lPartnerSINLeg.setOffTime (l1100);
01924     lPartnerSINLeg.setElapsedTime (l0340);
01925
01926     FacBomManager::addToListAndMap (lPartnerSINLeg, lPartnerSINBKKSegment);
01927     FacBomManager::addToListAndMap (lPartnerSINBKKSegment, lPartnerSINLeg);
01928
01929     // Step 9.0.5: segment-cabin level
01930
01931     SegmentCabin& lPartnerSINBKKSegmentYCabin =
01932       FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
01933     FacBomManager::addToListAndMap (lPartnerSINBKKSegment, lPartnerSINBKKSegmentY
      Cabin);
01934     FacBomManager::linkWithParent (lPartnerSINBKKSegment, lPartnerSINBKKSegmentYC
      abin);
01935
01936     SegmentCabin& lPartnerMktBKKHKGSegmentYCabin =
01937       FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
01938     FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegment, lPartnerMktBKKHKGSe
      gmentYCabin);
01939     FacBomManager::linkWithParent (lPartnerMktBKKHKGSegment, lPartnerMktBKKHKGSeg
      mentYCabin);
01940
01941     // Step 9.0.6: leg-cabin level
01942
01943     LegCabin& lPartnerSINLegYCabin =
01944       FacBom<LegCabin>::instance().create (lYLegCabinKey);
01945     FacBomManager::addToListAndMap (lPartnerSINLeg, lPartnerSINLegYCabin);
01946     FacBomManager::linkWithParent (lPartnerSINLeg, lPartnerSINLegYCabin);
01947
01948     lCapacity = CabinCapacity_T(999);
01949     lPartnerSINLegYCabin.setCapacities (lCapacity);
```

```
01950     lPartnerSINLegYCabin.setAvailabilityPool (lCapacity);
01951
01952     FacBomManager::addToListAndMap (lPartnerSINLegYCabin, lPartnerSINBKKSegmentYC
      abin,
01953                                     lPartnerSINBKKSegmentYCabin.getFullerKey());
01954     FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin, lPartnerSINLegYC
      abin,
01955                                     lPartnerSINLegYCabin.getFullerKey());
01956
01957     // Step 9.0.7: fare family level
01958
01959     FareFamily& lPartnerSINBKKSegmentYCabin1Family =
01960       FacBom<FareFamily>::instance().create (l1FareFamilyKey);
01961     FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin,
01962                                     lPartnerSINBKKSegmentYCabin1Family);
01963     FacBomManager::linkWithParent (lPartnerSINBKKSegmentYCabin,
01964                                    lPartnerSINBKKSegmentYCabin1Family);
01965
01966     FareFamily& lPartnerMktBKKHKGSegmentYCabin1Family =
01967       FacBom<FareFamily>::instance().create (l1FareFamilyKey);
01968     FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabin,
01969                                     lPartnerMktBKKHKGSegmentYCabin1Family);
01970     FacBomManager::linkWithParent (lPartnerMktBKKHKGSegmentYCabin,
01971                                    lPartnerMktBKKHKGSegmentYCabin1Family);
01972
01973
01974     // Step 9.0.8: booking class level
01975
01976     BookingClass& lPartnerSINBKKSegmentYCabin1FamilyYClass =
01977       FacBom<BookingClass>::instance().create (lYBookingClassKey);
01978     FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin1Family,
01979                                     lPartnerSINBKKSegmentYCabin1FamilyYClass);
01980     FacBomManager::linkWithParent (lPartnerSINBKKSegmentYCabin1Family,
01981                                    lPartnerSINBKKSegmentYCabin1FamilyYClass);
01982
01983     FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin,
01984                                     lPartnerSINBKKSegmentYCabin1FamilyYClass);
01985     FacBomManager::addToListAndMap (lPartnerSINBKKSegment,
01986                                     lPartnerSINBKKSegmentYCabin1FamilyYClass);
01987
01988     BookingClass& lPartnerMktBKKHKGSegmentYCabin1FamilyYClass =
01989       FacBom<BookingClass>::instance().create (lYBookingClassKey);
01990     FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabin1Family,
01991                                     lPartnerMktBKKHKGSegmentYCabin1FamilyYClass);

01992     FacBomManager::linkWithParent (lPartnerMktBKKHKGSegmentYCabin1Family,
01993                                    lPartnerMktBKKHKGSegmentYCabin1FamilyYClass);
01994
01995     FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabin,
01996                                     lPartnerMktBKKHKGSegmentYCabin1FamilyYClass);

01997     FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegment,
01998                                     lPartnerMktBKKHKGSegmentYCabin1FamilyYClass);

01999
02000     BookingClass& lPartnerSINBKKSegmentYCabin1FamilyMClass =
02001       FacBom<BookingClass>::instance().create (lMBookingClassKey);
02002     FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin1Family,
02003                                     lPartnerSINBKKSegmentYCabin1FamilyMClass);
02004     FacBomManager::linkWithParent (lPartnerSINBKKSegmentYCabin1Family,
02005                                    lPartnerSINBKKSegmentYCabin1FamilyMClass);
02006
```

```
02007     FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin,
02008                                     lPartnerSINBKKSegmentYCabin1FamilyMClass);
02009     FacBomManager::addToListAndMap (lPartnerSINBKKSegment,
02010                                     lPartnerSINBKKSegmentYCabin1FamilyMClass);
02011
02012     BookingClass& lPartnerMktBKKHKGSegmentYCabin1FamilyMClass =
02013       FacBom<BookingClass>::instance().create (lMBookingClassKey);
02014     FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabin1Family,
02015                                     lPartnerMktBKKHKGSegmentYCabin1FamilyMClass);

02016     FacBomManager::linkWithParent (lPartnerMktBKKHKGSegmentYCabin1Family,
02017                                    lPartnerMktBKKHKGSegmentYCabin1FamilyMClass);
02018
02019     FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabin,
02020                                     lPartnerMktBKKHKGSegmentYCabin1FamilyMClass);

02021     FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegment,
02022                                     lPartnerMktBKKHKGSegmentYCabin1FamilyMClass);

02023
02024     // Step 9.0.9: link CX inventory objects to Partner SQ inventory objects
02025     FacBomManager::addToList (lBKKHKGSegment, lPartnerMktBKKHKGSegment);
02026
02027     lMktSINBKKSegment.linkWithOperating (lPartnerSINBKKSegment);
02028
02029     /* ============================================================================
      ========= */
02030
02031     // Step 1.0: O&D level
02032     // Create an O&D Date (CX1100/08-FEB-2010/SIN-BKK-CX12/08-FEB-2010/BKK-HKG) f
      or CX's Inventory
02033     OnDString_T lMktCXSINBKKOnDStr = "CX;1100,2010-Feb-08;SIN,BKK";
02034     OnDString_T lCXBKKHKGOnDStr = "CX;12,2010-Feb-08;BKK,HKG";
02035     lOnDStringList.clear();
02036     lOnDStringList.push_back (lMktCXSINBKKOnDStr);
02037     lOnDStringList.push_back (lCXBKKHKGOnDStr);
02038
02039     lOnDDateKey = OnDDateKey(lOnDStringList);
02040     OnDDate& lCX_SINHKG_OnDDate =
02041       FacBom<OnDDate>::instance().create (lOnDDateKey);
02042     // Link to the inventory
02043     FacBomManager::addToListAndMap (lCXInv, lCX_SINHKG_OnDDate);
02044     FacBomManager::linkWithParent (lCXInv, lCX_SINHKG_OnDDate);
02045
02046     // Add the segments
02047     FacBomManager::addToListAndMap (lCX_SINHKG_OnDDate, lMktSINBKKSegment);
02048     FacBomManager::addToListAndMap (lCX_SINHKG_OnDDate, lBKKHKGSegment);
02049
02050     // Add total forecast info for cabin Y.
02051     lCX_SINHKG_OnDDate.setTotalForecast (lY, lWTP750Mean60StdDev6);
02052
02053     // Add demand info
02054     lCabinClassPairList.clear();
02055     lCabinClassPairList.push_back(lCC_YM1);
02056     lCabinClassPairList.push_back(lCC_YM2);
02057     lCX_SINHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield850Mean20
      StdDev2);
02058
02059     lCabinClassPairList.clear();
02060     lCabinClassPairList.push_back(lCC_YY1);
02061     lCabinClassPairList.push_back(lCC_YY2);
02062     lCX_SINHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield1200Mean1
```

```
      0StdDev1);
02063
02064     /**************************************************************************
      *******
02065     // Create an O&D Date (CX1100/08-FEB-2010/SIN-BKK) for CX's Inventory
02066     lFullKeyList.clear();
02067     lFullKeyList.push_back (lMktCXSINBKKFullKeyStr);
02068
02069     lOnDDateKey = OnDDateKey(lFullKeyList);
02070     OnDDate& lMktCX_SINBKK_OnDDate =
02071       FacBom<OnDDate>::instance().create (lOnDDateKey);
02072     // Link to the inventory
02073     FacBomManager::addToListAndMap (lCXInv, lMktCX_SINBKK_OnDDate);
02074     FacBomManager::linkWithParent (lCXInv, lMktCX_SINBKK_OnDDate);
02075
02076     // Add the segments
02077     FacBomManager::addToListAndMap (lMktCX_SINBKK_OnDDate, lMktSINBKKSegment);
02078
02079     // Demand info is not added for purely marketed O&Ds
02080     // Add demand info
02081     // lCabinClassPairList.clear();
02082     // lCabinClassPairList.push_back(lCC_YM1);
02083     // lMktCX_SINBKK_OnDDate.setDemandInformation (lCabinClassPairList, 500.0, 20
      .0, 1.0);
02084     **************************************************************************
      ********/
02085
02086     // Create an O&D Date (CX12/08-FEB-2010/BKK-HKG) for CX's Inventory
02087     lOnDStringList.clear();
02088     lOnDStringList.push_back (lCXBKKHKGOnDStr);
02089
02090     lOnDDateKey = OnDDateKey(lOnDStringList);
02091     OnDDate& lCX_BKKHKG_OnDDate =
02092       FacBom<OnDDate>::instance().create (lOnDDateKey);
02093     // Link to the inventory
02094     FacBomManager::addToListAndMap (lCXInv, lCX_BKKHKG_OnDDate);
02095     FacBomManager::linkWithParent (lCXInv, lCX_BKKHKG_OnDDate);
02096
02097     // Add the segments
02098     FacBomManager::addToListAndMap (lCX_BKKHKG_OnDDate, lBKKHKGSegment);
02099
02100     // Add total forecast info for cabin Y.
02101     lCX_BKKHKG_OnDDate.setTotalForecast (lY, lWTP400Mean60StdDev6);
02102
02103     // Add demand info
02104     lCabinClassPairList.clear();
02105     lCabinClassPairList.push_back(lCC_YM2);
02106     lCX_BKKHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield500Mean20
      StdDev1);
02107
02108     lCabinClassPairList.clear();
02109     lCabinClassPairList.push_back(lCC_YY2);
02110     const YieldDemandPair_T lYield700Mean10StdDev1 (lYield700, lMean10StdDev1 );
02111     lCX_BKKHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield700Mean10
      StdDev1);
02112
02113     /*=========================================================================
      =====
02114       =========================================================================
      =====
02115       =========================================================================
      =====*/
```

```
02116     // Schedule:
02117     // SQ:
02118     // Step 1: flight period level
02119     // Create a flight period for SQ11:
02120     const DoWStruct lDoWSrtuct ("1111111");
02121     const Date_T lDateRangeStart (2010, boost::gregorian::Feb, 8);
02122     const Date_T lDateRangeEnd (2010, boost::gregorian::Feb, 9);
02123     const DatePeriod_T lDatePeriod (lDateRangeStart, lDateRangeEnd);
02124     const PeriodStruct lPeriodStruct (lDatePeriod,lDoWSrtuct);
02125
02126     lFlightNumber = FlightNumber_T (11);
02127
02128     FlightPeriodKey lFlightPeriodKey (lFlightNumber, lPeriodStruct);
02129
02130     FlightPeriod& lSQ11FlightPeriod =
02131       FacBom<FlightPeriod>::instance().create (lFlightPeriodKey);
02132     FacBomManager::addToListAndMap (lSQInv, lSQ11FlightPeriod);
02133     FacBomManager::linkWithParent (lSQInv, lSQ11FlightPeriod);
02134
02135     // Step 2: segment period level
02136     // Create a segment period for SIN-BKK:
02137
02138     SegmentPeriodKey lSegmentPeriodKey (lSIN, lBKK);
02139
02140     SegmentPeriod& lSINBKKSegmentPeriod =
02141       FacBom<SegmentPeriod>::instance().create (lSegmentPeriodKey);
02142     FacBomManager::addToListAndMap (lSQ11FlightPeriod, lSINBKKSegmentPeriod);
02143     FacBomManager::linkWithParent (lSQ11FlightPeriod, lSINBKKSegmentPeriod);
02144
02145     lSINBKKSegmentPeriod.setBoardingTime (l0820);
02146     lSINBKKSegmentPeriod.setOffTime (l1100);
02147     lSINBKKSegmentPeriod.setElapsedTime (l0340);
02148     ClassList_String_T lYM ("YM");
02149     lSINBKKSegmentPeriod.addCabinBookingClassList (lY,lYM);
02150
02151     // CX:
02152     // Step 1: flight period level
02153     // Create a flight period for CX12:
02154     lFlightNumber = FlightNumber_T (12);
02155
02156     lFlightPeriodKey = FlightPeriodKey(lFlightNumber, lPeriodStruct);
02157
02158     FlightPeriod& lCX12FlightPeriod =
02159       FacBom<FlightPeriod>::instance().create (lFlightPeriodKey);
02160     FacBomManager::addToListAndMap (lCXInv, lCX12FlightPeriod);
02161     FacBomManager::linkWithParent (lCXInv, lCX12FlightPeriod);
02162
02163     // Step 2: segment period level
02164     // Create a segment period for BKK-HKG:
02165
02166     lSegmentPeriodKey = SegmentPeriodKey (lBKK, lHKG);
02167
02168     SegmentPeriod& lBKKHKGSegmentPeriod =
02169       FacBom<SegmentPeriod>::instance().create (lSegmentPeriodKey);
02170     FacBomManager::addToListAndMap (lCX12FlightPeriod, lBKKHKGSegmentPeriod);
02171     FacBomManager::linkWithParent (lCX12FlightPeriod, lBKKHKGSegmentPeriod);
02172
02173     lBKKHKGSegmentPeriod.setBoardingTime (l1200);
02174     lBKKHKGSegmentPeriod.setOffTime (l1540);
02175     lBKKHKGSegmentPeriod.setElapsedTime (l0240);
02176     lBKKHKGSegmentPeriod.addCabinBookingClassList (lY,lYM);
02177
```

```
02178   }
02179
02180   // ////////////////////////////////////////////////////////////////////
02181   void CmdBomManager::buildPartnershipsSamplePricing (BomRoot& ioBomRoot) {
02182
02184
02185     /*================================================================================
        ========*/
02186     // First airport pair SIN-BKK.
02187     // Set the airport-pair primary key.
02188     AirportPairKey lAirportPairKey ("SIN", "BKK");
02189
02190     // Create the AirportPairKey object and link it to the ioBomRoot object.
02191     AirportPair& lSINBKKAirportPair =
02192       FacBom<AirportPair>::instance().create (lAirportPairKey);
02193     FacBomManager::addToListAndMap (ioBomRoot, lSINBKKAirportPair);
02194     FacBomManager::linkWithParent (ioBomRoot, lSINBKKAirportPair);
02195
02196     // Set the fare date-period primary key.
02197     const Date_T lDateRangeStart (2010, boost::gregorian::Jan, 15);
02198     const Date_T lDateRangeEnd (2010, boost::gregorian::Dec, 31);
02199     const DatePeriod_T lDateRange (lDateRangeStart, lDateRangeEnd);
02200     const DatePeriodKey lDatePeriodKey (lDateRange);
02201
02202     // Create the DatePeriodKey object and link it to the PosChannel object.
02203     DatePeriod& lSINBKKDatePeriod =
02204       FacBom<DatePeriod>::instance().create (lDatePeriodKey);
02205     FacBomManager::addToListAndMap (lSINBKKAirportPair, lSINBKKDatePeriod);
02206     FacBomManager::linkWithParent (lSINBKKAirportPair, lSINBKKDatePeriod);
02207
02208     // Set the point-of-sale-channel primary key.
02209     PosChannelKey lPosChannelKey ("SIN","IN");
02210
02211     // Create the PositionKey object and link it to the AirportPair object.
02212     PosChannel& lSINPosChannel =
02213       FacBom<PosChannel>::instance().create (lPosChannelKey);
02214     FacBomManager::addToListAndMap (lSINBKKDatePeriod, lSINPosChannel);
02215     FacBomManager::linkWithParent (lSINBKKDatePeriod, lSINPosChannel);
02216
02217     // Set the fare time-period primary key.
02218     const Time_T lTimeRangeStart (0, 0, 0);
02219     const Time_T lTimeRangeEnd (23, 0, 0);
02220     const TimePeriodKey lFareTimePeriodKey (lTimeRangeStart,
02221                                             lTimeRangeEnd);
02222
02223     // Create the TimePeriodKey and link it to the DatePeriod object.
02224     TimePeriod& lSINBKKFareTimePeriod =
02225       FacBom<TimePeriod>::instance().create (lFareTimePeriodKey);
02226     FacBomManager::addToListAndMap (lSINPosChannel, lSINBKKFareTimePeriod);
02227     FacBomManager::linkWithParent (lSINPosChannel, lSINBKKFareTimePeriod);

02228
02229     // Generate the FareRule
02230     const FareFeaturesKey lFareFeaturesKey (TRIP_TYPE_ONE_WAY,
02231                                             NO_ADVANCE_PURCHASE,
02232                                             SATURDAY_STAY,
02233                                             CHANGE_FEES,
02234                                             NON_REFUNDABLE,
02235                                             NO_STAY_DURATION);
02236
02237     // Create the FareFeaturesKey and link it to the TimePeriod object.
02238     FareFeatures& lSINBKKFareFeatures =
```

```
02239       FacBom<FareFeatures>::instance().create (lFareFeaturesKey);
02240     FacBomManager::addToListAndMap (lSINBKKFareTimePeriod, lSINBKKFareFeatures);
02241     FacBomManager::linkWithParent (lSINBKKFareTimePeriod, lSINBKKFareFeatures);

02242
02243     // Generate Segment Features and link them to their FareRule.
02244     AirlineCodeList_T lSQAirlineCodeList;
02245     lSQAirlineCodeList.push_back ("SQ");
02246
02247     ClassList_StringList_T lYClassCodeList;
02248     lYClassCodeList.push_back ("Y");
02249     const AirlineClassListKey lSQAirlineYClassListKey (lSQAirlineCodeList,
02250                                                        lYClassCodeList);
02251
02252     ClassList_StringList_T lMClassCodeList;
02253     lMClassCodeList.push_back ("M");
02254     const AirlineClassListKey lSQAirlineMClassListKey (lSQAirlineCodeList,
02255                                                        lMClassCodeList);
02256
02257     // Create the AirlineClassListKey and link it to the FareFeatures object.
02258     AirlineClassList& lSQAirlineYClassList =
02259       FacBom<AirlineClassList>::instance().create (lSQAirlineYClassListKey);
02260     lSQAirlineYClassList.setFare(700);
02261     FacBomManager::addToListAndMap (lSINBKKFareFeatures, lSQAirlineYClassList);
02262     FacBomManager::linkWithParent (lSINBKKFareFeatures, lSQAirlineYClassList);
02263
02264     AirlineClassList& lSQAirlineMClassList =
02265       FacBom<AirlineClassList>::instance().create (lSQAirlineMClassListKey);
02266     lSQAirlineMClassList.setFare(500);
02267     FacBomManager::addToListAndMap (lSINBKKFareFeatures, lSQAirlineMClassList);
02268     FacBomManager::linkWithParent (lSINBKKFareFeatures, lSQAirlineMClassList);
02269
02270     /*================================================================================
    ========*/
02271     // Second airport pair BKK-HKG.
02272     // Set the airport-pair primary key.
02273     lAirportPairKey = AirportPairKey ("BKK", "HKG");
02274
02275     // Create the AirportPairKey object and link it to the ioBomRoot object.
02276     AirportPair& lBKKHKGAirportPair =
02277       FacBom<AirportPair>::instance().create (lAirportPairKey);
02278     FacBomManager::addToListAndMap (ioBomRoot, lBKKHKGAirportPair);
02279     FacBomManager::linkWithParent (ioBomRoot, lBKKHKGAirportPair);
02280
02281     // Set the fare date-period primary key.
02282     // Use the same as previously.
02283
02284     // Create the DatePeriodKey object and link it to the PosChannel object.
02285     DatePeriod& lBKKHKGDatePeriod =
02286       FacBom<DatePeriod>::instance().create (lDatePeriodKey);
02287     FacBomManager::addToListAndMap (lBKKHKGAirportPair, lBKKHKGDatePeriod);
02288     FacBomManager::linkWithParent (lBKKHKGAirportPair, lBKKHKGDatePeriod);
02289
02290     // Set the point-of-sale-channel primary key.
02291     lPosChannelKey  = PosChannelKey("BKK","IN");
02292
02293     // Create the PositionKey object and link it to the AirportPair object.
02294     PosChannel& lBKKPosChannel =
02295       FacBom<PosChannel>::instance().create (lPosChannelKey);
02296     FacBomManager::addToListAndMap (lBKKHKGDatePeriod, lBKKPosChannel);
02297     FacBomManager::linkWithParent (lBKKHKGDatePeriod, lBKKPosChannel);
02298
```

```
02299     // Set the fare time-period primary key.
02300     // Use the same as previously.
02301
02302     // Create the TimePeriodKey and link it to the DatePeriod object.
02303     TimePeriod& lBKKHKGFareTimePeriod =
02304       FacBom<TimePeriod>::instance().create (lFareTimePeriodKey);
02305     FacBomManager::addToListAndMap (lBKKPosChannel, lBKKHKGFareTimePeriod);
02306     FacBomManager::linkWithParent (lBKKPosChannel, lBKKHKGFareTimePeriod);

02307
02308     // Generate the FareRule
02309     // Use the same key as previously.
02310
02311     // Create the FareFeaturesKey and link it to the TimePeriod object.
02312     FareFeatures& lBKKHKGFareFeatures =
02313       FacBom<FareFeatures>::instance().create (lFareFeaturesKey);
02314     FacBomManager::addToListAndMap (lBKKHKGFareTimePeriod, lBKKHKGFareFeatures);
02315     FacBomManager::linkWithParent (lBKKHKGFareTimePeriod, lBKKHKGFareFeatures);

02316
02317     // Generate Segment Features and link them to their FareRule.
02318     AirlineCodeList_T lCXAirlineCodeList;
02319     lCXAirlineCodeList.push_back ("CX");
02320
02321     const AirlineClassListKey lCXAirlineYClassListKey (lCXAirlineCodeList,
02322                                                        lYClassCodeList);
02323
02324     const AirlineClassListKey lCXAirlineMClassListKey (lCXAirlineCodeList,
02325                                                        lMClassCodeList);
02326
02327     // Create the AirlineClassListKey and link it to the FareFeatures object.
02328     AirlineClassList& lCXAirlineYClassList =
02329       FacBom<AirlineClassList>::instance().create (lCXAirlineYClassListKey);
02330     lCXAirlineYClassList.setFare(700);
02331     FacBomManager::addToListAndMap (lBKKHKGFareFeatures, lCXAirlineYClassList);
02332     FacBomManager::linkWithParent (lBKKHKGFareFeatures, lCXAirlineYClassList);
02333
02334     AirlineClassList& lCXAirlineMClassList =
02335       FacBom<AirlineClassList>::instance().create (lCXAirlineMClassListKey);
02336     lCXAirlineMClassList.setFare(500);
02337     FacBomManager::addToListAndMap (lBKKHKGFareFeatures, lCXAirlineMClassList);
02338     FacBomManager::linkWithParent (lBKKHKGFareFeatures, lCXAirlineMClassList);
02339
02340     /*================================================================================
    ========*/
02341     // Third airport pair SIN-HKG.
02342     // Set the airport-pair primary key.
02343     lAirportPairKey = AirportPairKey ("SIN", "HKG");
02344
02345     // Create the AirportPairKey object and link it to the ioBomRoot object.
02346     AirportPair& lSINHKGAirportPair =
02347       FacBom<AirportPair>::instance().create (lAirportPairKey);
02348     FacBomManager::addToListAndMap (ioBomRoot, lSINHKGAirportPair);
02349     FacBomManager::linkWithParent (ioBomRoot, lSINHKGAirportPair);
02350
02351     // Set the fare date-period primary key.
02352     // Use the same as previously.
02353
02354     // Create the DatePeriodKey object and link it to the PosChannel object.
02355     DatePeriod& lSINHKGDatePeriod =
02356       FacBom<DatePeriod>::instance().create (lDatePeriodKey);
02357     FacBomManager::addToListAndMap (lSINHKGAirportPair, lSINHKGDatePeriod);
```

```
02358     FacBomManager::linkWithParent (lSINHKGAirportPair, lSINHKGDatePeriod);
02359
02360     // Set the point-of-sale-channel primary key.
02361     lPosChannelKey = PosChannelKey("SIN","IN");
02362
02363     // Create the PositionKey object and link it to the AirportPair object.
02364     PosChannel& lOnDSINPosChannel =
02365       FacBom<PosChannel>::instance().create (lPosChannelKey);
02366     FacBomManager::addToListAndMap (lSINHKGDatePeriod, lOnDSINPosChannel);
02367     FacBomManager::linkWithParent (lSINHKGDatePeriod, lOnDSINPosChannel);
02368
02369     // Set the fare time-period primary key.
02370     // Use the same as previously.
02371
02372     // Create the TimePeriodKey and link it to the DatePeriod object.
02373     TimePeriod& lSINHKGFareTimePeriod =
02374       FacBom<TimePeriod>::instance().create (lFareTimePeriodKey);
02375     FacBomManager::addToListAndMap (lOnDSINPosChannel, lSINHKGFareTimePeriod);
02376     FacBomManager::linkWithParent (lOnDSINPosChannel, lSINHKGFareTimePeriod);

02377
02378     // Generate the FareRule
02379     // Use the same key as previously.
02380
02381     // Create the FareFeaturesKey and link it to the TimePeriod object.
02382     FareFeatures& lSINHKGFareFeatures =
02383       FacBom<FareFeatures>::instance().create (lFareFeaturesKey);
02384     FacBomManager::addToListAndMap (lSINHKGFareTimePeriod, lSINHKGFareFeatures);
02385     FacBomManager::linkWithParent (lSINHKGFareTimePeriod, lSINHKGFareFeatures);

02386
02387     // Generate Segment Features and link them to their FareRule.
02388     AirlineCodeList_T lSQ_CXAirlineCodeList;
02389     lSQ_CXAirlineCodeList.push_back ("SQ");
02390     lSQ_CXAirlineCodeList.push_back ("CX");
02391
02392     ClassList_StringList_T lY_YClassCodeList;
02393     lY_YClassCodeList.push_back ("Y");
02394     lY_YClassCodeList.push_back ("Y");
02395     const AirlineClassListKey lSQ_CXAirlineYClassListKey (lSQ_CXAirlineCodeList,
02396                                                           lY_YClassCodeList);
02397
02398     ClassList_StringList_T lM_MClassCodeList;
02399     lM_MClassCodeList.push_back ("M");
02400     lM_MClassCodeList.push_back ("M");
02401     const AirlineClassListKey lSQ_CXAirlineMClassListKey (lSQ_CXAirlineCodeList,
02402                                                           lM_MClassCodeList);
02403
02404     // Create the AirlineClassListKey and link it to the FareFeatures object.
02405     AirlineClassList& lSQ_CXAirlineYClassList =
02406       FacBom<AirlineClassList>::instance().create (lSQ_CXAirlineYClassListKey);
02407     lSQ_CXAirlineYClassList.setFare(1200);
02408     FacBomManager::addToListAndMap (lSINHKGFareFeatures, lSQ_CXAirlineYClassList)
    ;
02409     FacBomManager::linkWithParent (lSINHKGFareFeatures, lSQ_CXAirlineYClassList);

02410
02411     AirlineClassList& lSQ_CXAirlineMClassList =
02412       FacBom<AirlineClassList>::instance().create (lSQ_CXAirlineMClassListKey);
02413     lSQ_CXAirlineMClassList.setFare(850);
02414     FacBomManager::addToListAndMap (lSINHKGFareFeatures, lSQ_CXAirlineMClassList)
    ;
```

```
02415     FacBomManager::linkWithParent (lSINHKGFareFeatures, lSQ_CXAirlineMClassList);

02416
02417
02419
02420     /*================================================================================
      ========*/
02421
02422     // Use the same airport pair, and date period for adding SQ SIN-BKK yields.
02423
02424     // Set the point-of-sale-channel primary key.
02425     lPosChannelKey = PosChannelKey(DEFAULT_POS, DEFAULT_CHANNEL);
02426
02427     // Create the PositionKey object and link it to the AirportPair object.
02428     PosChannel& lRAC_SINBKKPosChannel =
02429       FacBom<PosChannel>::instance().create (lPosChannelKey);
02430     FacBomManager::addToListAndMap (lSINBKKDatePeriod, lRAC_SINBKKPosChannel);
02431     FacBomManager::linkWithParent (lSINBKKDatePeriod, lRAC_SINBKKPosChannel);
02432
02433     // Set the yield time-period primary key.
02434     const TimePeriodKey lYieldTimePeriodKey (lTimeRangeStart,
02435                                              lTimeRangeEnd);
02436
02437     // Create the TimePeriodKey and link it to the DatePeriod object.
02438     TimePeriod& lSINBKKYieldTimePeriod =
02439       FacBom<TimePeriod>::instance().create (lYieldTimePeriodKey);
02440     FacBomManager::addToListAndMap (lRAC_SINBKKPosChannel, lSINBKKYieldTimePeriod
      );
02441     FacBomManager::linkWithParent (lRAC_SINBKKPosChannel, lSINBKKYieldTimePeriod)
      ;
02442
02443     // Generate the YieldRule
02444     const YieldFeaturesKey lYieldFeaturesKey (TRIP_TYPE_ONE_WAY,
02445                                               CABIN_Y);
02446
02447     // Create the YieldFeaturesKey and link it to the TimePeriod object.
02448     YieldFeatures& lSINBKKYieldFeatures =
02449       FacBom<YieldFeatures>::instance().create (lYieldFeaturesKey);
02450     FacBomManager::addToListAndMap (lSINBKKYieldTimePeriod, lSINBKKYieldFeatures)
      ;
02451     FacBomManager::linkWithParent (lSINBKKYieldTimePeriod, lSINBKKYieldFeatures);

02452
02453     // Generate Segment Features and link them to their YieldRule.
02454     // Use the same key as previously.
02455
02456     // Create the AirlineClassListKey and link it to the YieldFeatures object.
02457     AirlineClassList& lRAC_SQAirlineYClassList =
02458       FacBom<AirlineClassList>::instance().create (lSQAirlineYClassListKey);
02459     lRAC_SQAirlineYClassList.setYield(700);
02460     FacBomManager::addToListAndMap (lSINBKKYieldFeatures, lRAC_SQAirlineYClassLis
      t);
02461     FacBomManager::linkWithParent (lSINBKKYieldFeatures, lRAC_SQAirlineYClassList
      );
02462
02463     AirlineClassList& lRAC_SQAirlineMClassList =
02464       FacBom<AirlineClassList>::instance().create (lSQAirlineMClassListKey);
02465     lRAC_SQAirlineMClassList.setYield(500);
02466     FacBomManager::addToListAndMap (lSINBKKYieldFeatures, lRAC_SQAirlineMClassLis
      t);
02467     FacBomManager::linkWithParent (lSINBKKYieldFeatures, lRAC_SQAirlineMClassList
      );
```

```
02468
02469     /*====================================================================
      ========*/
02470
02471     // Use the same airport pair, and date period for adding CX BKK-HKG yields.
02472
02473     // Set the point-of-sale-channel primary key.
02474     // Use the same as previously.
02475
02476     // Create the PositionKey object and link it to the AirportPair object.
02477     PosChannel& lRAC_BKKHKGPosChannel =
02478       FacBom<PosChannel>::instance().create (lPosChannelKey);
02479     FacBomManager::addToListAndMap (lBKKHKGDatePeriod, lRAC_BKKHKGPosChannel);
02480     FacBomManager::linkWithParent (lBKKHKGDatePeriod, lRAC_BKKHKGPosChannel);
02481
02482     // Set the yield time-period primary key.
02483     // Use the same as previously.
02484
02485     // Create the TimePeriodKey and link it to the DatePeriod object.
02486     TimePeriod& lBKKHKGYieldTimePeriod =
02487       FacBom<TimePeriod>::instance().create (lYieldTimePeriodKey);
02488     FacBomManager::addToListAndMap (lRAC_BKKHKGPosChannel, lBKKHKGYieldTimePeriod
      );
02489     FacBomManager::linkWithParent (lRAC_BKKHKGPosChannel, lBKKHKGYieldTimePeriod)
      ;
02490
02491     // Generate the YieldRule
02492     // Use the same key as previously.
02493
02494     // Create the YieldFeaturesKey and link it to the TimePeriod object.
02495     YieldFeatures& lBKKHKGYieldFeatures =
02496       FacBom<YieldFeatures>::instance().create (lYieldFeaturesKey);
02497     FacBomManager::addToListAndMap (lBKKHKGYieldTimePeriod, lBKKHKGYieldFeatures)
      ;
02498     FacBomManager::linkWithParent (lBKKHKGYieldTimePeriod, lBKKHKGYieldFeatures);

02499
02500     // Generate Segment Features and link them to their YieldRule.
02501     // Use the same key as previously.
02502
02503     // Create the AirlineClassListKey and link it to the YieldFeatures object.
02504     AirlineClassList& lRAC_CXAirlineYClassList =
02505       FacBom<AirlineClassList>::instance().create (lCXAirlineYClassListKey);
02506     lRAC_CXAirlineYClassList.setYield(700);
02507     FacBomManager::addToListAndMap (lBKKHKGYieldFeatures, lRAC_CXAirlineYClassLis
      t);
02508     FacBomManager::linkWithParent (lBKKHKGYieldFeatures, lRAC_CXAirlineYClassList
      );
02509
02510     AirlineClassList& lRAC_CXAirlineMClassList =
02511       FacBom<AirlineClassList>::instance().create (lCXAirlineMClassListKey);
02512     lRAC_CXAirlineMClassList.setYield(500);
02513     FacBomManager::addToListAndMap (lBKKHKGYieldFeatures, lRAC_CXAirlineMClassLis
      t);
02514     FacBomManager::linkWithParent (lBKKHKGYieldFeatures, lRAC_CXAirlineMClassList
      );
02515
02516     /*====================================================================
      ========*/
02517
02518     // Use the same airport pair, and date period for SQ-CX SIN-HKG
02519
```

```
02520     // Set the point-of-sale-channel primary key.
02521     // Use the same as previously.
02522
02523     // Create the PositionKey object and link it to the AirportPair object.
02524     PosChannel& lRAC_SINHKGChannel =
02525       FacBom<PosChannel>::instance().create (lPosChannelKey);
02526     FacBomManager::addToListAndMap (lSINHKGDatePeriod, lRAC_SINHKGChannel);
02527     FacBomManager::linkWithParent (lSINHKGDatePeriod, lRAC_SINHKGChannel);
02528
02529     // Set the yield time-period primary key.
02530     // Use the same as previously.
02531
02532     // Create the TimePeriodKey and link it to the DatePeriod object.
02533     TimePeriod& lSINHKGYieldTimePeriod =
02534       FacBom<TimePeriod>::instance().create (lYieldTimePeriodKey);
02535     FacBomManager::addToListAndMap (lRAC_SINHKGChannel, lSINHKGYieldTimePeriod);
02536     FacBomManager::linkWithParent (lRAC_SINHKGChannel, lSINHKGYieldTimePeriod);

02537
02538     // Generate the YieldRule
02539     // Use the same key as previously.
02540
02541     // Create the YieldFeaturesKey and link it to the TimePeriod object.
02542     YieldFeatures& lSINHKGYieldFeatures =
02543       FacBom<YieldFeatures>::instance().create (lYieldFeaturesKey);
02544     FacBomManager::addToListAndMap (lSINHKGYieldTimePeriod, lSINHKGYieldFeatures)
      ;
02545     FacBomManager::linkWithParent (lSINHKGYieldTimePeriod, lSINHKGYieldFeatures);

02546
02547     // Generate Segment Features and link them to their YieldRule.
02548     // Use the same key as previously
02549
02550     // Create the AirlineClassListKey and link it to the YieldFeatures object.
02551     AirlineClassList& lRAC_SQ_CXAirlineYClassList =
02552       FacBom<AirlineClassList>::instance().create (lSQ_CXAirlineYClassListKey);
02553     lRAC_SQ_CXAirlineYClassList.setYield(1200);
02554     FacBomManager::addToListAndMap (lSINHKGYieldFeatures, lRAC_SQ_CXAirlineYClass
      List);
02555     FacBomManager::linkWithParent (lSINHKGYieldFeatures, lRAC_SQ_CXAirlineYClassL
      ist);
02556
02557     AirlineClassList& lRAC_SQ_CXAirlineMClassList =
02558       FacBom<AirlineClassList>::instance().create (lSQ_CXAirlineMClassListKey);
02559     lRAC_SQ_CXAirlineMClassList.setYield(850);
02560     FacBomManager::addToListAndMap (lSINHKGYieldFeatures, lRAC_SQ_CXAirlineMClass
      List);
02561     FacBomManager::linkWithParent (lSINHKGYieldFeatures, lRAC_SQ_CXAirlineMClassL
      ist);
02562
02563   }
02564
02565 }
02566
```

35.469 stdair/command/CmdBomManager.hpp File Reference

```
#include <iosfwd>

#include <stdair/stdair_inventory_types.hpp>
```

```
#include <stdair/basic/SampleType.hpp>
#include <stdair/bom/TravelSolutionTypes.hpp>
#include <stdair/command/CmdAbstract.hpp>
```

Classes

- class stdair::CmdBomManager

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.470 CmdBomManager.hpp

```
00001 #ifndef __STDAIR_CMD_CMDBOMMANAGER_HPP
00002 #define __STDAIR_CMD_CMDBOMMANAGER_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 // StdAir
00010 #include <stdair/stdair_inventory_types.hpp>
00011 #include <stdair/basic/SampleType.hpp>
00012 #include <stdair/bom/TravelSolutionTypes.hpp>
00013 #include <stdair/command/CmdAbstract.hpp>
00014
00015 namespace stdair {
00016
00018   class BomRoot;
00019   struct BookingRequestStruct;
00020
00025   class CmdBomManager : public CmdAbstract {
00026     //
00027     friend class STDAIR_Service;
00028   private:
00029
00030     // ////////////////// BOM initialisation support methods /////////////////
00043     static void buildSampleBom (BomRoot&);
00044
00056     static void buildSampleInventorySchedule (BomRoot&);
00057
00071     static void buildCompleteDummyInventory (BomRoot&);
00072
00090     static void buildDummyInventory (BomRoot&, const CabinCapacity_T&);
00091
00099     static void buildSamplePricing (BomRoot&);
00100
00115     static void buildSampleTravelSolutionForPricing (TravelSolutionList_T&);
00116
00134     static void buildSampleTravelSolutions (TravelSolutionList_T&);
00135
```

```
00152     static BookingRequestStruct buildSampleBookingRequest();
00153
00170     static BookingRequestStruct buildSampleBookingRequestForCRS();
00171
00182     static void buildPartnershipsSampleInventoryAndRM (BomRoot&);
00183
00191     static void buildPartnershipsSamplePricing (BomRoot&);
00192
00193   };
00194 }
00195 #endif // ___STDAIR_CMD_CMDBOMMANAGER_HPP
```

35.471 stdair/command/CmdBomSerialiser.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/list.hpp>
#include <boost/serialization/map.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightDate.hpp>
#include <stdair/bom/SegmentDate.hpp>
#include <stdair/bom/SegmentCabin.hpp>
#include <stdair/bom/FareFamily.hpp>
#include <stdair/bom/LegDate.hpp>
#include <stdair/bom/LegCabin.hpp>
#include <stdair/bom/Bucket.hpp>
#include <stdair/factory/FacBomManager.hpp>
#include <stdair/factory/FacBom.hpp>
#include <stdair/command/CmdBomSerialiser.hpp>
#include <stdair/service/Logger.hpp>
```

Namespaces

- namespace stdair

Handle on the StdAir library context.

Functions

- template<class Archive , class BOM_OBJECT1 , class BOM_OBJECT2 >
  void stdair::serialiseHelper (BOM_OBJECT1 &ioObject1, Archive &ioArchive, const unsigned int iFileVersion)
- template void stdair::BomRoot::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void stdair::BomRoot::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)
- template void stdair::Inventory::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void stdair::Inventory::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)
- template void stdair::FlightDate::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void stdair::FlightDate::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)
- template void stdair::SegmentDate::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void stdair::SegmentDate::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)
- template void stdair::SegmentCabin::serialize< ba::text_oarchive > (ba::text_oarchive &, unsigned int)
- template void stdair::SegmentCabin::serialize< ba::text_iarchive > (ba::text_iarchive &, unsigned int)

35.472 CmdBomSerialiser.cpp

```
00001 // //////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/list.hpp>
00011 #include <boost/serialization/map.hpp>
00012 #include <boost/serialization/access.hpp>
00013 // StdAir
00014 #include <stdair/basic/BasConst_General.hpp>
00015 #include <stdair/basic/BasConst_Inventory.hpp>
00016 #include <stdair/bom/BomRoot.hpp>
00017 #include <stdair/bom/Inventory.hpp>
00018 #include <stdair/bom/FlightDate.hpp>
00019 #include <stdair/bom/SegmentDate.hpp>
00020 #include <stdair/bom/SegmentCabin.hpp>
00021 #include <stdair/bom/FareFamily.hpp>
00022 #include <stdair/bom/LegDate.hpp>
```

```
00023 #include <stdair/bom/LegCabin.hpp>
00024 #include <stdair/bom/Bucket.hpp>
00025 #include <stdair/factory/FacBomManager.hpp>
00026 #include <stdair/factory/FacBom.hpp>
00027 #include <stdair/command/CmdBomSerialiser.hpp>
00028 #include <stdair/service/Logger.hpp>
00029
00030 namespace stdair {
00031
00032   // ////////////////////////////////////////////////////////////////////
00033   template <class Archive, class BOM_OBJECT1, class BOM_OBJECT2>
00034   void serialiseHelper (BOM_OBJECT1& ioObject1, Archive& ioArchive,
00035                         const unsigned int iFileVersion) {
00036
00050     BomHolder<BOM_OBJECT2>* lBomHolder_ptr =
00051       FacBomManager::getBomHolderPtr<BOM_OBJECT2> (ioObject1);
00052
00053     if (lBomHolder_ptr == NULL) {
00054       lBomHolder_ptr = &FacBomManager::addBomHolder<BOM_OBJECT2> (ioObject1);
00055     }
00056     assert (lBomHolder_ptr != NULL);
00057
00061     //ioArchive.register_type (static_cast<Inventory*> (NULL));
00062     ioArchive & lBomHolder_ptr->_bomList;
00063     ioArchive & lBomHolder_ptr->_bomMap;
00064
00071     typedef typename BomHolder<BOM_OBJECT2>::BomList_T BomList_T;
00072     const BomList_T& lBomList = lBomHolder_ptr->_bomList;
00073     for (typename BomList_T::const_iterator itObject = lBomList.begin();
00074          itObject != lBomList.end(); ++itObject) {
00075       BOM_OBJECT2* lObject2_ptr = *itObject;
00076       assert (lObject2_ptr != NULL);
00077
00078       if (lObject2_ptr->getParent() == NULL) {
00084         FacBomManager::linkWithParent (ioObject1, *lObject2_ptr);
00085       }
00086     }
00087
00096     typedef typename BomHolder<BOM_OBJECT2>::BomMap_T BomMap_T;
00097     const BomMap_T& lBomMap = lBomHolder_ptr->_bomMap;
00098     if (lBomList.empty() == true && lBomMap.empty() == false) {
00099
00100       for (typename BomMap_T::const_iterator itObject = lBomMap.begin();
00101            itObject != lBomMap.end(); ++itObject) {
00102         BOM_OBJECT2* lObject2_ptr = itObject->second;
00103         assert (lObject2_ptr != NULL);
00104
00105         if (lObject2_ptr->getParent() == NULL) {
00111           FacBomManager::linkWithParent (ioObject1, *lObject2_ptr);
00112         }
00113       }
00114     }
00115   }
00116
00117   // ////////////////////////////////////////////////////////////////////
00118   void BomRoot::serialisationImplementationExport() const {
00119     std::ostringstream oStr;
00120     boost::archive::text_oarchive oa (oStr);
00121     oa << *this;
00122   }
00123
00124   // ////////////////////////////////////////////////////////////////////
```

```
00125   void BomRoot::serialisationImplementationImport() {
00126     std::istringstream iStr;
00127     boost::archive::text_iarchive ia (iStr);
00128     ia >> *this;
00129   }
00130
00131   // ////////////////////////////////////////////////////////////////////
00132   template<class Archive>
00133   void BomRoot::serialize (Archive& ioArchive,
00134                            const unsigned int iFileVersion) {
00135     // Serialise the key (by default, equal to " -- ROOT -- ")
00136     ioArchive & _key;
00137
00138     // Serialise the children of the BomRoot object, i.e., the
00139     // Inventory children
00140     stdair::serialiseHelper<Archive, BomRoot, Inventory> (*this, ioArchive,
00141                                                           iFileVersion);
00142   }
00143
00144   // ////////////////////////////////////////////////////////////////////
00145   void Inventory::serialisationImplementationExport() const {
00146     std::ostringstream oStr;
00147     boost::archive::text_oarchive oa (oStr);
00148     oa << *this;
00149   }
00150
00151   // ////////////////////////////////////////////////////////////////////
00152   void Inventory::serialisationImplementationImport() {
00153     std::istringstream iStr;
00154     boost::archive::text_iarchive ia (iStr);
00155     ia >> *this;
00156   }
00157
00158   // ////////////////////////////////////////////////////////////////////
00159   template<class Archive>
00160   void Inventory::serialize (Archive& ioArchive,
00161                              const unsigned int iFileVersion) {
00162     // Serialise the key (airline code)
00163     ioArchive & _key;
00164
00165     // Serialise the children of the Inventory object, i.e., the
00166     // FlightDate children
00167     stdair::serialiseHelper<Archive, Inventory, FlightDate> (*this, ioArchive,
00168                                                              iFileVersion);
00169   }
00170
00171   // ////////////////////////////////////////////////////////////////////
00172   void FlightDate::serialisationImplementationExport() const {
00173     std::ostringstream oStr;
00174     boost::archive::text_oarchive oa (oStr);
00175     oa << *this;
00176   }
00177
00178   // ////////////////////////////////////////////////////////////////////
00179   void FlightDate::serialisationImplementationImport() {
00180     std::istringstream iStr;
00181     boost::archive::text_iarchive ia (iStr);
00182     ia >> *this;
00183   }
00184
00185   // ////////////////////////////////////////////////////////////////////
00186   template<class Archive>
```

```
00187   void FlightDate::serialize (Archive& ioArchive,
00188                               const unsigned int iFileVersion) {
00189     ioArchive & _key;
00190   }
00191
00192   // ////////////////////////////////////////////////////////////////////
00193   void SegmentDate::serialisationImplementationExport() const {
00194     std::ostringstream oStr;
00195     boost::archive::text_oarchive oa (oStr);
00196     oa << *this;
00197   }
00198
00199   // ////////////////////////////////////////////////////////////////////
00200   void SegmentDate::serialisationImplementationImport() {
00201     std::istringstream iStr;
00202     boost::archive::text_iarchive ia (iStr);
00203     ia >> *this;
00204   }
00205
00206   // ////////////////////////////////////////////////////////////////////
00207   template<class Archive>
00208   void SegmentDate::serialize (Archive& ioArchive,
00209                               const unsigned int iFileVersion) {
00210     ioArchive & _key;
00211   }
00212
00213   // ////////////////////////////////////////////////////////////////////
00214   void SegmentCabin::serialisationImplementationExport() const {
00215     std::ostringstream oStr;
00216     boost::archive::text_oarchive oa (oStr);
00217     oa << *this;
00218   }
00219
00220   // ////////////////////////////////////////////////////////////////////
00221   void SegmentCabin::serialisationImplementationImport() {
00222     std::istringstream iStr;
00223     boost::archive::text_iarchive ia (iStr);
00224     ia >> *this;
00225   }
00226
00227   // ////////////////////////////////////////////////////////////////////
00228   template<class Archive>
00229   void SegmentCabin::serialize (Archive& ioArchive,
00230                                 const unsigned int iFileVersion) {
00231     ioArchive & _key;
00232   }
00233
00234   // ////////////////////////////////////////////////////////////////////
00235   // Explicit template instantiations
00236   namespace ba = boost::archive;
00237   template void BomRoot::serialize<ba::text_oarchive> (ba::text_oarchive&,
00238                                                        unsigned int);
00239   template void BomRoot::serialize<ba::text_iarchive> (ba::text_iarchive&,
00240                                                        unsigned int);
00241   template void Inventory::serialize<ba::text_oarchive> (ba::text_oarchive&,
00242                                                          unsigned int);
00243   template void Inventory::serialize<ba::text_iarchive> (ba::text_iarchive&,
00244                                                          unsigned int);
00245   template void FlightDate::serialize<ba::text_oarchive> (ba::text_oarchive&,
00246                                                           unsigned int);
00247   template void FlightDate::serialize<ba::text_iarchive> (ba::text_iarchive&,
00248                                                           unsigned int);
```

```
00249   template void SegmentDate::serialize<ba::text_oarchive> (ba::text_oarchive&,
00250                                                             unsigned int);
00251   template void SegmentDate::serialize<ba::text_iarchive> (ba::text_iarchive&,
00252                                                             unsigned int);
00253   template void SegmentCabin::serialize<ba::text_oarchive> (ba::text_oarchive&,
00254                                                              unsigned int);
00255   template void SegmentCabin::serialize<ba::text_iarchive> (ba::text_iarchive&,
00256                                                              unsigned int);
00257   // //////////////////////////////////////////////////////////////////
00258
00259 }
```

35.473 stdair/command/CmdBomSerialiser.hpp File Reference

```
#include <iosfwd>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/TravelSolutionTypes.hpp>
#include <stdair/command/CmdAbstract.hpp>
```

Classes

- class stdair::CmdBomSerialiser

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.474 CmdBomSerialiser.hpp

```
00001 #ifndef __STDAIR_CMD_CMDBOMSERIALISER_HPP
00002 #define __STDAIR_CMD_CMDBOMSERIALISER_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 // StdAir
00010 #include <stdair/stdair_inventory_types.hpp>
00011 #include <stdair/bom/TravelSolutionTypes.hpp>
00012 #include <stdair/command/CmdAbstract.hpp>
00013
00014 namespace stdair {
00015
00017   class BomRoot;
00018   struct BookingRequestStruct;
00019
00020
00025   class CmdBomSerialiser : public CmdAbstract {
00026   public:
```

```
00027
00028     // ////////////////// BOM serialisation support methods /////////////////
00029     //
00030   };
00031 }
00032 #endif // ___STDAIR_CMD_CMDBOMSERIALISER_HPP
```

35.475 stdair/command/DBManagerForAirlines.cpp File Reference

```
#include <cassert>
#include <soci.h>
#include <mysql/soci-mysql.h>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/bom/AirlineStruct.hpp>
#include <stdair/dbadaptor/DbaAirline.hpp>
#include <stdair/command/DBManagerForAirlines.hpp>
#include <stdair/service/Logger.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.476 DBManagerForAirlines.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // SOCI
00007 #if defined(SOCI_HEADERS_BURIED)
00008 #include <soci/core/soci.h>
00009 #include <soci/backends/mysql/soci-mysql.h>
00010 #else // SOCI_HEADERS_BURIED
00011 #include <soci.h>
00012 #include <mysql/soci-mysql.h>
00013 #endif // SOCI_HEADERS_BURIED
00014 // StdAir
00015 #include <stdair/stdair_basic_types.hpp>
00016 #include <stdair/stdair_exceptions.hpp>
00017 #include <stdair/bom/AirlineStruct.hpp>
00018 #include <stdair/dbadaptor/DbaAirline.hpp>
00019 #include <stdair/command/DBManagerForAirlines.hpp>
00020 #include <stdair/service/Logger.hpp>
00021
00022 namespace stdair {
00023
```

```
00024   // ////////////////////////////////////////////////////////////////////
00025   void DBManagerForAirlines::
00026   prepareSelectStatement (DBSession_T& ioSociSession,
00027                           DBRequestStatement_T& ioSelectStatement,
00028                           AirlineStruct& ioAirline) {
00029
00030     try {
00031
00032       // Instanciate a SQL statement (no request is performed at that stage)
00038       ioSelectStatement = (ioSociSession.prepare
00039                            << "select iata_code, name "
00040                            << "from airlines ", soci::into (ioAirline));
00041
00042       // Execute the SQL query
00043       ioSelectStatement.execute();
00044
00045     } catch (std::exception const& lException) {
00046       throw SQLDatabaseException (lException.what());
00047     }
00048   }
00049
00050   // ////////////////////////////////////////////////////////////////////
00051   void DBManagerForAirlines::
00052   prepareSelectOnAirlineCodeStatement (DBSession_T& ioSociSession,
00053                                        DBRequestStatement_T& ioSelectStatement,
00054                                        const AirlineCode_T& iAirlineCode,
00055                                        AirlineStruct& ioAirline) {
00056
00057     try {
00058
00059       // Instanciate a SQL statement (no request is performed at that stage)
00066       ioSelectStatement = (ioSociSession.prepare
00067                            << "select iata_code, name "
00068                            << "from airlines "
00069                            << "where iata_code = :airline_code ",
00070                            soci::into (ioAirline), soci::use (iAirlineCode));
00071
00072       // Execute the SQL query
00073       ioSelectStatement.execute();
00074
00075     } catch (std::exception const& lException) {
00076       throw SQLDatabaseException (lException.what());
00077     }
00078   }
00079
00080   // ////////////////////////////////////////////////////////////////////
00081   bool DBManagerForAirlines::
00082   iterateOnStatement (DBRequestStatement_T& ioStatement,
00083                       AirlineStruct& ioAirline) {
00084     bool hasStillData = false;
00085
00086     try {
00087
00088       // Retrieve the next row of Airline object
00089       hasStillData = ioStatement.fetch();
00090
00091     } catch (std::exception const& lException) {
00092       throw SQLDatabaseException (lException.what());
00093     }
00094
00095     return hasStillData;
00096   }
```

```
00097
00098   // ////////////////////////////////////////////////////////////////////
00099   void DBManagerForAirlines::updateAirlineInDB (DBSession_T& ioSociSession,
00100                                                  const AirlineStruct& iAirline) {
00101     try {
00102       // Begin a transaction on the database
00103       ioSociSession.begin();
00104
00105       // Retrieve the airline code
00106       const std::string& lAirlineCode = iAirline.getAirlineCode();
00107
00108       // Retrieve the airline name
00109       const std::string& lAirlineName = iAirline.getAirlineName();
00110
00111       // Instanciate a SQL statement (no request is performed at that stage)
00112       DBRequestStatement_T lUpdateStatement =
00113         (ioSociSession.prepare
00114          << "update airlines "
00115          << "set name = :name "
00116          << "where iata_code = :iata_code",
00117          soci::use (lAirlineName), soci::use (lAirlineCode));
00118
00119       // Execute the SQL query
00120       lUpdateStatement.execute (true);
00121
00122       // Commit the transaction on the database
00123       ioSociSession.commit();
00124
00125       // Debug
00126       // STDAIR_LOG_DEBUG ("[" << lAirlineCode << "] " << iAirline);
00127
00128     } catch (std::exception const& lException) {
00129       throw SQLDatabaseException (lException.what());
00130     }
00131   }
00132
00133   // ////////////////////////////////////////////////////////////////////
00134   bool DBManagerForAirlines::retrieveAirline (DBSession_T& ioSociSession,
00135                                               const AirlineCode_T& iAirlineCode,
00136                                               AirlineStruct& ioAirline) {
00137     bool oHasRetrievedAirline = false;
00138
00139     try {
00140       // Prepare the SQL request corresponding to the select statement
00141       DBRequestStatement_T lSelectStatement (ioSociSession);
00142       prepareSelectOnAirlineCodeStatement (ioSociSession, lSelectStatement,
00143                                            iAirlineCode, ioAirline);
00144
00145       // const bool shouldDoReset = true;
00146       bool hasStillData = iterateOnStatement (lSelectStatement, ioAirline);
00147       if (hasStillData == true) {
00148         oHasRetrievedAirline = true;
00149       }
00150
00151       // Sanity check
00152       // const bool shouldNotDoReset = false;
00153       hasStillData = iterateOnStatement (lSelectStatement, ioAirline);
00154
00155       // Debug
00156       // STDAIR_LOG_DEBUG ("[" << iDocID << "] " << ioAirline);
00157
00158     } catch (std::exception const& lException) {
```

```
00159       throw SQLDatabaseException (lException.what());
00160     }
00161
00162     return oHasRetrievedAirline;
00163   }
00164
00165 }
```

35.477 stdair/command/DBManagerForAirlines.hpp File Reference

```
#include <stdair/stdair_db.hpp>
#include <stdair/command/CmdAbstract.hpp>
```

Classes

- class stdair::DBManagerForAirlines

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.478 DBManagerForAirlines.hpp

```
00001 #ifndef __DSIM_CMD_DBMANAGERFORAIRLINES_HPP
00002 #define __DSIM_CMD_DBMANAGERFORAIRLINES_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_db.hpp>
00009 #include <stdair/command/CmdAbstract.hpp>
00010
00011 namespace stdair {
00012
00013   // Forward declarations
00014   struct AirlineStruct;
00015
00018   class DBManagerForAirlines : public CmdAbstract {
00019   public:
00024     static void updateAirlineInDB (DBSession_T&, const AirlineStruct&);
00025
00032     static bool retrieveAirline (DBSession_T&, const AirlineCode_T&,
00033                                  AirlineStruct&);
00034
00035
00036   public:
00041     static void prepareSelectStatement (DBSession_T&, DBRequestStatement_T&,
00042                                         AirlineStruct&);
00043
00048     static bool iterateOnStatement (DBRequestStatement_T&, AirlineStruct&);
00049
```

```
00050
00051   private:
00057     static void prepareSelectOnAirlineCodeStatement (DBSession_T&,
00058                                                      DBRequestStatement_T&,
00059                                                      const AirlineCode_T&,
00060                                                      AirlineStruct&);
00061
00062
00063   private:
00064     // ////////////////// Constructors and Destructors //////////////
00067     DBManagerForAirlines () {}
00068     DBManagerForAirlines (const DBManagerForAirlines&) {}
00070     ~DBManagerForAirlines () {}
00071   };
00072
00073 }
00074 #endif // __DSIM_CMD_DBMANAGERFORAIRLINES_HPP
```

35.479 stdair/config/stdair-paths.hpp File Reference

Defines

- #define PACKAGE "stdair"
- #define PACKAGE_NAME "STDAIR"
- #define PACKAGE_VERSION "0.45.0"
- #define PREFIXDIR "/usr"
- #define EXEC_PREFIX "/usr"
- #define BINDIR "/usr/bin"
- #define LIBDIR "/usr/lib"
- #define LIBEXECDIR "/usr/libexec"
- #define SBINDIR "/usr/sbin"
- #define SYSCONFDIR "/usr/etc"
- #define INCLUDEDIR "/usr/include"
- #define DATAROOTDIR "/usr/share"
- #define DATADIR "/usr/share"
- #define DOCDIR "/usr/share/doc/stdair-0.45.0"
- #define MANDIR "/usr/share/man"
- #define INFODIR "/usr/share/info"
- #define HTMLDIR "/usr/share/doc/stdair-0.45.0/html"
- #define PDFDIR "/usr/share/doc/stdair-0.45.0/html"
- #define STDAIR_SAMPLE_DIR "/usr/share/stdair/samples"

35.479.1 Define Documentation

35.479.1.1 #define PACKAGE "stdair"

Definition at line 4 of file stdair-paths.hpp.

35.479.1.2 #define PACKAGE_NAME "STDAIR"

Definition at line 5 of file stdair-paths.hpp.

35.479.1.3 #define PACKAGE_VERSION "0.45.0"

Definition at line 6 of file stdair-paths.hpp.

35.479.1.4 #define PREFIXDIR "/usr"

Definition at line 7 of file stdair-paths.hpp.

35.479.1.5 #define EXEC_PREFIX "/usr"

Definition at line 8 of file stdair-paths.hpp.

35.479.1.6 #define BINDIR "/usr/bin"

Definition at line 9 of file stdair-paths.hpp.

35.479.1.7 #define LIBDIR "/usr/lib"

Definition at line 10 of file stdair-paths.hpp.

35.479.1.8 #define LIBEXECDIR "/usr/libexec"

Definition at line 11 of file stdair-paths.hpp.

35.479.1.9 #define SBINDIR "/usr/sbin"

Definition at line 12 of file stdair-paths.hpp.

35.479.1.10 #define SYSCONFDIR "/usr/etc"

Definition at line 13 of file stdair-paths.hpp.

35.479.1.11 #define INCLUDEDIR "/usr/include"

Definition at line 14 of file stdair-paths.hpp.

35.479.1.12 #define DATAROOTDIR "/usr/share"

Definition at line 15 of file stdair-paths.hpp.

35.479.1.13 #define DATADIR "/usr/share"

Definition at line 16 of file stdair-paths.hpp.

35.479.1.14 #define DOCDIR "/usr/share/doc/stdair-0.45.0"

Definition at line 17 of file stdair-paths.hpp.

35.479.1.15 #define MANDIR "/usr/share/man"

Definition at line 18 of file stdair-paths.hpp.

35.479.1.16 #define INFODIR "/usr/share/info"

Definition at line 19 of file stdair-paths.hpp.

35.479.1.17 #define HTMLDIR "/usr/share/doc/stdair-0.45.0/html"

Definition at line 20 of file stdair-paths.hpp.

35.479.1.18 #define PDFDIR "/usr/share/doc/stdair-0.45.0/html"

Definition at line 21 of file stdair-paths.hpp.

35.479.1.19 #define STDAIR_SAMPLE_DIR "/usr/share/stdair/samples"

Definition at line 22 of file stdair-paths.hpp.

35.480 stdair-paths.hpp

```
00001 #ifndef __STDAIR_PATHS_HPP__
00002 #define __STDAIR_PATHS_HPP__
00003
00004 #define PACKAGE "stdair"
00005 #define PACKAGE_NAME "STDAIR"
00006 #define PACKAGE_VERSION "0.45.0"
00007 #define PREFIXDIR "/usr"
00008 #define EXEC_PREFIX "/usr"
00009 #define BINDIR "/usr/bin"
00010 #define LIBDIR "/usr/lib"
00011 #define LIBEXECDIR "/usr/libexec"
00012 #define SBINDIR "/usr/sbin"
00013 #define SYSCONFDIR "/usr/etc"
00014 #define INCLUDEDIR "/usr/include"
00015 #define DATAROOTDIR "/usr/share"
00016 #define DATADIR "/usr/share"
00017 #define DOCDIR "/usr/share/doc/stdair-0.45.0"
00018 #define MANDIR "/usr/share/man"
00019 #define INFODIR "/usr/share/info"
00020 #define HTMLDIR "/usr/share/doc/stdair-0.45.0/html"
00021 #define PDFDIR "/usr/share/doc/stdair-0.45.0/html"
00022 #define STDAIR_SAMPLE_DIR "/usr/share/stdair/samples"
00023
00024 #endif // __STDAIR_PATHS_HPP__
```

35.481 stdair/dbadaptor/DbaAbstract.cpp File Reference

```
#include <stdair/dbadaptor/DbaAbstract.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.482 DbaAbstract.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // StdAir
00005 #include <stdair/dbadaptor/DbaAbstract.hpp>
00006
00007 namespace stdair {
00008
00009 }
```

35.483 stdair/dbadaptor/DbaAbstract.hpp File Reference

```
#include <iosfwd>
```

Classes

- class stdair::DbaAbstract

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Functions

- template<class charT , class traits >
  std::basic_ostream< charT, traits > & operator<< (std::basic_ostream< charT, traits > &ioOut, const stdair::DbaAbstract &iDba)
- template<class charT , class traits >
  std::basic_istream< charT, traits > & operator>> (std::basic_istream< charT, traits > &ioIn, stdair::DbaAbstract &ioDba)

35.483.1 Function Documentation

35.483.1.1 template<class charT , class traits > std::basic_ostream<charT, traits>& operator<< (std::basic_ostream< charT, traits > & *ioOut,* const stdair::DbaAbstract & *iDba*) [inline]

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (p653) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 41 of file DbaAbstract.hpp.

References stdair::DbaAbstract::toStream().

35.483.1.2 template<class charT , class traits > std::basic_istream<charT, traits>& operator>> (std::basic_istream< charT, traits > & *ioIn,* stdair::DbaAbstract & *ioDba*) [inline]

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (pp655-657) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 69 of file DbaAbstract.hpp.

References stdair::DbaAbstract::fromStream().

35.484 DbaAbstract.hpp

```
00001 #ifndef __STDAIR_DBA_DBAABSTRACT_HPP
00002 #define __STDAIR_DBA_DBAABSTRACT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009
00010 namespace stdair {
00011
00013   class DbaAbstract {
00014   public:
00015
00017     virtual ~DbaAbstract() {}
00018
00021     virtual void toStream (std::ostream& ioOut) const {}
00022
00025     virtual void fromStream (std::istream& ioIn) {}
00026
00027   protected:
00029     DbaAbstract() {}
00030   };
00031 }
00032
00038 template <class charT, class traits>
00039 inline
00040 std::basic_ostream<charT, traits>&
00041 operator<< (std::basic_ostream<charT, traits>& ioOut,
00042             const stdair::DbaAbstract& iDba) {
00048   std::basic_ostringstream<charT,traits> ostr;
00049   ostr.copyfmt (ioOut);
00050   ostr.width (0);
00051
00052   // Fill string stream
00053   iDba.toStream (ostr);
00054
00055   // Print string stream
00056   ioOut << ostr.str();
00057
00058   return ioOut;
00059 }
00060
00066 template <class charT, class traits>
00067 inline
```

```
00068 std::basic_istream<charT, traits>&
00069 operator>> (std::basic_istream<charT, traits>& ioIn,
00070             stdair::DbaAbstract& ioDba) {
00071   // Fill Dba object with input stream
00072   ioDba.fromStream (ioIn);
00073   return ioIn;
00074 }
00075
00076 #endif // __STDAIR_DBA_DBAABSTRACT_HPP
```

35.485 stdair/dbadaptor/DbaAirline.cpp File Reference

```
#include <exception>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/AirlineStruct.hpp>
#include <stdair/dbadaptor/DbaAirline.hpp>
#include <stdair/service/Logger.hpp>
```

Namespaces

- namespace soci
- namespace stdair

  Handle on the StdAir library context.

35.486 DbaAirline.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <exception>
00006 #include <string>
00007 // Stdair
00008 #include <stdair/stdair_inventory_types.hpp>
00009 #include <stdair/bom/AirlineStruct.hpp>
00010 #include <stdair/dbadaptor/DbaAirline.hpp>
00011 #include <stdair/service/Logger.hpp>
00012
00013 namespace soci {
00014
00015   // ////////////////////////////////////////////////////////////////////
00016   void type_conversion<stdair::AirlineStruct>::
00017   from_base (values const& iAirlineValues, indicator /* ind */,
00018              stdair::AirlineStruct& ioAirline) {
00019     /*
00020       iata_code, name
00021     */
00022     ioAirline.setAirlineCode (iAirlineValues.get<std::string> ("iata_code"));
00023     // The city code will be set to the default value (empty string)
00024     // when the column is null
```

```
00025     ioAirline.setAirlineName (iAirlineValues.get<std::string> ("name", ""));
00026   }
00027
00028   // ////////////////////////////////////////////////////////////////////
00029   void type_conversion<stdair::AirlineStruct>::
00030   to_base (const stdair::AirlineStruct& iAirline, values& ioAirlineValues,
00031            indicator& ioIndicator) {
00032     const indicator lNameIndicator =
00033       iAirline.getAirlineName().empty() ? i_null : i_ok;
00034     ioAirlineValues.set ("iata_code", iAirline.getAirlineCode());
00035     ioAirlineValues.set ("name", iAirline.getAirlineName(), lNameIndicator);
00036     ioIndicator = i_ok;
00037   }
00038
00039 }
00040
00041 namespace stdair {
00042
00043 }
```

35.487 stdair/dbadaptor/DbaAirline.hpp File Reference

```
#include <soci/soci.h>
```

Classes

- struct soci::type_conversion< stdair::AirlineStruct >

Namespaces

- namespace stdair

  Handle on the StdAir library context.
- namespace soci

35.488 DbaAirline.hpp

```
00001 #ifndef __STDAIR_DBA_DBAAIRLINE_HPP
00002 #define __STDAIR_DBA_DBAAIRLINE_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // SOCI
00008 #if defined(SOCI_HEADERS_BURIED)
00009 #include <soci/core/soci.h>
00010 #else // SOCI_HEADERS_BURIED
00011 #include <soci/soci.h>
00012 #endif // SOCI_HEADERS_BURIED
00013
00014 // Forward declarations
00015 namespace stdair {
00016   struct AirlineStruct;
00017 }
00018
```

```
00019 namespace soci {
00020
00024   template <>
00025   struct type_conversion<stdair::AirlineStruct> {
00026
00027     typedef values base_type;
00028
00030     static void from_base (values const& iAirlineValues,
00031                            indicator /* ind */,
00032                            stdair::AirlineStruct& ioAirline);
00033
00034
00036     static void to_base (const stdair::AirlineStruct& iAirline,
00037                          values& ioAirlineValues,
00038                          indicator& ioIndicator);
00039   };
00040 }
00041 #endif // __STDAIR_DBA_DBAAIRLINE_HPP
```

35.489 stdair/factory/FacAbstract.cpp File Reference

```
#include <cassert>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/factory/FacAbstract.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.490 FacAbstract.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // STDAIR
00007 #include <stdair/bom/BomAbstract.hpp>
00008 #include <stdair/factory/FacAbstract.hpp>
00009
00010 namespace stdair {
00011
00012   // ////////////////////////////////////////////////////////////////////
00013   FacAbstract::~FacAbstract() {
00014   }
00015
00016 }
```

35.491 stdair/factory/FacAbstract.hpp File Reference

Classes

- class stdair::FacAbstract

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.492 FacAbstract.hpp

```
00001 #ifndef __STDAIR_FAC_FACABSTRACT_HPP
00002 #define __STDAIR_FAC_FACABSTRACT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007
00008 namespace stdair {
00010   class FacAbstract {
00011   public:
00013     virtual ~FacAbstract();
00014
00015   protected:
00018     FacAbstract() {}
00019   };
00020 }
00021 #endif // __STDAIR_FAC_FACABSTRACT_HPP
```

35.493 stdair/factory/FacBom.hpp File Reference

```
#include <cassert>
#include <string>
#include <list>
#include <stdair/factory/FacAbstract.hpp>
#include <stdair/service/FacSupervisor.hpp>
#include <stdair/service/Logger.hpp>
```

Classes

- class stdair::FacBom< BOM >

  Base class for Factory layer.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.494 FacBom.hpp

```
00001 #ifndef __STDAIR_FAC_FACBOM_HPP
00002 #define __STDAIR_FAC_FACBOM_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <cassert>
00009 #include <string>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/factory/FacAbstract.hpp>
00013 #include <stdair/service/FacSupervisor.hpp>
00014 #include <stdair/service/Logger.hpp>
00015
00016 namespace stdair {
00017
00021   template <typename BOM>
00022   class FacBom : public FacAbstract {
00023
00025     typedef std::list<BOM*> BomPool_T;
00026     typedef typename BOM::Key_T Key_T;
00027
00028
00029   public:
00030     // ////////////// Business methods ////////////
00037     static FacBom& instance();
00038
00042     BOM& create ();
00043     BOM& create (const Key_T&);
00044
00045   protected:
00049     FacBom() {}
00050
00051   public:
00055     ~FacBom() {
00056       clean();
00057     }
00058
00062     void clean();
00063
00064
00065   private:
00066     // ////////////////////// Attributes //////////////////
00070     static FacBom* _instance;
00071
00075     BomPool_T _pool;
00076   };
00077
00078
00079   // ////////////////////////////////////////////////////////////////////
00080   template <typename BOM> FacBom<BOM>* FacBom<BOM>::_instance = NULL;
00081
00082   // ////////////////////////////////////////////////////////////////////
00083   template <typename BOM> FacBom<BOM>& FacBom<BOM>::instance () {
00084     if (_instance == NULL) {
00085       _instance = new FacBom ();
00086       assert (_instance != NULL);
00087
00088       FacSupervisor::instance().registerBomFactory (_instance);
```

```
00089     }
00090     return *_instance;
00091   }
00092
00093   // ////////////////////////////////////////////////////////////////////
00094   template <typename BOM> void FacBom<BOM>::clean () {
00095     // Destroy all the objects
00096     for (typename BomPool_T::iterator itBom = _pool.begin();
00097          itBom != _pool.end(); ++itBom) {
00098       BOM* currentBom_ptr = *itBom;
00099       assert (currentBom_ptr != NULL);
00100       delete currentBom_ptr; currentBom_ptr = NULL;
00101     }
00102
00103     // Empty the pool.
00104     _pool.clear();
00105
00106     // Reset the static instance.
00107     _instance = NULL;
00108   }
00109
00110   // ////////////////////////////////////////////////////////////////////
00111   template <typename BOM> BOM& FacBom<BOM>::create () {
00112     Key_T lKey;
00113     return instance().create (lKey);
00114   }
00115
00116   // ////////////////////////////////////////////////////////////////////
00117   template <typename BOM> BOM& FacBom<BOM>::create (const Key_T& iKey) {
00118     BOM* oBom_ptr = new BOM (iKey);
00119     assert (oBom_ptr != NULL);
00120     _pool.push_back (oBom_ptr);
00121     return *oBom_ptr;
00122   }
00123
00124 }
00125 #endif // __STDAIR_FAC_FACBOM_HPP
```

35.495 stdair/factory/FacBomManager.hpp File Reference

```
#include <iosfwd>
#include <list>
#include <map>
#include <boost/static_assert.hpp>
#include <boost/type_traits/is_same.hpp>
#include <stdair/bom/BomHolder.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/factory/FacAbstract.hpp>
#include <stdair/factory/FacBom.hpp>
#include <stdair/bom/SegmentDate.hpp>
```

Classes

- class stdair::FacBomManager

  Utility class for linking StdAir-based objects.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.496 FacBomManager.hpp

```
00001 #ifndef __STDAIR_FAC_FACBOMMANAGER_HPP
00002 #define __STDAIR_FAC_FACBOMMANAGER_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <list>
00010 #include <map>
00011 // Boost
00012 #include <boost/static_assert.hpp>
00013 #include <boost/type_traits/is_same.hpp>
00014 // StdAir
00015 #include <stdair/bom/BomHolder.hpp>
00016 #include <stdair/bom/BomManager.hpp>
00017 #include <stdair/factory/FacAbstract.hpp>
00018 #include <stdair/factory/FacBom.hpp>
00019 // Stdair BOM Objects
00020 #include <stdair/bom/SegmentDate.hpp>
00021
00022
00023 namespace stdair {
00024
00028   class FacBomManager : public FacAbstract {
00029   public:
00030     // ////////////// Business methods. ////////////
00039     template <typename OBJECT2, typename OBJECT1>
00040     static BomHolder<OBJECT2>* getBomHolderPtr (OBJECT1&);
00041
00051     template <typename OBJECT2, typename OBJECT1>
00052     static BomHolder<OBJECT2>& addBomHolder (OBJECT1&);
00053
00065     template <typename OBJECT1, typename OBJECT2>
00066     static void addToList (OBJECT1&, OBJECT2&);
00067
00080     template <typename OBJECT1, typename OBJECT2>
00081     static void addToMap (OBJECT1&, OBJECT2&, const MapKey_T&);
00082
00094     template <typename OBJECT1, typename OBJECT2>
00095     static void addToMap (OBJECT1&, OBJECT2&);
00096
00108     template <typename OBJECT1, typename OBJECT2>
00109     static void addToListAndMap (OBJECT1&, OBJECT2&);
00110
```

```
00123     template <typename OBJECT1, typename OBJECT2>
00124     static void addToListAndMap (OBJECT1&, OBJECT2&, const MapKey_T&);
00125
00132     template <typename PARENT, typename CHILD>
00133     static void linkWithParent (PARENT&, CHILD&);
00134
00145     template <typename OBJECT2, typename OBJECT1>
00146     static void cloneHolder (OBJECT1&, const OBJECT1&);
00147
00148
00149   private:
00162     template <typename OBJECT1, typename OBJECT2>
00163     static void addToList (BomHolder<OBJECT2>&, OBJECT1&, OBJECT2&);
00164
00178     template <typename OBJECT1, typename OBJECT2>
00179     static void addToMap (BomHolder<OBJECT2>&, OBJECT1&, OBJECT2&,
00180                           const MapKey_T&);
00181
00190     template <typename OBJECT2, typename OBJECT1>
00191     static BomHolder<OBJECT2>& getBomHolder (OBJECT1&);
00192
00193
00194   protected:
00200     FacBomManager() { }
00201
00202   public:
00206     ~FacBomManager() { }
00207   };
00208
00209   // ////////////////////////////////////////////////////////////////////
00210   // Public business method.
00211   // Compile time assertation to check OBJECT1 and OBJECT2 types.
00212   template <typename OBJECT2, typename OBJECT1>
00213   BomHolder<OBJECT2>& FacBomManager::addBomHolder (OBJECT1& ioObject1) {
00214
00215     //
00216     // Compile time assertation: this function must never be called with the
00217     // following list of couple types:
00218     // <SegmentDate, SegmentDate>
00219     //
00220     BOOST_STATIC_ASSERT ((boost::is_same<OBJECT1, SegmentDate>::value == false
00221                           || boost::is_same<OBJECT2, SegmentDate>::value == false
      ));
00222
00223     BomHolder<OBJECT2>* lBomHolder_ptr =
00224       &FacBom<BomHolder<OBJECT2> >::instance().create();
00225
00226     const bool hasInsertBeenSuccessful =
00227       ioObject1._holderMap.insert (typename HolderMap_T::
00228                                    value_type (&typeid (OBJECT2),
00229                                                lBomHolder_ptr)).second;
00230     assert (hasInsertBeenSuccessful == true);
00231
00232     return *lBomHolder_ptr;
00233   }
00234
00235   // ////////////////////////////////////////////////////////////////////
00236   // Public business method.
00237   // Compile time assertation to check OBJECT1 and OBJECT2 types.
00238   template <typename OBJECT2, typename OBJECT1>
00239   BomHolder<OBJECT2>* FacBomManager::getBomHolderPtr (OBJECT1& ioObject1) {
00240
```

```
00241     //
00242     // Compile time assertation: this function must never be called with the
00243     // following list of couple types:
00244     // <SegmentDate, SegmentDate>
00245     //
00246     BOOST_STATIC_ASSERT ((boost::is_same<OBJECT1, SegmentDate>::value == false
00247                           || boost::is_same<OBJECT2, SegmentDate>::value == false
      ));
00248
00249     BomHolder<OBJECT2>* lBomHolder_ptr = NULL;
00250
00251     // Find the corresponding BomHolder within the object1, if existing.
00252     HolderMap_T::const_iterator itHolder =
00253       ioObject1._holderMap.find (&typeid (OBJECT2));
00254
00255     if (itHolder != ioObject1._holderMap.end()) {
00256       lBomHolder_ptr = static_cast<BomHolder<OBJECT2>*> (itHolder->second);
00257     }
00258
00259     return lBomHolder_ptr;
00260   }
00261
00262   // ////////////////////////////////////////////////////////////////////
00263   // Private method.
00264   template <typename OBJECT2, typename OBJECT1>
00265   BomHolder<OBJECT2>& FacBomManager::getBomHolder (OBJECT1& ioObject1) {
00266
00267     BomHolder<OBJECT2>* lBomHolder_ptr = NULL;
00268
00269     // Find the corresponding BomHolder within the object1. If it does
00270     // not exist, then create one.
00271     HolderMap_T::const_iterator itHolder =
00272       ioObject1._holderMap.find (&typeid (OBJECT2));
00273
00274     if (itHolder == ioObject1._holderMap.end()) {
00275       lBomHolder_ptr = &addBomHolder<OBJECT2, OBJECT1> (ioObject1);
00276
00277     } else {
00278       lBomHolder_ptr = static_cast<BomHolder<OBJECT2>*> (itHolder->second);
00279     }
00280
00281     assert (lBomHolder_ptr != NULL);
00282
00283     return *lBomHolder_ptr;
00284   }
00285
00286   // ////////////////////////////////////////////////////////////////////
00287   // Private method.
00288   template <typename OBJECT1, typename OBJECT2>
00289   void FacBomManager::addToList (BomHolder<OBJECT2>& ioBomHolder,
00290                                  OBJECT1& ioObject1, OBJECT2& ioObject2) {
00291     ioBomHolder._bomList.push_back (&ioObject2);
00292   }
00293
00294   // ////////////////////////////////////////////////////////////////////
00295   // Public business method.
00296   // This method is specialized for the following couple types:
00297   // <SegmentDate, SegmentDate>
00298   template <typename OBJECT1, typename OBJECT2>
00299   void FacBomManager::addToList (OBJECT1& ioObject1, OBJECT2& ioObject2) {
00300
00301     BomHolder<OBJECT2>& lBomHolder = getBomHolder<OBJECT2> (ioObject1);
```

```
00302
00303     addToList<OBJECT1, OBJECT2> (lBomHolder, ioObject1, ioObject2);
00304   }
00305
00306   // ////////////////////////////////////////////////////////////////////
00307   // Private method.
00308   template <typename OBJECT1, typename OBJECT2>
00309   void FacBomManager::addToMap (BomHolder<OBJECT2>& ioBomHolder,
00310                                 OBJECT1& ioObject1, OBJECT2& ioObject2,
00311                                 const MapKey_T& iKey) {
00312
00313     const bool insertionSucceeded =
00314       ioBomHolder._bomMap.insert (typename std::map<const MapKey_T, OBJECT2*>::
00315                                   value_type (iKey, &ioObject2)).second;
00316
00317     if (insertionSucceeded == false) {
00318       // Build a nice message, so that the error be fully explicit
00319       std::ostringstream oStr;
00320       oStr << "The given object ('" << iKey
00321            << "') can not be added to the map of '" << ioObject1.describeKey()
00322            << "' object. That map already contains: '";
00323
00324       unsigned int idx = 0;
00325       for (typename std::map<const MapKey_T, OBJECT2*>::const_iterator iter =
00326              ioBomHolder._bomMap.begin();
00327            iter != ioBomHolder._bomMap.end(); ++iter, ++idx) {
00328         const OBJECT2* lCurrentObject_ptr = iter->second;
00329         assert (lCurrentObject_ptr != NULL);
00330
00331         if (idx != 0) {
00332           oStr << "; ";
00333         }
00334         oStr << lCurrentObject_ptr->describeKey();
00335       }
00336       oStr << "'";
00337
00338       STDAIR_LOG_ERROR (oStr.str());
00339       throw ObjectLinkingException (oStr.str());
00340     }
00341   }
00342
00343   // ////////////////////////////////////////////////////////////////////
00344   // Public business method.
00345   // Compile time assertation to check OBJECT1 and OBJECT2 types.
00346   template <typename OBJECT1, typename OBJECT2> void FacBomManager::
00347   addToMap (OBJECT1& ioObject1, OBJECT2& ioObject2, const MapKey_T& iKey) {
00348
00349     //
00350     // Compile time assertation: this function must never be called with the
00351     // following list of couple types:
00352     // <SegmentDate, SegmentDate>
00353     //
00354     BOOST_STATIC_ASSERT ((boost::is_same<OBJECT1, SegmentDate>::value == false
00355                           || boost::is_same<OBJECT2, SegmentDate>::value == false
      ));
00356
00357     BomHolder<OBJECT2>& lBomHolder = getBomHolder<OBJECT2> (ioObject1);
00358
00359     addToMap<OBJECT1, OBJECT2> (lBomHolder, ioObject1, ioObject2, iKey);
00360   }
00361
00362   // Public business method.
```

```
00363   // Compile time assertation to check OBJECT1 and OBJECT2 types.
00364   // ////////////////////////////////////////////////////////////////
00365   template <typename OBJECT1, typename OBJECT2>
00366   void FacBomManager::addToMap (OBJECT1& ioObject1, OBJECT2& ioObject2) {
00367
00368     //
00369     // Compile time assertation: this function must never be called with the
00370     // following list of couple types:
00371     // <SegmentDate, SegmentDate>
00372     //
00373     BOOST_STATIC_ASSERT ((boost::is_same<OBJECT1, SegmentDate>::value == false
00374                           || boost::is_same<OBJECT2, SegmentDate>::value == false
      ));
00375
00376     const MapKey_T& lKey = ioObject2.describeKey();
00377     addToMap (ioObject1, ioObject2, lKey);
00378   }
00379
00380   // ////////////////////////////////////////////////////////////////
00381   // Public business method.
00382   // Compile time assertation to check OBJECT1 and OBJECT2 types.
00383   template <typename OBJECT1, typename OBJECT2>
00384   void FacBomManager::addToListAndMap (OBJECT1& ioObject1, OBJECT2& ioObject2,
00385                                        const MapKey_T& iKey) {
00386     //
00387     // Compile time assertation: this function must never be called with the
00388     // following list of couple types:
00389     // <SegmentDate, SegmentDate>
00390     //
00391     BOOST_STATIC_ASSERT ((boost::is_same<OBJECT1, SegmentDate>::value == false
00392                           || boost::is_same<OBJECT2, SegmentDate>::value == false
      ));
00393
00394     BomHolder<OBJECT2>& lBomHolder = getBomHolder<OBJECT2> (ioObject1);
00395
00396     addToList<OBJECT1, OBJECT2> (lBomHolder, ioObject1, ioObject2);
00397     addToMap<OBJECT1, OBJECT2> (lBomHolder, ioObject1, ioObject2, iKey);
00398   }
00399
00400   // ////////////////////////////////////////////////////////////////
00401   // Public business method.
00402   // Compile time assertation to check OBJECT1 and OBJECT2 types.
00403   template <typename OBJECT1, typename OBJECT2> void FacBomManager::
00404   addToListAndMap (OBJECT1& ioObject1, OBJECT2& ioObject2) {
00405
00406     //
00407     // Compile time assertation: this function must never be called with the
00408     // following list of couple types:
00409     // <SegmentDate, SegmentDate>
00410     //
00411     BOOST_STATIC_ASSERT ((boost::is_same<OBJECT1, SegmentDate>::value == false
00412                           || boost::is_same<OBJECT2, SegmentDate>::value == false
      ));
00413
00414     const MapKey_T& lKey = ioObject2.describeKey();
00415     addToListAndMap<OBJECT1, OBJECT2> (ioObject1, ioObject2, lKey);
00416   }
00417
00418   // Public business method valid for all PARENT and CHILD types.
00419   // (No compile time assertation to check PARENT and CHILD types.)
00420   // ////////////////////////////////////////////////////////////////
00421   template <typename PARENT, typename CHILD> void FacBomManager::
```

```
00422   linkWithParent (PARENT& ioParent,  CHILD& ioChild) {
00423     ioChild._parent = &ioParent;
00424   }
00425
00426   // ////////////////////////////////////////////////////////////////////
00427   // Public business method valid for all PARENT and CHILD types.
00428   // (No compile time assertation to check PARENT and CHILD types.)
00429   template <typename OBJECT2, typename OBJECT1> void FacBomManager::
00430   cloneHolder (OBJECT1& ioDest, const OBJECT1& iOri) {
00431
00432     const BomHolder<OBJECT2>& lOriginHolder =
00433       BomManager::getBomHolder<OBJECT2> (iOri);
00434
00435     BomHolder<OBJECT2>& lDestHolder = getBomHolder<OBJECT2> (ioDest);
00436     lDestHolder._bomList = lOriginHolder._bomList;
00437     lDestHolder._bomMap = lOriginHolder._bomMap;
00438   }
00439
00440   // ////////////////////////////////////////////////////////////////////
00441   //
00442   // Specialization of the template method addToList above for the types
00443   // <SegmentDate, SegmentDate>.
00444   // Add an element to the marketing segment date list of a segment date.
00445   //
00446   // ////////////////////////////////////////////////////////////////////
00447
00448   template<>
00449   inline void FacBomManager::addToList <SegmentDate,SegmentDate>
00450   (SegmentDate& ioSegmentDate,
00451    SegmentDate& ioMarketingSegmentDate) {
00452
00453     ioSegmentDate._marketingSegmentDateList.push_back(&ioMarketingSegmentDate);
00454   }
00455
00456   // ////////////////////////////////////////////////////////////////////
00457   //
00458   // TODO:
00459   // This specialization is needed for all the objects in the current
00460   // BOM tree.
00461   // (An inventory is the parent of flight dates, a flight date is the
00462   // parent of segment dates and leg dates, ...)
00463   //
00464   // ////////////////////////////////////////////////////////////////////
00465
00466
00467 }
00468
00469 // ////////////////////////////////////////////////////////////////////
00470
00471 #endif // __STDAIR_FAC_FACBOMMANAGER_HPP
```

35.497 stdair/service/DBSessionManager.cpp File Reference

```
#include <cassert>
#include <string>
#include <sstream>
#include <soci.h>
```

```
#include <mysql/soci-mysql.h>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/BasDBParams.hpp>
#include <stdair/service/DBSessionManager.hpp>
#include <stdair/service/Logger.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.498 DBSessionManager.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <string>
00007 #include <sstream>
00008 // SOCI
00009 #if defined(SOCI_HEADERS_BURIED)
00010 #include <soci/core/soci.h>
00011 #include <soci/backends/mysql/soci-mysql.h>
00012 #else // SOCI_HEADERS_BURIED
00013 #include <soci.h>
00014 #include <mysql/soci-mysql.h>
00015 #endif // SOCI_HEADERS_BURIED
00016 // StdAir
00017 #include <stdair/stdair_exceptions.hpp>
00018 #include <stdair/basic/BasDBParams.hpp>
00019 #include <stdair/service/DBSessionManager.hpp>
00020 #include <stdair/service/Logger.hpp>
00021
00022 namespace stdair {
00023
00024   // ////////////////////////////////////////////////////////////////////
00025   DBSessionManager::DBSessionManager () : _dbSession (NULL) {
00026   }
00027
00028   // ////////////////////////////////////////////////////////////////////
00029   DBSessionManager::DBSessionManager (const DBSessionManager&)
00030     : _dbSession (NULL) {
00031     assert (false);
00032   }
00033
00034   // ////////////////////////////////////////////////////////////////////
00035   DBSessionManager::~DBSessionManager () {
00036     // std::cout << "In DBSessionManager destructor" << std::endl;
00037     dbFinalise();
00038   }
00039
00040   // ////////////////////////////////////////////////////////////////////
00041   void DBSessionManager::dbInit (const BasDBParams& iDBParams) {
00042
```

```
00043     // Database parameters
00044     std::ostringstream oStr;
00045     oStr << "db=" << iDBParams.getDBName() << " user=" << iDBParams.getUser()
00046          << " password=" << iDBParams.getPassword()
00047          << " port=" << iDBParams.getPort() << " host=" << iDBParams.getHost();
00048     const std::string lDBSessionConnectionString (oStr.str());
00049
00050     // Instanciate the database session: nothing else is performed at that stage
00051     _dbSession = new DBSession_T;
00052
00053     try {
00054       // Open the connection to the database
00055       _dbSession->open (soci::mysql, lDBSessionConnectionString);
00056
00057     } catch (std::exception const& lException) {
00058       std::ostringstream oMessage;
00059       oMessage <<"Error while opening a connection to database: "
00060                << lException.what() << std::endl
00061                << "Database parameters used:"
00062                << " db=" << iDBParams.getDBName()
00063                << " user=" << iDBParams.getUser()
00064                << " port=" << iDBParams.getPort()
00065                << " host=" << iDBParams.getHost();
00066       throw SQLDatabaseConnectionImpossibleException (oMessage.str());
00067     }
00068   }
00069
00070   // //////////////////////////////////////////////////////////////////
00071   void DBSessionManager::dbFinalise () {
00072     delete _dbSession; _dbSession = NULL;
00073   }
00074
00075   // //////////////////////////////////////////////////////////////////
00076   void DBSessionManager::init (const BasDBParams& iDBParams) {
00077     DBSessionManager& lInstance = instance();
00078     lInstance.dbInit (iDBParams);
00079   }
00080
00081   // //////////////////////////////////////////////////////////////////
00082   DBSessionManager& DBSessionManager::instance() {
00083     static DBSessionManager _instance;
00084     return _instance;
00085   }
00086
00087   // //////////////////////////////////////////////////////////////////
00088   void DBSessionManager::clean() {
00089   }
00090
00091   // //////////////////////////////////////////////////////////////////
00092   DBSession_T& DBSessionManager::getDBSession() const {
00093     if (_dbSession == NULL) {
00094       throw NonInitialisedDBSessionManagerException ("");
00095     }
00096     assert (_dbSession != NULL);
00097     return *_dbSession;
00098   }
00099
00100 }
```

35.499 stdair/service/DBSessionManager.hpp File Reference

```
#include <stdair/stdair_db.hpp>
```

Classes

- class stdair::DBSessionManager

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.500 DBSessionManager.hpp

```
00001 #ifndef __STDAIR_SVC_DBSESSIONMANAGER_HPP
00002 #define __STDAIR_SVC_DBSESSIONMANAGER_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_db.hpp>
00009
00010 namespace stdair {
00011
00012   // Forward declarations
00013   struct BasDBParams;
00014
00017   class DBSessionManager {
00018     // Friend classes
00019     friend class FacSupervisor;
00020     friend class STDAIR_Service;
00021
00022   public:
00024     static DBSessionManager& instance();
00025
00028     DBSession_T& getDBSession() const;
00029
00030
00031   private:
00034     DBSessionManager ();
00036     DBSessionManager (const DBSessionManager&);
00038     ~DBSessionManager ();
00039
00042     void dbInit (const BasDBParams&);
00043
00046     void dbFinalise ();
00047
00048
00049   private:
00052     static void init (const BasDBParams&);
00053
00055     static void clean();
00056
00057
```

```
00058   private:
00060     DBSession_T* _dbSession;
00061   };
00062
00063 }
00064 #endif // __STDAIR_SVC_DBSESSIONMANAGER_HPP
```

35.501 stdair/service/FacServiceAbstract.cpp File Reference

```
#include <cassert>
#include <stdair/service/ServiceAbstract.hpp>
#include <stdair/service/FacServiceAbstract.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.502 FacServiceAbstract.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/service/ServiceAbstract.hpp>
00008 #include <stdair/service/FacServiceAbstract.hpp>
00009
00010 namespace stdair {
00011
00012   // ////////////////////////////////////////////////////////////////////
00013   FacServiceAbstract::~FacServiceAbstract() {
00014     clean();
00015   }
00016
00017   // ////////////////////////////////////////////////////////////////////
00018   void FacServiceAbstract::clean() {
00019     for (ServicePool_T::iterator itService = _pool.begin();
00020          itService != _pool.end(); itService++) {
00021       ServiceAbstract* currentService_ptr = *itService;
00022       assert (currentService_ptr != NULL);
00023
00024       delete (currentService_ptr); currentService_ptr = NULL;
00025     }
00026
00027     // Empty the pool of Service Factories
00028     _pool.clear();
00029   }
00030
00031 }
```

35.503 stdair/service/FacServiceAbstract.hpp File Reference

```
#include <vector>
```

Classes

- class stdair::FacServiceAbstract

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.504 FacServiceAbstract.hpp

```
00001 #ifndef __STDAIR_SVC_FACSERVICEABSTRACT_HPP
00002 #define __STDAIR_SVC_FACSERVICEABSTRACT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <vector>
00009
00010 namespace stdair {
00011
00012   // Forward declarations
00013   class ServiceAbstract;
00014
00016   class FacServiceAbstract {
00017   public:
00018
00020     typedef std::vector<ServiceAbstract*> ServicePool_T;
00021
00023     virtual ~FacServiceAbstract();
00024
00026     void clean();
00027
00028   protected:
00031     FacServiceAbstract() {}
00032
00034     ServicePool_T _pool;
00035   };
00036
00037 }
00038 #endif // __STDAIR_SVC_FACSERVICEABSTRACT_HPP
```

35.505 stdair/service/FacSTDAIRServiceContext.cpp File Reference

```
#include <cassert>
#include <stdair/service/FacSupervisor.hpp>
#include <stdair/service/FacSTDAIRServiceContext.hpp>
```

`#include <stdair/service/STDAIR_ServiceContext.hpp>`

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.506 FacSTDAIRServiceContext.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/service/FacSupervisor.hpp>
00008 #include <stdair/service/FacSTDAIRServiceContext.hpp>
00009 #include <stdair/service/STDAIR_ServiceContext.hpp>
00010
00011 namespace stdair {
00012
00013   FacSTDAIRServiceContext* FacSTDAIRServiceContext::_instance = NULL;
00014
00015   // ////////////////////////////////////////////////////////////////////
00016   FacSTDAIRServiceContext::~FacSTDAIRServiceContext() {
00017     _instance = NULL;
00018   }
00019
00020   // ////////////////////////////////////////////////////////////////////
00021   FacSTDAIRServiceContext& FacSTDAIRServiceContext::instance() {
00022
00023     if (_instance == NULL) {
00024       _instance = new FacSTDAIRServiceContext();
00025       assert (_instance != NULL);
00026
00027       FacSupervisor::instance().registerServiceFactory (_instance);
00028     }
00029     return *_instance;
00030   }
00031
00032   // ////////////////////////////////////////////////////////////////////
00033   STDAIR_ServiceContext& FacSTDAIRServiceContext::create() {
00034     STDAIR_ServiceContext* aServiceContext_ptr = NULL;
00035
00036     aServiceContext_ptr = new STDAIR_ServiceContext ();
00037     assert (aServiceContext_ptr != NULL);
00038
00039     // The new object is added to the Bom pool
00040     _pool.push_back (aServiceContext_ptr);
00041
00042     return *aServiceContext_ptr;
00043   }
00044
00045 }
```

35.507 stdair/service/FacSTDAIRServiceContext.hpp File Reference

```
#include <stdair/service/FacServiceAbstract.hpp>
```

Classes

- class stdair::FacSTDAIRServiceContext

  Factory for Bucket.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.508 FacSTDAIRServiceContext.hpp

```
00001 #ifndef __STDAIR_SVC_FACSTDAIRSERVICECONTEXT_HPP
00002 #define __STDAIR_SVC_FACSTDAIRSERVICECONTEXT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/service/FacServiceAbstract.hpp>
00009
00010 namespace stdair {
00011
00013   class STDAIR_ServiceContext;
00014
00018   class FacSTDAIRServiceContext : public FacServiceAbstract {
00019   public:
00020
00028     static FacSTDAIRServiceContext& instance();
00029
00036     ~FacSTDAIRServiceContext();
00037
00045     STDAIR_ServiceContext& create();
00046
00047
00048   protected:
00054     FacSTDAIRServiceContext() {}
00055
00056   private:
00060     static FacSTDAIRServiceContext* _instance;
00061   };
00062
00063 }
00064 #endif // __STDAIR_SVC_FACSTDAIRSERVICECONTEXT_HPP
```

35.509 stdair/service/FacSupervisor.cpp File Reference

```
#include <cassert>
```

```
#include <stdair/factory/FacAbstract.hpp>
#include <stdair/service/FacServiceAbstract.hpp>
#include <stdair/service/FacSupervisor.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/service/DBSessionManager.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.510 FacSupervisor.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/factory/FacAbstract.hpp>
00008 #include <stdair/service/FacServiceAbstract.hpp>
00009 #include <stdair/service/FacSupervisor.hpp>
00010 #include <stdair/service/Logger.hpp>
00011 #include <stdair/service/DBSessionManager.hpp>
00012
00013 namespace stdair {
00014
00015   FacSupervisor* FacSupervisor::_instance = NULL;
00016
00017   // ////////////////////////////////////////////////////////////////////
00018   FacSupervisor& FacSupervisor::instance() {
00019     if (_instance == NULL) {
00020       _instance = new FacSupervisor();
00021     }
00022
00023     return *_instance;
00024   }
00025
00026   // ////////////////////////////////////////////////////////////////////
00027   FacSupervisor::~FacSupervisor() {
00028     cleanBomLayer();
00029     cleanServiceLayer();
00030   }
00031
00032   // ////////////////////////////////////////////////////////////////////
00033   void FacSupervisor::registerBomFactory (FacAbstract* ioFac_ptr) {
00034     _bomPool.push_back (ioFac_ptr);
00035   }
00036
00037   // ////////////////////////////////////////////////////////////////////
00038   void FacSupervisor::registerServiceFactory (FacServiceAbstract* ioFac_ptr) {
00039     _svcPool.push_back (ioFac_ptr);
00040   }
00041
00042   // ////////////////////////////////////////////////////////////////////
```

```
00043   void FacSupervisor::cleanBomLayer() {
00044     for (BomFactoryPool_T::const_iterator itFactory = _bomPool.begin();
00045          itFactory != _bomPool.end(); itFactory++) {
00046       const FacAbstract* currentFactory_ptr = *itFactory;
00047       assert (currentFactory_ptr != NULL);
00048 
00049       delete (currentFactory_ptr); currentFactory_ptr = NULL;
00050     }
00051 
00052     // Empty the pool of BOM factories
00053     _bomPool.clear();
00054   }
00055 
00056   // ////////////////////////////////////////////////////////////////////
00057   void FacSupervisor::cleanServiceLayer() {
00058     for (ServiceFactoryPool_T::const_iterator itFactory = _svcPool.begin();
00059          itFactory != _svcPool.end(); itFactory++) {
00060       const FacServiceAbstract* currentFactory_ptr = *itFactory;
00061       assert (currentFactory_ptr != NULL);
00062 
00063       delete (currentFactory_ptr); currentFactory_ptr = NULL;
00064     }
00065 
00066     // Empty the pool of Service Factories
00067     _svcPool.clear();
00068   }
00069 
00070   // ////////////////////////////////////////////////////////////////////
00071   void FacSupervisor::cleanLoggerService() {
00072     // Clean the static instance of the log service
00073     Logger::clean();
00074   }
00075 
00076   // ////////////////////////////////////////////////////////////////////
00077   void FacSupervisor::cleanDBSessionManager() {
00078     // Clean the static instance of the database service
00079     DBSessionManager::clean();
00080   }
00081 
00082   // ////////////////////////////////////////////////////////////////////
00083   void FacSupervisor::cleanAll() {
00084 
00085     // Clean the static instance of the database session manager
00086     cleanDBSessionManager();
00087 
00088     // Clean the static instance of the log service
00089     cleanLoggerService();
00090 
00091     // Clean the static instance of the FacSupervisor.
00092     // This in turn will invoke the destructor (~FacSupervisor() method)
00093     // of the static instance, thus cleaning both the BOM and service layers.
00094     delete _instance; _instance = NULL;
00095   }
00096 
00097 }
```

35.511 stdair/service/FacSupervisor.hpp File Reference

```
#include <iosfwd>
```

```
#include <list>
```

Classes

- class stdair::FacSupervisor

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.512 FacSupervisor.hpp

```
00001 #ifndef __STDAIR_SVC_FACSUPERVISOR_HPP
00002 #define __STDAIR_SVC_FACSUPERVISOR_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <list>
00010
00011 namespace stdair {
00012
00014   class FacAbstract;
00015   class FacServiceAbstract;
00016
00020   class FacSupervisor {
00021   public:
00025     typedef std::list<FacAbstract*> BomFactoryPool_T;
00026     typedef std::list<FacServiceAbstract*> ServiceFactoryPool_T;
00027
00034     static FacSupervisor& instance();
00035
00043     void registerBomFactory (FacAbstract*);
00044
00052     void registerServiceFactory (FacServiceAbstract*);
00053
00060     void cleanBomLayer();
00061
00068     void cleanServiceLayer();
00069
00073     static void cleanLoggerService();
00074
00078     static void cleanDBSessionManager();
00079
00085     static void cleanAll();
00086
00093     ~FacSupervisor();
00094
00095
00096   protected:
00102     FacSupervisor() {}
00103     FacSupervisor (const FacSupervisor&) {}
00104
```

```
00105   private:
00109     static FacSupervisor* _instance;
00110
00114     BomFactoryPool_T _bomPool;
00115
00119     ServiceFactoryPool_T _svcPool;
00120   };
00121 }
00122 #endif // __STDAIR_SVC_FACSUPERVISOR_HPP
```

35.513 stdair/service/Logger.cpp File Reference

```
#include <iostream>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/service/Logger.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.514 Logger.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <iostream>
00006 // StdAir Logger
00007 #include <stdair/stdair_exceptions.hpp>
00008 #include <stdair/service/Logger.hpp>
00009
00010 namespace stdair {
00011
00012   // ////////////////////////////////////////////////////////////////////
00013   Logger::Logger()
00014     : _level (LOG::DEBUG), _logStream (&std::cout),
00015       _hasBeenInitialised (false) {
00016   }
00017
00018   // ////////////////////////////////////////////////////////////////////
00019   Logger::Logger (const Logger&)
00020     : _level (LOG::DEBUG), _logStream (&std::cout),
00021       _hasBeenInitialised (false) {
00022     assert (false);
00023   }
00024
00025   // ////////////////////////////////////////////////////////////////////
00026   Logger::~Logger() {
00027     // std::cout << "In Logger destructor" << std::endl;
00028   }
00029
00030   // ////////////////////////////////////////////////////////////////////
00031   void Logger::init (const BasLogParams& iLogParams) {
```

```
00032
00033     //
00034     Logger& lInstance = instance();
00035     const bool hasBeenInitialised = lInstance.getStatus();
00036     if (hasBeenInitialised == true
00037         && iLogParams.getForcedInitialisationFlag() == false) {
00038       STDAIR_LOG_ERROR ("Error: the log stream has already been initialised");
00039       assert (false);
00040     }
00041
00042     lInstance.setLevel (iLogParams._logLevel);
00043     lInstance.setStream (iLogParams._logStream);
00044     lInstance.setStatus (true);
00045   }
00046
00047   // ////////////////////////////////////////////////////////////////////
00048   Logger& Logger::instance() {
00049     static Logger _instance;
00050     return _instance;
00051   }
00052
00053   // ////////////////////////////////////////////////////////////////////
00054   BasLogParams Logger::getLogParams() {
00055     std::ostream* oStream_ptr = instance()._logStream;
00056     assert (oStream_ptr != NULL);
00057     return BasLogParams (instance()._level, *oStream_ptr);
00058   }
00059
00060   // ////////////////////////////////////////////////////////////////////
00061   void Logger::clean() {
00062     Logger& lInstance = instance();
00063     lInstance.setStatus (false);
00064   }
00065
00066 }
```

35.515 stdair/service/Logger.hpp File Reference

```
#include <cassert>
#include <sstream>
#include <string>
#include <stdair/stdair_log.hpp>
#include <stdair/basic/BasLogParams.hpp>
```

Classes

- class stdair::Logger

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Defines

- #define STDAIR_LOG_CORE(iLevel, iToBeLogged)
- #define STDAIR_LOG_CRITICAL(iToBeLogged) STDAIR_LOG_CORE (stdair::LOG::CRITICAL, iToBeLogged)
- #define STDAIR_LOG_ERROR(iToBeLogged) STDAIR_LOG_CORE (stdair::LOG::ERROR, iToBeLogged)
- #define STDAIR_LOG_NOTIFICATION(iToBeLogged) STDAIR_LOG_CORE (stdair::LOG::NOTIFICATION, iToBeLogged)
- #define STDAIR_LOG_WARNING(iToBeLogged) STDAIR_LOG_CORE (stdair::LOG::WARNING, iToBeLogged)
- #define STDAIR_LOG_DEBUG(iToBeLogged) STDAIR_LOG_CORE (stdair::LOG::DEBUG, iToBeLogged)
- #define STDAIR_LOG_VERBOSE(iToBeLogged) STDAIR_LOG_CORE (stdair::LOG::VERBOSE, iToBeLogged)

35.515.1 Define Documentation

35.515.1.1 #define STDAIR_LOG_CORE(*iLevel, iToBeLogged*)

Value:

```
{ std::ostringstream ostr; ostr << iToBeLogged; \
    stdair::Logger::instance().log (iLevel, __LINE__, __FILE__, ostr.str()); }
```

Definition at line 16 of file Logger.hpp.

35.515.1.2 #define STDAIR_LOG_CRITICAL(*iToBeLogged*) STDAIR_LOG_CORE (stdair::LOG::CRITICAL, iToBeLogged)

Definition at line 20 of file Logger.hpp.

35.515.1.3 #define STDAIR_LOG_ERROR(*iToBeLogged*) STDAIR_LOG_CORE (stdair::LOG::ERROR, iToBeLogged)

Definition at line 23 of file Logger.hpp.

Referenced by stdair::EventQueue::calculateProgress(), stdair::EventQueue::getActualTotalNbOfEvents(), stdair::ParsedKey::getBoardingTime(), stdair::EventQueue::getCurrentNbOfEvents(), stdair::EventQueue::getExpected stdair::ParsedKey::getFlightDateKey(), stdair::ParsedKey::getInventoryKey(), stdair::BomManager::getObject(), stdair::ParsedKey::getSegmentKey(), and stdair::EventQueue::updateStatus().

35.515.1.4 #define STDAIR_LOG_NOTIFICATION(*iToBeLogged*) STDAIR_LOG_CORE (stdair::LOG::NOTIFICATION, iToBeLogged)

Definition at line 26 of file Logger.hpp.

35.515.1.5 #define STDAIR_LOG_WARNING(*iToBeLogged*) STDAIR_LOG_CORE (stdair::LOG::WARNING, iToBeLogged)

Definition at line 29 of file Logger.hpp.

35.515.1.6 #define STDAIR_LOG_DEBUG(*iToBeLogged*) STDAIR_LOG_CORE (stdair::LOG::DEBUG, iToBeLogged)

Definition at line 32 of file Logger.hpp.

Referenced by stdair::ParsedKey::getBoardingTime(), stdair::ParsedKey::getFlightDateKey(), stdair::ParsedKey::getInventoryKey(), stdair::ParsedKey::getSegmentKey(), stdair::TimePeriod::isDepartureTimeValid(), and stdair::BomRetriever::retrieveSegmentDateFromLongKey().

35.515.1.7 #define STDAIR_LOG_VERBOSE(*iToBeLogged*) STDAIR_LOG_CORE (stdair::LOG::VERBOSE, iToBeLogged)

Definition at line 35 of file Logger.hpp.

35.516 Logger.hpp

```
00001 #ifndef __STDAIR_SVC_LOGGER_HPP
00002 #define __STDAIR_SVC_LOGGER_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <cassert>
00009 #include <sstream>
00010 #include <string>
00011 // StdAir
00012 #include <stdair/stdair_log.hpp>
00013 #include <stdair/basic/BasLogParams.hpp>
00014
00015 // ///////////////// LOG MACROS /////////////////
00016 #define STDAIR_LOG_CORE(iLevel, iToBeLogged) \
00017   { std::ostringstream ostr; ostr << iToBeLogged; \
00018     stdair::Logger::instance().log (iLevel, __LINE__, __FILE__, ostr.str()); }
00019
00020 #define STDAIR_LOG_CRITICAL(iToBeLogged) \
00021   STDAIR_LOG_CORE (stdair::LOG::CRITICAL, iToBeLogged)
00022
00023 #define STDAIR_LOG_ERROR(iToBeLogged) \
00024   STDAIR_LOG_CORE (stdair::LOG::ERROR, iToBeLogged)
00025
00026 #define STDAIR_LOG_NOTIFICATION(iToBeLogged) \
00027   STDAIR_LOG_CORE (stdair::LOG::NOTIFICATION, iToBeLogged)
00028
00029 #define STDAIR_LOG_WARNING(iToBeLogged) \
00030   STDAIR_LOG_CORE (stdair::LOG::WARNING, iToBeLogged)
00031
00032 #define STDAIR_LOG_DEBUG(iToBeLogged) \
00033   STDAIR_LOG_CORE (stdair::LOG::DEBUG, iToBeLogged)
00034
00035 #define STDAIR_LOG_VERBOSE(iToBeLogged) \
00036   STDAIR_LOG_CORE (stdair::LOG::VERBOSE, iToBeLogged)
00037 // ////////////// (END OF) LOG MACROS //////////////
00038
00039
00040 namespace stdair {
00041
00048   class Logger {
```

```
00050     friend class FacSupervisor;
00051     friend class STDAIR_Service;
00052
00053   public:
00054
00058     template <typename T>
00059     void log (const LOG::EN_LogLevel iLevel, const int iLineNumber,
00060               const std::string& iFileName, const T& iToBeLogged) {
00061       assert (_logStream != NULL);
00062       if (iLevel <= _level) {
00063         *_logStream << "[" << LOG::_logLevels[iLevel] << "]" << iFileName << ":"
00064                     << iLineNumber << ": " << iToBeLogged << std::endl;
00065       }
00066     }
00067
00071     static Logger& instance();
00072
00073
00074   private:
00075     // ////////////////// Initialisation and finalisation ///////////////
00079     bool getStatus() const {
00080       return _hasBeenInitialised;
00081     }
00082
00086     void setLevel (const LOG::EN_LogLevel& iLevel) {
00087       _level = iLevel;
00088     }
00089
00093     void setStream (std::ostream& ioStream) {
00094       _logStream = &ioStream;
00095     }
00096
00100     void setStatus (const bool iStatus) {
00101       _hasBeenInitialised = iStatus;
00102     }
00103
00108     Logger();
00112     Logger (const Logger&);
00116     ~Logger();
00117
00123     static void init (const BasLogParams&);
00124
00128     static BasLogParams getLogParams();
00129
00133     static void clean();
00134
00135
00136   private:
00137     // ////////////////// Attributes ///////////////
00141     LOG::EN_LogLevel _level;
00142
00146     std::ostream* _logStream;
00147
00151     bool _hasBeenInitialised;
00152   };
00153
00154 }
00155 #endif // __STDAIR_SVC_LOGGER_HPP
00156
```

35.517 stdair/service/ServiceAbstract.cpp File Reference

```
#include <stdair/service/ServiceAbstract.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.518 ServiceAbstract.cpp

```
00001 // ////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // ////////////////////////////////////////////////////////////////////
00004 // StdAir
00005 #include <stdair/service/ServiceAbstract.hpp>
00006
00007 namespace stdair {
00008
00009 }
```

35.519 stdair/service/ServiceAbstract.hpp File Reference

```
#include <iosfwd>
```

Classes

- class stdair::ServiceAbstract

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Functions

- template<class charT , class traits >
  std::basic_ostream< charT, traits > & operator<< (std::basic_ostream< charT, traits > &ioOut, const stdair::ServiceAbstract &iService)
- template<class charT , class traits >
  std::basic_istream< charT, traits > & operator>> (std::basic_istream< charT, traits > &ioIn, stdair::ServiceAbstract &ioService)

35.519.1 Function Documentation

35.519.1.1 template<class charT , class traits > std::basic_ostream<charT, traits>& operator<< (std::basic_ostream< charT, traits > & *ioOut,* const stdair::ServiceAbstract & *iService*) [inline]

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (p653) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 58 of file ServiceAbstract.hpp.

References stdair::ServiceAbstract::toStream().

35.519.1.2 template<class charT , class traits > std::basic_istream<charT, traits>& operator>> (std::basic_istream< charT, traits > & *ioIn,* stdair::ServiceAbstract & *ioService*) [inline]

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (pp655-657) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 86 of file ServiceAbstract.hpp.

References stdair::ServiceAbstract::fromStream().

35.520 ServiceAbstract.hpp

```
00001 #ifndef __STDAIR_SVC_SERVICEABSTRACT_HPP
00002 #define __STDAIR_SVC_SERVICEABSTRACT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009
00010 namespace stdair {
00011
00015   class ServiceAbstract {
00016   public:
00017
00021     virtual ~ServiceAbstract() {}
00022
00028     virtual void toStream (std::ostream& ioOut) const {}
00029
00035     virtual void fromStream (std::istream& ioIn) {}
00036
00040     // virtual const std::string describe() const = 0;
00041
00042   protected:
00046     ServiceAbstract() {}
00047   };
00048 }
00049
00055 template <class charT, class traits>
00056 inline
```

```
00057 std::basic_ostream<charT, traits>&
00058 operator<< (std::basic_ostream<charT, traits>& ioOut,
00059             const stdair::ServiceAbstract& iService) {
00065   std::basic_ostringstream<charT,traits> ostr;
00066   ostr.copyfmt (ioOut);
00067   ostr.width (0);
00068
00069   // Fill string stream
00070   iService.toStream (ostr);
00071
00072   // Print string stream
00073   ioOut << ostr.str();
00074
00075   return ioOut;
00076 }
00077
00083 template <class charT, class traits>
00084 inline
00085 std::basic_istream<charT, traits>&
00086 operator>> (std::basic_istream<charT, traits>& ioIn,
00087             stdair::ServiceAbstract& ioService) {
00088   // Fill Service object with input stream
00089   ioService.fromStream (ioIn);
00090   return ioIn;
00091 }
00092
00093 #endif // __STDAIR_SVC_SERVICEABSTRACT_HPP
```

35.521 stdair/service/STDAIR_Service.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/stdair_types.hpp>
#include <stdair/basic/BasChronometer.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BomRetriever.hpp>
#include <stdair/bom/BomJSONExport.hpp>
#include <stdair/bom/BomDisplay.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/EventQueue.hpp>
#include <stdair/bom/EventStruct.hpp>
#include <stdair/bom/BookingRequestStruct.hpp>
#include <stdair/bom/DatePeriod.hpp>
#include <stdair/command/CmdBomManager.hpp>
#include <stdair/service/FacSupervisor.hpp>
#include <stdair/service/FacSTDAIRServiceContext.hpp>
```

```
#include <stdair/service/STDAIR_ServiceContext.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/service/DBSessionManager.hpp>
#include <stdair/STDAIR_Service.hpp>
```

Namespaces

- namespace bpt
- namespace stdair

  Handle on the StdAir library context.

35.522 STDAIR_Service.cpp

```
00001 // //////////////////////////////////////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 #if BOOST_VERSION >= 104100
00008 // Boost Property Tree
00009 #include <boost/property_tree/ptree.hpp>
00010 #include <boost/property_tree/json_parser.hpp>
00011 #endif // BOOST_VERSION >= 104100
00012 // StdAir
00013 #include <stdair/stdair_types.hpp>
00014 #include <stdair/basic/BasChronometer.hpp>
00015 #include <stdair/bom/BomManager.hpp>
00016 #include <stdair/bom/BomRetriever.hpp>
00017 #include <stdair/bom/BomJSONExport.hpp>
00018 #include <stdair/bom/BomDisplay.hpp>
00019 #include <stdair/bom/BomRoot.hpp>
00020 #include <stdair/bom/EventQueue.hpp>
00021 #include <stdair/bom/EventStruct.hpp>
00022 #include <stdair/bom/BookingRequestStruct.hpp>
00023 #include <stdair/bom/DatePeriod.hpp>
00024 #include <stdair/command/CmdBomManager.hpp>
00025 #include <stdair/service/FacSupervisor.hpp>
00026 #include <stdair/service/FacSTDAIRServiceContext.hpp>
00027 #include <stdair/service/STDAIR_ServiceContext.hpp>
00028 #include <stdair/service/Logger.hpp>
00029 #include <stdair/service/DBSessionManager.hpp>
00030 #include <stdair/STDAIR_Service.hpp>
00031
00032 #if BOOST_VERSION >= 104100
00033 namespace bpt = boost::property_tree;
00034 #else // BOOST_VERSION >= 104100
00035 namespace bpt {
00036   typedef char ptree;
00037 }
00038 #endif // BOOST_VERSION >= 104100
00039
00040 namespace stdair {
00041
00042   // //////////////////////////////////////////////////////////////////////
```

```
00043   STDAIR_Service::STDAIR_Service() : _stdairServiceContext (NULL) {
00044
00045     // Initialise the service context
00046     initServiceContext();
00047
00048     // Initialise the (remaining of the) context
00049     init();
00050   }
00051
00052   // ////////////////////////////////////////////////////////////////////
00053   STDAIR_Service::STDAIR_Service (const STDAIR_Service& iService)
00054     : _stdairServiceContext (NULL) {
00055     assert (false);
00056   }
00057
00058   // ////////////////////////////////////////////////////////////////////
00059   STDAIR_Service::STDAIR_Service (const BasLogParams& iLogParams)
00060     : _stdairServiceContext (NULL) {
00061
00062     // Initialise the service context
00063     initServiceContext();
00064
00065     // Set the log file
00066     logInit (iLogParams);
00067
00068     // Initialise the (remaining of the) context
00069     init();
00070   }
00071
00072   // ////////////////////////////////////////////////////////////////////
00073   STDAIR_Service::STDAIR_Service (const BasLogParams& iLogParams,
00074                                   const BasDBParams& iDBParams)
00075     : _stdairServiceContext (NULL) {
00076
00077     // Initialise the service context
00078     initServiceContext();
00079
00080     // Set the log file
00081     logInit (iLogParams);
00082
00083     // Create a database session
00084     dbInit (iDBParams);
00085
00086     // Initialise the (remaining of the) context
00087     init();
00088   }
00089
00090   // ////////////////////////////////////////////////////////////////////
00091   STDAIR_Service::~STDAIR_Service() {
00092     // Delete/Clean all the objects from memory
00093     finalise();
00094   }
00095
00096   // ////////////////////////////////////////////////////////////////////
00097   void STDAIR_Service::initServiceContext() {
00098     // Initialise the service context
00099     STDAIR_ServiceContext& lSTDAIR_ServiceContext =
00100       FacSTDAIRServiceContext::instance().create();
00101
00102     // Store the stdair service context
00103     _stdairServiceContext = &lSTDAIR_ServiceContext;
00104   }
```

```
00105
00106   // ////////////////////////////////////////////////////////////////////
00107   void STDAIR_Service::logInit (const BasLogParams& iLogParams) {
00108     Logger::init (iLogParams);
00109   }
00110
00111   // ////////////////////////////////////////////////////////////////////
00112   void STDAIR_Service::dbInit (const BasDBParams& iDBParams) {
00113     DBSessionManager::init (iDBParams);
00114
00115     // Store the database parameters into the StdAir service context
00116     assert (_stdairServiceContext != NULL);
00117     STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00118     lSTDAIR_ServiceContext.setDBParams (iDBParams);
00119   }
00120
00121   // ////////////////////////////////////////////////////////////////////
00122   void STDAIR_Service::init() {
00123   }
00124
00125   // ////////////////////////////////////////////////////////////////////
00126   BomRoot& STDAIR_Service::getBomRoot() const {
00127     // Retrieve the StdAir service context
00128     assert (_stdairServiceContext != NULL);
00129     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;

00130     return lSTDAIR_ServiceContext.getBomRoot();
00131   }
00132
00133   // ////////////////////////////////////////////////////////////////////
00134   EventQueue& STDAIR_Service::getEventQueue() const {
00135     // Retrieve the StdAir service context
00136     assert (_stdairServiceContext != NULL);
00137     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;

00138     return lSTDAIR_ServiceContext.getEventQueue();
00139   }
00140
00141   // ////////////////////////////////////////////////////////////////////
00142   BasLogParams STDAIR_Service::getLogParams() const {
00143     return Logger::getLogParams();
00144   }
00145
00146   // ////////////////////////////////////////////////////////////////////
00147   const BasDBParams& STDAIR_Service::getDBParams() const {
00148     // Retrieve the StdAir service context
00149     assert (_stdairServiceContext != NULL);
00150     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;

00151     return lSTDAIR_ServiceContext.getDBParams();
00152   }
00153
00154   // ////////////////////////////////////////////////////////////////////
00155   const ServiceInitialisationType& STDAIR_Service::
00156   getServiceInitialisationType() const {
00157     // Retrieve the StdAir service context
00158     assert (_stdairServiceContext != NULL);
00159     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;

00160     return lSTDAIR_ServiceContext.getServiceInitialisationType();
00161   }
00162
```

```
00163   // ////////////////////////////////////////////////////////////////////
00164   void STDAIR_Service::buildSampleBom() {
00165     // Retrieve the StdAir service context
00166     assert (_stdairServiceContext != NULL);
00167     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;

00168
00169     // Retrieve the BOM tree root
00170     BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00171
00172     // Delegate the building process to the dedicated command
00173     CmdBomManager::buildSampleBom (lBomRoot);
00174   }
00175
00176   // ////////////////////////////////////////////////////////////////////
00177   void STDAIR_Service::
00178   buildDummyInventory (const CabinCapacity_T& iCabinCapacity) {
00179     // Retrieve the StdAir service context
00180     assert (_stdairServiceContext != NULL);
00181     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;

00182
00183     // Retrieve the BOM tree root
00184     BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00185
00186     // Delegate the building process to the dedicated command
00187     CmdBomManager::buildDummyInventory (lBomRoot, iCabinCapacity);
00188   }
00189
00190   // ////////////////////////////////////////////////////////////////////
00191   void STDAIR_Service::
00192   buildSampleTravelSolutionForPricing (TravelSolutionList_T& ioTravelSolutionList
      ) {
00193     // Build a sample list of travel solution structures
00194     CmdBomManager::buildSampleTravelSolutionForPricing (ioTravelSolutionList);
00195   }
00196
00197   // ////////////////////////////////////////////////////////////////////
00198   void STDAIR_Service::
00199   buildSampleTravelSolutions (TravelSolutionList_T& ioTravelSolutionList) {
00200     // Build a sample list of travel solution structures
00201     CmdBomManager::buildSampleTravelSolutions (ioTravelSolutionList);
00202   }
00203
00204   // ////////////////////////////////////////////////////////////////////
00205   BookingRequestStruct STDAIR_Service::
00206   buildSampleBookingRequest (const bool isForCRS) {
00207
00208     // Build a sample booking request structure
00209     if (isForCRS == true) {
00210       return CmdBomManager::buildSampleBookingRequestForCRS();
00211     }
00212
00213     return CmdBomManager::buildSampleBookingRequest();
00214   }
00215
00216   // ////////////////////////////////////////////////////////////////////
00217   std::string STDAIR_Service::
00218   jsonExport (const stdair::AirlineCode_T& iAirlineCode,
00219               const stdair::FlightNumber_T& iFlightNumber,
00220               const stdair::Date_T& iDepartureDate) const {
00221     std::ostringstream oStr;
```

```
00222
00223     // Retrieve the StdAir service context
00224     assert (_stdairServiceContext != NULL);
00225     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;

00226
00227     // Retrieve the BOM tree root
00228     BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00229
00230     // Retrieve the flight-date object corresponding to the key
00231     FlightDate* lFlightDate_ptr =
00232       BomRetriever::retrieveFlightDateFromKeySet (lBomRoot, iAirlineCode,
00233                                                   iFlightNumber, iDepartureDate);

00234
00235     // Dump the content of the whole BOM tree into the string
00236     if (lFlightDate_ptr != NULL) {
00237       BomJSONExport::jsonExport (oStr, *lFlightDate_ptr);
00238
00239     } else {
00240 #if BOOST_VERSION >= 104100
00241       //
00242       bpt::ptree lPropertyTree;
00243
00244       // Build the appropriate message, so that the client may know that
00245       // no flight-date can be found for that given key.
00246       std::ostringstream oNoFlightDateStream;
00247       oNoFlightDateStream << "No flight-date found for the given key: '"
00248                           << iAirlineCode << iFlightNumber
00249                           << " - " << iDepartureDate << "'";
00250       const std::string oNoFlightDateString (oNoFlightDateStream.str());
00251
00252       // Put in the property tree the fact that no flight-date has been found.
00253       // \note That is not (necessary) an error.
00254       lPropertyTree.put ("error", oNoFlightDateString.c_str());
00255
00256       // Write the property tree into the JSON stream.
00257       write_json (oStr, lPropertyTree);
00258 #endif // BOOST_VERSION >= 104100
00259     }
00260
00261     return oStr.str();
00262   }
00263
00264   // ////////////////////////////////////////////////////////////////////
00265   std::string STDAIR_Service::list (const AirlineCode_T& iAirlineCode,
00266                                     const FlightNumber_T& iFlightNumber) const {
00267     std::ostringstream oStr;
00268
00269     // Retrieve the StdAir service context
00270     assert (_stdairServiceContext != NULL);
00271     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;

00272
00273     // Retrieve the BOM tree root
00274     BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00275
00276     // Dump the content of the whole BOM tree into the string
00277     BomDisplay::list (oStr, lBomRoot, iAirlineCode, iFlightNumber);
00278
00279     return oStr.str();
00280   }
```

```
00281
00282   // ////////////////////////////////////////////////////////////////////
00283   std::string STDAIR_Service::listAirportPairDateRange () const {
00284     std::ostringstream oStr;
00285
00286     // Retrieve the StdAir service context
00287     assert (_stdairServiceContext != NULL);
00288     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;

00289
00290     // Retrieve the BOM tree root
00291     BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00292
00293     // Dump the content of the whole BOM tree into the string
00294     BomDisplay::listAirportPairDateRange (oStr, lBomRoot);
00295
00296     return oStr.str();
00297   }
00298
00299   // ////////////////////////////////////////////////////////////////////
00300   bool STDAIR_Service::check (const AirlineCode_T& iAirlineCode,
00301                               const FlightNumber_T& iFlightNumber,
00302                               const stdair::Date_T& iDepartureDate) const {
00303     std::ostringstream oStr;
00304
00305     // Retrieve the StdAir service context
00306     assert (_stdairServiceContext != NULL);
00307     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;

00308
00309     // Retrieve the BOM tree root
00310     BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00311
00312     // Dump the content of the whole BOM tree into the string
00313     const FlightDate* lFlightDate_ptr =
00314       BomRetriever::retrieveFlightDateFromKeySet (lBomRoot, iAirlineCode,
00315                                                   iFlightNumber,
00316                                                   iDepartureDate);
00317
00318     return (lFlightDate_ptr != NULL);
00319   }
00320
00321   // ////////////////////////////////////////////////////////////////////
00322   bool STDAIR_Service::check (const stdair::AirportCode_T& ioOrigin,
00323                               const stdair::AirportCode_T& ioDestination,
00324                               const stdair::Date_T& ioDepartureDate) const {
00325     std::ostringstream oStr;
00326
00327     // Retrieve the StdAir service context
00328     assert (_stdairServiceContext != NULL);
00329     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;

00330
00331     // Retrieve the BOM tree root
00332     BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00333
00334     // Dump the content of the whole BOM tree into the string
00335     stdair::DatePeriodList_T lDatePeriodList;
00336     BomRetriever::retrieveDatePeriodListFromKeySet  (lBomRoot, ioOrigin,
00337                                                      ioDestination,
00338                                                      ioDepartureDate,
00339                                                      lDatePeriodList);
```

```
00340
00341     return (lDatePeriodList.size() != 0);
00342   }
00343
00344   // ////////////////////////////////////////////////////////////////////
00345   std::string STDAIR_Service::csvDisplay() const {
00346     std::ostringstream oStr;
00347
00348     // Retrieve the StdAir service context
00349     assert (_stdairServiceContext != NULL);
00350     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;

00351
00352     // Retrieve the BOM tree root
00353     BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00354
00355     // Dump the content of the whole BOM tree into the string
00356     BomDisplay::csvDisplay (oStr, lBomRoot);
00357
00358     return oStr.str();
00359   }
00360
00361   // ////////////////////////////////////////////////////////////////////
00362   std::string STDAIR_Service::
00363   csvDisplay (const stdair::AirlineCode_T& iAirlineCode,
00364               const stdair::FlightNumber_T& iFlightNumber,
00365               const stdair::Date_T& iDepartureDate) const {
00366     std::ostringstream oStr;
00367
00368     // Retrieve the StdAir service context
00369     assert (_stdairServiceContext != NULL);
00370     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;

00371
00372     // Retrieve the BOM tree root
00373     BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00374
00375     // Retrieve the flight-date object corresponding to the key
00376     FlightDate* lFlightDate_ptr =
00377       BomRetriever::retrieveFlightDateFromKeySet (lBomRoot, iAirlineCode,
00378                                                   iFlightNumber, iDepartureDate);

00379
00380     // Dump the content of the whole BOM tree into the string
00381     if (lFlightDate_ptr != NULL) {
00382       BomDisplay::csvDisplay (oStr, *lFlightDate_ptr);
00383
00384     } else {
00385       oStr << "   No flight-date found for the given key: '"
00386            << iAirlineCode << iFlightNumber << " - " << iDepartureDate << "'";
00387     }
00388
00389     return oStr.str();
00390   }
00391
00392   // ////////////////////////////////////////////////////////////////////
00393   std::string STDAIR_Service::
00394   csvDisplay (const TravelSolutionList_T& iTravelSolutionList) const {
00395
00396     // Dump the content of the whole list of travel solutions into the string
00397     std::ostringstream oStr;
00398     BomDisplay::csvDisplay (oStr, iTravelSolutionList);
```

```
00399
00400     return oStr.str();
00401   }
00402
00403   // ////////////////////////////////////////////////////////////////////
00404   std::string STDAIR_Service::
00405   csvDisplay (const stdair::AirportCode_T& iOrigin,
00406               const stdair::AirportCode_T& iDestination,
00407               const stdair::Date_T& iDepartureDate) const {
00408     std::ostringstream oStr;
00409
00410     // Retrieve the StdAir service context
00411     assert (_stdairServiceContext != NULL);
00412     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;

00413
00414     // Retrieve the BOM tree root
00415     BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00416
00417     // Retrieve the flight-date object corresponding to the key
00418     DatePeriodList_T lDatePeriodList;
00419     BomRetriever::retrieveDatePeriodListFromKeySet (lBomRoot, iOrigin,
00420                                                     iDestination, iDepartureDate,

00421                                                     lDatePeriodList);
00422
00423     // Dump the content of the whole BOM tree into the string
00424     if (lDatePeriodList.empty()) {
00425       oStr << "   No fare-rule found for the given key: '"
00426            << iOrigin << "-" << iDestination << " - " << iDepartureDate << "'";
00427     } else {
00428       BomDisplay::csvDisplay (oStr, lDatePeriodList);
00429     }
00430
00431     return oStr.str();
00432   }
00433
00434   // ////////////////////////////////////////////////////////////////////
00435   void STDAIR_Service::finalise() {
00436     // Clean all the objects
00437     FacSupervisor::cleanAll();
00438   }
00439
00440   // ////////////////////////////////////////////////////////////////////
00441   const Count_T& STDAIR_Service::
00442   getExpectedTotalNumberOfEventsToBeGenerated() const {
00443
00444     // Retrieve the StdAir service context
00445     assert (_stdairServiceContext != NULL);
00446     STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00447
00448     // Retrieve the event queue object instance
00449     const EventQueue& lQueue = lSTDAIR_ServiceContext.getEventQueue();
00450
00451     // Delegate the call to the dedicated command
00452     const Count_T& oExpectedTotalNumberOfEventsToBeGenerated =
00453       lQueue.getExpectedTotalNbOfEvents();
00454
00455     //
00456     return oExpectedTotalNumberOfEventsToBeGenerated;
00457   }
00458
```

```
00459   // ////////////////////////////////////////////////////////////////////
00460   const Count_T& STDAIR_Service::
00461   getExpectedTotalNumberOfEventsToBeGenerated (const EventType::EN_EventType& iTy
      pe) const {
00462
00463     // Retrieve the StdAir service context
00464     assert (_stdairServiceContext != NULL);
00465     STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00466
00467     // Retrieve the event queue object instance
00468     const EventQueue& lQueue = lSTDAIR_ServiceContext.getEventQueue();
00469
00470     // Delegate the call to the dedicated command
00471     const Count_T& oExpectedTotalNumberOfEventsToBeGenerated =
00472       lQueue.getExpectedTotalNbOfEvents (iType);
00473
00474     //
00475     return oExpectedTotalNumberOfEventsToBeGenerated;
00476   }
00477
00478   // ////////////////////////////////////////////////////////////////////
00479   const Count_T& STDAIR_Service::
00480   getActualTotalNumberOfEventsToBeGenerated() const {
00481
00482     // Retrieve the StdAir service context
00483     assert (_stdairServiceContext != NULL);
00484     STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00485
00486     // Retrieve the event queue object instance
00487     const EventQueue& lQueue = lSTDAIR_ServiceContext.getEventQueue();
00488
00489     // Delegate the call to the dedicated command
00490     const Count_T& oActualTotalNumberOfEventsToBeGenerated =
00491       lQueue.getActualTotalNbOfEvents();
00492
00493     //
00494     return oActualTotalNumberOfEventsToBeGenerated;
00495   }
00496
00497   // ////////////////////////////////////////////////////////////////////
00498   const Count_T& STDAIR_Service::
00499   getActualTotalNumberOfEventsToBeGenerated (const EventType::EN_EventType& iType
      ) const {
00500
00501     // Retrieve the StdAir service context
00502     assert (_stdairServiceContext != NULL);
00503     STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00504
00505     // Retrieve the event queue object instance
00506     const EventQueue& lQueue = lSTDAIR_ServiceContext.getEventQueue();
00507
00508     // Delegate the call to the dedicated command
00509     const Count_T& oActualTotalNumberOfEventsToBeGenerated =
00510       lQueue.getActualTotalNbOfEvents (iType);
00511
00512     //
00513     return oActualTotalNumberOfEventsToBeGenerated;
00514   }
00515
00516   // ////////////////////////////////////////////////////////////////////
00517   ProgressStatusSet STDAIR_Service::popEvent (EventStruct& ioEventStruct) const {
```

```
00518
00519     // Retrieve the StdAir service context
00520     assert (_stdairServiceContext != NULL);
00521     STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00522
00523     // Retrieve the event queue object instance
00524     EventQueue& lQueue = lSTDAIR_ServiceContext.getEventQueue();
00525
00526     // Extract the next event from the queue
00527     return lQueue.popEvent (ioEventStruct);
00528   }
00529
00530   // ////////////////////////////////////////////////////////////////////
00531   bool STDAIR_Service::isQueueDone() const {
00532
00533     // Retrieve the StdAir service context
00534     assert (_stdairServiceContext != NULL);
00535     STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00536
00537     // Retrieve the event queue object instance
00538     const EventQueue& lQueue = lSTDAIR_ServiceContext.getEventQueue();
00539
00540     // Calculates whether the event queue has been fully emptied
00541     const bool isQueueDone = lQueue.isQueueDone();
00542
00543     //
00544     return isQueueDone;
00545   }
00546
00547   // ////////////////////////////////////////////////////////////////////
00548   void STDAIR_Service::reset() const {
00549
00550     // Retrieve the StdAir service context
00551     assert (_stdairServiceContext != NULL);
00552     STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00553
00554     // Retrieve the event queue object instance
00555     EventQueue& lQueue = lSTDAIR_ServiceContext.getEventQueue();
00556
00557     // Delegate the call to the event queue object
00558     lQueue.reset();
00559   }
00560
00561 }
```

35.523 stdair/service/STDAIR_ServiceContext.cpp File Reference

35.524 STDAIR_ServiceContext.cpp

```
00001
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <cassert>
00010 #include <sstream>
00011 // StdAir
00012 #include <stdair/basic/BasConst_General.hpp>
00013 #include <stdair/bom/BomRoot.hpp>
00014 #include <stdair/bom/EventQueue.hpp>
```

```
00015 #include <stdair/factory/FacBom.hpp>
00016 #include <stdair/service/STDAIR_ServiceContext.hpp>
00017
00018 namespace stdair {
00019
00020   // ////////////////////////////////////////////////////////////////////
00021   STDAIR_ServiceContext::STDAIR_ServiceContext()
00022     : _bomRoot (NULL), _eventQueue (NULL),
00023       _initType (ServiceInitialisationType::NOT_YET_INITIALISED) {
00024     // Build the BomRoot object
00025     init();
00026   }
00027
00028   // ////////////////////////////////////////////////////////////////////
00029   STDAIR_ServiceContext::
00030   STDAIR_ServiceContext (const STDAIR_ServiceContext& iServiceContext)
00031     : _bomRoot (iServiceContext._bomRoot),
00032       _eventQueue (iServiceContext._eventQueue),
00033       _initType (ServiceInitialisationType::NOT_YET_INITIALISED) {
00034     assert (false);
00035   }
00036
00037   // ////////////////////////////////////////////////////////////////////
00038   STDAIR_ServiceContext::~STDAIR_ServiceContext() {
00039   }
00040
00041   // ////////////////////////////////////////////////////////////////////
00042   void STDAIR_ServiceContext::init() {
00043     //
00044     initBomRoot();
00045
00046     //
00047     initEventQueue();
00048   }
00049
00050   // ////////////////////////////////////////////////////////////////////
00051   void STDAIR_ServiceContext::initBomRoot() {
00052     _bomRoot = &FacBom<BomRoot>::instance().create();
00053   }
00054
00055   // ////////////////////////////////////////////////////////////////////
00056   void STDAIR_ServiceContext::initEventQueue() {
00057
00058     // The event queue key is just a string. For now, it is not used.
00059     const EventQueueKey lKey ("EQ01");
00060
00061     // Create an EventQueue object instance
00062     EventQueue& lEventQueue = FacBom<EventQueue>::instance().create (lKey);
00063
00064     // Store the event queue object
00065     _eventQueue = &lEventQueue;
00066   }
00067
00068   // ////////////////////////////////////////////////////////////////////
00069   const std::string STDAIR_ServiceContext::shortDisplay() const {
00070     std::ostringstream oStr;
00071     oStr << "STDAIR_ServiceContext -- " << _initType
00072          << " -- DB: " << _dbParams;
00073     if (_eventQueue != NULL) {
00074       oStr << " -- Queue: " << _eventQueue->toString();
00075     }
00076     return oStr.str();
```

```
00077   }
00078
00079   // ////////////////////////////////////////////////////////////////////
00080   const std::string STDAIR_ServiceContext::display() const {
00081     std::ostringstream oStr;
00082     oStr << shortDisplay();
00083     return oStr.str();
00084   }
00085
00086   // ////////////////////////////////////////////////////////////////////
00087   const std::string STDAIR_ServiceContext::describe() const {
00088     return shortDisplay();
00089   }
00090
00091   // ////////////////////////////////////////////////////////////////////
00092   BomRoot& STDAIR_ServiceContext::getBomRoot() const {
00093     assert (_bomRoot != NULL);
00094     return *_bomRoot;
00095   }
00096
00097   // ////////////////////////////////////////////////////////////////////
00098   EventQueue& STDAIR_ServiceContext::getEventQueue() const {
00099     assert (_eventQueue != NULL);
00100     return *_eventQueue;
00101   }
00102
00103 }
00104
```

35.525 stdair/service/STDAIR_ServiceContext.hpp File Reference

```
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/basic/BasLogParams.hpp>
#include <stdair/basic/BasDBParams.hpp>
#include <stdair/basic/ServiceInitialisationType.hpp>
#include <stdair/service/ServiceAbstract.hpp>
```

Classes

- class stdair::STDAIR_ServiceContext

  Class holding the context of the Stdair services.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.526 STDAIR_ServiceContext.hpp

```
00001 #ifndef __STDAIR_SVC_STDAIRSERVICECONTEXT_HPP
00002 #define __STDAIR_SVC_STDAIRSERVICECONTEXT_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_basic_types.hpp>
00011 #include <stdair/basic/BasLogParams.hpp>
00012 #include <stdair/basic/BasDBParams.hpp>
00013 #include <stdair/basic/ServiceInitialisationType.hpp>
00014 #include <stdair/service/ServiceAbstract.hpp>
00015
00016 namespace stdair {
00017
00019   class BomRoot;
00020   class EventQueue;
00021
00025   class STDAIR_ServiceContext : public ServiceAbstract {
00029     friend class STDAIR_Service;
00030     friend class FacSTDAIRServiceContext;
00031
00032   private:
00033     // ///////// Getters ///////////
00037     BomRoot& getBomRoot() const;
00038
00042     EventQueue& getEventQueue() const;
00043
00047     const BasDBParams& getDBParams() const {
00048       return _dbParams;
00049     }
00050
00054     const ServiceInitialisationType& getServiceInitialisationType() const {
00055       return _initType;
00056     }
00057
00058
00059   private:
00060     // ///////// Setters ///////////
00064     void setDBParams (const BasDBParams& iDBParams) {
00065       _dbParams = iDBParams;
00066     }
00067
00071     void setServiceInitialisationType (const ServiceInitialisationType& iSIT) {
00072       _initType = iSIT;
00073     }
00074
00075
00076   private:
00077     // ///////// Display Methods ///////////
00081     const std::string shortDisplay() const;
00082
00086     const std::string display() const;
00087
00091     const std::string describe() const;
00092
00093
00094   private:
```

```
00095     // /////// Construction / initialisation ////////
00099     STDAIR_ServiceContext();
00100
00107     STDAIR_ServiceContext (const STDAIR_ServiceContext&);
00108
00112     ~STDAIR_ServiceContext();
00113
00121     void init();
00122
00129     void initBomRoot();
00130
00137     void initEventQueue();
00138
00139
00140   private:
00141     // ////////////// Children ////////////
00145     BomRoot* _bomRoot;
00146
00150     EventQueue* _eventQueue;
00151
00155     BasDBParams _dbParams;
00156
00170     ServiceInitialisationType _initType;
00171   };
00172
00173 }
00174 #endif // __STDAIR_SVC_STDAIRSERVICECONTEXT_HPP
```

35.527 stdair/stdair_basic_types.hpp File Reference

```
#include <string>
#include <list>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::string stdair::LocationCode_T
- typedef unsigned long int stdair::Distance_T
- typedef LocationCode_T stdair::AirportCode_T
- typedef LocationCode_T stdair::CityCode_T
- typedef std::string stdair::KeyDescription_T
- typedef std::string stdair::AirlineCode_T
- typedef unsigned short stdair::FlightNumber_T
- typedef unsigned short stdair::GuillotineNumber_T
- typedef std::string stdair::CabinCode_T
- typedef std::string stdair::FamilyCode_T
- typedef std::string stdair::ClassCode_T

- typedef unsigned long stdair::Identity_T
- typedef std::string stdair::TripType_T
- typedef double stdair::MonetaryValue_T
- typedef double stdair::RealNumber_T
- typedef double stdair::Percentage_T
- typedef double stdair::PriceValue_T
- typedef double stdair::YieldValue_T
- typedef std::string stdair::PriceCurrency_T
- typedef double stdair::Revenue_T
- typedef double stdair::Multiplier_T
- typedef double stdair::NbOfSeats_T
- typedef unsigned int stdair::Count_T
- typedef short stdair::PartySize_T
- typedef double stdair::NbOfRequests_T
- typedef NbOfRequests_T stdair::NbOfBookings_T
- typedef NbOfRequests_T stdair::NbOfCancellations_T
- typedef unsigned short stdair::NbOfTravelSolutions_T
- typedef std::string stdair::ClassList_String_T
- typedef unsigned short stdair::NbOfSegments_T
- typedef unsigned short stdair::NbOfAirlines_T
- typedef double stdair::Availability_T
- typedef double stdair::Fare_T
- typedef bool stdair::Flag_T
- typedef unsigned int stdair::UnsignedIndex_T
- typedef std::string stdair::Filename_T
- typedef std::string stdair::FileAddress_T
- typedef float stdair::ProgressPercentage_T

35.528 stdair_basic_types.hpp

```
00001 #ifndef __STDAIR_STDAIR_BASIC_TYPES_HPP
00002 #define __STDAIR_STDAIR_BASIC_TYPES_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <list>
00010
00011 namespace stdair {
00012
00013   // //////////////////////////////////////////////////////////////////
00014   // Basic types
00016   typedef std::string LocationCode_T;
00017
00019   typedef unsigned long int Distance_T;
00020
00022   typedef LocationCode_T AirportCode_T;
00023
00025   typedef LocationCode_T CityCode_T;
```

```
00026
00028   typedef std::string KeyDescription_T;
00029
00031   typedef std::string AirlineCode_T;
00032
00034   typedef unsigned short FlightNumber_T;
00035
00037   typedef unsigned short GuillotineNumber_T;
00038
00041   typedef std::string CabinCode_T;
00042
00044   typedef std::string FamilyCode_T;
00045
00048   typedef std::string ClassCode_T;
00049
00051   typedef unsigned long Identity_T;
00052
00055   typedef std::string TripType_T;
00056
00058   typedef double MonetaryValue_T;
00059
00061   typedef double RealNumber_T;
00062
00064   typedef double Percentage_T;
00065
00067   typedef double PriceValue_T;
00068
00070   typedef double YieldValue_T;
00071
00073   typedef std::string PriceCurrency_T;
00074
00076   typedef double Revenue_T;
00077
00079   typedef double Multiplier_T;
00080
00083   typedef double NbOfSeats_T;
00084
00086   typedef unsigned int Count_T;
00087
00089   typedef short PartySize_T;
00090
00092   typedef double NbOfRequests_T;
00093
00095   typedef NbOfRequests_T NbOfBookings_T;
00096
00098   typedef NbOfRequests_T NbOfCancellations_T;
00099
00102   typedef unsigned short NbOfTravelSolutions_T;
00103
00105   typedef std::string ClassList_String_T;
00106
00108   typedef unsigned short NbOfSegments_T;
00109
00111   typedef unsigned short NbOfAirlines_T;
00112
00114   typedef double Availability_T;
00115
00117   typedef double Fare_T;
00118
00120   typedef bool Flag_T;
00121
00123   typedef unsigned int UnsignedIndex_T;
```

```
00124
00125   // ////////////// Technical /////////////////
00129   typedef std::string Filename_T;
00130
00133   typedef std::string FileAddress_T;
00134
00137   typedef float ProgressPercentage_T;
00138
00139 }
00140 #endif // __STDAIR_STDAIR_BASIC_TYPES_HPP
```

35.529 stdair/stdair_date_time_types.hpp File Reference

```
#include <string>
#include <boost/date_time/gregorian/gregorian.hpp>
#include <boost/date_time/posix_time/posix_time.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef boost::posix_time::time_duration stdair::Duration_T
- typedef boost::gregorian::date stdair::Date_T
- typedef boost::posix_time::time_duration stdair::Time_T
- typedef boost::posix_time::ptime stdair::DateTime_T
- typedef boost::gregorian::date_period stdair::DatePeriod_T
- typedef std::string stdair::DOW_String_T
- typedef boost::gregorian::date_duration stdair::DateOffset_T
- typedef unsigned int stdair::DayDuration_T
- typedef bool stdair::SaturdayStay_T
- typedef long int stdair::IntDuration_T
- typedef unsigned long long int stdair::LongDuration_T
- typedef float stdair::FloatDuration_T

35.530 stdair_date_time_types.hpp

```
00001 #ifndef __STDAIR_STDAIR_DATE_TIME_TYPES_HPP
00002 #define __STDAIR_STDAIR_DATE_TIME_TYPES_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // Boost (Extended STL)
```

```
00010 #include <boost/date_time/gregorian/gregorian.hpp>
00011 #include <boost/date_time/posix_time/posix_time.hpp>
00012
00013 namespace stdair {
00014
00015   // ///////// Type definitions /////////
00017   typedef boost::posix_time::time_duration Duration_T;
00018
00020   typedef boost::gregorian::date Date_T;
00021
00023   typedef boost::posix_time::time_duration Time_T;
00024
00026   typedef boost::posix_time::ptime DateTime_T;
00027
00029   typedef boost::gregorian::date_period DatePeriod_T;
00030
00032   typedef std::string DOW_String_T;
00033
00035   typedef boost::gregorian::date_duration DateOffset_T;
00036
00038   typedef unsigned int DayDuration_T;
00039
00041   typedef bool SaturdayStay_T;
00042
00044   typedef long int IntDuration_T;
00045
00047   typedef unsigned long long int LongDuration_T;
00048
00050   typedef float FloatDuration_T;
00051
00052 }
00053 #endif // __STDAIR_STDAIR_DATE_TIME_TYPES_HPP
```

35.531 stdair/stdair_db.hpp File Reference

```
#include <string>
```

Namespaces

- namespace soci
- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef soci::session stdair::DBSession_T
- typedef soci::statement stdair::DBRequestStatement_T
- typedef std::string stdair::DBConnectionName_T

35.532 stdair_db.hpp

```
00001 #ifndef __STDAIR_STDAIR_DB_HPP
00002 #define __STDAIR_STDAIR_DB_HPP
```

```
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009
00010 // Forward declarations
00011 namespace soci {
00012   class session;
00013   class statement;
00014 }
00015
00016 namespace stdair {
00017
00018   // //////// Type definitions /////////
00020   typedef soci::session DBSession_T;
00021
00023   typedef soci::statement DBRequestStatement_T;
00024
00026   typedef std::string DBConnectionName_T;
00027
00028 }
00029 #endif // __STDAIR_STDAIR_DB_HPP
```

35.533 stdair/stdair_demand_types.hpp File Reference

```
#include <string>
#include <vector>
#include <map>
#include <boost/random/linear_congruential.hpp>
#include <boost/random/uniform_real.hpp>
#include <boost/random/variate_generator.hpp>
#include <boost/date_time/gregorian/gregorian.hpp>
#include <boost/date_time/posix_time/posix_time.hpp>
#include <boost/tuple/tuple.hpp>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_maths_types.hpp>
#include <stdair/stdair_inventory_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef bool stdair::ChangeFees_T
- typedef bool stdair::NonRefundable_T
- typedef unsigned int stdair::SaturdayStayRatio_T
- typedef unsigned int stdair::ChangeFeesRatio_T
- typedef unsigned int stdair::NonRefundableRatio_T
- typedef std::string stdair::PassengerType_T
- typedef std::string stdair::DistributionPatternId_T
- typedef std::string stdair::CancellationRateCurveId_T
- typedef std::string stdair::AirlinePreferenceId_T
- typedef std::pair< Percentage_T, Percentage_T > stdair::CancellationNoShowRatePair_T
- typedef std::string stdair::CharacteristicsPatternId_T
- typedef std::string stdair::CharacteristicsIndex_T
- typedef double stdair::WTP_T
- typedef boost::tuples::tuple< double, WTP_T > stdair::CharacteristicsWTP_tuple_T
- typedef std::pair< WTP_T, MeanStdDevPair_T > stdair::WTPDemandPair_T
- typedef NbOfRequests_T stdair::NbOfNoShows_T
- typedef double stdair::MatchingIndicator_T
- typedef std::string stdair::DemandStreamKeyStr_T
- typedef std::string stdair::ChannelLabel_T
- typedef std::string stdair::FrequentFlyer_T
- typedef std::string stdair::RequestStatus_T
- typedef std::map< Identity_T, Identity_T > stdair::BookingTSIDMap_T
- typedef std::pair< CabinCode_T, ClassCode_T > stdair::CabinClassPair_T
- typedef std::list< CabinClassPair_T > stdair::CabinClassPairList_T
- typedef double stdair::ProportionFactor_T
- typedef std::list< ProportionFactor_T > stdair::ProportionFactorList_T
- typedef std::string stdair::OnDString_T
- typedef std::list< OnDString_T > stdair::OnDStringList_T

35.534 stdair_demand_types.hpp

```
00001 #ifndef __STDAIR_STDAIR_DEMAND_TYPES_HPP
00002 #define __STDAIR_STDAIR_DEMAND_TYPES_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <vector>
00010 #include <map>
00011 // Boost Random
00012 #include <boost/random/linear_congruential.hpp>
00013 #include <boost/random/uniform_real.hpp>
00014 #include <boost/random/variate_generator.hpp>
00015 // Boost (Extended STL)
```

```
00016 #include <boost/date_time/gregorian/gregorian.hpp>
00017 #include <boost/date_time/posix_time/posix_time.hpp>
00018 #include <boost/tuple/tuple.hpp>
00019 // StdAir
00020 #include <stdair/stdair_basic_types.hpp>
00021 #include <stdair/stdair_maths_types.hpp>
00022 #include <stdair/stdair_inventory_types.hpp>
00023
00024
00025 namespace stdair {
00026
00027   // //////// Type definitions /////////
00029   typedef bool ChangeFees_T;
00030
00032   typedef bool NonRefundable_T;
00033
00035   typedef bool SaturdayStay_T;
00036
00039   typedef unsigned int SaturdayStayRatio_T;
00040
00043   typedef unsigned int ChangeFeesRatio_T;
00044
00047   typedef unsigned int NonRefundableRatio_T;
00048
00051   typedef std::string PassengerType_T;
00052
00054   typedef std::string DistributionPatternId_T;
00055
00057   typedef std::string CancellationRateCurveId_T;
00058
00060   typedef std::string AirlinePreferenceId_T;
00061
00063   typedef std::pair<Percentage_T, Percentage_T> CancellationNoShowRatePair_T;
00064
00067   typedef std::string CharacteristicsPatternId_T;
00068
00070   typedef std::string CharacteristicsIndex_T;
00071
00073   typedef double WTP_T;
00074
00076   typedef boost::tuples::tuple<double, WTP_T> CharacteristicsWTP_tuple_T;
00077
00079   typedef std::pair<WTP_T, MeanStdDevPair_T> WTPDemandPair_T;
00080
00082   typedef NbOfRequests_T NbOfCancellations_T;
00083
00085   typedef NbOfRequests_T NbOfNoShows_T;
00086
00088   typedef double MatchingIndicator_T;
00089
00091   typedef std::string DemandStreamKeyStr_T;
00092
00094   typedef std::string ChannelLabel_T;
00095
00097   typedef std::string FrequentFlyer_T;
00098
00101   typedef std::string RequestStatus_T;
00102
00104   typedef std::map<Identity_T, Identity_T> BookingTSIDMap_T;
00105
00107   typedef std::pair<CabinCode_T, ClassCode_T> CabinClassPair_T;
00108
```

```
00110   typedef std::list<CabinClassPair_T> CabinClassPairList_T;
00111
00113   typedef double ProportionFactor_T;
00114
00116   typedef std::list<ProportionFactor_T> ProportionFactorList_T;
00117
00119   typedef std::string OnDString_T;
00120
00122   typedef std::list<OnDString_T> OnDStringList_T;
00123
00124 }
00125 #endif // __STDAIR_STDAIR_DEMAND_TYPES_HPP
```

35.535 stdair/stdair_event_types.hpp File Reference

```
#include <string>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::string stdair::EventName_T
- typedef double stdair::NbOfEvents_T
- typedef std::string stdair::EventQueueID_T
- typedef std::string stdair::EventGeneratorKey_T

35.536 stdair_event_types.hpp

```
00001 #ifndef __STDAIR_STDAIR_EVENT_TYPES_HPP
00002 #define __STDAIR_STDAIR_EVENT_TYPES_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009
00010 namespace stdair {
00011
00012   // //////// Type definitions /////////
00014   typedef std::string EventName_T;
00015
00017   typedef double NbOfEvents_T;
00018
00020   typedef std::string EventQueueID_T;
00021
00023   typedef std::string EventGeneratorKey_T;
00024
00025 }
00026 #endif // __STDAIR_STDAIR_EVENT_TYPES_HPP
```

35.537 stdair/stdair_exceptions.hpp File Reference

```
#include <string>
```

Classes

- class stdair::RootException

  Root of the stdair exceptions.
- class stdair::FileNotFoundException
- class stdair::NonInitialisedLogServiceException
- class stdair::NonInitialisedServiceException
- class stdair::NonInitialisedContainerException
- class stdair::NonInitialisedRelationShipException
- class stdair::MemoryAllocationException
- class stdair::ObjectLinkingException
- class stdair::DocumentNotFoundException
- class stdair::ParserException
- class stdair::SerialisationException
- class stdair::KeyNotFoundException
- class stdair::CodeConversionException
- class stdair::CodeDuplicationException
- class stdair::ObjectCreationgDuplicationException
- class stdair::ObjectNotFoundException
- class stdair::ParsingFileFailedException
- class stdair::SQLDatabaseException
- class stdair::NonInitialisedDBSessionManagerException
- class stdair::SQLDatabaseConnectionImpossibleException
- class stdair::EventException
- class stdair::EventQueueException

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.538 stdair_exceptions.hpp

```
00001 #ifndef __STDAIR_STDAIR_EXCEPTIONS_HPP
00002 #define __STDAIR_STDAIR_EXCEPTIONS_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009
00010 namespace stdair {
00011
```

```
00019   class RootException : public std::exception {
00020   public:
00024     RootException (const std::string& iWhat) : _what (iWhat) {}
00028     RootException() : _what ("No further details") {}
00029
00033     virtual ~RootException() throw() {}
00034
00038     const char* what() const throw() {
00039       return _what.c_str();
00040     }
00041
00042   protected:
00046     std::string _what;
00047   };
00048
00050   class FileNotFoundException : public RootException {
00051   public:
00053     FileNotFoundException (const std::string& iWhat) : RootException (iWhat) {}
00054   };
00055
00057   class NonInitialisedLogServiceException : public RootException {
00058   public:
00060     NonInitialisedLogServiceException (const std::string& iWhat)
00061       : RootException (iWhat) {}
00062   };
00063
00065   class NonInitialisedServiceException : public RootException {
00066   public:
00068     NonInitialisedServiceException (const std::string& iWhat)
00069       : RootException (iWhat) {}
00070   };
00071
00073   class NonInitialisedContainerException : public RootException {
00074   public:
00076     NonInitialisedContainerException (const std::string& iWhat)
00077       : RootException (iWhat) {}
00078   };
00079
00081   class NonInitialisedRelationShipException : public RootException {
00082   public:
00084     NonInitialisedRelationShipException (const std::string& iWhat)
00085       : RootException (iWhat) {}
00086   };
00087
00089   class MemoryAllocationException : public RootException {
00090   public:
00092     MemoryAllocationException (const std::string& iWhat)
00093       : RootException (iWhat) {}
00094   };
00095
00097   class ObjectLinkingException : public RootException {
00098   public:
00100     ObjectLinkingException (const std::string& iWhat) : RootException (iWhat) {}
00101   };
00102
00104   class DocumentNotFoundException : public RootException {
00105   public:
00107     DocumentNotFoundException (const std::string& iWhat)
00108       : RootException (iWhat) {}
00109   };
00110
00112   class ParserException : public RootException {
```

```
00113   public:
00115     ParserException (const std::string& iWhat) : RootException (iWhat) {}
00116   };
00117
00119   class SerialisationException : public RootException {
00120   public:
00122     SerialisationException (const std::string& iWhat) : RootException (iWhat) {}
00123   };
00124
00126   class KeyNotFoundException : public RootException {
00127   public:
00129     KeyNotFoundException (const std::string& iWhat) : RootException (iWhat) {}
00130   };
00131
00133   class CodeConversionException : public ParserException {
00134   public:
00136     CodeConversionException (const std::string& iWhat)
00137       : ParserException (iWhat) {}
00138   };
00139
00141   class CodeDuplicationException : public ParserException {
00142   public:
00144     CodeDuplicationException (const std::string& iWhat)
00145       : ParserException(iWhat) {}
00146   };
00147
00149   class ObjectCreationgDuplicationException : public ParserException {
00150   public:
00152     ObjectCreationgDuplicationException (const std::string& iWhat)
00153       : ParserException (iWhat) {}
00154   };
00155
00157   class ObjectNotFoundException : public RootException {
00158   public:
00160     ObjectNotFoundException (const std::string& iWhat)
00161       : RootException (iWhat) {}
00162   };
00163
00165   class ParsingFileFailedException : public ParserException {
00166   public:
00168     ParsingFileFailedException (const std::string& iWhat)
00169       : ParserException (iWhat) {}
00170   };
00171
00173   class SQLDatabaseException : public RootException {
00174   public:
00176     SQLDatabaseException (const std::string& iWhat) : RootException (iWhat) {}
00177   };
00178
00180   class NonInitialisedDBSessionManagerException : public RootException {
00181   public:
00183     NonInitialisedDBSessionManagerException (const std::string& iWhat)
00184       : RootException (iWhat) {}
00185   };
00186
00188   class SQLDatabaseConnectionImpossibleException : public SQLDatabaseException {
00189   public:
00191     SQLDatabaseConnectionImpossibleException (const std::string& iWhat)
00192       : SQLDatabaseException (iWhat) {}
00193   };
00194
00196   class EventException : public RootException {
```

```
00197   public:
00199     EventException (const std::string& iWhat) : RootException (iWhat) {}
00200   };
00201
00203   class EventQueueException : public RootException {
00204   public:
00206     EventQueueException (const std::string& iWhat) : RootException (iWhat) {}
00207   };
00208
00209 }
00210 #endif // __STDAIR_STDAIR_EXCEPTIONS_HPP
```

35.539 stdair/stdair_fare_types.hpp File Reference

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef double stdair::NbOfFareRules_T

35.540 stdair_fare_types.hpp

```
00001 #ifndef __STDAIR_STDAIR_FARE_TYPES_HPP
00002 #define __STDAIR_STDAIR_FARE_TYPES_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007
00008 namespace stdair {
00009
00010   // //////// Type definitions /////////
00012   typedef double NbOfFareRules_T;
00013
00014 }
00015 #endif // __STDAIR_STDAIR_FARE_TYPES_HPP
```

35.541 stdair/stdair_file.hpp File Reference

```
#include <string>
#include <boost/utility.hpp>
#include <stdair/stdair_basic_types.hpp>
```

Classes

- class stdair::RootFilePath

Root of the input and output files.

- class stdair::InputFilePath

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.542 stdair_file.hpp

```
00001 #ifndef __STDAIR_STDAIR_FILE_HPP
00002 #define __STDAIR_STDAIR_FILE_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // Boost
00010 #include <boost/utility.hpp>
00011 // StdAir
00012 #include <stdair/stdair_basic_types.hpp>
00013
00014 namespace stdair {
00015
00022   class RootFilePath {
00023   public:
00027     RootFilePath (const Filename_T& iFilename) :
00028       _filename (iFilename) {}
00032     RootFilePath () : _filename ("MyFilename") {}
00033
00037     virtual ~RootFilePath() {}
00038
00042     const char * name() const {
00043       return _filename.c_str();
00044     }
00045
00046   protected:
00050     const Filename_T _filename;
00051   };
00052
00054   class InputFilePath : public RootFilePath {
00055   public:
00057     InputFilePath (const Filename_T& iFilename) :
00058       RootFilePath (iFilename) {}
00059   };
00060
00061 }
00062 #endif // __STDAIR_STDAIR_FILE_HPP
```

35.543 stdair/stdair_inventory_types.hpp File Reference

```
#include <string>
#include <vector>
```

```
#include <map>
#include <list>
#include <boost/multi_array.hpp>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_maths_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::string stdair::NetworkID_T
- typedef std::vector< AirlineCode_T > stdair::AirlineCodeList_T
- typedef std::vector< ClassList_String_T > stdair::ClassList_StringList_T
- typedef std::vector< ClassCode_T > stdair::ClassCodeList_T
- typedef unsigned short stdair::SubclassCode_T
- typedef std::string stdair::FlightPathCode_T
- typedef std::map< CabinCode_T, ClassList_String_T > stdair::CabinBookingClassMap_T
- typedef double stdair::CabinCapacity_T
- typedef double stdair::NbOfFlightDates_T
- typedef double stdair::CommittedSpace_T
- typedef double stdair::UPR_T
- typedef double stdair::BookingLimit_T
- typedef double stdair::AuthorizationLevel_T
- typedef double stdair::CapacityAdjustment_T
- typedef double stdair::BlockSpace_T
- typedef bool stdair::AvailabilityStatus_T
- typedef std::vector< Availability_T > stdair::BucketAvailabilities_T
- typedef double stdair::NbOfYields_T
- typedef double stdair::NbOfInventoryControlRules_T
- typedef bool stdair::CensorshipFlag_T
- typedef short stdair::DTD_T
- typedef short stdair::DCP_T
- typedef std::list< DCP_T > stdair::DCPList_T
- typedef std::map< DTD_T, RealNumber_T > stdair::DTDFratMap_T
- typedef std::map< FloatDuration_T, float > stdair::DTDProbMap_T
- typedef std::vector< CensorshipFlag_T > stdair::CensorshipFlagList_T
- typedef double stdair::BookingRatio_T
- typedef double stdair::Yield_T
- typedef unsigned int stdair::YieldLevel_T

- typedef std::map< YieldLevel_T, MeanStdDevPair_T > stdair::YieldLevelDemandMap_T
- typedef std::pair< Yield_T, MeanStdDevPair_T > stdair::YieldDemandPair_T
- typedef double stdair::BidPrice_T
- typedef std::vector< BidPrice_T > stdair::BidPriceVector_T
- typedef unsigned int stdair::SeatIndex_T
- typedef std::string stdair::ControlMode_T
- typedef double stdair::OverbookingRate_T
- typedef double stdair::ProtectionLevel_T
- typedef std::vector< double > stdair::EmsrValueList_T
- typedef std::vector< double > stdair::BookingLimitVector_T
- typedef std::vector< double > stdair::ProtectionLevelVector_T
- typedef boost::multi_array< double, 2 > stdair::SnapshotBlock_T
- typedef SnapshotBlock_T::index_range stdair::SnapshotBlockRange_T
- typedef SnapshotBlock_T::array_view< 1 >::type stdair::SegmentCabinDTDSnapshotView_T
- typedef SnapshotBlock_T::array_view< 2 >::type stdair::SegmentCabinDTDRangeSnapshotView_T
- typedef SnapshotBlock_T::const_array_view< 1 >::type stdair::ConstSegmentCabinDTDSnapshotView_T
- typedef SnapshotBlock_T::const_array_view< 2 >::type stdair::ConstSegmentCabinDTDRangeSnapshotView_T
- typedef unsigned short stdair::BlockNumber_T
- typedef unsigned short stdair::BlockIndex_T

35.544 stdair_inventory_types.hpp

```
00001 #ifndef __STDAIR_STDAIR_INVENTORY_TYPES_HPP
00002 #define __STDAIR_STDAIR_INVENTORY_TYPES_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <vector>
00010 #include <map>
00011 #include <list>
00012 // BOOST
00013 #include <boost/multi_array.hpp>
00014 // StdAir
00015 #include <stdair/stdair_basic_types.hpp>
00016 #include <stdair/stdair_maths_types.hpp>
00017 #include <stdair/stdair_date_time_types.hpp>
00018
00019 namespace stdair {
00020
00021   // //////// Type definitions /////////
00023   typedef std::string NetworkID_T;
00024
00026   typedef std::vector<AirlineCode_T> AirlineCodeList_T;
00027
00029   typedef std::vector<ClassList_String_T> ClassList_StringList_T;
```

```
00030
00032   typedef std::vector<ClassCode_T> ClassCodeList_T;
00033
00037   typedef unsigned short SubclassCode_T;
00038
00040   typedef std::string FlightPathCode_T;
00041
00044   typedef std::map<CabinCode_T, ClassList_String_T> CabinBookingClassMap_T;
00045
00048   typedef double CabinCapacity_T;
00049
00051   typedef double NbOfFlightDates_T;
00052
00054   typedef double CommittedSpace_T;
00055
00057   typedef double UPR_T;
00058
00060   typedef double BookingLimit_T;
00061
00063   typedef double AuthorizationLevel_T;
00064
00066   typedef double CapacityAdjustment_T;
00067
00069   typedef double BlockSpace_T;
00070
00072   typedef bool AvailabilityStatus_T;
00073
00075   typedef std::vector<Availability_T> BucketAvailabilities_T;
00076
00078   typedef double NbOfYields_T;
00079
00081   typedef double NbOfInventoryControlRules_T;
00082
00084   typedef bool CensorshipFlag_T;
00085
00087   typedef short DTD_T;
00088
00090   typedef short DCP_T;
00091
00093   typedef std::list<DCP_T> DCPList_T;
00094
00096   typedef std::map<DTD_T, RealNumber_T> DTDFratMap_T;
00097
00099   typedef std::map<FloatDuration_T, float> DTDProbMap_T;
00100
00103   typedef std::vector<CensorshipFlag_T> CensorshipFlagList_T;
00104
00107   typedef double BookingRatio_T;
00108
00110   typedef double Yield_T;
00111
00113   typedef unsigned int YieldLevel_T;
00114
00116   typedef std::map<YieldLevel_T, MeanStdDevPair_T> YieldLevelDemandMap_T;
00117
00119   typedef std::pair<Yield_T, MeanStdDevPair_T> YieldDemandPair_T;
00120
00122   typedef double BidPrice_T;
00123
00125   typedef std::vector<BidPrice_T> BidPriceVector_T;
00126
00128   typedef unsigned int SeatIndex_T;
```

```
00129
00131   typedef std::string ControlMode_T;
00132
00134   typedef double OverbookingRate_T;
00135
00138   typedef double BookingLimit_T;
00139
00142   typedef double ProtectionLevel_T;
00143
00145   typedef std::vector<double> EmsrValueList_T;
00146
00149   typedef std::vector<double> BookingLimitVector_T;
00150
00153   typedef std::vector<double> ProtectionLevelVector_T;
00154
00156   typedef boost::multi_array<double, 2> SnapshotBlock_T;
00157
00159   typedef SnapshotBlock_T::index_range SnapshotBlockRange_T;
00160
00162   typedef SnapshotBlock_T::array_view<1>::type SegmentCabinDTDSnapshotView_T;
00163
00165   typedef SnapshotBlock_T::array_view<2>::type
      SegmentCabinDTDRangeSnapshotView_T;
00166
00168   typedef SnapshotBlock_T::const_array_view<1>::type
      ConstSegmentCabinDTDSnapshotView_T;
00169
00171   typedef SnapshotBlock_T::const_array_view<2>::type
      ConstSegmentCabinDTDRangeSnapshotView_T;
00172
00174   typedef unsigned short BlockNumber_T;
00175
00177   typedef unsigned short BlockIndex_T;
00178
00179 }
00180 #endif // __STDAIR_STDAIR_INVENTORY_TYPES_HPP
```

35.545 stdair/stdair_log.hpp File Reference

```
#include <string>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.
- namespace stdair::LOG

Enumerations

- enum stdair::LOG::EN_LogLevel {

  stdair::LOG::CRITICAL = 0, stdair::LOG::ERROR, stdair::LOG::NOTIFICATION, stdair::LOG::WARNING,

  stdair::LOG::DEBUG, stdair::LOG::VERBOSE, stdair::LOG::LAST_VALUE }

Variables

- static const std::string stdair::LOG::_logLevels [LAST_VALUE]

35.546 stdair_log.hpp

```
00001 #ifndef __STDAIR_STDAIR_LOG_HPP
00002 #define __STDAIR_STDAIR_LOG_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009
00010 namespace stdair {
00011
00012   // Forward declarations
00013   class STDAIR_Service;
00014
00015   // /////////////// Log //////////////
00017   namespace LOG {
00018     typedef enum {
00019       CRITICAL = 0,
00020       ERROR,
00021       NOTIFICATION,
00022       WARNING,
00023       DEBUG,
00024       VERBOSE,
00025       LAST_VALUE
00026     } EN_LogLevel;
00027
00028     static const std::string _logLevels[LAST_VALUE] =
00029       {"C", "E", "N", "W", "D", "V"};
00030   }
00031
00032 }
00033 #endif // __STDAIR_STDAIR_LOG_HPP
```

35.547 stdair/stdair_maths_types.hpp File Reference

```
#include <string>
#include <vector>
#include <map>
#include <boost/random/linear_congruential.hpp>
#include <boost/random/uniform_real.hpp>
#include <boost/random/normal_distribution.hpp>
#include <boost/random/exponential_distribution.hpp>
#include <boost/random/variate_generator.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef unsigned int stdair::ReplicationNumber_T
- typedef unsigned long int stdair::ExponentialSeed_T
- typedef unsigned long int stdair::UniformSeed_T
- typedef unsigned long int stdair::RandomSeed_T
- typedef boost::minstd_rand stdair::BaseGenerator_T
- typedef boost::uniform_real stdair::UniformDistribution_T
- typedef boost::variate_generator< BaseGenerator_T &, UniformDistribution_T > stdair::UniformGenerator_T
- typedef boost::normal_distribution stdair::NormalDistribution_T
- typedef boost::variate_generator< BaseGenerator_T &, NormalDistribution_T > stdair::NormalGenerator_T
- typedef boost::exponential_distribution stdair::ExponentialDistribution_T
- typedef boost::variate_generator< BaseGenerator_T &, ExponentialDistribution_T > stdair::ExponentialGenerator_T
- typedef double stdair::MeanValue_T
- typedef double stdair::StdDevValue_T
- typedef std::pair< MeanValue_T, StdDevValue_T > stdair::MeanStdDevPair_T
- typedef float stdair::Probability_T

35.548 stdair_maths_types.hpp

```
00001 #ifndef __STDAIR_STDAIR_MATHS_TYPES_HPP
00002 #define __STDAIR_STDAIR_MATHS_TYPES_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <vector>
00010 #include <map>
00011 // Boost Random
00012 #include <boost/random/linear_congruential.hpp>
00013 #include <boost/random/uniform_real.hpp>
00014 #include <boost/random/normal_distribution.hpp>
00015 #include <boost/random/exponential_distribution.hpp>
00016 #include <boost/random/variate_generator.hpp>
00017
00018 namespace stdair {
00019
00020   // //////// Type definitions /////////
00024   typedef unsigned int ReplicationNumber_T;
00025
00029   typedef unsigned long int ExponentialSeed_T;
00030
```

```
00034   typedef unsigned long int UniformSeed_T;
00035
00039   typedef unsigned long int RandomSeed_T;
00040
00044   typedef boost::minstd_rand BaseGenerator_T;
00045
00049   typedef boost::uniform_real<> UniformDistribution_T;
00050
00054   typedef boost::variate_generator<BaseGenerator_T&,
00055                                    UniformDistribution_T> UniformGenerator_T;
00056
00060   typedef boost::normal_distribution<> NormalDistribution_T;
00061
00065   typedef boost::variate_generator<BaseGenerator_T&,
00066                                    NormalDistribution_T> NormalGenerator_T;
00067
00069   typedef boost::exponential_distribution<> ExponentialDistribution_T;
00070
00071
00073   typedef boost::variate_generator<BaseGenerator_T&,
00074                                    ExponentialDistribution_T>
      ExponentialGenerator_T;
00075
00079   typedef double MeanValue_T;
00080
00084   typedef double StdDevValue_T;
00085
00089   typedef std::pair<MeanValue_T, StdDevValue_T> MeanStdDevPair_T;
00090
00094   typedef float Probability_T;
00095
00096 }
00097 #endif // __STDAIR_STDAIR_MATHS_TYPES_HPP
```

35.549 stdair/stdair_rm_types.hpp File Reference

```
#include <string>
#include <vector>
#include <stdair/stdair_basic_types.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef std::string stdair::ForecasterMode_T
- typedef short stdair::HistoricalDataLimit_T
- typedef std::string stdair::OptimizerMode_T
- typedef NbOfBookings_T stdair::PolicyDemand_T
- typedef std::vector< double > stdair::GeneratedDemandVector_T

- typedef std::vector< GeneratedDemandVector_T > stdair::GeneratedDemandVectorHolder_T
- typedef double stdair::SellupProbability_T
- typedef std::vector< SellupProbability_T > stdair::SellupProbabilityVector_T
- typedef std::vector< double > stdair::SellupFactorHolder_T

35.550 stdair_rm_types.hpp

```
00001 #ifndef __STDAIR_STDAIR_RM_TYPES_HPP
00002 #define __STDAIR_STDAIR_RM_TYPES_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <vector>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012
00013 namespace stdair {
00014
00015   // //////// Type definitions /////////
00017   typedef std::string ForecasterMode_T;
00018
00020   typedef short HistoricalDataLimit_T;
00021
00023   typedef std::string OptimizerMode_T;
00024
00026   typedef NbOfBookings_T PolicyDemand_T;
00027
00030   typedef std::vector<double> GeneratedDemandVector_T;
00031
00033   typedef std::vector<GeneratedDemandVector_T> GeneratedDemandVectorHolder_T;
00034
00036   typedef double SellupProbability_T;
00037
00039   typedef std::vector<SellupProbability_T> SellupProbabilityVector_T;
00040
00042   typedef std::vector<double> SellupFactorHolder_T;
00043
00044 }
00045 #endif // __STDAIR_STDAIR_RM_TYPES_HPP
```

35.551 stdair/STDAIR_Service.hpp File Reference

```
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_service_types.hpp>
#include <stdair/basic/BasLogParams.hpp>
#include <stdair/basic/BasDBParams.hpp>
#include <stdair/basic/ServiceInitialisationType.hpp>
```

```
#include <stdair/basic/EventType.hpp>
#include <stdair/bom/TravelSolutionTypes.hpp>
```

Classes

- class stdair::STDAIR_Service

  Interface for the STDAIR Services.

Namespaces

- namespace stdair

  Handle on the StdAir library context.

35.552 STDAIR_Service.hpp

```
00001
00012 #ifndef __STDAIR_STDAIR_HPP
00013 #define __STDAIR_STDAIR_HPP
00014
00015 // //////////////////////////////////////////////////////////////////
00016 // Import section
00017 // //////////////////////////////////////////////////////////////////
00018 // STL
00019 #include <string>
00020 // StdAir
00021 #include <stdair/stdair_inventory_types.hpp>
00022 #include <stdair/stdair_service_types.hpp>
00023 #include <stdair/basic/BasLogParams.hpp>
00024 #include <stdair/basic/BasDBParams.hpp>
00025 #include <stdair/basic/ServiceInitialisationType.hpp>
00026 #include <stdair/basic/EventType.hpp>
00027 #include <stdair/bom/TravelSolutionTypes.hpp>
00028
00029 namespace stdair {
00030
00032   class BomRoot;
00033   class EventQueue;
00034   class EventStruct;
00035   struct ProgressStatusSet;
00036   struct BookingRequestStruct;
00037   class STDAIR_ServiceContext;
00038
00039
00043   class STDAIR_Service {
00044   public:
00045     // ////////// Constructors and destructors //////////
00049     STDAIR_Service();
00050
00062     STDAIR_Service (const BasLogParams&);
00063
00079     STDAIR_Service (const BasLogParams&, const BasDBParams&);
00080
00084     ~STDAIR_Service();
00085
00086
```

```
00087   public:
00088     // ////////////////// Business support methods /////////////////
00108     void buildSampleBom();
00109
00131     void buildDummyInventory (const CabinCapacity_T& iCabinCapacity);
00132
00147     void buildSampleTravelSolutionForPricing (TravelSolutionList_T&);
00148
00166     void buildSampleTravelSolutions (TravelSolutionList_T&);
00167
00196     BookingRequestStruct buildSampleBookingRequest (const bool isForCRS = false);
00197
00212     const Count_T& getExpectedTotalNumberOfEventsToBeGenerated() const;
00213
00230     const Count_T&
00231     getExpectedTotalNumberOfEventsToBeGenerated (const EventType::EN_EventType&)
      const;
00232
00245     const Count_T& getActualTotalNumberOfEventsToBeGenerated() const;
00246
00260     const Count_T&
00261     getActualTotalNumberOfEventsToBeGenerated (const EventType::EN_EventType&) co
      nst;
00262
00279     ProgressStatusSet popEvent (EventStruct&) const;
00280
00286     bool isQueueDone() const;
00287
00292     void reset() const;
00293
00294
00295   public:
00296     // ///////////////// Export support methods /////////////////
00306     std::string jsonExport (const AirlineCode_T&, const FlightNumber_T&,
00307                             const Date_T& iDepartureDate) const;
00308
00309
00310   public:
00311     // ///////////////// Display support methods /////////////////
00325     std::string list (const AirlineCode_T& iAirlineCode = "all",
00326                       const FlightNumber_T& iFlightNumber = 0) const;
00327
00334     std::string listAirportPairDateRange () const;
00335
00345     bool check (const AirlineCode_T&, const FlightNumber_T&,
00346                 const Date_T& iDepartureDate) const;
00347
00360     bool check (const AirportCode_T&, const AirportCode_T&,
00361                 const Date_T& iDepartureDate) const;
00362
00370     std::string csvDisplay() const;
00371
00381     std::string csvDisplay (const AirlineCode_T&, const FlightNumber_T&,
00382                             const Date_T& iDepartureDate) const;
00383
00391     std::string csvDisplay (const TravelSolutionList_T&) const;
00392
00403     std::string csvDisplay (const AirportCode_T&, const AirportCode_T&,
00404                             const Date_T& iDepartureDate) const;
00405
00406
```

```
00407   public:
00408     // ////////////////// Getters ///////////////////
00417     BomRoot& getBomRoot() const;
00418
00427     EventQueue& getEventQueue() const;
00428
00434     BasLogParams getLogParams() const;
00435
00442     const BasDBParams& getDBParams() const;
00443
00452     const ServiceInitialisationType& getServiceInitialisationType() const;
00453
00454
00455   private:
00456     // /////// Construction and Destruction helper methods ///////
00463     STDAIR_Service (const STDAIR_Service&);
00464
00469     void initServiceContext();
00470
00488     void logInit (const BasLogParams&);
00489
00495     void dbInit (const BasDBParams&);
00496
00512     void init();
00513
00517     void finalise();
00518
00519
00520   private:
00521     // ///////// Service Context /////////
00525     STDAIR_ServiceContext* _stdairServiceContext;
00526   };
00527 }
00528 #endif // __STDAIR_STDAIR_HPP
```

35.553 stdair/stdair_service_types.hpp File Reference

```
#include <boost/shared_ptr.hpp>
```

Namespaces

- namespace stdair

  Handle on the StdAir library context.

Typedefs

- typedef boost::shared_ptr< STDAIR_Service > stdair::STDAIR_ServicePtr_T

35.554 stdair_service_types.hpp

```
00001 #ifndef __STDAIR_STDAIR_SERVICE_HPP
00002 #define __STDAIR_STDAIR_SERVICE_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
```

```
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // Boost (Extended STL)
00008 #include <boost/shared_ptr.hpp>
00009
00010 namespace stdair {
00011
00012   // Forward declarations
00013   class STDAIR_Service;
00014
00016   typedef boost::shared_ptr<STDAIR_Service> STDAIR_ServicePtr_T;
00017
00018 }
00019 #endif // __STDAIR_STDAIR_SERVICE_HPP
```

35.555 stdair/stdair_types.hpp File Reference

```
#include <stdair/stdair_exceptions.hpp>
#include <stdair/stdair_log.hpp>
#include <stdair/stdair_db.hpp>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/stdair_maths_types.hpp>
#include <stdair/stdair_fare_types.hpp>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_rm_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/stdair_service_types.hpp>
```

35.556 stdair_types.hpp

```
00001 #ifndef __STDAIR_STDAIR_TYPES_HPP
00002 #define __STDAIR_STDAIR_TYPES_HPP
00003
00004 // ////////////////////////////////////////////////////////////////////
00005 // Import section
00006 // ////////////////////////////////////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_exceptions.hpp>
00009 #include <stdair/stdair_log.hpp>
00010 #include <stdair/stdair_db.hpp>
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/stdair_demand_types.hpp>
00013 #include <stdair/stdair_maths_types.hpp>
00014 #include <stdair/stdair_fare_types.hpp>
00015 #include <stdair/stdair_inventory_types.hpp>
00016 #include <stdair/stdair_rm_types.hpp>
00017 #include <stdair/stdair_date_time_types.hpp>
00018 #include <stdair/stdair_service_types.hpp>
00019
```

```
00020 #endif // __STDAIR_STDAIR_TYPES_HPP
```

35.557 stdair/ui/cmdline/readline_autocomp.hpp File Reference

```
#include <string>
#include <iosfwd>
#include <cstdio>
#include <sys/types.h>
#include <sys/file.h>
#include <sys/stat.h>
#include <sys/errno.h>
#include <readline/readline.h>
#include <readline/history.h>
```

Classes

- struct COMMAND

Typedefs

- typedef int(* pt2Func)(char *)

Functions

- char * getwd ()
- char * xmalloc (size_t)
- int com_list (char *)
- int com_view (char *)
- int com_rename (char *)
- int com_stat (char *)
- int com_pwd (char *)
- int com_delete (char *)
- int com_help (char *)
- int com_cd (char *)
- int com_quit (char *)
- char * stripwhite (char *iString)
- COMMAND * find_command (char *iString)
- char * dupstr (char *iString)
- int execute_line (char *line)
- char * command_generator (char *text, int state)
- char ** fileman_completion (char *text, int start, int end)
- void initialize_readline ()

- void too_dangerous (char *caller)
- int valid_argument (char *caller, char *arg)

Variables

- COMMAND commands []
- int done
- static char syscom [1024]

35.557.1 Typedef Documentation

35.557.1.1 typedef int(* pt2Func)(char *)

Definition at line 35 of file readline_autocomp.hpp.

35.557.2 Function Documentation

35.557.2.1 char* getwd ( )

readline_autocomp.hpp -- A tiny application which demonstrates how to use the GNU Readline library. This application interactively allows users to manipulate files and their modes.

Referenced by com_pwd().

35.557.2.2 char* xmalloc (size_t)

Referenced by dupstr().

35.557.2.3 void com_list (char * *arg*)

List the file(s) named in arg.

Definition at line 264 of file readline_autocomp.hpp.

35.557.2.4 int com_view (char * *arg*)

Definition at line 274 of file readline_autocomp.hpp.

References valid_argument().

35.557.2.5 int com_rename (char * *arg*)

Definition at line 284 of file readline_autocomp.hpp.

References too_dangerous().

35.557.2.6 int com_stat (char * *arg*)

Definition at line 289 of file readline_autocomp.hpp.

References valid_argument().

35.557.2.7 int com_pwd (char * *ignore*)

Definition at line 367 of file readline_autocomp.hpp.

References getwd().

Referenced by com_cd().

35.557.2.8 int com_delete (char * *arg*)

Definition at line 315 of file readline_autocomp.hpp.

References too_dangerous().

35.557.2.9 int com_help (char * *arg*)

Print out help for ARG, or for all of the commands if ARG is not present.

Definition at line 324 of file readline_autocomp.hpp.

References COMMAND::name.

35.557.2.10 int com_cd (char * *arg*)

Definition at line 356 of file readline_autocomp.hpp.

References com_pwd().

35.557.2.11 int com_quit (char * *arg*)

Definition at line 381 of file readline_autocomp.hpp.

35.557.2.12 char * stripwhite (char * *string*)

Strip whitespace from the start and end of STRING. Return a pointer into STRING.

Definition at line 152 of file readline_autocomp.hpp.

35.557.2.13 COMMAND * find_command (char * *name*)

Look up NAME as the name of a command, and return a pointer to that command. Return a NULL pointer if NAME isn't a command name.

Definition at line 136 of file readline_autocomp.hpp.

References COMMAND::name.

Referenced by execute_line().

35.557.2.14 char* dupstr (char * *iString*)

Duplicate a string

Definition at line 85 of file readline_autocomp.hpp.

References xmalloc().

Referenced by command_generator().

35.557.2.15 int execute_line (char * *line*)

Execute a command line.

Definition at line 94 of file readline_autocomp.hpp.

References find_command(), and COMMAND::func.

35.557.2.16 char * command_generator (char * *text*, int *state*)

Generator function for command completion. STATE lets us know whether to start from scratch; without any state (i.e. STATE == 0), then we start at the top of the list.

Definition at line 222 of file readline_autocomp.hpp.

References dupstr().

Referenced by fileman_completion().

35.557.2.17 char ** fileman_completion (char * *text*, int *start*, int *end*)

Attempt to complete on the contents of TEXT. START and END bound the region of rl_line_buffer that contains the word to complete. TEXT is the word to complete. We can use the entire contents of rl_line_buffer in case we want to do some simple parsing. Return the array of matches, or NULL if there aren't any.

Definition at line 200 of file readline_autocomp.hpp.

References command_generator().

Referenced by initialize_readline().

35.557.2.18 void initialize_readline ( )

Tell the GNU Readline library how to complete. We want to try to complete on command names if this is the first word in the line, or on filenames if not.

Definition at line 185 of file readline_autocomp.hpp.

References fileman_completion().

35.557.2.19 void too_dangerous (char * *caller*)

Definition at line 387 of file readline_autocomp.hpp.

Referenced by com_delete(), and com_rename().

35.557.2.20 int valid_argument (char * *caller*, char * *arg*)

Definition at line 395 of file readline_autocomp.hpp.

Referenced by com_stat(), and com_view().

35.557.3 Variable Documentation

35.557.3.1 COMMAND commands[]

Initial value:

```
{
  { "cd", (*com_cd)(), "Change to directory DIR" },
  { "delete", com_delete, "Delete FILE" },
  { "help", com_help, "Display this text" },
  { "?", com_help, "Synonym for `help'" },
  { "list", com_list, "List files in DIR" },
  { "ls", com_list, "Synonym for `list'" },
  { "pwd", com_pwd, "Print the current working directory" },
  { "quit", com_quit, "Quit using airinv" },
  { "rename", com_rename, "Rename FILE to NEWNAME" },
  { "stat", com_stat, "Print out statistics on FILE" },
  { "view", com_view, "View the contents of FILE" },
  { (char*) NULL, (pt2Func) NULL, (char*) NULL }
}
```

Definition at line 58 of file readline_autocomp.hpp.

35.557.3.2 int done

When non-zero, this global means the user is done using this program.

Definition at line 80 of file readline_autocomp.hpp.

35.557.3.3 char syscom[1024] [static]

String to pass to system(). This is for the LIST, VIEW and RENAME commands.

Definition at line 259 of file readline_autocomp.hpp.

35.558 readline_autocomp.hpp

```
00001
00006 #ifndef __AIRINV_READLINE_AUTOCOMP_HPP
00007 #define __AIRINV_READLINE_AUTOCOMP_HPP
00008
00009 // STL
00010 #include <string>
00011 #include <iosfwd>
00012 #include <cstdio>
00013 #include <sys/types.h>
00014 #include <sys/file.h>
00015 #include <sys/stat.h>
00016 #include <sys/errno.h>
00017
00018 #include <readline/readline.h>
00019 #include <readline/history.h>
00020
00021 extern char* getwd();
00022 extern char* xmalloc (size_t);
00023
00024 /* The names of functions that actually do the manipulation. */
00025 int com_list (char*);
00026 int com_view (char*);
00027 int com_rename (char*);
```

```
00028 int com_stat (char*);
00029 int com_pwd (char*);
00030 int com_delete (char*);
00031 int com_help (char*);
00032 int com_cd (char*);
00033 int com_quit (char*);
00034
00035 typedef int (*pt2Func) (char*);
00036
00041 typedef struct {
00045   char const* name;
00046
00050   pt2Func *func;
00051
00055   char *doc;
00056 } COMMAND;
00057
00058 COMMAND commands[] = {
00059   { "cd", (*com_cd)(), "Change to directory DIR" },
00060   { "delete", com_delete, "Delete FILE" },
00061   { "help", com_help, "Display this text" },
00062   { "?", com_help, "Synonym for `help'" },
00063   { "list", com_list, "List files in DIR" },
00064   { "ls", com_list, "Synonym for `list'" },
00065   { "pwd", com_pwd, "Print the current working directory" },
00066   { "quit", com_quit, "Quit using airinv" },
00067   { "rename", com_rename, "Rename FILE to NEWNAME" },
00068   { "stat", com_stat, "Print out statistics on FILE" },
00069   { "view", com_view, "View the contents of FILE" },
00070   { (char*) NULL, (pt2Func) NULL, (char*) NULL }
00071 };
00072
00073 // Forward declarations
00074 char* stripwhite (char* iString);
00075 COMMAND* find_command (char* iString);
00076
00080 int done;
00081
00085 char* dupstr (char* iString) {
00086   char* r = xmalloc (std::strlen (iString) + 1);
00087   strcpy (r, iString);
00088   return r;
00089 }
00090
00094 int execute_line (char* line) {
00095   register int i;
00096   COMMAND* command;
00097   char* word;
00098
00099   /* Isolate the command word. */
00100   i = 0;
00101   while (line[i] && whitespace (line[i])) {
00102     i++;
00103   }
00104   word = line + i;
00105
00106   while (line[i] && !whitespace (line[i])) {
00107     i++;
00108   }
00109
00110   if (line[i]) {
00111     line[i++] = '\0';
```

```
00112   }
00113
00114   command = find_command (word);
00115
00116   if (!command) {
00117     std::cerr << word << ": No such command for airinv." << std::endl;
00118     return -1;
00119   }
00120
00121   /* Get argument to command, if any. */
00122   while (whitespace (line[i])) {
00123     i++;
00124   }
00125
00126   word = line + i;
00127
00128   /* Call the function. */
00129   return (*(command->func)) (word);
00130 }
00131
00136 COMMAND* find_command (char* name) {
00137   register int i;
00138
00139   for (i = 0; commands[i].name; i++) {
00140     if (strcmp (name, commands[i].name) == 0) {
00141       return (&commands[i]);
00142     }
00143   }
00144
00145   return (COMMAND*) NULL;
00146 }
00147
00152 char* stripwhite (char* string) {
00153   register char *s, *t;
00154
00155   for (s = string; whitespace (*s); s++) {
00156   }
00157
00158   if (*s == 0) {
00159     return s;
00160   }
00161
00162   t = s + strlen (s) - 1;
00163   while (t > s && whitespace (*t)) {
00164     t--;
00165   }
00166   *++t = '\0';
00167
00168   return s;
00169 }
00170
00171 /* ********************************************************************** */
00172 /*                                                                        */
00173 /*                  Interface to Readline Completion                      */
00174 /*                                                                        */
00175 /* ********************************************************************** */
00176
00177 char* command_generator (char* text, int state);
00178 char** fileman_completion (char* text, int start, int end);
00179
00185 void initialize_readline() {
00186   /* Allow conditional parsing of the ~/.inputrc file. */
```

```
00187   rl_readline_name = "airinv";
00188
00189   /* Tell the completer that we want a crack first. */
00190   rl_attempted_completion_function = (rl_completion_func_t*) fileman_completion;
00191 }
00192
00200 char** fileman_completion (char* text, int start, int end) {
00201   char **matches;
00202
00203   matches = (char**) NULL;
00204
00210   if (start == 0) {
00211     matches = completion_matches (text, command_generator);
00212   }
00213
00214   return matches;
00215 }
00216
00222 char* command_generator (char* text, int state) {
00223   static int list_index, len;
00224   char* name;
00225
00231   if (!state) {
00232     list_index = 0;
00233     len = strlen (text);
00234   }
00235
00236   /* Return the next name which partially matches from the command list. */
00237   while (name = commands[list_index].name) {
00238     ++list_index;
00239
00240     if (strncmp (name, text, len) == 0) {
00241       return dupstr (name);
00242     }
00243   }
00244
00245   /* If no names matched, then return NULL. */
00246   return (char*) NULL;
00247 }
00248
00249 /* ********************************************************************* */
00250 /*                                                                       */
00251 /*                       airinv Commands                                 */
00252 /*                                                                       */
00253 /* ********************************************************************* */
00254
00259 static char syscom[1024];
00260
00264 void com_list (char* arg) {
00265   if (!arg) {
00266     arg = "";
00267   }
00268
00269   std::ostringstream oStr;
00270   oStr << "ls -FClg " << arg;
00271   return system (oStr.c_str());
00272 }
00273
00274 int com_view (char* arg) {
00275   if (!valid_argument ("view", arg)) {
00276     return 1;
00277   }
```

```
00278
00279   std::ostringstream oStr;
00280   oStr << "more " << arg;
00281   return system (syscom);
00282 }
00283
00284 int com_rename (char* arg) {
00285   too_dangerous ("rename");
00286   return 1;
00287 }
00288
00289 int com_stat (char* arg) {
00290   struct stat finfo;
00291
00292   if (!valid_argument ("stat", arg)) {
00293     return 1;
00294   }
00295
00296   if (stat (arg, &finfo) == -1) {
00297     perror (arg);
00298     return 1;
00299   }
00300
00301   std::cout << "Statistics for `" << arg << "':" << std::endl;
00302
00303   const std::string lPluralEnd1 = (finfo.st_nlink == 1) ? "" : "s";
00304   const std::string lPluralEnd2 = (finfo.st_size == 1) ? "" : "s";
00305   std::cout << arg << " has "
00306             << finfo.st_nlink << " link" << lPluralEnd1 << ", and is "
00307             << finfo.st_size << " byte" << lPluralEnd2 << " in length."
00308             << std::endl;
00309   std::cout << " Inode Last Change at: " << ctime (&finfo.st_ctime) << std::endl;

00310   std::cout << " Last access at: " << ctime (&finfo.st_atime) << std::endl;
00311   std::cout << " Last modified at: " << ctime (&finfo.st_mtime) << std::endl;
00312   return 0;
00313 }
00314
00315 int com_delete (char* arg) {
00316   too_dangerous ("delete");
00317   return 1;
00318 }
00319
00324 int com_help (char* arg) {
00325   register int i;
00326   int printed = 0;
00327
00328   for (i = 0; commands[i].name; i++) {
00329     if (!*arg || (strcmp (arg, commands[i].name) == 0)) {
00330       printf ("%s\t\t%s.\n", commands[i].name, commands[i].doc);
00331       printed++;
00332     }
00333   }
00334
00335   if (!printed) {
00336     printf ("No commands match `%s'.  Possibilties are:\n", arg);
00337
00338     for (i = 0; commands[i].name; i++) {
00339       /* Print in six columns. */
00340       if (printed == 6) {
00341         printed = 0;
00342         printf ("\n");
```

```
00343       }
00344
00345       printf ("%s\t", commands[i].name);
00346       printed++;
00347     }
00348
00349     if (printed)
00350       printf ("\n");
00351   }
00352   return 0;
00353 }
00354
00355 /* Change to the directory ARG. */
00356 int com_cd (char* arg) {
00357   if (chdir (arg) == -1) {
00358     perror (arg);
00359     return 1;
00360   }
00361
00362   com_pwd ("");
00363   return 0;
00364 }
00365
00366 /* Print out the current working directory. */
00367 int com_pwd (char* ignore) {
00368   char dir[1024], *s;
00369
00370   s = getwd (dir);
00371   if (s == 0) {
00372     printf ("Error getting pwd: %s\n", dir);
00373     return 1;
00374   }
00375
00376   printf ("Current directory is %s\n", dir);
00377   return 0;
00378 }
00379
00380 /* The user wishes to quit using this program.  Just set DONE non-zero. */
00381 int com_quit (char* arg) {
00382   done = 1;
00383   return 0;
00384 }
00385
00386 /* Function which tells you that you can't do this. */
00387 void too_dangerous (char* caller) {
00388   fprintf (stderr,
00389            "%s: Too dangerous for me to distribute.  Write it yourself.\n",
00390            caller);
00391 }
00392
00393 /* Return non-zero if ARG is a valid argument for CALLER, else print
00394  *    an error message and return zero. */
00395 int valid_argument (char* caller, char* arg) {
00396   if (!arg || !*arg) {
00397     fprintf (stderr, "%s: Argument required.\n", caller);
00398     return 0;
00399   }
00400
00401   return 1;
00402 }
00403
00404 #endif // _AIRINV_READLINE_AUTOCOMP_HPP
```

35.559 stdair/ui/cmdline/SReadline.hpp File Reference

C++ wrapper around libreadline.

```
#include <stdio.h>
#include <readline/readline.h>
#include <readline/history.h>
#include <readline/keymaps.h>
#include <string>
#include <fstream>
#include <vector>
#include <stdexcept>
#include <map>
#include <boost/algorithm/string/trim.hpp>
#include <boost/tokenizer.hpp>
#include <boost/function.hpp>
```

Classes

- class swift::SKeymap

  The readline keymap wrapper.
- class swift::SReadline

  The readline library wrapper.

Namespaces

- namespace swift

  The wrapper namespace.

35.559.1 Detailed Description

C++ wrapper around libreadline. Supported: editing, history, custom completers, keymaps. Attention: implementation is not thread safe! It is mainly because the readline library provides pure C interface and has many calls for an "atomic" completion operation

Definition in file SReadline.hpp.

35.560 SReadline.hpp

```
00001
00011 //
00012 // Date:      17 December 2005
```

```
00013 //            03 April    2006
00014 //            20 April    2006
00015 //            07 May      2006
00016 //
00017 // Copyright (c) Sergey Satskiy 2005 - 2006
00018 //               <sergesatsky@yahoo.com>
00019 //
00020 // Permission to copy, use, modify, sell and distribute this software
00021 // is granted provided this copyright notice appears in all copies.
00022 // This software is provided "as is" without express or implied
00023 // warranty, and with no claim as to its suitability for any purpose.
00024 //
00025
00026 #ifndef SREADLINE_H
00027 #define SREADLINE_H
00028
00029 #include <stdio.h>
00030
00031 #include <readline/readline.h>
00032 #include <readline/history.h>
00033 #include <readline/keymaps.h>
00034
00035 #include <string>
00036 #include <fstream>
00037 #include <vector>
00038 #include <stdexcept>
00039 #include <map>
00040
00041 #include <boost/algorithm/string/trim.hpp>
00042 #include <boost/tokenizer.hpp>
00043 #include <boost/function.hpp>
00044
00045
00050 namespace {
00054   typedef std::vector<std::string> TokensStorage;
00055
00059   typedef std::vector<TokensStorage> CompletionsStorage;
00060
00064   typedef boost::function<int (int, int)> KeyCallback;
00065
00069   typedef std::map<int, KeyCallback> KeysBind;
00070
00074   const size_t DefaultHistoryLimit (64);
00075
00079   CompletionsStorage Completions;
00080
00084   TokensStorage Tokens;
00085
00089   std::map<Keymap, KeysBind> Keymaps;
00090
00094   bool KeymapWasSetup (false);
00095
00099   Keymap Earlykeymap (0);
00100
00101
00108   char* Generator (const char* text, int State);
00109
00110
00118   char** UserCompletion (const char* text, int start, int end);
00119
00120
00128   int KeyDispatcher (int Count, int Key);
```

```
00129
00130
00135   int StartupHook (void);
00136
00137
00145   template <typename  Container>
00146   bool AreTokensEqual (const Container& Pattern, const Container& Input) {
00147     if (Input.size() > Pattern.size()) {
00148       return false;
00149     }
00150
00151     typename Container::const_iterator k (Pattern.begin());
00152     typename Container::const_iterator j (Input.begin());
00153     for ( ; j != Input.end(); ++k, ++j) {
00154       const std::string lPattern = *k;
00155       if (lPattern == "%file") {
00156         continue;
00157       }
00158
00159       const std::string lInput = *j;
00160       if (lPattern != lInput) {
00161         return false;
00162       }
00163     }
00164     return true;
00165   }
00166
00167   // See description near the prototype
00168   template <typename  ContainerType>
00169   void SplitTokens (const std::string& Source, ContainerType& Container) {
00170     typedef boost::tokenizer<boost::char_separator<char> > TokenizerType;
00171
00172     // Set of token separators
00173     boost::char_separator<char> Separators (" \t\n");
00174     // Tokens provider
00175     TokenizerType Tokenizer (Source, Separators);
00176
00177     Container.clear();
00178     for (TokenizerType::const_iterator k (Tokenizer.begin());
00179          k != Tokenizer.end(); ++k) {
00180       // Temporary storage for the token, in order to trim that latter
00181       std::string SingleToken (*k);
00182
00183       boost::algorithm::trim (SingleToken);
00184       Container.push_back (SingleToken);
00185     }
00186   }
00187
00188   // See description near the prototype
00189   char** UserCompletion (const char* text, int start, int end) {
00190     // No default completion at all
00191     rl_attempted_completion_over = 1;
00192
00193     if (Completions.empty() == true) {
00194       return NULL;
00195     }
00196
00197     // Memorise all the previous tokens
00198     std::string PreInput (rl_line_buffer, start);
00199     SplitTokens (PreInput, Tokens);
00200
00201     // Detect whether we should call the standard file name completer
```

```
00202     // or a custom one
00203     bool FoundPretender (false);
00204
00205     for (CompletionsStorage::const_iterator k (Completions.begin());
00206          k != Completions.end(); ++k) {
00207       const TokensStorage& lTokenStorage = *k;
00208       if (AreTokensEqual (lTokenStorage, Tokens) == false) {
00209         continue;
00210       }
00211
00212       if (lTokenStorage.size() > Tokens.size()) {
00213         FoundPretender = true;
00214         if (lTokenStorage [Tokens.size()] == "%file") {
00215           // Standard file name completer - called for the "%file" keyword
00216           return rl_completion_matches (text, rl_filename_completion_function);
00217         }
00218       }
00219     }
00220
00221     if (FoundPretender) {
00222       return rl_completion_matches (text, Generator);
00223     }
00224     return NULL;
00225   }
00226
00227   // See description near the prototype
00228   char* Generator (const char* text, int State) {
00229     static int Length;
00230     static CompletionsStorage::const_iterator Iterator;
00231
00232     if ( State == 0 ) {
00233       Iterator = Completions.begin();
00234       Length = strlen (text);
00235     }
00236
00237     for ( ; Iterator != Completions.end(); ++Iterator) {
00238       const TokensStorage& lCompletion = *Iterator;
00239       if (AreTokensEqual (lCompletion, Tokens) == false) {
00240         continue;
00241       }
00242
00243       if (lCompletion.size() > Tokens.size()) {
00244         if (lCompletion [Tokens.size()] == "%file") {
00245           continue;
00246         }
00247
00248         const char* lCompletionCharStr (lCompletion [Tokens.size()].c_str());
00249         if (strncmp (text, lCompletionCharStr, Length) == 0) {
00250           // Readline will free the allocated memory
00251           const size_t lCompletionSize = strlen (lCompletionCharStr) + 1;
00252           char* NewString (static_cast<char*> (malloc (lCompletionSize)));
00253           strcpy (NewString, lCompletionCharStr);
00254
00255           ++Iterator;
00256
00257           return NewString;
00258         }
00259       }
00260     }
00261
00262     return NULL;
00263   }
```

```
00264
00265
00266   // See the description near the prototype
00267   int KeyDispatcher  (int Count, int  Key ) {
00268     std::map< Keymap, KeysBind >::iterator Set (Keymaps.find (rl_get_keymap()));
00269     if (Set == Keymaps.end()) {
00270       // Most probably it happens bacause the header was
00271       // included into many compilation units and the
00272       // keymap setting calls were made in different files.
00273       // This is the problem of "global" data.
00274       // The storage of all the registered keymaps is in anonymous
00275       // namespace.
00276       throw std::runtime_error ("Error selecting a keymap.");
00277     }
00278
00279     (Set->second)[Key] (Count, Key);
00280     return 0;
00281   }
00282
00283   // See the description near the prototype
00284   int StartupHook (void) {
00285     if (KeymapWasSetup) {
00286       rl_set_keymap (Earlykeymap);
00287     }
00288     return 0;
00289   }
00290
00291 } // Anonymous namespace
00292
00293
00299 namespace swift {
00300
00307   class SKeymap {
00308   private:
00309     // Readline keymap
00310     Keymap keymap;
00311
00312   public:
00319     explicit SKeymap (bool PrintableBound = false) : keymap (NULL) {
00320       if (PrintableBound == true) {
00321         // Printable characters are bound
00322         keymap = rl_make_keymap();
00323
00324       } else {
00325         // Empty keymap
00326         keymap = rl_make_bare_keymap();
00327       }
00328
00329       if (keymap == NULL) {
00330         throw std::runtime_error ("Cannot allocate keymap.");
00331       }
00332
00333       // Register a new keymap in the global list
00334       Keymaps [keymap] = KeysBind();
00335     }
00336
00342     explicit SKeymap (Keymap Pattern) : keymap (rl_copy_keymap (Pattern)) {
00343       if ( keymap == NULL ) {
00344         throw std::runtime_error( "Cannot allocate keymap." );
00345       }
00346
00347       // Register a new keymap in the global list
```

```
00348       Keymaps [keymap] = KeysBind();
00349     }
00350
00354     ~SKeymap() {
00355       // Deregister the keymap
00356       Keymaps.erase (keymap);
00357       rl_discard_keymap (keymap);
00358     }
00359
00366     void Bind (int  Key, KeyCallback  Callback) {
00367       Keymaps [keymap][Key] = Callback;
00368
00369       if (rl_bind_key_in_map (Key, KeyDispatcher, keymap) != 0) {
00370         // Remove from the map just bound key
00371         Keymaps [keymap].erase (Key);
00372         throw std::runtime_error ("Invalid key.");
00373       }
00374     }
00375
00381     void Unbind (int  Key) {
00382       rl_unbind_key_in_map (Key, keymap);
00383       Keymaps [keymap].erase (Key);
00384     }
00385
00386     // void Bind (const std::string& Sequence, boost::function<int (int, int)>);
00387     // void Unbind (std::string&  Sequence);
00388
00389   public:
00395     SKeymap (const SKeymap& rhs) {
00396       if (this == &rhs) {
00397         return;
00398       }
00399       keymap = rl_copy_keymap (rhs.keymap);
00400     }
00401
00407     SKeymap& operator= (const SKeymap& rhs) {
00408       if (this == &rhs) {
00409         return *this;
00410       }
00411       keymap = rl_copy_keymap (rhs.keymap);
00412       return *this;
00413     }
00414
00415     friend class SReadline;
00416   };
00417
00424   class SReadline {
00425   public:
00431     SReadline (const size_t Limit = DefaultHistoryLimit) :
00432       HistoryLimit (Limit), HistoryFileName (""),
00433       OriginalCompletion (rl_attempted_completion_function) {
00434       rl_startup_hook = StartupHook;
00435       rl_attempted_completion_function = UserCompletion;
00436       using_history();
00437     }
00438
00446     SReadline( const std::string &  historyFileName,
00447                const size_t  Limit = DefaultHistoryLimit ) :
00448       HistoryLimit( Limit ),
00449       HistoryFileName( historyFileName ),
00450       OriginalCompletion( rl_attempted_completion_function )
00451     {
```

```
00452       rl_startup_hook = StartupHook;
00453       rl_attempted_completion_function = UserCompletion;
00454       using_history();
00455       LoadHistory( HistoryFileName );
00456     }
00457
00462     ~SReadline() {
00463       rl_attempted_completion_function = OriginalCompletion;
00464       SaveHistory (HistoryFileName);
00465     }
00466
00473     std::string GetLine (const std::string& Prompt) {
00474       bool Unused;
00475       return GetLine (Prompt, Unused);
00476     }
00477
00486     template <typename  Container>
00487     std::string GetLine (const std::string& Prompt, Container& ReadTokens) {
00488       bool Unused;
00489       return GetLine (Prompt, ReadTokens, Unused);
00490     }
00491
00501     template <typename  Container>
00502     std::string GetLine (const std::string& Prompt, Container& ReadTokens,
00503                          bool& BreakOut) {
00504       std::string Input (GetLine (Prompt, BreakOut));
00505       SplitTokens (Input, ReadTokens);
00506       return Input;
00507     }
00508
00509
00517     std::string GetLine (const std::string& Prompt, bool& BreakOut) {
00518       BreakOut = true;
00519
00520       char* ReadLine (readline (Prompt.c_str()));
00521       if (ReadLine == NULL) {
00522         return std::string();
00523       }
00524
00525       // It's OK
00526       BreakOut = false;
00527       std::string Input (ReadLine);
00528       free (ReadLine); ReadLine = NULL;
00529
00530       boost::algorithm::trim (Input);
00531       if (Input.empty() == false) {
00532         if (history_length == 0
00533             || Input != history_list()[ history_length - 1 ]->line) {
00534           add_history (Input.c_str());
00535
00536           if (history_length >= static_cast<int> (HistoryLimit)) {
00537             stifle_history (HistoryLimit);
00538           }
00539         }
00540       }
00541
00542       return Input;
00543     }
00544
00545
00551     template <typename ContainerType>
00552     void GetHistory (ContainerType&  Container) {
```

```
00553       for (int k (0); k < history_length; ++k ) {
00554         Container.push_back (history_list()[k]->line);
00555       }
00556     }
00557
00564     bool SaveHistory (std::ostream& OS) {
00565       if (!OS) {
00566         return false;
00567       }
00568
00569       for (int k (0); k < history_length; ++k) {
00570         OS << history_list()[ k ]->line << std::endl;
00571       }
00572       return true;
00573     }
00574
00581     bool SaveHistory (const std::string&  FileName) {
00582       if (FileName.empty() == true) {
00583         return false;
00584       }
00585
00586       std::ofstream OS (FileName.c_str());
00587       return SaveHistory (OS);
00588     }
00589
00594     void ClearHistory() {
00595       clear_history();
00596     }
00597
00604     bool LoadHistory (std::istream& IS) {
00605       if (!IS) {
00606         return false;
00607       }
00608
00609       ClearHistory();
00610       std::string OneLine;
00611
00612       while (!getline (IS, OneLine).eof()) {
00613         boost::algorithm::trim( OneLine );
00614         if ((history_length == 0)
00615             || OneLine != history_list()[history_length - 1]->line) {
00616           add_history (OneLine.c_str());
00617         }
00618       }
00619       stifle_history (HistoryLimit);
00620       return true;
00621     }
00622
00629     bool LoadHistory (const std::string&  FileName) {
00630       if (FileName.empty() == true) {
00631         return false;
00632       }
00633
00634       std::ifstream IS (FileName.c_str());
00635       return LoadHistory (IS);
00636     }
00637
00657     template <typename  ContainerType>
00658     void RegisterCompletions (const ContainerType& Container) {
00659       Completions.clear();
00660       for (typename ContainerType::const_iterator k (Container.begin());
00661            k != Container.end(); ++k) {
```

```
00662         std::vector<std::string> OneLine;
00663         const std::string& kStr = static_cast<std::string> (*k);
00664
00665         SplitTokens (kStr, OneLine);
00666         Completions.push_back (OneLine);
00667       }
00668     }
00669
00675     void SetKeymap (SKeymap& NewKeymap) {
00676       rl_set_keymap (NewKeymap.keymap);
00677       KeymapWasSetup = true;
00678       Earlykeymap = NewKeymap.keymap;
00679     }
00680
00681
00682   private:
00683     // /////////////////////////// Attributes ////////////////////////
00687     const size_t HistoryLimit;
00688
00692     const std::string HistoryFileName;
00693
00697     rl_completion_func_t* OriginalCompletion;
00698   };
00699
00700 }; // namespace swift
00701
00702 #endif
00703
```

35.561 test/stdair/MPBomRoot.cpp File Reference

35.562 MPBomRoot.cpp

```
00001
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <cassert>
00010 // StdAir Test
00011 #include <test/stdair/MPBomRoot.hpp>
00012
00013 namespace myprovider {
00014
00015   // ////////////////////////////////////////////////////////////////////
00016   BomRoot::BomRoot (const Key_T& iKey) : stdair::BomRoot (iKey) {
00017   }
00018
00019   // ////////////////////////////////////////////////////////////////////
00020   BomRoot::~BomRoot () {
00021   }
00022
00023 }
```

35.563 test/stdair/MPBomRoot.hpp File Reference

35.564 MPBomRoot.hpp

```
00001 #ifndef __MYPROVIDER_BOMROOT_HPP
00002 #define __MYPROVIDER_BOMROOT_HPP
00003
00008 // //////////////////////////////////////////////////////////////////
00009 // Import section
00010 // //////////////////////////////////////////////////////////////////
00011 // STL
00012 #include <string>
00013 // StdAir
00014 #include <stdair/bom/BomRoot.hpp>
00015
00016 namespace myprovider {
00017
00020   class BomRoot : public stdair::BomRoot {
00021   public:
00022     // /////////// Display support methods /////////
00024     std::string toString() const { return describeKey(); }
00025
00028     const std::string describeKey() const { return std::string (""); }
00029
00030   public:
00034     BomRoot (const Key_T&);
00036     ~BomRoot();
00038     BomRoot ();
00039     BomRoot (const BomRoot&);
00040   };
00041
00042 }
00046 #endif // __MYPROVIDER_BOMROOT_HPP
```

35.565 test/stdair/MPInventory.cpp File Reference

35.566 MPInventory.cpp

```
00001
00005 // //////////////////////////////////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <cassert>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 // StdAir Test
00013 #include <test/stdair/MPInventory.hpp>
00014
00015 namespace myprovider {
00016
00017   // //////////////////////////////////////////////////////////////////
00018   Inventory::Inventory (const Key_T& iKey) : stdair::Inventory (iKey) {
00019   }
00020
00021   // //////////////////////////////////////////////////////////////////
00022   Inventory::~Inventory () {
00023   }
00024
00025   // //////////////////////////////////////////////////////////////////
00026   std::string Inventory::toString() const {
```

```
00027     std::ostringstream oStr;
00028     oStr << _key.toString();
00029     return oStr.str();
00030   }
00031
00032   // ////////////////////////////////////////////////////////////////////
00033   const std::string Inventory::describeKey() const {
00034     return _key.toString();
00035   }
00036
00037 }
```

35.567 test/stdair/MPInventory.hpp File Reference

35.568 MPInventory.hpp

```
00001 #ifndef __MYPROVIDER_INVENTORY_HPP
00002 #define __MYPROVIDER_INVENTORY_HPP
00003
00008 // ////////////////////////////////////////////////////////////////////
00009 // Import section
00010 // ////////////////////////////////////////////////////////////////////
00011 // STL
00012 #include <list>
00013 // StdAir
00014 #include <stdair/bom/Inventory.hpp>
00015
00016 namespace myprovider {
00017
00018   class Inventory : public stdair::Inventory {
00019   public:
00020     // ////////// Display support methods /////////
00022     std::string toString() const;
00023
00026     const std::string describeKey() const;
00027
00028   public:
00032     Inventory (const Key_T&);
00034     ~Inventory();
00036     Inventory ();
00037     Inventory (const Inventory&);
00038   };
00039
00040   // ////////// Type definitions /////////
00042   typedef std::list<Inventory*> InventoryList_T;
00043
00044 }
00048 #endif // __MYPROVIDER_INVENTORY_HPP
```

35.569 test/stdair/StandardAirlineITTestSuite.cpp File Reference

35.570 StandardAirlineITTestSuite.cpp

```
00001
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
```

```
00008 // STL
00009 #include <sstream>
00010 #include <fstream>
00011 #include <string>
00012 // Boost MPL
00013 #include <boost/mpl/push_back.hpp>
00014 #include <boost/mpl/vector.hpp>
00015 #include <boost/mpl/at.hpp>
00016 #include <boost/mpl/assert.hpp>
00017 #include <boost/type_traits/is_same.hpp>
00018 // Boost Unit Test Framework (UTF)
00019 #define BOOST_TEST_DYN_LINK
00020 #define BOOST_TEST_MAIN
00021 #define BOOST_TEST_MODULE StdAirTest
00022 #if BOOST_VERSION >= 103900
00023 #include <boost/test/unit_test.hpp>
00024 #else  // BOOST_VERSION >= 103900
00025 #include <boost/test/test_tools.hpp>
00026 #include <boost/test/results_reporter.hpp>
00027 #include <boost/test/unit_test_suite.hpp>
00028 #include <boost/test/output_test_stream.hpp>
00029 #include <boost/test/unit_test_log.hpp>
00030 #include <boost/test/framework.hpp>
00031 #include <boost/test/detail/unit_test_parameters.hpp>
00032 #endif // BOOST_VERSION >= 103900
00033 // Boost Serialisation
00034 #include <boost/archive/text_oarchive.hpp>
00035 #include <boost/archive/text_iarchive.hpp>
00036 // StdAir
00037 #include <stdair/stdair_inventory_types.hpp>
00038 #include <stdair/service/Logger.hpp>
00039 #include <stdair/STDAIR_Service.hpp>
00040 #include <stdair/basic/float_utils.hpp>
00041 #include <stdair/bom/BomDisplay.hpp>
00042 #include <stdair/bom/BomRoot.hpp>
00043 #include <stdair/bom/BomManager.hpp>
00044 #include <stdair/factory/FacBom.hpp>
00045 #include <stdair/factory/FacBomManager.hpp>
00046 // StdAir Test Suite
00047 #include <test/stdair/StdairTestLib.hpp>
00048 #include <test/stdair/MPInventory.hpp>
00049
00050 namespace boost_utf = boost::unit_test;
00051
00052 #if BOOST_VERSION >= 103900
00053
00054 // (Boost) Unit Test XML Report
00055 std::ofstream utfReportStream ("StandardAirlineITTestSuite_utfresults.xml");
00056
00060 struct UnitTestConfig {
00062   UnitTestConfig() {
00063     boost_utf::unit_test_log.set_stream (utfReportStream);
00064     boost_utf::unit_test_log.set_format (boost_utf::XML);
00065     boost_utf::unit_test_log.set_threshold_level (boost_utf::log_test_units);
00066     // boost_utf::unit_test_log.set_threshold_level (boost_utf::log_successful_te
      sts);
00067   }
00068
00070   ~UnitTestConfig() {
00071   }
00072 };
00073
```

```
00074
00075 // /////////////// Main: Unit Test Suite //////////////
00076
00077 // Set the UTF configuration (re-direct the output to a specific file)
00078 BOOST_GLOBAL_FIXTURE (UnitTestConfig);
00079
00080 // Start the test suite
00081 BOOST_AUTO_TEST_SUITE (master_test_suite)
00082
00083
00087 BOOST_AUTO_TEST_CASE (float_comparison_test) {
00088   float a = 0.2f;
00089   a = 5*a;
00090   const float b = 1.0f;
00091
00092   // Test the Boost way
00093   BOOST_CHECK_MESSAGE (a == b, "The two floats (" << a << " and " << b
00094                        << ") should be equal, but are not");
00095   BOOST_CHECK_CLOSE (a, b, 0.0001);
00096
00097   // Test the Google way
00098   const FloatingPoint<float> lhs (a), rhs (b);
00099   BOOST_CHECK_MESSAGE (lhs.AlmostEquals (rhs),
00100                        "The two floats (" << a << " and " << b
00101                        << ") should be equal, but are not");
00102 }
00103
00108 BOOST_AUTO_TEST_CASE (mpl_structure_test) {
00109   const stdair::ClassCode_T lBookingClassCodeA ("A");
00110   const stdair_test::BookingClass lA (lBookingClassCodeA);
00111   const stdair_test::Cabin lCabin (lA);
00112
00113   BOOST_CHECK_EQUAL (lCabin.toString(), lBookingClassCodeA);
00114   BOOST_CHECK_MESSAGE (lCabin.toString() == lBookingClassCodeA,
00115                        "The cabin key, '" << lCabin.toString()
00116                        << "' is not equal to '" << lBookingClassCodeA << "'");
00117
00118   // MPL
00119   typedef boost::mpl::vector<stdair_test::BookingClass> MPL_BookingClass;
00120   typedef boost::mpl::push_back<MPL_BookingClass,
00121                                 stdair_test::Cabin>::type types;
00122
00123   if (boost::is_same<stdair_test::BookingClass,
00124                      stdair_test::Cabin::child>::value == false) {
00125     BOOST_REQUIRE ("The two types mut be equal, but are not");
00126   }
00127
00128   if (boost::is_same<boost::mpl::at_c<types, 1>::type,
00129                      stdair_test::Cabin>::value == false) {
00130     BOOST_REQUIRE ("The type must be stdair_test::Cabin, but is not");
00131   }
00132 }
00133
00137 BOOST_AUTO_TEST_CASE (stdair_service_initialisation_test) {
00138   // Output log File
00139   const std::string lLogFilename ("StandardAirlineITTestSuite_init.log");
00140
00141   // Set the log parameters
00142   std::ofstream logOutputFile;
00143
00144   // Open and clean the log outputfile
00145   logOutputFile.open (lLogFilename.c_str());
```

```
00146   logOutputFile.clear();
00147
00148   // Initialise the stdair BOM
00149   const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
00150   stdair::STDAIR_Service stdairService (lLogParams);
00151
00152   // Retrieve (a reference on) the top of the BOM tree
00153   stdair::BomRoot& lBomRoot = stdairService.getBomRoot();
00154
00155   // Retrieve the BomRoot key, and compare it to the expected one
00156   const std::string& lBomRootKeyStr = lBomRoot.describeKey();
00157   const std::string lBomRootString (" -- ROOT -- ");
00158
00159   // DEBUG
00160   STDAIR_LOG_DEBUG ("The BOM root key is '" << lBomRootKeyStr
00161                     << "'. It should be equal to '" << lBomRootString << "'");
00162
00163   BOOST_CHECK_EQUAL (lBomRootKeyStr, lBomRootString);
00164   BOOST_CHECK_MESSAGE (lBomRootKeyStr == lBomRootString,
00165                        "The BOM root key, '" << lBomRootKeyStr
00166                        << "', should be equal to '" << lBomRootString
00167                        << "', but is not.");
00168
00169   // Build a sample BOM tree
00170   stdairService.buildSampleBom();
00171
00172   // DEBUG: Display the whole BOM tree
00173   const std::string& lCSVDump = stdairService.csvDisplay();
00174   STDAIR_LOG_DEBUG (lCSVDump);
00175
00176   // Close the Log outputFile
00177   logOutputFile.close();
00178 }
00179
00183 BOOST_AUTO_TEST_CASE (bom_structure_instantiation_test) {
00184   // Step 0.0: initialisation
00185   // Create the root of the Bom tree (i.e., a BomRoot object)
00186   stdair::BomRoot& lBomRoot =
00187     stdair::FacBom<stdair::BomRoot>::instance().create();
00188
00189   // Step 0.1: Inventory level
00190   // Create an Inventory (BA)
00191   const stdair::AirlineCode_T lBAAirlineCode ("BA");
00192   const stdair::InventoryKey lBAKey (lBAAirlineCode);
00193   myprovider::Inventory& lBAInv =
00194     stdair::FacBom<myprovider::Inventory>::instance().create (lBAKey);
00195   stdair::FacBomManager::addToList (lBomRoot, lBAInv);
00196
00197   BOOST_CHECK_EQUAL (lBAInv.describeKey(), lBAAirlineCode);
00198   BOOST_CHECK_MESSAGE (lBAInv.describeKey() == lBAAirlineCode,
00199                        "The inventory key, '" << lBAInv.describeKey()
00200                        << "', should be equal to '" << lBAAirlineCode
00201                        << "', but is not");
00202
00203   // Create an Inventory for AF
00204   const stdair::AirlineCode_T lAFAirlineCode ("AF");
00205   const stdair::InventoryKey lAFKey (lAFAirlineCode);
00206   myprovider::Inventory& lAFInv =
00207     stdair::FacBom<myprovider::Inventory>::instance().create (lAFKey);
00208   stdair::FacBomManager::addToList (lBomRoot, lAFInv);
00209
00210   BOOST_CHECK_EQUAL (lAFInv.describeKey(), lAFAirlineCode);
```

```
00211   BOOST_CHECK_MESSAGE (lAFInv.describeKey() == lAFAirlineCode,
00212                        "The inventory key, '" << lAFInv.describeKey()
00213                        << "', should be equal to '" << lAFAirlineCode
00214                        << "', but is not");
00215
00216   // Browse the inventories
00217   const myprovider::InventoryList_T& lInventoryList =
00218       stdair::BomManager::getList<myprovider::Inventory> (lBomRoot);
00219   const std::string lInventoryKeyArray[2] = {lBAAirlineCode, lAFAirlineCode};
00220   short idx = 0;
00221   for (myprovider::InventoryList_T::const_iterator itInv =
00222          lInventoryList.begin(); itInv != lInventoryList.end();
00223        ++itInv, ++idx) {
00224     const myprovider::Inventory* lInv_ptr = *itInv;
00225     BOOST_REQUIRE (lInv_ptr != NULL);
00226
00227     BOOST_CHECK_EQUAL (lInventoryKeyArray[idx], lInv_ptr->describeKey());
00228     BOOST_CHECK_MESSAGE (lInventoryKeyArray[idx] == lInv_ptr->describeKey(),
00229                          "They inventory key, '" << lInventoryKeyArray[idx]
00230                          << "', does not match that of the Inventory object: '"
00231                          << lInv_ptr->describeKey() << "'");
00232   }
00233 }
00234
00238 BOOST_AUTO_TEST_CASE (bom_structure_serialisation_test) {
00239
00240   // Backup (thanks to Boost.Serialisation) file
00241   const std::string lBackupFilename = "StandardAirlineITTestSuite_serial.txt";
00242
00243   // Output log File
00244   const std::string lLogFilename ("StandardAirlineITTestSuite_serial.log");
00245
00246   // Set the log parameters
00247   std::ofstream logOutputFile;
00248
00249   // Open and clean the log outputfile
00250   logOutputFile.open (lLogFilename.c_str());
00251   logOutputFile.clear();
00252
00253   // Initialise the stdair BOM
00254   const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
00255   stdair::STDAIR_Service stdairService (lLogParams);
00256
00257   // Build a sample BOM tree
00258   stdairService.buildSampleBom();
00259
00260   // DEBUG: Display the whole BOM tree
00261   const std::string& lCSVDump = stdairService.csvDisplay();
00262   STDAIR_LOG_DEBUG (lCSVDump);
00263
00264   // Retrieve (a reference on) the top of the BOM tree
00265   stdair::BomRoot& lBomRoot = stdairService.getBomRoot();
00266
00267   // Retrieve the BomRoot key, and compare it to the expected one
00268   const std::string lBAInvKeyStr ("BA");
00269   stdair::Inventory* lBAInv_ptr = lBomRoot.getInventory (lBAInvKeyStr);
00270
00271   // DEBUG
00272   STDAIR_LOG_DEBUG ("There should be an Inventory object corresponding to the '"
00273                     << lBAInvKeyStr << "' key.");
00274
00275   BOOST_REQUIRE_MESSAGE (lBAInv_ptr != NULL,
```

```
00276                         "An Inventory object should exist with the key, '"
00277                         << lBAInvKeyStr << "'.");
00278
00279   // create and open a character archive for output
00280   std::ofstream ofs (lBackupFilename.c_str());
00281
00282   // save data to archive
00283   {
00284     boost::archive::text_oarchive oa (ofs);
00285     // write class instance to archive
00286     oa << lBomRoot;
00287     // archive and stream closed when destructors are called
00288   }
00289
00290   // ... some time later restore the class instance to its orginal state
00291   stdair::BomRoot& lRestoredBomRoot =
00292     stdair::FacBom<stdair::BomRoot>::instance().create();
00293   {
00294     // create and open an archive for input
00295     std::ifstream ifs (lBackupFilename.c_str());
00296     boost::archive::text_iarchive ia(ifs);
00297     // read class state from archive
00298     ia >> lRestoredBomRoot;
00299     // archive and stream closed when destructors are called
00300   }
00301
00302   // DEBUG: Display the whole BOM tree
00303   std::ostringstream oRestoredCSVDumpStr;
00304   stdair::BomDisplay::csvDisplay (oRestoredCSVDumpStr, lRestoredBomRoot);
00305   STDAIR_LOG_DEBUG (oRestoredCSVDumpStr.str());
00306
00307   // Retrieve the BomRoot key, and compare it to the expected one
00308   const std::string& lBomRootKeyStr = lRestoredBomRoot.describeKey();
00309   const std::string lBomRootString (" -- ROOT -- ");
00310
00311   // DEBUG
00312   STDAIR_LOG_DEBUG ("The BOM root key is '" << lBomRootKeyStr
00313                     << "'. It should be equal to '" << lBomRootString << "'");
00314
00315   BOOST_CHECK_EQUAL (lBomRootKeyStr, lBomRootString);
00316   BOOST_CHECK_MESSAGE (lBomRootKeyStr == lBomRootString,
00317                        "The BOM root key, '" << lBomRootKeyStr
00318                        << "', should be equal to '" << lBomRootString
00319                        << "', but is not.");
00320
00321   // Retrieve the Inventory
00322   stdair::Inventory* lRestoredBAInv_ptr =
00323     lRestoredBomRoot.getInventory (lBAInvKeyStr);
00324
00325   // DEBUG
00326   STDAIR_LOG_DEBUG ("There should be an Inventory object corresponding to the '"
00327                     << lBAInvKeyStr << "' key.");
00328
00329   BOOST_CHECK_MESSAGE (lRestoredBAInv_ptr != NULL,
00330                        "An Inventory object should exist with the key, '"
00331                        << lBAInvKeyStr << "'.");
00332
00333   // Close the Log outputFile
00334   logOutputFile.close();
00335 }
00336
00337 // End the test suite
```

```
00338 BOOST_AUTO_TEST_SUITE_END()
00339
00340 #else // BOOST_VERSION >= 103900
00341 boost_utf::test_suite* init_unit_test_suite (int, char* []) {
00342   boost_utf::test_suite* test = BOOST_TEST_SUITE ("Unit test example 1");
00343   return test;
00344 }
00345 #endif // BOOST_VERSION >= 103900
00346
```

35.571 test/stdair/StdairTestLib.hpp File Reference

```
#include <string>
#include <sstream>
```

Classes

- struct stdair_test::BookingClass
- struct stdair_test::Cabin

Namespaces

- namespace stdair_test

35.572 StdairTestLib.hpp

```
00001 #ifndef __STDAIR_TST_STDAIR_TEST_LIB_HPP
00002 #define __STDAIR_TST_STDAIR_TEST_LIB_HPP
00003
00004 // //////////////////////////////////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////////////////////////////////
00007 #include <string>
00008 #include <sstream>
00009
00013 namespace stdair_test {
00014
00016   struct BookingClass {
00017     std::string _classCode;
00019     BookingClass (const std::string& iClassCode)
00020       : _classCode (iClassCode) {
00021     }
00022
00024     std::string toString() const {
00025       std::ostringstream oStr;
00026       oStr << _classCode;
00027       return oStr.str();
00028     }
00029   };
00030
00032   struct Cabin {
00033     BookingClass _bookingClass;
00034     Cabin (const BookingClass& iBkgClass)
```

```
00035       : _bookingClass (iBkgClass) {
00036     }
00037
00039     std::string toString() const {
00040       std::ostringstream oStr;
00041       oStr << _bookingClass._classCode;
00042       return oStr.str();
00043     }
00044
00046     typedef BookingClass child;
00047   };
00048 }
00049
00050 #endif // __STDAIR_TST_STDAIR_TEST_LIB_HPP
```

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