

AirRAC

0.2.1

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## 1 AirRAC Documentation

### 1.1 Getting Started

- [Main features](#)
- [Installation](#)
- [Linking with AirRAC](#)
- [Users Guide](#)
- [Tutorials](#)
- [Copyright and License](#)
- [Make a Difference](#)
- [Make a new release](#)
- [People](#)

### 1.2 AirRAC at SourceForge

- [Project page](#)
- [Download AirRAC](#)
- [Open a ticket for a bug or feature](#)
- [Mailing lists](#)
- [Forums](#)
  - [Discuss about Development issues](#)
  - [Ask for Help](#)
  - [Discuss AirRAC](#)

### 1.3 AirRAC Development

- [Git Repository](#) (Subversion is deprecated)
- [Coding Rules](#)
- [Documentation Rules](#)
- [Test Rules](#)

### 1.4 External Libraries

- [Boost](#) (C++ STL extensions)
- [Python](#)
- [MySQL client](#)
- [SOI](#) (C++ DB API)

### 1.5 Support AirRAC

### 1.6 About AirRAC

AirRAC is a C++ library of airline revenue accounting classes and functions, mainly targeting simulation purposes. [N](#)

AirRAC makes an extensive use of existing open-source libraries for increased functionality, speed and accuracy. In particular the [Boost](#) (*C++ Standard Extensions*) library is used.

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

AirRAC 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 AirRAC 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 AirRAC.

## 2 People

## 2.1 Project Admins (and Developers)

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### Note

(N) - **Amadeus** employees.

## 3 Coding Rules

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

### 3.1 Default Naming Rules for Variables

Variables names follow Java naming conventions. Examples:

- `lNumberOfPassengers`
- `lSeatAvailability`

### 3.2 Default Naming Rules for Functions

Function names follow Java naming conventions. Example:

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

### 3.3 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`

### 3.4 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`

### 3.5 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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### 4.1.1 Version 2.1, February 1999

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

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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
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```

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

## 5 Documentation Rules

### 5.1 General Rules

All classes in AirRAC 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 AirRAC 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
};

```

## 5.2 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.
 *
 * -----
 *
 * AirRAC - C++ Simulated Revenue Accounting (RAC) System Library
 *
 * Copyright (C) 2009-2011 (\see authors file for a list of contributors)
 *
 * \see copyright file for license information
 *
 * -----
 */

```

## 5.3 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);

```

## 6 Main features

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

### 6.1 Yield calculation

- Calculation of yields from statistics on tickets/coupons

### 6.2 Yield rule engine

- Yield rules: storage, engine, management

### 6.3 Yield retrieval

- Retrieval of yields for specific booking requests or product assesment

### 6.4 Other features

- CSV input file parsing
- Memory handling

## 7 Make a Difference

**Do not ask what AirRAC can do for you. Ask what you can do for AirRAC.**

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

- Start using AirRAC
- Tell your friends about AirRAC and help them to get started using it
- If you find a bug, report it to us. 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 AirRAC discussion forums on SourceForge. If you know the answer to a question, help others to overcome their AirRAC 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 us to port AirRAC to new platforms. If you manage to compile AirRAC on a new platform, then tell us how you did it.
- Send us your code. If you have a good AirRAC compatible code, which you can release under the LGPL, and you think it should be included in AirRAC, then send it to us.
- Become an AirRAC developer. Send us an e-mail and tell what you can do for AirRAC.

## 8 Make a new release

### 8.1 Introduction

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

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

### 8.2 Initialisation

Clone locally the full [Git project](#):

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

### 8.3 Branch creation

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

```
cd ~/dev/sim/airracgit
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 airrac.spec
```

## 8.4 Commit and publish the release branch

Commit the new release:

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

## 8.5 Update the change-log in the trunk as well

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

```
cd ~/dev/sim/airracgit
git checkout trunk
vi ChangeLog
vi airrac.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
```

## 8.6 Create distribution packages

Create the distribution packages using the following command:

```
cd ~/dev/sim/airracgit
git checkout 0.5.0
rm -rf build && mkdir -p build
cd build
cmake -DCMAKE_INSTALL_PREFIX=/home/user/dev/deliveries/airrac-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, `airrac-0.5.0.tar.gz` and `airrac-0.5.0.tar.bz2`.

## 8.7 Generation the RPM packages

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

```
cd ~/dev/sim/airracgit
git checkout 0.5.0
rm -rf build && mkdir -p build
cd build
cmake -DCMAKE_INSTALL_PREFIX=/home/user/dev/deliveries/airrac-0.5.0 \
      -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 airrac.spec ~/dev/packages/SPECS \  
  && cp airrac-0.5.0.tar.bz2 ~/dev/packages/SOURCES  
cd ~/dev/packages/SPECS  
rpmbuild -ba airrac.spec  
rpmlint -i ../SPECS/airrac.spec ../SRPMS/airrac-0.5.0-1.fc15.src.rpm \  
  ../RPMS/noarch/airrac-* ../RPMS/i686/airrac-*
```

## 8.8 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 [AirRAC's Git repository](#).

## 8.9 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, `airrac-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.

## 8.10 Upload the files to SourceForge

Upload the distribution and documentation packages to the SourceForge server. Check [SourceForge help page on uploading software](#).

## 8.11 Upload the documentation to SourceForge

In order to update the Web site files, either:

- [synchronise them with rsync and SSH](#):

```
cd ~/dev/sim/airracgit  
git checkout 0.5.0  
rsync -aiv doc/html/ doc/latex/refman.pdf joe,airrac@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](#).

## 8.12 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](#).

## 8.13 Send an email on the announcement mailing-list

Finally, you should send an announcement to [airrac-announce@lists.sourceforge.net](mailto:airrac-announce@lists.sourceforge.net) (see <https://lists.sourceforge.net/lists/listinfo/airrac-announce> for the archives)

# 9 Installation

## 9.1 Table of Contents

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## 9.2 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 airrac-devel airrac-doc
```

RPM packages can also be available on the [SourceForge download site](#).

### 9.3 AirRAC Requirements

AirRAC 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 AirRAC.

### 9.4 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.

## 9.5 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.

## 9.6 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.

## 9.7 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/directory` 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.

## 9.8 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'.

## 9.9 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
```

## 9.10 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'`.

## 9.11 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.

## 9.12 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
```

### 9.13 '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 output like this:

```

cmake -DCMAKE_INSTALL_PREFIX=/home/user/dev/deliveries/airrac-0.5.0 \
-DLIB_SUFFIX=64 -DCMAKE_BUILD_TYPE:String=Debug -DINSTALL_DOC:BOOL=ON \
-DWITH_STDAIR_PREFIX=/home/user/dev/deliveries/stdair-stable ..
-- 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: fd0a80b436abd00facc362505699501b2e7acf58 trunk
-- Requires Boost-1.41
-- Boost version: 1.46.0
-- Found the following Boost libraries:
--   program_options
--   date_time
--   iostreams
--   serialization
--   filesystem
--   unit_test_framework
-- Found Boost version: 1.46.0
-- Found BoostWrapper: /usr/include (found suitable version "1.46.0", required is "1.41")
-- Requires MySQL without specifying any version
-- Using mysql-config: /usr/bin/mysql_config
-- Found MySQL: /usr/lib64/mysql/libmysqlclient.so (found version "5.5.14")
-- 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 (found suitable version "3.0.0", required is "3.0")
-- Found SOCIMySQL: /usr/lib64/libsoci_mysql.so (found suitable version "3.0.0", required is "3.0")
-- Found SOCI with MySQL back-end support version: 3.0.0
-- Requires StdAir-0.35
-- Found StdAir version: 0.36.2
-- Requires Doxygen without specifying any version
-- Found Doxygen: /usr/bin/doxygen
-- Found DoxygenWrapper: /usr/bin/doxygen (found version "1.7.4")
-- Found Doxygen version: 1.7.4
-- Had to set the linker language for 'airraclib' to CXX
-- Test 'YieldTestSuite' to be built with 'YieldTestSuite.cpp'
--
-- =====
--
-- ---      Project Information      ---
--
-- PROJECT_NAME ..... : airrac
-- PACKAGE_PRETTY_NAME ..... : AirRAC
-- PACKAGE ..... : airrac
-- PACKAGE_NAME ..... : AIRRAC
-- PACKAGE_VERSION ..... : 0.5.0
-- GENERIC_LIB_VERSION ..... : 0.5.0
-- GENERIC_LIB_SOVERSION ..... : 99.99
--
-- -----
--
-- ---      Build Configuration      ---
--
-- Modules to build ..... : airrac
-- Libraries to build ..... : airraclib

```

```

-- Binaries to build ..... : airrac
-- Modules to test ..... : airrac
-- Binaries to test ..... : YieldTestSuitetst
--
-- * Module ..... : airrac
--   + Layers to be built ..... : .;basic;bom;factory;command;service
--   + Dependencies on other layers :
--   + Libraries to be built ..... : airraclib
--   + Executables to be built .... : airrac
--   + Test to be checked ..... : YieldTestSuitetst
--
-- BUILD_SHARED_LIBS ..... : ON
-- CMAKE_BUILD_TYPE ..... : Debug
-- CMAKE_MODULE_PATH ..... : /home/user/dev/sim/airrac/airracgithub/config/
-- CMAKE_INSTALL_PREFIX ..... : /home/user/dev/deliveries/airrac-0.5.0
--
-- * 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/airrac-0.5.0/lib64
-- INSTALL_BIN_DIR ..... : /home/user/dev/deliveries/airrac-0.5.0/bin
-- INSTALL_INCLUDE_DIR ..... : /home/user/dev/deliveries/airrac-0.5.0/include
-- INSTALL_DATA_DIR ..... : /home/user/dev/deliveries/airrac-0.5.0/share
-- INSTALL_SAMPLE_DIR ..... : /home/user/dev/deliveries/airrac-0.5.0/share/airrac/samples
-- INSTALL_DOC ..... : ON
--
-----
-- --- Packaging Configuration ---
-----
-- CPACK_PACKAGE_CONTACT ..... : Denis Arnaud <denis_arnaud - at - users dot sourceforge dot net>
-- CPACK_PACKAGE_VENDOR ..... : Denis Arnaud
-- CPACK_PACKAGE_VERSION ..... : 0.5.0
-- CPACK_PACKAGE_DESCRIPTION_FILE . : /home/user/dev/sim/airrac/airracgithub/README
-- CPACK_RESOURCE_FILE_LICENSE .... : /home/user/dev/sim/airrac/airracgithub/COPYING
-- CPACK_GENERATOR ..... : TBZ2
-- CPACK_DEBIAN_PACKAGE_DEPENDS ... :
-- CPACK_SOURCE_GENERATOR ..... : TBZ2;TGZ
-- CPACK_SOURCE_PACKAGE_FILE_NAME . : airrac-0.5.0
--
-----
-- --- External libraries ---
-----
--
-- * 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/lib64/libboost_iostreams-mt.so
--
-- * 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
--   - SOCI_MYSQL_INCLUDE_DIR ..... : /usr/include/soci
--   - SOCI_LIBRARIES ..... : /usr/lib64/libsoci_core.so
--   - SOCI_MYSQL_LIBRARIES ..... : /usr/lib64/libsoci_mysql.so
--
-- * StdAir:
--   - STDAIR_VERSION ..... : 0.36.2
--   - STDAIR_BINARY_DIRS ..... : /home/user/dev/deliveries/stdair-0.36.2/bin
--   - STDAIR_EXECUTABLES ..... : stdair
--   - STDAIR_LIBRARY_DIRS ..... : /home/user/dev/deliveries/stdair-0.36.2/lib64
--   - STDAIR_LIBRARIES ..... : stdairlib;stdairuicllib
--   - STDAIR_INCLUDE_DIRS ..... : /home/user/dev/deliveries/stdair-0.36.2/include
--   - STDAIR_SAMPLE_DIR ..... : /home/user/dev/deliveries/stdair-0.36.2/share/stdair/samples
--
-- Change a value with: cmake -D<Variable>=<Value>
-- =====
--
-- Configuring done
-- Generating done
-- Build files have been written to: /home/user/dev/sim/airrac/airracgithub/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_airrac
[ 90%] Built target airraclib
[100%] Built target YieldTestSuitetst
Test project /home/user/dev/sim/airrac/airracgithub/build/test/airrac
  Start 1: YieldTestSuitetst
1/1 Test #1: YieldTestSuitetst ..... Passed    0.03 sec

100% tests passed, 0 tests failed out of 1

Total Test time (real) = 0.23 sec
[100%] Built target check_airractst
[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/airracgit
rm -rf build && mkdir build
cd build
```

to remove everything.

## 10 Linking with AirRAC

### 10.1 Table of Contents

- [Introduction](#)
- [Using the pkg-config command](#)
- [Using the airrac-config script](#)
- [M4 macro for the GNU Autotools](#)
- [Using AirRAC with dynamic linking](#)

### 10.2 Introduction

There are two convenient methods of linking your programs with the AirRAC library. The first one employs the 'pkg-config' command (see <http://pkgconfig.freedesktop.org/>), whereas the second one uses 'airrac-config' script. These methods are shortly described below.

### 10.3 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 AirRAC based program 'my\_prog.cpp', you should use the following command:

```
g++ `pkg-config --cflags airrac` -o my_prog my_prog.cpp `pkg-config --libs airrac`
```

For more information see the 'pkg-config' man pages.

## 10.4 Using the airrac-config script

AirRAC provides a shell script called `'airrac-config'`, which is installed by default in `'$prefix/bin'` (`'/usr/local/bin'`) directory. It can be used to simplify compilation and linking of AirRAC 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++ `airrac-config --cflags` -o my_prog_opt my_prog.cpp `airrac-config --libs`
```

A list of `'airrac-config'` options can be obtained by typing:

```
airrac-config --help
```

If the `'airrac-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
```

## 10.5 M4 macro for the GNU Autotools

A M4 macro file is delivered with AirRAC, namely `'airrac.m4'`, which can be found in, e.g., `'/usr/share/aclocal'`. When used by a `'configure'` script, thanks to the `'AM_PATH_AirRAC'` macro (specified in the M4 macro file), the following Makefile variables are then defined:

- `'AirRAC_VERSION'` (e.g., defined to 0.23.0)
- `'AirRAC_CFLAGS'` (e.g., defined to `'-I${prefix}/include'`)
- `'AirRAC_LIBS'` (e.g., defined to `'-L${prefix}/lib -lairrac'`)

## 10.6 Using AirRAC with dynamic linking

When using static linking some of the library routines in AirRAC 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 AirRAC library file during your program execution. If you install the AirRAC 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=<AirRAC installation prefix>/lib:$LD_LIBRARY_PATH
```

## 11 Test Rules

This section describes how the functionality of the AirRAC library should be verified. In the `'test/airrac'` subdirectory, test source files are provided. All functionality should be tested using these test source files.

### 11.1 The Test Source Files

Each new AirRAC 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 AirRAC 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/airrac'` subdirectory and should have a name ending with `'TestSuite.cpp'`.

### 11.2 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.

### 11.3 Testing AirRAC Library

One can compile and execute all test programs from the `'test/airrac'` sub-directory by typing:

```
% make check
```

after successful compilation of the AirRAC library.

## 12 Users Guide

### 12.1 Table of Contents

- [Introduction](#)
- [Get Started](#)
  - [Get the AirRAC library](#)

- Build the AirRAC project
  - Build and Run the Tests
  - Install the AirRAC Project (Binaries, Documentation)
- Exploring the Predefined BOM Tree
  - Yield Rule Engine BOM Tree
- Extending the BOM Tree

## 12.2 Introduction

The `AirRAC` library contains classes for yield rule management. This document does not cover all the aspects of the `AirRAC` library. It does however explain the most important things you need to know in order to start using `AirRAC`.

## 12.3 Get Started

### 12.3.1 Get the AirRAC library

### 12.3.2 Build the AirRAC project

To run the configuration script the first time, go to the top directory (where the `AirRAC` package has been un-packed), and issue either of the following two commands, depending on whether the `AirRAC` project has been checked out from the Subversion repository or downloaded as a tar-ball package from the Sourceforge Web site:

- `./autogen.sh`
- `./configure`

### 12.3.3 Build and Run the Tests

### 12.3.4 Install the AirRAC Project (Binaries, Documentation)

## 12.4 Exploring the Predefined BOM Tree

`AirRAC` predefines a BOM (Business Object Model) tree specific to the airline IT arena.

### 12.4.1 Yield Rule Engine BOM Tree

- `AIRRAC::YieldRuleStruct`

## 12.5 Extending the BOM Tree

# 13 Supported Systems

## 13.1 Table of Contents

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- [AirRAC 0.1.x](#)
  - [Linux Systems](#)
    - \* [Fedora Core 4 with ATLAS](#)
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## 13.2 Introduction

This page is intended to provide a list of AirRAC supported systems, i.e. the systems on which configuration, installation and testing process of the AirRAC library has been successful. 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 AirRAC library on a system not mentioned below, please let us know, so we could update this database.

### 13.3 AirRAC 0.1.x

#### 13.3.1 Linux Systems

##### 13.3.1.1 Fedora Core 4 with ATLAS

- **Platform:** Intel Pentium 4
- **Operating System:** Fedora Core 4 (x86)
- **Compiler:** g++ (GCC) 4.0.2 20051125
- **AirRAC release:** 0.1.0
- **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:** AirRAC configured with:

```
% CXXFLAGS="-O3 -pipe -march=pentium4" ./configure
```
- **Date:** March 7, 2006
- **Tester:** Tony Ottosson

##### 13.3.1.2 Gentoo Linux with ACML

- **Platform:** AMD Sempron 3000+
- **Operating System:** Gentoo Linux 2006.0 (x86 arch)
- **Compiler(s):** g++ (GCC) 3.4.5
- **AirRAC release:** 0.1.1
- **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
```

AirRAC configured with:

```
% export CPPFLAGS="-I/usr/include/acml"  
% ./configure --with-blas="-lblas"
```

- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)

#### 13.3.1.3 Gentoo Linux with ATLAS

- **Platform:** Intel Pentium M Centrino
- **Operating System:** Gentoo Linux 2006.0 (x86)
- **Compiler:** g++ (GCC) 3.4.5
- **AirRAC release:** 0.1.1
- **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
```

AirRAC configured with:

```
% ./configure --with-blas="-lblas"
```

- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)

#### 13.3.1.4 Gentoo Linux with MKL

- **Platform:** Intel Pentium M Centrino
- **Operating System:** Gentoo Linux 2006.0 (x86 arch)
- **Compiler:** g++ (GCC) 3.4.5
- **AirRAC release:** 0.1.0
- **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:** AirRAC configured using the following commands:

```
% export LDFLAGS="-I/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)

#### 13.3.1.5 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
- **AirRAC release:** 0.1.1
- **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
```

AirRAC configured with:

```
% ./configure --with-blas="-lblas"
```

- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)

#### 13.3.1.6 Red Hat Enterprise Linux with AirRAC 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)
- **AirRAC release:** 0.1.0
- **External Libraries:** BLAS, CBLAS, LAPACK and FFTW libraries from AirRAC External 2.1.1 package
- **Tests Status:** All tests PASSED
- **Date:** March 7, 2006
- **Tester:** Erik G. Larsson

#### 13.3.1.7 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
- **AirRAC release:** 0.1.0
- **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:** AirRAC 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)

## 13.3.1.8 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
- **AirRAC release:** 0.1.0
- **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:** AirRAC 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)

## 13.3.2 Windows Systems

## 13.3.2.1 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)
- **AirRAC release:** 0.1.1
- **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. AirRAC configured with:

```
% ./configure
```
- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)

## 13.3.2.2 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)
- **AirRAC release:** 0.1.1
- **External Libraries:** Installed from Cygwin's repository:

```
- fftw-3.0.1-2
- fftw-dev-3.0.1-1
```

ATLAS BLAS and LAPACK libraries from AirRAC External 2.1.1 package configured using:

```
% ./configure --enable-atlas --disable-fftw
```

- **Tests Status:** All tests PASSED
- **Comments:** Only static library can be built. AirRAC configured with:

```
% export LDFLAGS="-L/usr/local/lib"
% ./configure
```

- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)

## 13.3.2.3 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)
- **AirRAC release:** 0.1.2
- **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. AirRAC 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)

## 13.3.2.4 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)
- **AirRAC release:** 0.1.2
- **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. AirRAC 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)

## 13.3.2.5 Microsoft Windows XP with MinGW, MSYS and AirRAC 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)
- **AirRAC release:** 0.1.5
- **External Libraries:** BLAS, CBLAS, LAPACK and FFTW libraries from AirRAC External 2.2.0 package
- **Tests Status:** All tests PASSED
- **Comments:** Only static library can be built. AirRAC 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)

## 13.3.2.6 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
- **AirRAC release:** 0.1.5
- **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 AirRAC based programs compiled and run with success.
- **Comments:** Only static library can be built. AirRAC built by opening the "win32\airrac.vcproj" project file in MSVC++ and executing "Build -> Build Solution" command from menu.
- **Date:** August 11, 2006
- **Tester:** Adam Piatyszek (ediap)

## 13.3.3 Unix Systems

## 13.3.3.1 SunOS 5.9 with AirRAC External

- **Platform:** SUNW, Sun-Blade-100 (SPARC)
- **Operating System:** SunOS 5.9 Generic\_112233-10
- **Compiler(s):** g++ (GCC) 3.4.5
- **AirRAC release:** 0.1.2
- **External Libraries:** BLAS, CBLAS, LAPACK and FFTW libraries from AirRAC 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:** AirRAC 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)

## 14 AirRAC Supported Systems (Previous Releases)

### 14.1 AirRAC 3.9.1

### 14.2 AirRAC 3.9.0

### 14.3 AirRAC 3.8.1

## 15 Tutorials

### 15.1 Table of Contents

- [Introduction](#)
  - [Preparing the AirRAC Project for Development](#)
- [Build a Predefined BOM Tree](#)
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  - [Instantiate the \(Airline\) Inventory Object](#)
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  - [Build Another Airline Inventory](#)
  - [Dump The BOM Tree Content](#)
  - [Result of the Tutorial Program](#)

### 15.2 Introduction

This page contains some tutorial examples that will help you getting started using AirRAC. Most examples show how to construct some simple business objects, i.e., instances of the so-named Business Object Model (BOM).

#### 15.2.1 Preparing the AirRAC Project for Development

The source code for these examples can be found in the `batches` and `test/airrac` directories. They are compiled along with the rest of the AirRAC project. See the User Guide ([Users Guide](#)) for more details on how to build the AirRAC project.

### 15.3 Build a Predefined BOM Tree

A few steps:

- [Instantiate the BOM Root Object](#)
- [Instantiate the \(Airline\) Inventory Object](#)
- [Link the Inventory Object with the BOM Root](#)

### 15.3.1 Instantiate the BOM Root Object

First, a BOM root object (i.e., a root for all the classes in the project) is instantiated by the `airrac::AIRRAC_ServiceContext` context object, when the `airrac::AIRRAC_Service` is itself instantiated. The corresponding `AirRAC` type (class) is `airrac::BomRoot`.

In the following sample, that object is named `ioBomRoot`, and is given as input/output parameter of the `airrac::CmdBomManager::buildSampleBom()` method:

### 15.3.2 Instantiate 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) `airrac::InventoryKey` has first to be instantiated.

Thanks to that key, an airline inventory object, i.e. of type (class) `airrac::Inventory`, can be instantiated. Let us name that airline inventory object `lBAInv`.

### 15.3.3 Link the Inventory Object with the BOM Root

Then, both objects have to be linked: the airline inventory object (`airrac::Inventory`) has to be linked with the root of the BOM tree (`airrac::BomRoot`). That operation is as simple as using the `airrac::FacBomManager::addToListAndMap()` method:

### 15.3.4 Build Another Airline Inventory

Another airline inventory object, corresponding to the Air France (`Air France`) company, is instantiated the same way:

See the corresponding full program (`cmd_bom_manager_cpp`) for more details.

### 15.3.5 Dump The BOM Tree Content

From the `BomRoot` (of type `airrac::BomRoot`) object instance, the list of airline inventories (of type `airrac::Inventory`) can then be retrieved...

... and browsed:

See the corresponding full program (bom\_display\_cpp) for more details.

### 15.3.6 Result of the Tutorial Program

When the `airrac.cpp` program is run (with the `-b` option), the output should look like:

```
[D]/home/user/dev/sim/airrac/airracgithub/airrac/batches/airrac.cpp:184: Welcome
to AirRAC
[D]/home/user/dev/sim/airrac/airracgithub/airrac/command/YieldParserHelper.cpp:49
3: Parsing yield input file: /home/user/dev/deliveries/stdair-0.36.2/share/stdair
/samples/yieldstore01.csv
[D]/home/user/dev/sim/airrac/airracgithub/airrac/command/YieldParserHelper.cpp:32
6: YieldRule: 1, SIN-BKK (ALL), DC, [2010-Jan-15/2011-Jan-01] - [00:00:00/23:59:0
0], Y, 200 EUR, SQ / Y
[D]/home/user/dev/sim/airrac/airracgithub/airrac/command/YieldParserHelper.cpp:32
6: YieldRule: 2, SIN-HND (ALL), DC, [2010-Jan-15/2011-Jan-01] - [00:00:00/23:59:0
0], Y, 200 EUR, SQ / Y
[D]/home/user/dev/sim/airrac/airracgithub/airrac/command/YieldParserHelper.cpp:32
6: YieldRule: 3, SIN-NCE (ALL), DC, [2010-Jan-15/2011-Jan-01] - [00:00:00/23:59:0
0], Y, 1200 EUR, SQ / Y - AF / YLMN
[D]/home/user/dev/sim/airrac/airracgithub/airrac/command/YieldParserHelper.cpp:32
6: YieldRule: 4, SIN-BKK (ALL), DC, [2010-Jan-15/2011-Jan-01] - [00:00:00/23:59:0
0], Y, 300 EUR, SQ / Y
[D]/home/user/dev/sim/airrac/airracgithub/airrac/command/YieldParserHelper.cpp:32
6: YieldRule: 5, SIN-HND (ALL), DC, [2010-Jan-15/2011-Jan-01] - [00:00:00/23:59:0
0], Y, 300 EUR, SQ / Y
[D]/home/user/dev/sim/airrac/airracgithub/airrac/command/YieldParserHelper.cpp:32
6: YieldRule: 6, SIN-NCE (ALL), DC, [2010-Jan-15/2011-Jan-01] - [00:00:00/23:59:0
0], Y, 1500 EUR, SQ / Y - AF / YLMN
[D]/home/user/dev/sim/airrac/airracgithub/airrac/command/YieldParserHelper.cpp:54
1: Parsing of yield input file: /home/user/dev/deliveries/stdair-0.36.2/share/std
air/samples/yieldstore01.csv succeeded
[D]/home/user/dev/sim/airrac/airracgithub/airrac/batches/airrac.cpp:205: BOM tree
:
=====
BomRoot:  -- ROOT  --
=====
+++++
AirportPair: SIN, BKK
+++++
-----
DatePeriod: [2010-Jan-15/2011-Jan-01]
-----
*****
PosChannel: ALL, DC
*****
-----
TimePeriod: 00:00:00-23:59:00
-----
-----
```

```

Fare/yield-Features: OW -- Y
-----
-----
AirlineClassList: SQ Y
-----
-----
Fare/yield-Features: RT -- Y
-----
-----
AirlineClassList: SQ Y
-----
+++++
AirportPair: SIN, HND
+++++
-----
DatePeriod: [2010-Jan-15/2011-Jan-01]
-----
*****
PosChannel: ALL, DC
*****
-----
TimePeriod: 00:00:00-23:59:00
-----
-----
Fare/yield-Features: OW -- Y
-----
-----
AirlineClassList: SQ Y
-----
-----
Fare/yield-Features: RT -- Y
-----
-----
AirlineClassList: SQ Y
-----
+++++
AirportPair: SIN, NCE
+++++
-----
DatePeriod: [2010-Jan-15/2011-Jan-01]
-----
*****
PosChannel: ALL, DC
*****
-----
TimePeriod: 00:00:00-23:59:00
-----
-----
Fare/yield-Features: OW -- Y
-----
-----
AirlineClassList: SQ Y, AF YLMN
-----
-----
Fare/yield-Features: RT -- Y
-----
-----
AirlineClassList: SQ Y, AF YLMN
-----

[D]/home/user/dev/sim/airrac/airracgithub/airrac/batches/airrac.cpp:210: Travel s
olutions:

```

```
[0] [0] BA, 9, 2011-06-10, LHR, SYD, 21:45 --- Q, 900, 1 1 1 --- [0] Q:8
```

See the corresponding full program (batch\_airrac\_cpp) for more details.

## 16 Command-Line Test to Demonstrate How To Test the AirRAC Project

```

*/
// //////////////////////////////////////
// Import section
// //////////////////////////////////////
// STL
#include <sstream>
#include <fstream>
#include <string>
// Boost Unit Test Framework (UTF)
#define BOOST_TEST_DYN_LINK
#define BOOST_TEST_MAIN
#define BOOST_TEST_MODULE YieldTestSuite
#include <boost/test/unit_test.hpp>
// StdAir
#include <stdair/basic/BasLogParams.hpp>
#include <stdair/basic/BasDBParams.hpp>
#include <stdair/basic/BasFileMgr.hpp>
#include <stdair/bom/TravelSolutionStruct.hpp>
#include <stdair/service/Logger.hpp>
// Airrac
#include <airrac/AIRAC_Service.hpp>
#include <airrac/config/airrac-paths.hpp>

namespace boost_utf = boost::unit_test;

// (Boost) Unit Test XML Report
std::ofstream utfReportStream ("YieldTestSuite_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_tests);
    }

    ~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 (airrac_simple_yield) {

    // Travel solution
    stdair::TravelSolutionStruct lTravelSolution;
    stdair::TravelSolutionList_T lTravelSolutionList;

    // Input file name
    const stdair::Filename_T lYieldInputFilename (STDAIR_SAMPLE_DIR
                                                    "/yieldstore01.csv");

    // Check that the file path given as input corresponds to an actual file
    bool doesExistAndIsReadable =
        stdair::BasFileMgr::doesExistAndIsReadable (lYieldInputFilename);
    BOOST_CHECK_MESSAGE (doesExistAndIsReadable == true,
        "The '" << lYieldInputFilename
        << "' input file can not be open and read");

    // Output log File
    const stdair::Filename_T lLogFilename ("YieldTestSuite.log");

    // Set the log parameters
    std::ofstream logOutputFile;
    // Open and clean the log outputfile
    logOutputFile.open (lLogFilename.c_str());
    logOutputFile.clear();

    // Initialise the list of classes/buckets
    const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);

    AIRRAC::AIRRAC_Service airracService (lLogParams);

    // Build the BOM tree from parsing a yield file
    AIRRAC::YieldFilePath lYieldFilePath (lYieldInputFilename);
    airracService.parseAndLoad (lYieldFilePath);

    // Calculate the yields for the given travel solution
    lTravelSolutionList.push_back(lTravelSolution);
    airracService.calculateYields (lTravelSolutionList);

    // Close the log file
    logOutputFile.close();
}

// End the test suite
BOOST_AUTO_TEST_SUITE_END()

/*!

```

## 17 Directory Hierarchy

### 17.1 Directories

This directory hierarchy is sorted roughly, but not completely, alphabetically:

<b>airrac</b>	<b>54</b>
<b>basic</b>	<b>55</b>

<b>batches</b>	<b>55</b>
<b>bom</b>	<b>55</b>
<b>command</b>	<b>55</b>
<b>config</b>	<b>56</b>
<b>factory</b>	<b>56</b>
<b>service</b>	<b>56</b>
<b>test</b>	<b>56</b>
<b>airrac</b>	<b>54</b>

## 18 Namespace Index

### 18.1 Namespace List

Here is a list of all namespaces with brief descriptions:

<b>AIRRAC</b>	<b>56</b>
<b>AIRRAC::YieldParserHelper</b>	<b>60</b>
<b>stdair</b> (Forward declarations )	<b>62</b>

## 19 Class Index

### 19.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

<b>AIRRAC::AIRRAC_Service</b>	<b>63</b>
std::basic_fstream< char >	
std::basic_fstream< wchar_t >	
std::basic_ifstream< char >	
std::basic_ifstream< wchar_t >	
std::basic_ios< char >	
std::basic_ios< wchar_t >	
std::basic_iostream< char >	
std::basic_iostream< wchar_t >	
std::basic_istream< char >	
std::basic_istream< wchar_t >	
std::basic_istreamstream< char >	
std::basic_istreamstream< wchar_t >	
std::basic_ofstream< char >	

std::basic_ofstream< wchar_t >	
std::basic_ostream< char >	
std::basic_ostream< wchar_t >	
std::basic_ostringstream< char >	
std::basic_ostringstream< wchar_t >	
std::basic_string< char >	
std::basic_string< wchar_t >	
std::basic_stringstream< char >	
std::basic_stringstream< wchar_t >	
<b>CmdAbstract</b>	<b>68</b>
<b>AIRRAC::YieldFileParser</b>	<b>101</b>
<b>AIRRAC::YieldParser</b>	<b>105</b>
<b>AIRRAC::YieldRuleGenerator</b>	<b>106</b>
<b>FacServiceAbstract</b>	<b>72</b>
<b>AIRRAC::FacAirracServiceContext</b>	<b>70</b>
<b>FileNotFoundException</b>	<b>73</b>
<b>AIRRAC::YieldInputFileNotFoundException</b>	<b>103</b>
<b>grammar</b>	<b>74</b>
<b>AIRRAC::YieldParserHelper::YieldRuleParser</b>	<b>106</b>
<b>InputFilePath</b>	<b>75</b>
<b>AIRRAC::YieldFilePath</b>	<b>102</b>
<b>ObjectNotFoundException</b>	<b>75</b>
<b>AIRRAC::AirlineNotFoundException</b>	<b>62</b>
<b>AIRRAC::AirportPairNotFoundException</b>	<b>63</b>
<b>AIRRAC::FeaturesNotFoundException</b>	<b>72</b>
<b>AIRRAC::FlightDateNotFoundException</b>	<b>73</b>
<b>AIRRAC::FlightTimeNotFoundException</b>	<b>74</b>
<b>AIRRAC::PosOrChannelNotFoundException</b>	<b>77</b>
<b>AIRRAC::YieldParserHelper::ParserSemanticAction</b>	<b>75</b>
<b>AIRRAC::YieldParserHelper::doEndYield</b>	<b>68</b>
<b>AIRRAC::YieldParserHelper::storeAirlineCode</b>	<b>79</b>

<b>AIRRAC::YieldParserHelper::storeCabinCode</b>	<b>81</b>
<b>AIRRAC::YieldParserHelper::storeChannel</b>	<b>82</b>
<b>AIRRAC::YieldParserHelper::storeClass</b>	<b>84</b>
<b>AIRRAC::YieldParserHelper::storeDateRangeEnd</b>	<b>85</b>
<b>AIRRAC::YieldParserHelper::storeDateRangeStart</b>	<b>86</b>
<b>AIRRAC::YieldParserHelper::storeDestination</b>	<b>88</b>
<b>AIRRAC::YieldParserHelper::storeEndRangeTime</b>	<b>89</b>
<b>AIRRAC::YieldParserHelper::storeOrigin</b>	<b>91</b>
<b>AIRRAC::YieldParserHelper::storePOS</b>	<b>92</b>
<b>AIRRAC::YieldParserHelper::storeStartRangeTime</b>	<b>94</b>
<b>AIRRAC::YieldParserHelper::storeTripType</b>	<b>95</b>
<b>AIRRAC::YieldParserHelper::storeYield</b>	<b>97</b>
<b>AIRRAC::YieldParserHelper::storeYieldId</b>	<b>98</b>
<b>ParsingFileFailedException</b>	<b>77</b>
<b>AIRRAC::YieldFileParsingFailedException</b>	<b>102</b>
<b>RootException</b>	<b>79</b>
<b>AIRRAC::QuotingException</b>	<b>78</b>
<b>ServiceAbstract</b>	<b>79</b>
<b>AIRRAC::AIRRAC_ServiceContext</b>	<b>67</b>
<b>StructAbstract</b>	<b>100</b>
<b>AIRRAC::YieldRuleStruct</b>	<b>111</b>
<b>TestFixture</b>	<b>100</b>
<b>YieldTestSuite</b>	<b>119</b>
<b>AIRRAC::YieldManager</b>	<b>104</b>

## 20 Class Index

## 20.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

<a href="#">AIRRAC::AirlineNotFoundException</a>	62
<a href="#">AIRRAC::AirportPairNotFoundException</a>	63
<a href="#">AIRRAC::AIRRAC_Service</a> (Interface for the <a href="#">AIRRAC</a> Services )	63
<a href="#">AIRRAC::AIRRAC_ServiceContext</a> (Inner class holding the context for the <a href="#">AIRRAC</a> Service object )	67
<a href="#">CmdAbstract</a>	68
<a href="#">AIRRAC::YieldParserHelper::doEndYield</a>	68
<a href="#">AIRRAC::FacAirracsServiceContext</a> (Factory for the service context )	70
<a href="#">FacServiceAbstract</a>	72
<a href="#">AIRRAC::FeaturesNotFoundException</a>	72
<a href="#">FileNotFoundException</a>	73
<a href="#">AIRRAC::FlightDateNotFoundException</a>	73
<a href="#">AIRRAC::FlightTimeNotFoundException</a>	74
<a href="#">grammar</a>	74
<a href="#">InputFilePath</a>	75
<a href="#">ObjectNotFoundException</a>	75
<a href="#">AIRRAC::YieldParserHelper::ParserSemanticAction</a>	75
<a href="#">ParsingFileFailedException</a>	77
<a href="#">AIRRAC::PosOrChannelNotFoundException</a>	77
<a href="#">AIRRAC::QuotingException</a>	78
<a href="#">RootException</a>	79
<a href="#">ServiceAbstract</a>	79
<a href="#">AIRRAC::YieldParserHelper::storeAirlineCode</a>	79
<a href="#">AIRRAC::YieldParserHelper::storeCabinCode</a>	81
<a href="#">AIRRAC::YieldParserHelper::storeChannel</a>	82

<a href="#">AIRRAC::YieldParserHelper::storeClass</a>	84
<a href="#">AIRRAC::YieldParserHelper::storeDateRangeEnd</a>	85
<a href="#">AIRRAC::YieldParserHelper::storeDateRangeStart</a>	86
<a href="#">AIRRAC::YieldParserHelper::storeDestination</a>	88
<a href="#">AIRRAC::YieldParserHelper::storeEndRangeTime</a>	89
<a href="#">AIRRAC::YieldParserHelper::storeOrigin</a>	91
<a href="#">AIRRAC::YieldParserHelper::storePOS</a>	92
<a href="#">AIRRAC::YieldParserHelper::storeStartRangeTime</a>	94
<a href="#">AIRRAC::YieldParserHelper::storeTripType</a>	95
<a href="#">AIRRAC::YieldParserHelper::storeYield</a>	97
<a href="#">AIRRAC::YieldParserHelper::storeYieldId</a>	98
<a href="#">StructAbstract</a>	100
<a href="#">TestFixture</a>	100
<a href="#">AIRRAC::YieldFileParser</a>	101
<a href="#">AIRRAC::YieldFileParsingFailedException</a>	102
<a href="#">AIRRAC::YieldFilePath</a>	102
<a href="#">AIRRAC::YieldInputFileNotFoundException</a>	103
<a href="#">AIRRAC::YieldManager</a> (Command wrapping the travel request process )	104
<a href="#">AIRRAC::YieldParser</a> (Class wrapping the parser entry point )	105
<a href="#">AIRRAC::YieldRuleGenerator</a>	106
<a href="#">AIRRAC::YieldParserHelper::YieldRuleParser</a>	106
<a href="#">AIRRAC::YieldRuleStruct</a> (Utility Structure for the parsing of Flight-Date structures )	111
<a href="#">YieldTestSuite</a>	119

## 21 File Index

## 21.1 File List

Here is a list of all files with brief descriptions:

<a href="#">airrac/AIRRAC_Service.hpp</a>	121
<a href="#">airrac/AIRRAC_Types.hpp</a>	123
<a href="#">airrac/basic/BasConst.cpp</a>	125
<a href="#">airrac/basic/BasConst_AIRRAC_Service.hpp</a>	125
<a href="#">airrac/basic/BasConst_General.hpp</a>	126
<a href="#">airrac/basic/BasParserTypes.hpp</a>	127
<a href="#">airrac/batches/airrac.cpp</a>	130
<a href="#">airrac/bom/YieldRuleStruct.cpp</a>	134
<a href="#">airrac/bom/YieldRuleStruct.hpp</a>	136
<a href="#">airrac/command/YieldManager.cpp</a>	141
<a href="#">airrac/command/YieldManager.hpp</a>	145
<a href="#">airrac/command/YieldParser.cpp</a>	146
<a href="#">airrac/command/YieldParser.hpp</a>	147
<a href="#">airrac/command/YieldParserHelper.cpp</a>	149
<a href="#">airrac/command/YieldParserHelper.hpp</a>	159
<a href="#">airrac/command/YieldRuleGenerator.cpp</a>	162
<a href="#">airrac/command/YieldRuleGenerator.hpp</a>	166
<a href="#">airrac/config/airrac-paths.hpp</a>	170
<a href="#">airrac/factory/FacAirracServiceContext.cpp</a>	170
<a href="#">airrac/factory/FacAirracServiceContext.hpp</a>	171
<a href="#">airrac/service/AIRRAC_Service.cpp</a>	173
<a href="#">airrac/service/AIRRAC_ServiceContext.cpp</a>	178
<a href="#">airrac/service/AIRRAC_ServiceContext.hpp</a>	179
<a href="#">test/airrac/YieldTestSuite.cpp</a>	181
<a href="#">test/airrac/YieldTestSuite.hpp</a>	184

## 22 Directory Documentation

### 22.1 test/airrac/ Directory Reference

#### Files

- file [YieldTestSuite.cpp](#)
- file [YieldTestSuite.hpp](#)

### 22.2 airrac/ Directory Reference

#### Directories

- directory [basic](#)
- directory [batches](#)
- directory [bom](#)
- directory [command](#)
- directory [config](#)
- directory [factory](#)
- directory [service](#)

#### Files

- file [AIRRAC\\_Service.hpp](#)
- file [AIRRAC\\_Types.hpp](#)

### 22.3 airrac/basic/ Directory Reference

#### Files

- file [BasConst.cpp](#)
- file [BasConst\\_AIRRAC\\_Service.hpp](#)
- file [BasConst\\_General.hpp](#)
- file [BasParserTypes.hpp](#)

### 22.4 airrac/batches/ Directory Reference

#### Files

- file [airrac.cpp](#)

## 22.5 airrac/bom/ Directory Reference

### Files

- file [YieldRuleStruct.cpp](#)
- file [YieldRuleStruct.hpp](#)

## 22.6 airrac/command/ Directory Reference

### Files

- file [YieldManager.cpp](#)
- file [YieldManager.hpp](#)
- file [YieldParser.cpp](#)
- file [YieldParser.hpp](#)
- file [YieldParserHelper.cpp](#)
- file [YieldParserHelper.hpp](#)
- file [YieldRuleGenerator.cpp](#)
- file [YieldRuleGenerator.hpp](#)

## 22.7 airrac/config/ Directory Reference

### Files

- file [airrac-paths.hpp](#)

## 22.8 airrac/factory/ Directory Reference

### Files

- file [FacAirracsServiceContext.cpp](#)
- file [FacAirracsServiceContext.hpp](#)

## 22.9 airrac/service/ Directory Reference

### Files

- file [AIRRAC\\_Service.cpp](#)
- file [AIRRAC\\_ServiceContext.cpp](#)
- file [AIRRAC\\_ServiceContext.hpp](#)

## 22.10 test/ Directory Reference

### Directories

- directory [airrac](#)

## 23 Namespace Documentation

### 23.1 AIRRAC Namespace Reference

#### Namespaces

- namespace [YieldParserHelper](#)

#### Classes

- class [AIRRAC\\_Service](#)  
*Interface for the [AIRRAC](#) Services.*
- class [AirportPairNotFoundException](#)
- class [PosOrChannelNotFoundException](#)
- class [FlightDateNotFoundException](#)
- class [FlightTimeNotFoundException](#)
- class [FeaturesNotFoundException](#)
- class [AirlineNotFoundException](#)
- class [YieldInputFileNotFoundException](#)
- class [YieldFileParsingFailedException](#)
- class [QuotingException](#)
- class [YieldFilePath](#)
- struct [YieldRuleStruct](#)  
*Utility Structure for the parsing of Flight-Date structures.*
- class [YieldManager](#)  
*Command wrapping the travel request process.*
- class [YieldParser](#)  
*Class wrapping the parser entry point.*
- class [YieldFileParser](#)
- class [YieldRuleGenerator](#)
- class [FacAirracServiceContext](#)  
*Factory for the service context.*
- class [AIRRAC\\_ServiceContext](#)  
*Inner class holding the context for the [AIRRAC](#) Service object.*

#### Typedefs

- typedef boost::shared\_ptr< [AIRRAC\\_Service](#) > [AIRRAC\\_ServicePtr\\_T](#)
- typedef unsigned int [YieldID\\_T](#)
- typedef char [char\\_t](#)
- typedef boost::spirit::classic::file\_iterator< [char\\_t](#) > [iterator\\_t](#)
- typedef boost::spirit::classic::scanner< [iterator\\_t](#) > [scanner\\_t](#)
- typedef boost::spirit::classic::rule< [scanner\\_t](#) > [rule\\_t](#)
- typedef boost::spirit::classic::int\_parser< unsigned int, 10, 1, 1 > [int1\\_p\\_t](#)
- typedef boost::spirit::classic::uint\_parser< unsigned int, 10, 2, 2 > [uint2\\_p\\_t](#)

- typedef boost::spirit::classic::uint\_parser< unsigned int, 10, 1, 2 > [uint1\\_2\\_p\\_t](#)
- typedef boost::spirit::classic::uint\_parser< unsigned int, 10, 1, 3 > [uint1\\_3\\_p\\_t](#)
- typedef boost::spirit::classic::uint\_parser< unsigned int, 10, 4, 4 > [uint4\\_p\\_t](#)
- typedef boost::spirit::classic::uint\_parser< unsigned int, 10, 1, 4 > [uint1\\_4\\_p\\_t](#)
- typedef boost::spirit::classic::chset< [char\\_t](#) > [chset\\_t](#)
- typedef boost::spirit::classic::impl::loop\_traits< [chset\\_t](#), unsigned int, unsigned int >::type [repeat\\_p\\_t](#)
- typedef boost::spirit::classic::bounded< [uint2\\_p\\_t](#), unsigned int > [bounded2\\_p\\_t](#)
- typedef boost::spirit::classic::bounded< [uint1\\_2\\_p\\_t](#), unsigned int > [bounded1\\_2\\_p\\_t](#)
- typedef boost::spirit::classic::bounded< [uint1\\_3\\_p\\_t](#), unsigned int > [bounded1\\_3\\_p\\_t](#)
- typedef boost::spirit::classic::bounded< [uint4\\_p\\_t](#), unsigned int > [bounded4\\_p\\_t](#)
- typedef boost::spirit::classic::bounded< [uint1\\_4\\_p\\_t](#), unsigned int > [bounded1\\_4\\_p\\_t](#)

#### Variables

- const std::string [DEFAULT\\_AIRLINE\\_CODE](#) = "BA"

#### 23.1.1 Typedef Documentation

23.1.1.1 typedef boost::shared\_ptr<[AIRRAC\\_Service](#)>  
[AIRRAC::AIRRAC\\_ServicePtr\\_T](#)

Definition at line 93 of file [AIRRAC\\_Types.hpp](#).

23.1.1.2 typedef unsigned int [AIRRAC::YieldID\\_T](#)

ID for the Yield Quote system.

Definition at line 100 of file [AIRRAC\\_Types.hpp](#).

23.1.1.3 typedef char [AIRRAC::char\\_t](#)

Definition at line 31 of file [BasParserTypes.hpp](#).

23.1.1.4 typedef boost::spirit::classic::file\_iterator<[char\\_t](#)> [AIRRAC::iterator\\_t](#)

Definition at line 35 of file [BasParserTypes.hpp](#).

23.1.1.5 typedef boost::spirit::classic::scanner<[iterator\\_t](#)> [AIRRAC::scanner\\_t](#)

Definition at line 36 of file [BasParserTypes.hpp](#).

23.1.1.6 typedef boost::spirit::classic::rule<[scanner\\_t](#)> [AIRRAC::rule\\_t](#)

Definition at line 37 of file [BasParserTypes.hpp](#).

23.1.1.7 `typedef boost::spirit::classic::int_parser<unsigned int, 10, 1, 1> AIRRAC::int1_p_t`

1-digit-integer parser

Definition at line 45 of file [BasParserTypes.hpp](#).

23.1.1.8 `typedef boost::spirit::classic::uint_parser<unsigned int, 10, 2, 2>  
AIRRAC::uint2_p_t`

2-digit-integer parser

Definition at line 48 of file [BasParserTypes.hpp](#).

23.1.1.9 `typedef boost::spirit::classic::uint_parser<unsigned int, 10, 1, 2>  
AIRRAC::uint1_2_p_t`

Up-to-2-digit-integer parser

Definition at line 51 of file [BasParserTypes.hpp](#).

23.1.1.10 `typedef boost::spirit::classic::uint_parser<unsigned int, 10, 1, 3>  
AIRRAC::uint1_3_p_t`

Up-to-3-digit-integer parser

Definition at line 54 of file [BasParserTypes.hpp](#).

23.1.1.11 `typedef boost::spirit::classic::uint_parser<unsigned int, 10, 4, 4>  
AIRRAC::uint4_p_t`

4-digit-integer parser

Definition at line 57 of file [BasParserTypes.hpp](#).

23.1.1.12 `typedef boost::spirit::classic::uint_parser<unsigned int, 10, 1, 4>  
AIRRAC::uint1_4_p_t`

Up-to-4-digit-integer parser

Definition at line 60 of file [BasParserTypes.hpp](#).

23.1.1.13 `typedef boost::spirit::classic::chset<char_t> AIRRAC::chset_t`

character set

Definition at line 63 of file [BasParserTypes.hpp](#).

23.1.1.14 `typedef boost::spirit::classic::impl::loop_traits<chset_t, unsigned int, unsigned  
int>::type AIRRAC::repeat_p_t`

(Repeating) sequence of a given number of characters: `repeat_p(min, max)`

Definition at line 69 of file [BasParserTypes.hpp](#).

23.1.1.15 `typedef boost::spirit::classic::bounded<uint2_p_t, unsigned int>  
AIRRAC::bounded2_p_t`

Bounded-number-of-integers parser

Definition at line 72 of file [BasParserTypes.hpp](#).

23.1.1.16 `typedef boost::spirit::classic::bounded<uint1_2_p_t, unsigned int>  
AIRRAC::bounded1_2_p_t`

Definition at line 73 of file [BasParserTypes.hpp](#).

23.1.1.17 `typedef boost::spirit::classic::bounded<uint1_3_p_t, unsigned int>  
AIRRAC::bounded1_3_p_t`

Definition at line 74 of file [BasParserTypes.hpp](#).

23.1.1.18 `typedef boost::spirit::classic::bounded<uint4_p_t, unsigned int>  
AIRRAC::bounded4_p_t`

Definition at line 75 of file [BasParserTypes.hpp](#).

23.1.1.19 `typedef boost::spirit::classic::bounded<uint1_4_p_t, unsigned int>  
AIRRAC::bounded1_4_p_t`

Definition at line 76 of file [BasParserTypes.hpp](#).

## 23.1.2 Variable Documentation

23.1.2.1 `const std::string AIRRAC::DEFAULT_AIRLINE_CODE = "BA"`

Default airline name for the [AIRRAC\\_Service](#).

Definition at line 10 of file [BasConst.cpp](#).

## 23.2 AIRRAC::YieldParserHelper Namespace Reference

### Classes

- struct [ParserSemanticAction](#)
- struct [storeYieldId](#)
- struct [storeOrigin](#)
- struct [storeDestination](#)
- struct [storeTripType](#)
- struct [storeDateRangeStart](#)
- struct [storeDateRangeEnd](#)
- struct [storeStartRangeTime](#)
- struct [storeEndRangeTime](#)
- struct [storePOS](#)
- struct [storeCabinCode](#)

- struct [storeChannel](#)
- struct [storeYield](#)
- struct [storeAirlineCode](#)
- struct [storeClass](#)
- struct [doEndYield](#)
- struct [YieldRuleParser](#)

#### Variables

- `stdair::int1_p_t` [int1\\_p](#)
- `stdair::uint2_p_t` [uint2\\_p](#)
- `stdair::uint4_p_t` [uint4\\_p](#)
- `stdair::uint1_4_p_t` [uint1\\_4\\_p](#)
- `stdair::hour_p_t` [hour\\_p](#)
- `stdair::minute_p_t` [minute\\_p](#)
- `stdair::second_p_t` [second\\_p](#)
- `stdair::year_p_t` [year\\_p](#)
- `stdair::month_p_t` [month\\_p](#)
- `stdair::day_p_t` [day\\_p](#)

#### 23.2.1 Variable Documentation

##### 23.2.1.1 `stdair::int1_p_t` AIRRAC::YieldParserHelper::int1\_p

Namespaces. 1-digit-integer parser

Definition at line 339 of file [YieldParserHelper.cpp](#).

##### 23.2.1.2 `stdair::uint2_p_t` AIRRAC::YieldParserHelper::uint2\_p

2-digit-integer parser

Definition at line 342 of file [YieldParserHelper.cpp](#).

##### 23.2.1.3 `stdair::uint4_p_t` AIRRAC::YieldParserHelper::uint4\_p

4-digit-integer parser

Definition at line 345 of file [YieldParserHelper.cpp](#).

##### 23.2.1.4 `stdair::uint1_4_p_t` AIRRAC::YieldParserHelper::uint1\_4\_p

Up-to-4-digit-integer parser

Definition at line 348 of file [YieldParserHelper.cpp](#).

Referenced by [AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser\(\)](#).

#### 23.2.1.5 stdair::hour\_p\_t AIRRAC::YieldParserHelper::hour\_p

Time element parsers.

Definition at line 351 of file [YieldParserHelper.cpp](#).

Referenced by [AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser\(\)](#).

#### 23.2.1.6 stdair::minute\_p\_t AIRRAC::YieldParserHelper::minute\_p

Definition at line 352 of file [YieldParserHelper.cpp](#).

Referenced by [AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser\(\)](#).

#### 23.2.1.7 stdair::second\_p\_t AIRRAC::YieldParserHelper::second\_p

Definition at line 353 of file [YieldParserHelper.cpp](#).

Referenced by [AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser\(\)](#).

#### 23.2.1.8 stdair::year\_p\_t AIRRAC::YieldParserHelper::year\_p

Date element parsers.

Definition at line 356 of file [YieldParserHelper.cpp](#).

Referenced by [AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser\(\)](#).

#### 23.2.1.9 stdair::month\_p\_t AIRRAC::YieldParserHelper::month\_p

Definition at line 357 of file [YieldParserHelper.cpp](#).

Referenced by [AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser\(\)](#).

#### 23.2.1.10 stdair::day\_p\_t AIRRAC::YieldParserHelper::day\_p

Definition at line 358 of file [YieldParserHelper.cpp](#).

Referenced by [AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser\(\)](#).

### 23.3 stdair Namespace Reference

Forward declarations.

#### 23.3.1 Detailed Description

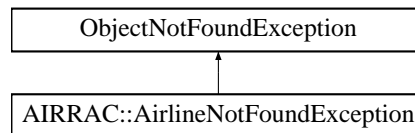
Forward declarations.

## 24 Class Documentation

## 24.1 AIRRAC::AirlineNotFoundException Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::AirlineNotFoundException:



### Public Member Functions

- [AirlineNotFoundException](#) (const std::string &iWhat)

#### 24.1.1 Detailed Description

Definition at line 52 of file [AIRRAC\\_Types.hpp](#).

#### 24.1.2 Constructor & Destructor Documentation

24.1.2.1 `AIRRAC::AirlineNotFoundException::AirlineNotFoundException ( const std::string &iWhat ) [inline]`

Constructor.

Definition at line 55 of file [AIRRAC\\_Types.hpp](#).

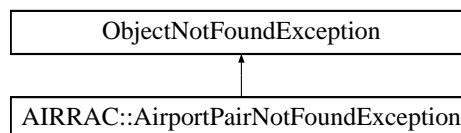
The documentation for this class was generated from the following file:

- [airrac/AIRRAC\\_Types.hpp](#)

## 24.2 AIRRAC::AirportPairNotFoundException Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::AirportPairNotFoundException:



## Public Member Functions

- [AirportPairNotFoundException](#) (const std::string &iWhat)

## 24.2.1 Detailed Description

Definition at line 17 of file [AIRRAC\\_Types.hpp](#).

## 24.2.2 Constructor &amp; Destructor Documentation

24.2.2.1 AIRRAC::AirportPairNotFoundException::AirportPairNotFoundException ( const std::string & *iWhat* ) [inline]

Constructor.

Definition at line 20 of file [AIRRAC\\_Types.hpp](#).

The documentation for this class was generated from the following file:

- [airrac/AIRRAC\\_Types.hpp](#)

## 24.3 AIRRAC::AIRRAC\_Service Class Reference

Interface for the [AIRRAC](#) Services.

```
#include <airrac/AIRRAC_Service.hpp>
```

## Public Member Functions

- [AIRRAC\\_Service](#) (const stdair::BasLogParams &)
- [AIRRAC\\_Service](#) (const stdair::BasLogParams &, const stdair::BasDBParams &)
- [AIRRAC\\_Service](#) (stdair::STDAIR\_ServicePtr\_T ioSTDAIR\_ServicePtr)
- void [parseAndLoad](#) (const [YieldFilePath](#) &iYieldFilename)
- [~AIRRAC\\_Service](#) ()
- void [calculateYields](#) (stdair::TravelSolutionList\_T &)
- void [updateYields](#) ()
- void [buildSampleBom](#) ()
- void [buildSampleTravelSolutions](#) (stdair::TravelSolutionList\_T &)
- std::string [csvDisplay](#) () const
- std::string [csvDisplay](#) (const stdair::TravelSolutionList\_T &) const

## 24.3.1 Detailed Description

Interface for the [AIRRAC](#) Services.

Definition at line 29 of file [AIRRAC\\_Service.hpp](#).

### 24.3.2 Constructor & Destructor Documentation

#### 24.3.2.1 AIRRAC::AIRRAC\_Service::AIRRAC\_Service ( const stdair::BasLogParams & iLogParams )

Constructor.

The initAirracService() 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.

##### Parameters

<i>const</i> stdair::BasLogParams& Parameters for the output log stream.
--

Definition at line 34 of file [AIRRAC\\_Service.cpp](#).

#### 24.3.2.2 AIRRAC::AIRRAC\_Service::AIRRAC\_Service ( const stdair::BasLogParams & iLogParams, const stdair::BasDBParams & iDBParams )

Constructor.

The initAirracService() 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.

##### Parameters

<i>const</i> stdair::BasLogParams& Parameters for the output log stream.
<i>const</i> stdair::BasDBParams& Parameters for the database access.

Definition at line 54 of file [AIRRAC\\_Service.cpp](#).

#### 24.3.2.3 AIRRAC::AIRRAC\_Service::AIRRAC\_Service ( stdair::STDAIR\_ServicePtr\_T ioSTDAIR\_ServicePtr )

Constructor.

The initAirracService() method is called; see the corresponding documentation for more details.

Moreover, as no reference on any output stream is given, it is assumed that the StdAir log service has already been initialised with the proper log output stream by some other methods in the calling chain (for instance, when the [AIRRAC\\_Service](#) is itself being initialised by another library service such as SIMCRS\_Service).

##### Parameters

<i>stdair::STDAI</i> <i>ServicePtr_</i> <i>T</i>	Reference on the STDAIR service.
--	----------------------------------

Definition at line 76 of file [AIRRAC\\_Service.cpp](#).

#### 24.3.2.4 AIRRAC::AIRRAC\_Service::~~AIRRAC\_Service ( )

Destructor.

Definition at line 92 of file [AIRRAC\\_Service.cpp](#).

### 24.3.3 Member Function Documentation

#### 24.3.3.1 void AIRRAC::AIRRAC\_Service::parseAndLoad ( const YieldFilePath & iYieldFilename )

Parse the yield input file, and load them into memory.

The CSV files, describing the airline schedule and the O&Ds for the simulator, are parsed and instantiated in memory accordingly.

#### Parameters

<i>const</i> <a href="#">YieldFilePath</a> & Filename of the input yield file.
--

Definition at line 170 of file [AIRRAC\\_Service.cpp](#).

References [AIRRAC::YieldParser::generateYieldStore\(\)](#).

Referenced by [main\(\)](#).

#### 24.3.3.2 void AIRRAC::AIRRAC\_Service::calculateYields ( stdair::TravelSolutionList\_T & ioTravelSolutionList )

Calculate/retrieve a yield.

Definition at line 301 of file [AIRRAC\\_Service.cpp](#).

#### 24.3.3.3 void AIRRAC::AIRRAC\_Service::updateYields ( )

Update the yields for booking classes and O&D.

Definition at line 332 of file [AIRRAC\\_Service.cpp](#).

#### 24.3.3.4 void AIRRAC::AIRRAC\_Service::buildSampleBom ( )

Build a sample BOM tree.

For now, no object is created: the BOM tree remains empty. In the future, it will hold a sample yield store.

Definition at line 184 of file [AIRRAC\\_Service.cpp](#).

Referenced by [main\(\)](#).

**24.3.3.5** void AIRRAC::AIRRAC\_Service::buildSampleTravelSolutions (stdair::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

<i>TravelSolutionList.T</i> &	Sample list of travel solution structures. It should be given empty. It is altered with the returned sample.
-------------------------------	--

Definition at line 231 of file [AIRRAC\\_Service.cpp](#).

Referenced by [main\(\)](#).

**24.3.3.6** std::string AIRRAC::AIRRAC\_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 251 of file [AIRRAC\\_Service.cpp](#).

Referenced by [main\(\)](#).

**24.3.3.7** std::string AIRRAC::AIRRAC\_Service::csvDisplay ( const stdair::TravelSolutionList.T & ioTravelSolutionList ) 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 279 of file [AIRRAC\\_Service.cpp](#).

The documentation for this class was generated from the following files:

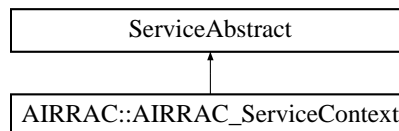
- [airrac/AIRRAC\\_Service.hpp](#)
- [airrac/service/AIRRAC\\_Service.cpp](#)

## 24.4 AIRRAC::AIRRAC\_ServiceContext Class Reference

Inner class holding the context for the [AIRRAC](#) Service object.

```
#include <airrac/service/AIRRAC_ServiceContext.hpp>
```

Inheritance diagram for AIRRAC::AIRRAC\_ServiceContext:



### Friends

- class [AIRRAC\\_Service](#)
- class [FacAirracServiceContext](#)

### 24.4.1 Detailed Description

Inner class holding the context for the [AIRRAC](#) Service object.

Definition at line 25 of file [AIRRAC\\_ServiceContext.hpp](#).

### 24.4.2 Friends And Related Function Documentation

#### 24.4.2.1 friend class AIRRAC\_Service [friend]

The [AIRRAC\\_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 31 of file [AIRRAC\\_ServiceContext.hpp](#).

#### 24.4.2.2 friend class FacAirracServiceContext [friend]

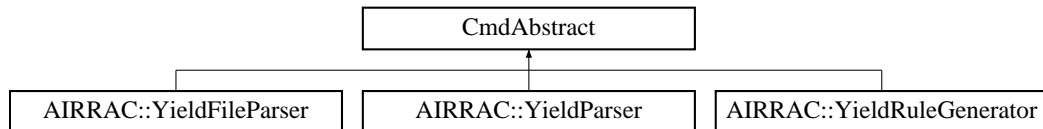
Definition at line 32 of file [AIRRAC\\_ServiceContext.hpp](#).

The documentation for this class was generated from the following files:

- [airrac/service/AIRRAC\\_ServiceContext.hpp](#)
- [airrac/service/AIRRAC\\_ServiceContext.cpp](#)

## 24.5 CmdAbstract Class Reference

Inheritance diagram for CmdAbstract:



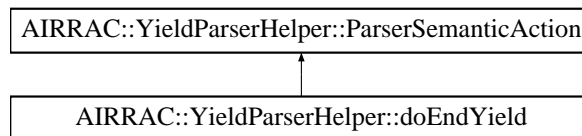
The documentation for this class was generated from the following file:

- [airrac/command/YieldParserHelper.hpp](#)

## 24.6 AIRRAC::YieldParserHelper::doEndYield Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::doEndYield:



### Public Member Functions

- [doEndYield](#) (stdair::BomRoot &, [YieldRuleStruct](#) &)
- void [operator\(\)](#) (boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type) const

### Public Attributes

- stdair::BomRoot & [\\_bomRoot](#)
- [YieldRuleStruct](#) & [\\_yieldRule](#)

### 24.6.1 Detailed Description

Mark the end of the yield-rule parsing.

Definition at line 178 of file [YieldParserHelper.hpp](#).

### 24.6.2 Constructor & Destructor Documentation

#### 24.6.2.1 AIRRAC::YieldParserHelper::doEndYield::doEndYield ( *stdair::BomRoot & ioBomRoot*, *YieldRuleStruct & ioYieldRule* )

Actor Constructor.

Definition at line 312 of file [YieldParserHelper.cpp](#).

### 24.6.3 Member Function Documentation

#### 24.6.3.1 void AIRRAC::YieldParserHelper::doEndYield::operator() ( *boost::spirit::qi::unused\_type* , *boost::spirit::qi::unused\_type* , *boost::spirit::qi::unused\_type* ) *const*

Actor Function (functor).

Definition at line 319 of file [YieldParserHelper.cpp](#).

References [\\_bomRoot](#), [AIRRAC::YieldParserHelper::ParserSemanticAction::\\_yieldRule](#), and [AIRRAC::YieldRuleStruct::describe\(\)](#).

### 24.6.4 Member Data Documentation

#### 24.6.4.1 *stdair::BomRoot&* AIRRAC::YieldParserHelper::doEndYield::\_bomRoot

Actor Specific Context.

Definition at line 186 of file [YieldParserHelper.hpp](#).

Referenced by [operator\(\)](#).

#### 24.6.4.2 *YieldRuleStruct&* AIRRAC::YieldParserHelper::ParserSemanticAction::\_yieldRule *[inherited]*

Actor Context.

Definition at line 34 of file [YieldParserHelper.hpp](#).

Referenced by [operator\(\)](#), [AIRRAC::YieldParserHelper::storeClass::operator\(\)](#), [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storeYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeChannel::operator\(\)](#), [AIRRAC::YieldParserHelper::storeCabinCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storePOS::operator\(\)](#), [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeStart::operator\(\)](#), [AIRRAC::YieldParserHelper::storeTripType::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDestination::operator\(\)](#), [AIRRAC::YieldParserHelper::storeOrigin::operator\(\)](#), and [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)](#).

The documentation for this struct was generated from the following files:

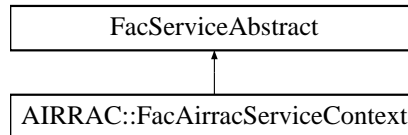
- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

## 24.7 AIRRAC::FacAirracsServiceContext Class Reference

Factory for the service context.

```
#include <airrac/factory/FacAirracsServiceContext.hpp>
```

Inheritance diagram for AIRRAC::FacAirracsServiceContext:



### Public Member Functions

- [~FacAirracsServiceContext](#) ()
- [AIRRAC\\_ServiceContext](#) & [create](#) ()

### Static Public Member Functions

- static [FacAirracsServiceContext](#) & [instance](#) ()

### Protected Member Functions

- [FacAirracsServiceContext](#) ()

#### 24.7.1 Detailed Description

Factory for the service context.

Definition at line 21 of file [FacAirracsServiceContext.hpp](#).

#### 24.7.2 Constructor & Destructor Documentation

##### 24.7.2.1 AIRRAC::FacAirracsServiceContext::~~FacAirracsServiceContext ( )

Destructor.

The Destruction put the `_instance` to NULL in order to be clean for the next `FacSimfqt-ServiceContext::instance()`.

Definition at line 17 of file [FacAirracsServiceContext.cpp](#).

##### 24.7.2.2 AIRRAC::FacAirracsServiceContext::FacAirracsServiceContext ( ) [inline, protected]

Default Constructor.

This constructor is protected in order to ensure the singleton pattern.

Definition at line 56 of file [FacAirracsServiceContext.hpp](#).

Referenced by [instance\(\)](#).

### 24.7.3 Member Function Documentation

#### 24.7.3.1 FacAirracsServiceContext & AIRRAC::FacAirracsServiceContext::instance ( ) [static]

Provide the unique instance.

The singleton is instantiated when first used.

#### Returns

FacServiceContext&

Definition at line 22 of file [FacAirracsServiceContext.cpp](#).

References [FacAirracsServiceContext\(\)](#).

#### 24.7.3.2 AIRRAC\_ServiceContext & AIRRAC::FacAirracsServiceContext::create ( )

Create a new ServiceContext object.

This new object is added to the list of instantiated objects.

#### Returns

ServiceContext& The newly created object.

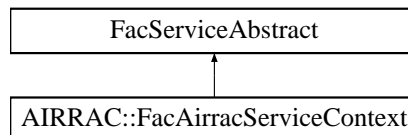
Definition at line 34 of file [FacAirracsServiceContext.cpp](#).

The documentation for this class was generated from the following files:

- [airrac/factory/FacAirracsServiceContext.hpp](#)
- [airrac/factory/FacAirracsServiceContext.cpp](#)

## 24.8 FacServiceAbstract Class Reference

Inheritance diagram for FacServiceAbstract:



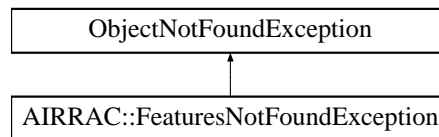
The documentation for this class was generated from the following file:

- [airrac/factory/FacAirracsServiceContext.hpp](#)

## 24.9 AIRRAC::FeaturesNotFoundException Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::FeaturesNotFoundException:



### Public Member Functions

- [FeaturesNotFoundException](#) (const std::string &iWhat)

#### 24.9.1 Detailed Description

Definition at line 45 of file [AIRRAC\\_Types.hpp](#).

#### 24.9.2 Constructor & Destructor Documentation

24.9.2.1 AIRRAC::FeaturesNotFoundException::FeaturesNotFoundException ( const std::string & iWhat ) [inline]

Constructor.

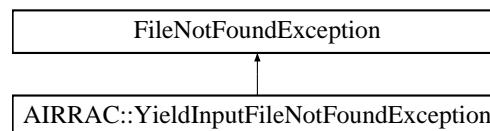
Definition at line 48 of file [AIRRAC\\_Types.hpp](#).

The documentation for this class was generated from the following file:

- [airrac/AIRRAC\\_Types.hpp](#)

## 24.10 FileNotFoundException Class Reference

Inheritance diagram for FileNotFoundException:



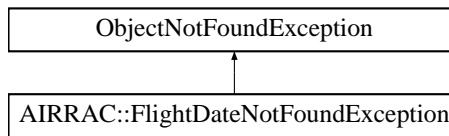
The documentation for this class was generated from the following file:

- [airrac/AIRRAC\\_Types.hpp](#)

## 24.11 AIRRAC::FlightDateNotFoundException Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::FlightDateNotFoundException:



### Public Member Functions

- [FlightDateNotFoundException](#) (const std::string &iWhat)

#### 24.11.1 Detailed Description

Definition at line 31 of file [AIRRAC\\_Types.hpp](#).

#### 24.11.2 Constructor & Destructor Documentation

24.11.2.1 `AIRRAC::FlightDateNotFoundException::FlightDateNotFoundException ( const std::string & iWhat ) [inline]`

Constructor.

Definition at line 34 of file [AIRRAC\\_Types.hpp](#).

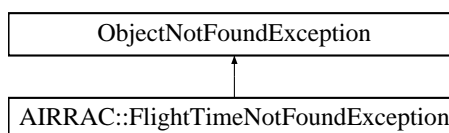
The documentation for this class was generated from the following file:

- [airrac/AIRRAC\\_Types.hpp](#)

## 24.12 AIRRAC::FlightTimeNotFoundException Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::FlightTimeNotFoundException:



## Public Member Functions

- [FlightTimeNotFoundException](#) (const std::string &iWhat)

## 24.12.1 Detailed Description

Definition at line 38 of file [AIRRAC\\_Types.hpp](#).

## 24.12.2 Constructor &amp; Destructor Documentation

#### 24.12.2.1 AIRRAC::FlightTimeNotFoundException::FlightTimeNotFoundException ( const std::string & iWhat ) [inline]

Constructor.

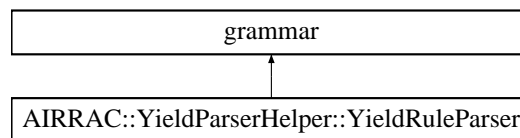
Definition at line 41 of file [AIRRAC\\_Types.hpp](#).

The documentation for this class was generated from the following file:

- [airrac/AIRRAC\\_Types.hpp](#)

## 24.13 grammar Class Reference

Inheritance diagram for grammar:

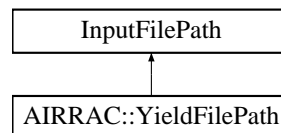


The documentation for this class was generated from the following file:

- [airrac/command/YieldParserHelper.hpp](#)

## 24.14 InputFilePath Class Reference

Inheritance diagram for InputFilePath:

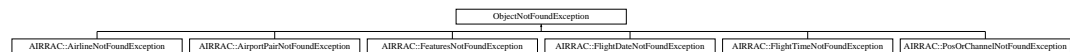


The documentation for this class was generated from the following file:

- [airrac/AIRAC\\_Types.hpp](#)

## 24.15 ObjectNotFoundException Class Reference

Inheritance diagram for ObjectNotFoundException:



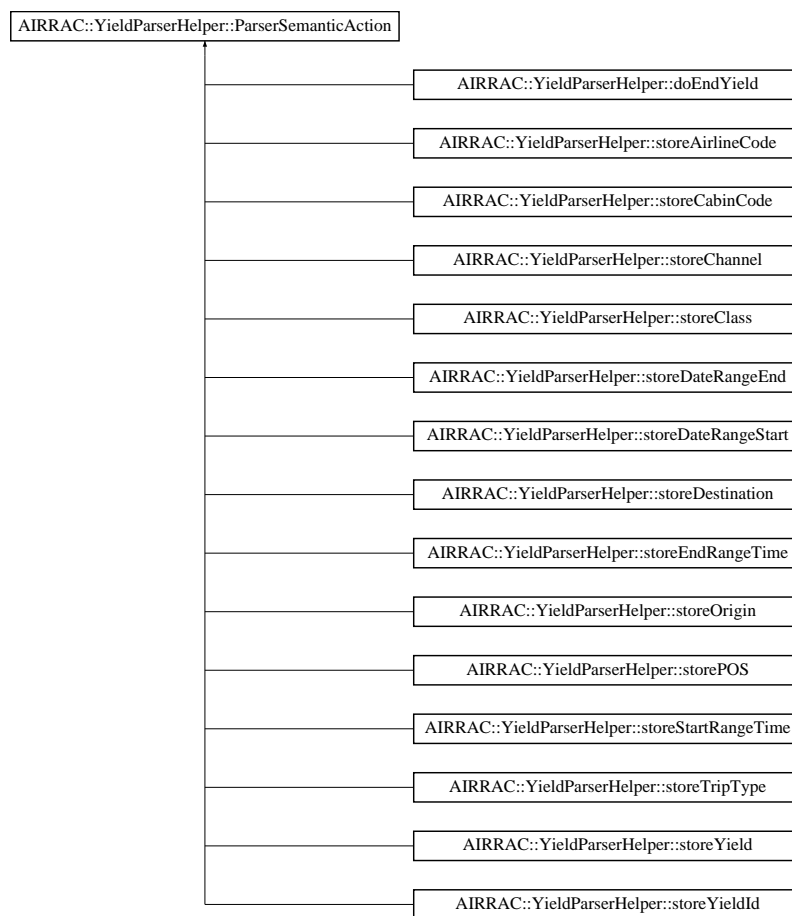
The documentation for this class was generated from the following file:

- [airrac/AIRAC\\_Types.hpp](#)

## 24.16 AIRAC::YieldParserHelper::ParserSemanticAction Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRAC::YieldParserHelper::ParserSemanticAction:



### Public Member Functions

- [ParserSemanticAction](#) ([YieldRuleStruct](#) &)

### Public Attributes

- [YieldRuleStruct](#) & [\\_yieldRule](#)

#### 24.16.1 Detailed Description

Generic Semantic Action (Actor / Functor) for the Yield Parser.

Definition at line 30 of file [YieldParserHelper.hpp](#).

#### 24.16.2 Constructor & Destructor Documentation

#### 24.16.2.1 AIRRAC::YieldParserHelper::ParserSemanticAction::ParserSemanticAction ( YieldRuleStruct & ioYieldRule )

Actor Constructor.

Definition at line 26 of file [YieldParserHelper.cpp](#).

#### 24.16.3 Member Data Documentation

##### 24.16.3.1 YieldRuleStruct& AIRRAC::YieldParserHelper::ParserSemanticAction::\_yieldRule

Actor Context.

Definition at line 34 of file [YieldParserHelper.hpp](#).

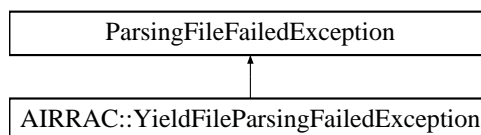
Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeClass::operator\(\)](#), [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storeYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeChannel::operator\(\)](#), [AIRRAC::YieldParserHelper::storeCabinCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storePOS::operator\(\)](#), [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeStart::operator\(\)](#), [AIRRAC::YieldParserHelper::storeTripType::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDestination::operator\(\)](#), [AIRRAC::YieldParserHelper::storeOrigin::operator\(\)](#), and [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)](#).

The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

## 24.17 ParsingFileFailedException Class Reference

Inheritance diagram for ParsingFileFailedException:



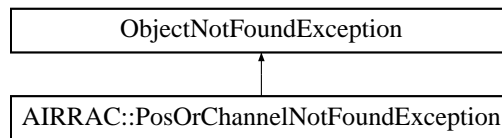
The documentation for this class was generated from the following file:

- [airrac/AIRRAC\\_Types.hpp](#)

## 24.18 AIRRAC::PosOrChannelNotFoundException Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::PosOrChannelNotFoundException:



#### Public Member Functions

- [PosOrChannelNotFoundException](#) (const std::string &iWhat)

##### 24.18.1 Detailed Description

Definition at line 24 of file [AIRRAC\\_Types.hpp](#).

##### 24.18.2 Constructor & Destructor Documentation

24.18.2.1 `AIRRAC::PosOrChannelNotFoundException::PosOrChannelNotFoundException (const std::string &iWhat) [inline]`

Constructor.

Definition at line 27 of file [AIRRAC\\_Types.hpp](#).

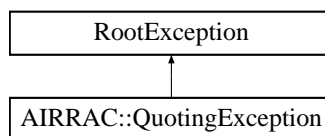
The documentation for this class was generated from the following file:

- [airrac/AIRRAC\\_Types.hpp](#)

## 24.19 AIRRAC::QuotingException Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::QuotingException:



##### 24.19.1 Detailed Description

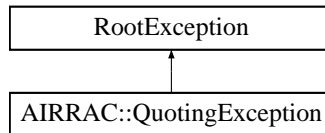
Definition at line 73 of file [AIRRAC\\_Types.hpp](#).

The documentation for this class was generated from the following file:

- [airrac/AIRRAC\\_Types.hpp](#)

## 24.20 RootException Class Reference

Inheritance diagram for RootException:

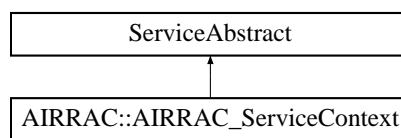


The documentation for this class was generated from the following file:

- [airrac/AIRRAC\\_Types.hpp](#)

## 24.21 ServiceAbstract Class Reference

Inheritance diagram for ServiceAbstract:



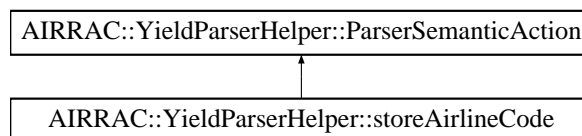
The documentation for this class was generated from the following file:

- [airrac/service/AIRRAC\\_ServiceContext.hpp](#)

## 24.22 AIRRAC::YieldParserHelper::storeAirlineCode Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeAirlineCode:



### Public Member Functions

- [storeAirlineCode](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) (std::vector< char >, boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type) const

## Public Attributes

- [YieldRuleStruct](#) & [\\_yieldRule](#)

## 24.22.1 Detailed Description

Store the parsed airline code.

Definition at line 158 of file [YieldParserHelper.hpp](#).

## 24.22.2 Constructor &amp; Destructor Documentation

## 24.22.2.1 AIRRAC::YieldParserHelper::storeAirlineCode::storeAirlineCode ( YieldRuleStruct &amp; ioYieldRule )

Actor Constructor.

Definition at line 268 of file [YieldParserHelper.cpp](#).

## 24.22.3 Member Function Documentation

## 24.22.3.1 void AIRRAC::YieldParserHelper::storeAirlineCode::operator() ( std::vector&lt; char &gt; iChar, boost::spirit::qi::unused\_type , boost::spirit::qi::unused\_type ) const

Actor Function (functor).

Definition at line 273 of file [YieldParserHelper.cpp](#).

References [AIRRAC::YieldParserHelper::ParserSemanticAction::\\_yieldRule](#), [AIRRAC::YieldRuleStruct::addAirlineCode](#) and [AIRRAC::YieldRuleStruct::setAirlineCode\(\)](#).

## 24.22.4 Member Data Documentation

## 24.22.4.1 YieldRuleStruct&amp; AIRRAC::YieldParserHelper::ParserSemanticAction::\_yieldRule [inherited]

Actor Context.

Definition at line 34 of file [YieldParserHelper.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeClass::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeYield::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeChannel::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeCabinCode::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storePOS::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeStart::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeTripType::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeDestination::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeOrigin::operator\(\)\(\)](#), and [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)\(\)](#).

The documentation for this struct was generated from the following files:

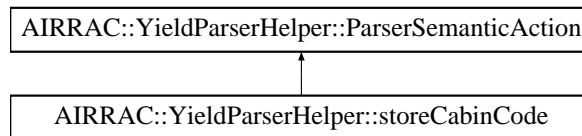
- [airrac/command/YieldParserHelper.hpp](#)

- [airrac/command/YieldParserHelper.cpp](#)

### 24.23 AIRRAC::YieldParserHelper::storeCabinCode Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeCabinCode:



#### Public Member Functions

- [storeCabinCode](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) (char, boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type) const

#### Public Attributes

- [YieldRuleStruct](#) & [\\_yieldRule](#)

#### 24.23.1 Detailed Description

Store the cabin code.

Definition at line 128 of file [YieldParserHelper.hpp](#).

#### 24.23.2 Constructor & Destructor Documentation

##### 24.23.2.1 AIRRAC::YieldParserHelper::storeCabinCode::storeCabinCode ( [YieldRuleStruct](#) & *ioYieldRule* )

Actor Constructor.

Definition at line 210 of file [YieldParserHelper.cpp](#).

#### 24.23.3 Member Function Documentation

##### 24.23.3.1 void AIRRAC::YieldParserHelper::storeCabinCode::operator() ( char *iChar*, boost::spirit::qi::unused\_type , boost::spirit::qi::unused\_type ) const

Actor Function (functor).

Definition at line 215 of file [YieldParserHelper.cpp](#).

References [AIRRAC::YieldParserHelper::ParserSemanticAction::\\_yieldRule](#), and [AIRRAC::YieldRuleStruct::setCabinCode\(\)](#).

#### 24.23.4 Member Data Documentation

##### 24.23.4.1 YieldRuleStruct& AIRRAC::YieldParserHelper::ParserSemanticAction::\_yieldRule [inherited]

Actor Context.

Definition at line 34 of file [YieldParserHelper.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeClass::operator\(\)](#), [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storeYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeChannel::operator\(\)](#), [operator\(\)](#), [AIRRAC::YieldParserHelper::storePOS::operator\(\)](#), [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeStart::operator\(\)](#), [AIRRAC::YieldParserHelper::storeTripType::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDestination::operator\(\)](#), [AIRRAC::YieldParserHelper::storeOrigin::operator\(\)](#), and [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)](#).

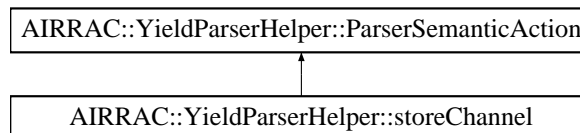
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

## 24.24 AIRRAC::YieldParserHelper::storeChannel Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeChannel:



#### Public Member Functions

- [storeChannel](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) (std::vector< char >, boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type) const

#### Public Attributes

- [YieldRuleStruct](#) & [\\_yieldRule](#)

#### 24.24.1 Detailed Description

Store the channel distribution.

Definition at line 138 of file [YieldParserHelper.hpp](#).

#### 24.24.2 Constructor & Destructor Documentation

##### 24.24.2.1 AIRRAC::YieldParserHelper::storeChannel::storeChannel ( YieldRuleStruct & ioYieldRule )

Actor Constructor.

Definition at line 231 of file [YieldParserHelper.cpp](#).

#### 24.24.3 Member Function Documentation

##### 24.24.3.1 void AIRRAC::YieldParserHelper::storeChannel::operator() ( std::vector< char > iChar, boost::spirit::qi::unused\_type , boost::spirit::qi::unused\_type ) const

Actor Function (functor).

Definition at line 236 of file [YieldParserHelper.cpp](#).

References [AIRRAC::YieldParserHelper::ParserSemanticAction::\\_yieldRule](#), and [AIRRAC::YieldRuleStruct::setChannel\(\)](#).

#### 24.24.4 Member Data Documentation

##### 24.24.4.1 YieldRuleStruct& AIRRAC::YieldParserHelper::ParserSemanticAction::\_yieldRule [inherited]

Actor Context.

Definition at line 34 of file [YieldParserHelper.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeClass::operator\(\)](#), [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storeYield::operator\(\)](#), [operator\(\)](#), [AIRRAC::YieldParserHelper::storeCabinCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storePOS::operator\(\)](#), [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeStart::operator\(\)](#), [AIRRAC::YieldParserHelper::storeTripType::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDestination::operator\(\)](#), [AIRRAC::YieldParserHelper::storeOrigin::operator\(\)](#), and [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)](#).

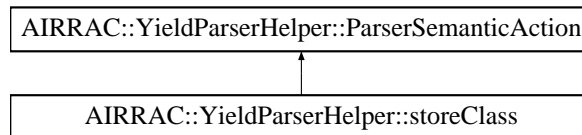
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

## 24.25 AIRRAC::YieldParserHelper::storeClass Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeClass:



### Public Member Functions

- [storeClass](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) (std::vector< char >, boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type) const

### Public Attributes

- [YieldRuleStruct](#) & [\\_yieldRule](#)

#### 24.25.1 Detailed Description

Store the parsed class.

Definition at line 168 of file [YieldParserHelper.hpp](#).

#### 24.25.2 Constructor & Destructor Documentation

##### 24.25.2.1 AIRRAC::YieldParserHelper::storeClass::storeClass ( [YieldRuleStruct](#) & [ioYieldRule](#) )

Actor Constructor.

Definition at line 288 of file [YieldParserHelper.cpp](#).

#### 24.25.3 Member Function Documentation

##### 24.25.3.1 void AIRRAC::YieldParserHelper::storeClass::operator() ( std::vector< char > [iChar](#), boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type ) const

Actor Function (functor).

Definition at line 293 of file [YieldParserHelper.cpp](#).

References [AIRRAC::YieldParserHelper::ParserSemanticAction::\\_yieldRule](#), and [AIRRAC::YieldRuleStruct::addClassCode\(\)](#).

## 24.25.4 Member Data Documentation

## 24.25.4.1 YieldRuleStruct&amp; AIRRAC::YieldParserHelper::ParserSemanticAction::\_yieldRule [inherited]

Actor Context.

Definition at line 34 of file [YieldParserHelper.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)\(\)](#), [operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeYield::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeChannel::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeCabinCode::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storePOS::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeStart::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeTripType::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeDestination::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeOrigin::operator\(\)\(\)](#), and [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)\(\)](#).

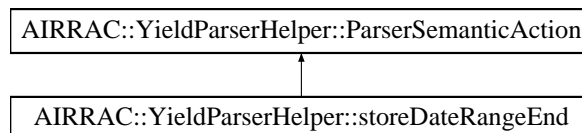
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

## 24.26 AIRRAC::YieldParserHelper::storeDateRangeEnd Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeDateRangeEnd:



## Public Member Functions

- [storeDateRangeEnd](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) (boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type) const

## Public Attributes

- [YieldRuleStruct](#) & [\\_yieldRule](#)

## 24.26.1 Detailed Description

Store the parsed end of the date range.

## 24.27 AIRRAC::YieldParserHelper::storeDateRangeStart Struct Reference 87

Definition at line 88 of file [YieldParserHelper.hpp](#).

### 24.26.2 Constructor & Destructor Documentation

#### 24.26.2.1 AIRRAC::YieldParserHelper::storeDateRangeEnd::storeDateRangeEnd (YieldRuleStruct & ioYieldRule )

Actor Constructor.

Definition at line 127 of file [YieldParserHelper.cpp](#).

### 24.26.3 Member Function Documentation

#### 24.26.3.1 void AIRRAC::YieldParserHelper::storeDateRangeEnd::operator() ( boost::spirit::qi::unused\_type , boost::spirit::qi::unused\_type , boost::spirit::qi::unused\_type ) const

Actor Function (functor).

Definition at line 132 of file [YieldParserHelper.cpp](#).

References [AIRRAC::YieldParserHelper::ParserSemanticAction::\\_yieldRule](#), [AIRRAC::YieldRuleStruct::calculateDate\(\)](#), and [AIRRAC::YieldRuleStruct::setDateRangeEnd\(\)](#).

### 24.26.4 Member Data Documentation

#### 24.26.4.1 YieldRuleStruct& AIRRAC::YieldParserHelper::ParserSemanticAction::\_yieldRule [inherited]

Actor Context.

Definition at line 34 of file [YieldParserHelper.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeClass::operator\(\)](#), [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storeYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeChannel::operator\(\)](#), [AIRRAC::YieldParserHelper::storeCabinCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storePOS::operator\(\)](#), [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)](#), [operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRRAC::YieldParserHelper::storeTripType::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDestination::operator\(\)](#), [AIRRAC::YieldParserHelper::storeOrigin::operator\(\)](#), and [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)](#).

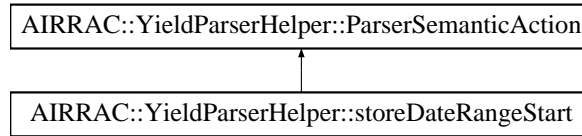
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

## 24.27 AIRRAC::YieldParserHelper::storeDateRangeStart Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeDateRangeStart:



#### Public Member Functions

- [storeDateRangeStart](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) (boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type) const

#### Public Attributes

- [YieldRuleStruct](#) & [\\_yieldRule](#)

##### 24.27.1 Detailed Description

Store the parsed start of the date range.

Definition at line 78 of file [YieldParserHelper.hpp](#).

##### 24.27.2 Constructor & Destructor Documentation

###### 24.27.2.1 AIRRAC::YieldParserHelper::storeDateRangeStart::storeDateRangeStart ( [YieldRuleStruct](#) & *ioYieldRule* )

Actor Constructor.

Definition at line 111 of file [YieldParserHelper.cpp](#).

##### 24.27.3 Member Function Documentation

###### 24.27.3.1 void AIRRAC::YieldParserHelper::storeDateRangeStart::operator() ( boost::spirit::qi::unused\_type , boost::spirit::qi::unused\_type , boost::spirit::qi::unused\_type ) const

Actor Function (functor).

Definition at line 116 of file [YieldParserHelper.cpp](#).

References [AIRRAC::YieldParserHelper::ParserSemanticAction::\\_yieldRule](#), [AIRRAC::YieldRuleStruct::calculateDate\(\)](#), and [AIRRAC::YieldRuleStruct::setDateRangeStart\(\)](#).

## 24.27.4 Member Data Documentation

## 24.27.4.1 YieldRuleStruct&amp; AIRRAC::YieldParserHelper::ParserSemanticAction::\_yieldRule [inherited]

Actor Context.

Definition at line 34 of file [YieldParserHelper.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeClass::operator\(\)](#), [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storeYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeChannel::operator\(\)](#), [AIRRAC::YieldParserHelper::storeCabinCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storePOS::operator\(\)](#), [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRRAC::YieldParserHelper::storeTripType::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDestination::operator\(\)](#), [AIRRAC::YieldParserHelper::storeOrigin::operator\(\)](#), and [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)](#).

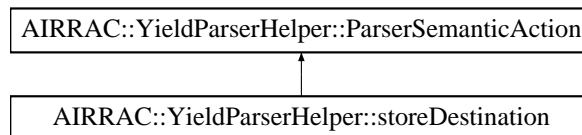
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

## 24.28 AIRRAC::YieldParserHelper::storeDestination Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeDestination:



## Public Member Functions

- [storeDestination](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) (std::vector< char >, boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type) const

## Public Attributes

- [YieldRuleStruct](#) & [\\_yieldRule](#)

## 24.28.1 Detailed Description

Store the parsed destination.

Definition at line 58 of file [YieldParserHelper.hpp](#).

## 24.28.2 Constructor &amp; Destructor Documentation

## 24.28.2.1 AIRRAC::YieldParserHelper::storeDestination::storeDestination ( YieldRuleStruct &amp; ioYieldRule )

Actor Constructor.

Definition at line 73 of file [YieldParserHelper.cpp](#).

## 24.28.3 Member Function Documentation

## 24.28.3.1 void AIRRAC::YieldParserHelper::storeDestination::operator() ( std::vector&lt; char &gt; iChar, boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type ) const

Actor Function (functor).

Definition at line 78 of file [YieldParserHelper.cpp](#).

References [AIRRAC::YieldParserHelper::ParserSemanticAction::\\_yieldRule](#), and [AIRRAC::YieldRuleStruct::setDestination\(\)](#).

## 24.28.4 Member Data Documentation

## 24.28.4.1 YieldRuleStruct&amp; AIRRAC::YieldParserHelper::ParserSemanticAction::\_yieldRule [inherited]

Actor Context.

Definition at line 34 of file [YieldParserHelper.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeClass::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeYield::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeChannel::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeCabinCode::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storePOS::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeStart::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeTripType::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeOrigin::operator\(\)\(\)](#), and [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)\(\)](#).

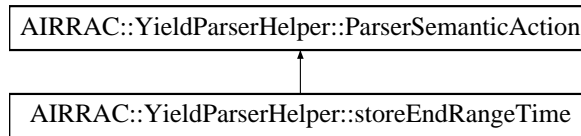
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

## 24.29 AIRRAC::YieldParserHelper::storeEndRangeTime Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeEndRangeTime:



#### Public Member Functions

- [storeEndRangeTime](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) (boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type) const

#### Public Attributes

- [YieldRuleStruct](#) & [\\_yieldRule](#)

##### 24.29.1 Detailed Description

Store the parsed end start range time.

Definition at line 108 of file [YieldParserHelper.hpp](#).

##### 24.29.2 Constructor & Destructor Documentation

###### 24.29.2.1 AIRRAC::YieldParserHelper::storeEndRangeTime::storeEndRangeTime ( [YieldRuleStruct](#) & *ioYieldRule* )

Actor Constructor.

Definition at line 166 of file [YieldParserHelper.cpp](#).

##### 24.29.3 Member Function Documentation

###### 24.29.3.1 void AIRRAC::YieldParserHelper::storeEndRangeTime::operator() ( boost::spirit::qi::unused\_type , boost::spirit::qi::unused\_type , boost::spirit::qi::unused\_type ) const

Actor Function (functor).

Definition at line 171 of file [YieldParserHelper.cpp](#).

References [AIRRAC::YieldRuleStruct::\\_itSeconds](#), [AIRRAC::YieldParserHelper::ParserSemanticAction::\\_yieldRule](#), [AIRRAC::YieldRuleStruct::calculateTime\(\)](#), and [AIRRAC::YieldRuleStruct::setTimeRangeEnd\(\)](#).

##### 24.29.4 Member Data Documentation

#### 24.29.4.1 YieldRuleStruct& AIRRAC::YieldParserHelper::ParserSemanticAction::\_yieldRule [inherited]

Actor Context.

Definition at line 34 of file [YieldParserHelper.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeClass::operator\(\)](#), [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storeYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeChannel::operator\(\)](#), [AIRRAC::YieldParserHelper::storeCabinCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storePOS::operator\(\)](#), [operator\(\)](#), [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeStart::operator\(\)](#), [AIRRAC::YieldParserHelper::storeTripType::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDestination::operator\(\)](#), [AIRRAC::YieldParserHelper::storeOrigin::operator\(\)](#), and [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)](#).

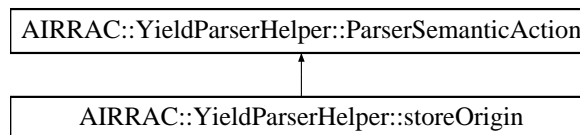
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

### 24.30 AIRRAC::YieldParserHelper::storeOrigin Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeOrigin:



#### Public Member Functions

- [storeOrigin](#) (YieldRuleStruct &)
- void [operator\(\)](#) (std::vector< char >, boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type) const

#### Public Attributes

- [YieldRuleStruct](#) & [\\_yieldRule](#)

#### 24.30.1 Detailed Description

Store the parsed origin.

Definition at line 48 of file [YieldParserHelper.hpp](#).

## 24.30.2 Constructor &amp; Destructor Documentation

## 24.30.2.1 AIRRAC::YieldParserHelper::storeOrigin::storeOrigin ( YieldRuleStruct &amp; ioYieldRule )

Actor Constructor.

Definition at line 57 of file [YieldParserHelper.cpp](#).

## 24.30.3 Member Function Documentation

## 24.30.3.1 void AIRRAC::YieldParserHelper::storeOrigin::operator() ( std::vector&lt; char &gt; iChar, boost::spirit::qi::unused\_type , boost::spirit::qi::unused\_type ) const

Actor Function (functor).

Definition at line 62 of file [YieldParserHelper.cpp](#).

References [AIRRAC::YieldParserHelper::ParserSemanticAction::\\_yieldRule](#), and [AIRRAC::YieldRuleStruct::setOrigin\(\)](#).

## 24.30.4 Member Data Documentation

## 24.30.4.1 YieldRuleStruct&amp; AIRRAC::YieldParserHelper::ParserSemanticAction::\_yieldRule [inherited]

Actor Context.

Definition at line 34 of file [YieldParserHelper.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeClass::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeYield::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeChannel::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeCabinCode::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storePOS::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeStart::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeTripType::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeDestination::operator\(\)\(\)](#), [operator\(\)\(\)](#), and [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)\(\)](#).

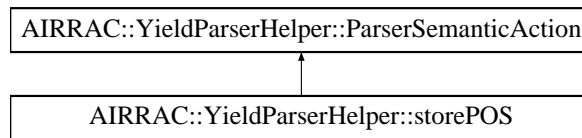
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

## 24.31 AIRRAC::YieldParserHelper::storePOS Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storePOS:



#### Public Member Functions

- [storePOS](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) (std::vector< char >, boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type) const

#### Public Attributes

- [YieldRuleStruct](#) & [\\_yieldRule](#)

##### 24.31.1 Detailed Description

Store the parsed customer point\_of\_sale.

Definition at line 118 of file [YieldParserHelper.hpp](#).

##### 24.31.2 Constructor & Destructor Documentation

###### 24.31.2.1 AIRRAC::YieldParserHelper::storePOS::storePOS ( [YieldRuleStruct](#) & *ioYieldRule* )

Actor Constructor.

Definition at line 184 of file [YieldParserHelper.cpp](#).

##### 24.31.3 Member Function Documentation

###### 24.31.3.1 void AIRRAC::YieldParserHelper::storePOS::operator() ( [std::vector< char >](#) *iChar*, [boost::spirit::qi::unused\\_type](#) , [boost::spirit::qi::unused\\_type](#) ) const

Actor Function (functor).

Definition at line 189 of file [YieldParserHelper.cpp](#).

References [AIRRAC::YieldParserHelper::ParserSemanticAction::\\_yieldRule](#), [AIRRAC::YieldRuleStruct::getDestination\(\)](#), [AIRRAC::YieldRuleStruct::getOrigin\(\)](#), and [AIRRAC::YieldRuleStruct::setPOS\(\)](#).

##### 24.31.4 Member Data Documentation

#### 24.31.4.1 YieldRuleStruct& AIRRAC::YieldParserHelper::ParserSemanticAction::\_yieldRule [inherited]

Actor Context.

Definition at line 34 of file [YieldParserHelper.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeClass::operator\(\)](#), [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storeYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeChannel::operator\(\)](#), [AIRRAC::YieldParserHelper::storeCabinCode::operator\(\)](#), [operator\(\)](#), [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeStart::operator\(\)](#), [AIRRAC::YieldParserHelper::storeTripType::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDestination::operator\(\)](#), [AIRRAC::YieldParserHelper::storeOrigin::operator\(\)](#), and [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)](#).

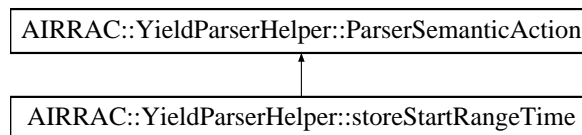
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

## 24.32 AIRRAC::YieldParserHelper::storeStartRangeTime Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeStartRangeTime:



### Public Member Functions

- [storeStartRangeTime](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) ([boost::spirit::qi::unused\\_type](#), [boost::spirit::qi::unused\\_type](#), [boost::spirit::qi::unused\\_type](#)) const

### Public Attributes

- [YieldRuleStruct](#) & [\\_yieldRule](#)

#### 24.32.1 Detailed Description

Store the parsed start range time.

Definition at line 98 of file [YieldParserHelper.hpp](#).

## 24.32.2 Constructor &amp; Destructor Documentation

## 24.32.2.1 AIRRAC::YieldParserHelper::storeStartRangeTime::storeStartRangeTime ( YieldRuleStruct &amp; ioYieldRule )

Actor Constructor.

Definition at line 148 of file [YieldParserHelper.cpp](#).

## 24.32.3 Member Function Documentation

## 24.32.3.1 void AIRRAC::YieldParserHelper::storeStartRangeTime::operator() ( boost::spirit::qi::unused\_type , boost::spirit::qi::unused\_type , boost::spirit::qi::unused\_type ) const

Actor Function (functor).

Definition at line 153 of file [YieldParserHelper.cpp](#).

References [AIRRAC::YieldRuleStruct::\\_itSeconds](#), [AIRRAC::YieldParserHelper::ParserSemanticAction::\\_yieldRule](#), [AIRRAC::YieldRuleStruct::calculateTime\(\)](#), and [AIRRAC::YieldRuleStruct::setTimeRangeStart\(\)](#).

## 24.32.4 Member Data Documentation

## 24.32.4.1 YieldRuleStruct&amp; AIRRAC::YieldParserHelper::ParserSemanticAction::\_yieldRule [inherited]

Actor Context.

Definition at line 34 of file [YieldParserHelper.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeClass::operator\(\)](#), [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storeYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeChannel::operator\(\)](#), [AIRRAC::YieldParserHelper::storeCabinCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storePOS::operator\(\)](#), [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)](#), [operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeStart::operator\(\)](#), [AIRRAC::YieldParserHelper::storeTripType::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDestination::operator\(\)](#), [AIRRAC::YieldParserHelper::storeOrigin::operator\(\)](#), and [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)](#).

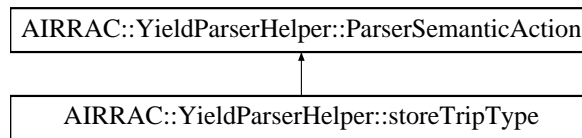
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

## 24.33 AIRRAC::YieldParserHelper::storeTripType Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeTripType:



#### Public Member Functions

- [storeTripType](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) (std::vector< char >, boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type) const

#### Public Attributes

- [YieldRuleStruct](#) & [\\_yieldRule](#)

##### 24.33.1 Detailed Description

Store the parsed customer trip type.

Definition at line 68 of file [YieldParserHelper.hpp](#).

##### 24.33.2 Constructor & Destructor Documentation

###### 24.33.2.1 AIRRAC::YieldParserHelper::storeTripType::storeTripType ( [YieldRuleStruct](#) & [ioYieldRule](#) )

Actor Constructor.

Definition at line 89 of file [YieldParserHelper.cpp](#).

##### 24.33.3 Member Function Documentation

###### 24.33.3.1 void AIRRAC::YieldParserHelper::storeTripType::operator() ( std::vector< char > [iChar](#), boost::spirit::qi::unused\_type , boost::spirit::qi::unused\_type ) const

Actor Function (functor).

Definition at line 94 of file [YieldParserHelper.cpp](#).

References [AIRRAC::YieldParserHelper::ParserSemanticAction::\\_yieldRule](#), and [AIRRAC::YieldRuleStruct::setTripType\(\)](#).

##### 24.33.4 Member Data Documentation

#### 24.33.4.1 YieldRuleStruct& AIRRAC::YieldParserHelper::ParserSemanticAction::\_yieldRule [inherited]

Actor Context.

Definition at line 34 of file [YieldParserHelper.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeClass::operator\(\)](#), [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storeYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeChannel::operator\(\)](#), [AIRRAC::YieldParserHelper::storeCabinCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storePOS::operator\(\)](#), [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeStart::operator\(\)](#), [operator\(\)](#), [AIRRAC::YieldParserHelper::storeDestination::operator\(\)](#), [AIRRAC::YieldParserHelper::storeOrigin::operator\(\)](#), and [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)](#).

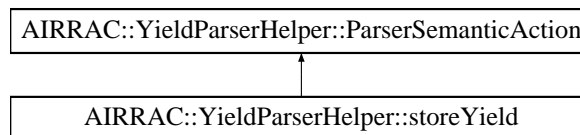
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

### 24.34 AIRRAC::YieldParserHelper::storeYield Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeYield:



#### Public Member Functions

- [storeYield](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) (double, boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type) const

#### Public Attributes

- [YieldRuleStruct](#) & [\\_yieldRule](#)

#### 24.34.1 Detailed Description

Store the parsed yield value.

Definition at line 148 of file [YieldParserHelper.hpp](#).

## 24.34.2 Constructor &amp; Destructor Documentation

## 24.34.2.1 AIRRAC::YieldParserHelper::storeYield::storeYield ( YieldRuleStruct &amp; ioYieldRule )

Actor Constructor.

Definition at line 252 of file [YieldParserHelper.cpp](#).

## 24.34.3 Member Function Documentation

## 24.34.3.1 void AIRRAC::YieldParserHelper::storeYield::operator() ( double iYield, boost::spirit::qi::unused\_type , boost::spirit::qi::unused\_type ) const

Actor Function (functor).

Definition at line 257 of file [YieldParserHelper.cpp](#).

References [AIRRAC::YieldParserHelper::ParserSemanticAction::\\_yieldRule](#), and [AIRRAC::YieldRuleStruct::setYield\(\)](#).

## 24.34.4 Member Data Documentation

## 24.34.4.1 YieldRuleStruct&amp; AIRRAC::YieldParserHelper::ParserSemanticAction::\_yieldRule [inherited]

Actor Context.

Definition at line 34 of file [YieldParserHelper.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeClass::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)\(\)](#), [operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeChannel::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeCabinCode::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storePOS::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeStart::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeTripType::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeDestination::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeOrigin::operator\(\)\(\)](#), and [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)\(\)](#).

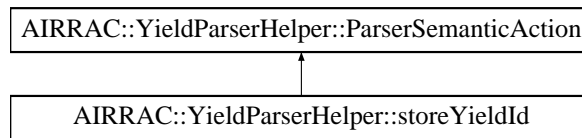
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

## 24.35 AIRRAC::YieldParserHelper::storeYieldId Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeYieldId:



#### Public Member Functions

- [storeYieldId](#) ([YieldRuleStruct](#) &)
- void [operator](#)() (unsigned int, boost::spirit::qi::unused\_type, boost::spirit::qi::unused\_type) const

#### Public Attributes

- [YieldRuleStruct](#) & [\\_yieldRule](#)

##### 24.35.1 Detailed Description

Store the parsed yield Id.

Definition at line 38 of file [YieldParserHelper.hpp](#).

##### 24.35.2 Constructor & Destructor Documentation

###### 24.35.2.1 AIRRAC::YieldParserHelper::storeYieldId::storeYieldId ( [YieldRuleStruct](#) & [ioYieldRule](#) )

Actor Constructor.

Definition at line 32 of file [YieldParserHelper.cpp](#).

##### 24.35.3 Member Function Documentation

###### 24.35.3.1 void AIRRAC::YieldParserHelper::storeYieldId::operator() ( unsigned int *iYieldId*, boost::spirit::qi::unused\_type , boost::spirit::qi::unused\_type ) const

Actor Function (functor).

Definition at line 37 of file [YieldParserHelper.cpp](#).

References [AIRRAC::YieldRuleStruct::\\_itSeconds](#), [AIRRAC::YieldParserHelper::ParserSemanticAction::\\_yieldRule](#), [AIRRAC::YieldRuleStruct::clearAirlineCodeList\(\)](#), [AIRRAC::YieldRuleStruct::clearClassCodeList\(\)](#), [AIRRAC::YieldRuleStruct::setAirlineCode\(\)](#), [AIRRAC::YieldRuleStruct::setClassCode\(\)](#), and [AIRRAC::YieldRuleStruct::setYieldID\(\)](#).

## 24.35.4 Member Data Documentation

24.35.4.1 YieldRuleStruct& AIRRAC::YieldParserHelper::ParserSemanticAction::\_-  
yieldRule [inherited]

Actor Context.

Definition at line 34 of file [YieldParserHelper.hpp](#).

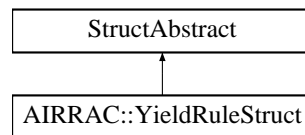
Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeClass::operator\(\)](#), [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storeYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeChannel::operator\(\)](#), [AIRRAC::YieldParserHelper::storeCabinCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storePOS::operator\(\)](#), [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeStart::operator\(\)](#), [AIRRAC::YieldParserHelper::storeTripType::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDestination::operator\(\)](#), [AIRRAC::YieldParserHelper::storeOrigin::operator\(\)](#), and [operator\(\)](#).

The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

## 24.36 StructAbstract Class Reference

Inheritance diagram for StructAbstract:

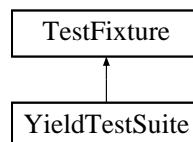


The documentation for this class was generated from the following file:

- [airrac/bom/YieldRuleStruct.hpp](#)

## 24.37 TestFixture Class Reference

Inheritance diagram for TestFixture:



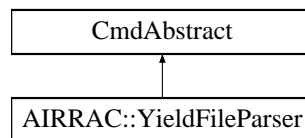
The documentation for this class was generated from the following file:

- [test/airrac/YieldTestSuite.hpp](#)

## 24.38 AIRRAC::YieldFileParser Class Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldFileParser:



### Public Member Functions

- [YieldFileParser](#) (stdair::BomRoot &, const stdair::Filename\_T &iYieldInputFilename)
- void [generateYieldStore](#) ()

#### 24.38.1 Detailed Description

Class wrapping the initialisation and entry point of the parser.

The seemingly redundancy is used to force the instantiation of the actual parser, which is a templatised Boost Spirit grammar. Hence, the actual parser is instantiated within that class object code.

Definition at line 246 of file [YieldParserHelper.hpp](#).

#### 24.38.2 Constructor & Destructor Documentation

**24.38.2.1** AIRRAC::YieldFileParser::YieldFileParser ( stdair::BomRoot & , const stdair::Filename\_T & iYieldInputFilename )

Constructor.

Definition at line 469 of file [YieldParserHelper.cpp](#).

#### 24.38.3 Member Function Documentation

**24.38.3.1** void AIRRAC::YieldFileParser::generateYieldStore ( )

Parse the yield store input file.

Definition at line 491 of file [YieldParserHelper.cpp](#).

Referenced by [AIRRAC::YieldParser::generateYieldStore\(\)](#).

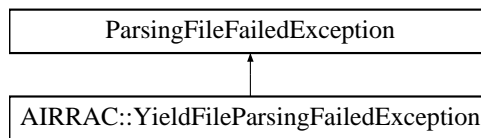
The documentation for this class was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

## 24.39 AIRRAC::YieldFileParsingFailedException Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::YieldFileParsingFailedException:



### Public Member Functions

- [YieldFileParsingFailedException](#) (const std::string &iWhat)

#### 24.39.1 Detailed Description

Definition at line 66 of file [AIRRAC\\_Types.hpp](#).

#### 24.39.2 Constructor & Destructor Documentation

24.39.2.1 AIRRAC::YieldFileParsingFailedException::YieldFileParsingFailedException ( const std::string & *iWhat* ) [inline]

Constructor.

Definition at line 69 of file [AIRRAC\\_Types.hpp](#).

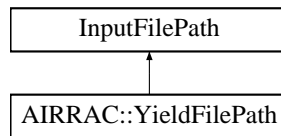
The documentation for this class was generated from the following file:

- [airrac/AIRRAC\\_Types.hpp](#)

## 24.40 AIRRAC::YieldFilePath Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::YieldFilePath:



#### Public Member Functions

- [YieldFilePath](#) (const stdair::Filename\_T &iFilename)

##### 24.40.1 Detailed Description

Yield input file.

Definition at line 80 of file [AIRRAC\\_Types.hpp](#).

##### 24.40.2 Constructor & Destructor Documentation

**24.40.2.1** `AIRRAC::YieldFilePath::YieldFilePath ( const stdair::Filename_T &iFilename )`  
`[inline, explicit]`

Constructor.

Definition at line 85 of file [AIRRAC\\_Types.hpp](#).

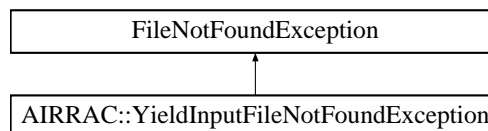
The documentation for this class was generated from the following file:

- [airrac/AIRRAC\\_Types.hpp](#)

## 24.41 AIRRAC::YieldInputFileNotFoundException Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::YieldInputFileNotFoundException:



#### Public Member Functions

- [YieldInputFileNotFoundException](#) (const std::string &iWhat)

#### 24.41.1 Detailed Description

Definition at line 59 of file [AIRRAC\\_Types.hpp](#).

#### 24.41.2 Constructor & Destructor Documentation

24.41.2.1 AIRRAC::YieldInputFileNotFoundException::YieldInputFileNotFoundException ( const std::string & *iWhat* ) [inline]

Constructor.

Definition at line 62 of file [AIRRAC\\_Types.hpp](#).

The documentation for this class was generated from the following file:

- [airrac/AIRRAC\\_Types.hpp](#)

## 24.42 AIRRAC::YieldManager Class Reference

Command wrapping the travel request process.

```
#include <airrac/command/YieldManager.hpp>
```

#### Friends

- class [AIRRAC\\_Service](#)

#### 24.42.1 Detailed Description

Command wrapping the travel request process.

Definition at line 23 of file [YieldManager.hpp](#).

#### 24.42.2 Friends And Related Function Documentation

24.42.2.1 friend class AIRRAC\_Service [friend]

Only the [AIRRAC\\_Service](#) may access to the methods of that class.

Definition at line 27 of file [YieldManager.hpp](#).

The documentation for this class was generated from the following files:

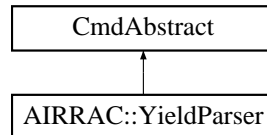
- [airrac/command/YieldManager.hpp](#)
- [airrac/command/YieldManager.cpp](#)

## 24.43 AIRRAC::YieldParser Class Reference

Class wrapping the parser entry point.

```
#include <airrac/command/YieldParser.hpp>
```

Inheritance diagram for AIRRAC::YieldParser:



### Static Public Member Functions

- static void [generateYieldStore](#) (const [YieldFilePath](#) &, [stdair::BomRoot](#) &)

#### 24.43.1 Detailed Description

Class wrapping the parser entry point.

Definition at line 25 of file [YieldParser.hpp](#).

#### 24.43.2 Member Function Documentation

**24.43.2.1** void AIRRAC::YieldParser::generateYieldStore ( const [YieldFilePath](#) & *iYieldFilename*, [stdair::BomRoot](#) & *ioBomRoot* ) [static]

Parse the CSV file describing an airline yield store, and generates the corresponding data model in memory. It can then be used, for instance in a simulator.

### Parameters

<i>const</i> <a href="#">YieldFilePath</a>	& The file-name of the CSV-formatted yield input file.
<i>stdair::BomRoot</i>	Root of the BOM tree.

Definition at line 16 of file [YieldParser.cpp](#).

References [AIRRAC::YieldFileParser::generateYieldStore\(\)](#).

Referenced by [AIRRAC::AIRRAC\\_Service::parseAndLoad\(\)](#).

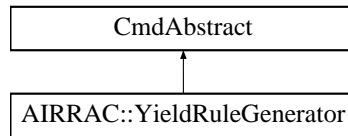
The documentation for this class was generated from the following files:

- [airrac/command/YieldParser.hpp](#)
- [airrac/command/YieldParser.cpp](#)

## 24.44 AIRRAC::YieldRuleGenerator Class Reference

```
#include <airrac/command/YieldRuleGenerator.hpp>
```

Inheritance diagram for AIRRAC::YieldRuleGenerator:



### Friends

- class [YieldFileParser](#)
- struct [YieldParserHelper::doEndYield](#)
- class [YieldParser](#)

#### 24.44.1 Detailed Description

Class handling the generation / instantiation of the Yield BOM.

Definition at line 32 of file [YieldRuleGenerator.hpp](#).

#### 24.44.2 Friends And Related Function Documentation

##### 24.44.2.1 friend class [YieldFileParser](#) [friend]

Definition at line 36 of file [YieldRuleGenerator.hpp](#).

##### 24.44.2.2 friend struct [YieldParserHelper::doEndYield](#) [friend]

Definition at line 37 of file [YieldRuleGenerator.hpp](#).

##### 24.44.2.3 friend class [YieldParser](#) [friend]

Definition at line 38 of file [YieldRuleGenerator.hpp](#).

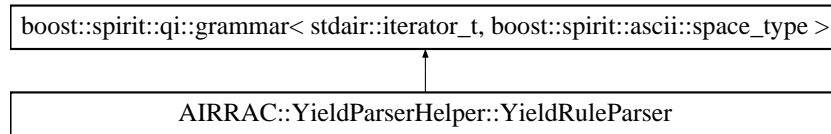
The documentation for this class was generated from the following files:

- [airrac/command/YieldRuleGenerator.hpp](#)
- [airrac/command/YieldRuleGenerator.cpp](#)

## 24.45 AIRRAC::YieldParserHelper::YieldRuleParser Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::YieldRuleParser:



### Public Member Functions

- [YieldRuleParser](#) (stdair::BomRoot &, [YieldRuleStruct](#) &)

### Public Attributes

- boost::spirit::qi::rule< stdair::iterator\_t, boost::spirit::ascii::space\_type > [start](#)
- boost::spirit::qi::rule< stdair::iterator\_t, boost::spirit::ascii::space\_type > [comments](#)
- boost::spirit::qi::rule< stdair::iterator\_t, boost::spirit::ascii::space\_type > [yield\\_rule](#)
- boost::spirit::qi::rule< stdair::iterator\_t, boost::spirit::ascii::space\_type > [yield\\_id](#)
- boost::spirit::qi::rule< stdair::iterator\_t, boost::spirit::ascii::space\_type > [origin](#)
- boost::spirit::qi::rule< stdair::iterator\_t, boost::spirit::ascii::space\_type > [destination](#)
- boost::spirit::qi::rule< stdair::iterator\_t, boost::spirit::ascii::space\_type > [tripType](#)
- boost::spirit::qi::rule< stdair::iterator\_t, boost::spirit::ascii::space\_type > [dateRangeStart](#)
- boost::spirit::qi::rule< stdair::iterator\_t, boost::spirit::ascii::space\_type > [dateRangeEnd](#)
- boost::spirit::qi::rule< stdair::iterator\_t, boost::spirit::ascii::space\_type > [date](#)
- boost::spirit::qi::rule< stdair::iterator\_t, boost::spirit::ascii::space\_type > [timeRangeStart](#)
- boost::spirit::qi::rule< stdair::iterator\_t, boost::spirit::ascii::space\_type > [timeRangeEnd](#)
- boost::spirit::qi::rule< stdair::iterator\_t, boost::spirit::ascii::space\_type > [time](#)
- boost::spirit::qi::rule< stdair::iterator\_t, boost::spirit::ascii::space\_type > [point\\_of\\_sale](#)
- boost::spirit::qi::rule< stdair::iterator\_t, boost::spirit::ascii::space\_type > [cabin-Code](#)
- boost::spirit::qi::rule< stdair::iterator\_t, boost::spirit::ascii::space\_type > [channel](#)
- boost::spirit::qi::rule< stdair::iterator\_t, boost::spirit::ascii::space\_type > [yield](#)
- boost::spirit::qi::rule< stdair::iterator\_t, boost::spirit::ascii::space\_type > [segment](#)
- boost::spirit::qi::rule< stdair::iterator\_t, boost::spirit::ascii::space\_type > [yield\\_rule\\_end](#)
- stdair::BomRoot & [\\_bomRoot](#)
- [YieldRuleStruct](#) & [\\_yieldRule](#)

## 24.45.1 Detailed Description

Yields: yieldID; OriginCity; DestinationCity; DateRangeStart; DateRangeEnd; DepartureTimeRangeStart; DepartureTimeRangeEnd; Yield; AirlineCode; Class

1; LHR; JFK; 2008-06-01; 2009-12-31; 00:00; 23:59; 4200.0; BA; A;

YieldID (Integer) OriginCity (3-char airport code) DestinationCity (3-char airport code) DateRangeStart (yyyy-mm-dd) DateRangeEnd (yyyy-mm-dd) DepartureTimeRangeStart (hh:mm) DepartureTimeRangeEnd (hh:mm) Yield (Double) AirlineCodeList (List of 2-char airline code) ClassList (List of 1-char class code) Grammar for the Yield-Rule parser.

Definition at line 214 of file [YieldParserHelper.hpp](#).

## 24.45.2 Constructor &amp; Destructor Documentation

24.45.2.1 AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser ( [stdair::BomRoot](#) & [ioBomRoot](#), [YieldRuleStruct](#) & [ioYieldRule](#) )

Definition at line 365 of file [YieldParserHelper.cpp](#).

References [\\_bomRoot](#), [AIRRAC::YieldRuleStruct::\\_itDay](#), [AIRRAC::YieldRuleStruct::\\_itHours](#), [AIRRAC::YieldRuleStruct::\\_itMinutes](#), [AIRRAC::YieldRuleStruct::\\_itMonth](#), [AIRRAC::YieldRuleStruct::\\_itSeconds](#), [AIRRAC::YieldRuleStruct::\\_itYear](#), [\\_yieldRule](#), [cabinCode](#), [channel](#), [comments](#), [date](#), [dateRangeEnd](#), [dateRangeStart](#), [AIRRAC::YieldParserHelper::day\\_p](#), [destination](#), [AIRRAC::YieldParserHelper::hour\\_p](#), [AIRRAC::YieldParserHelper::minute\\_p](#), [AIRRAC::YieldParserHelper::month\\_p](#), [origin](#), [point\\_of\\_sale](#), [AIRRAC::YieldParserHelper::second\\_p](#), [segment](#), [start](#), [time](#), [timeRangeEnd](#), [timeRangeStart](#), [tripType](#), [AIRRAC::YieldParserHelper::uint1\\_4\\_p](#), [AIRRAC::YieldParserHelper::year\\_p](#), [yield](#), [yield\\_id](#), [yield\\_rule](#), and [yield\\_rule\\_end](#).

## 24.45.3 Member Data Documentation

24.45.3.1 [boost::spirit::qi::rule<stdair::iterator\\_t, boost::spirit::ascii::space\\_type>](#)  
[AIRRAC::YieldParserHelper::YieldRuleParser::start](#)

Definition at line 223 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.2 [boost::spirit::qi::rule<stdair::iterator\\_t, boost::spirit::ascii::space\\_type>](#)  
[AIRRAC::YieldParserHelper::YieldRuleParser::comments](#)

Definition at line 223 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.3 [boost::spirit::qi::rule<stdair::iterator\\_t, boost::spirit::ascii::space\\_type>](#)  
[AIRRAC::YieldParserHelper::YieldRuleParser::yield\\_rule](#)

Definition at line 223 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.4 `boost::spirit::qi::rule<stdair::iterator_t, boost::spirit::ascii::space_type>  
AIRRAC::YieldParserHelper::YieldRuleParser::yield_id`

Definition at line 223 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.5 `boost::spirit::qi::rule<stdair::iterator_t, boost::spirit::ascii::space_type>  
AIRRAC::YieldParserHelper::YieldRuleParser::origin`

Definition at line 223 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.6 `boost::spirit::qi::rule<stdair::iterator_t, boost::spirit::ascii::space_type>  
AIRRAC::YieldParserHelper::YieldRuleParser::destination`

Definition at line 223 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.7 `boost::spirit::qi::rule<stdair::iterator_t, boost::spirit::ascii::space_type>  
AIRRAC::YieldParserHelper::YieldRuleParser::tripType`

Definition at line 223 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.8 `boost::spirit::qi::rule<stdair::iterator_t, boost::spirit::ascii::space_type>  
AIRRAC::YieldParserHelper::YieldRuleParser::dateRangeStart`

Definition at line 223 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.9 `boost::spirit::qi::rule<stdair::iterator_t, boost::spirit::ascii::space_type>  
AIRRAC::YieldParserHelper::YieldRuleParser::dateRangeEnd`

Definition at line 223 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.10 `boost::spirit::qi::rule<stdair::iterator_t, boost::spirit::ascii::space_type>  
AIRRAC::YieldParserHelper::YieldRuleParser::date`

Definition at line 223 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.11 `boost::spirit::qi::rule<stdair::iterator_t, boost::spirit::ascii::space_type>  
AIRRAC::YieldParserHelper::YieldRuleParser::timeRangeStart`

Definition at line 223 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.12 `boost::spirit::qi::rule<stdair::iterator_t, boost::spirit::ascii::space_type>  
AIRRAC::YieldParserHelper::YieldRuleParser::timeRangeEnd`

Definition at line 223 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.13 `boost::spirit::qi::rule<stdair::iterator_t, boost::spirit::ascii::space_type>  
AIRRAC::YieldParserHelper::YieldRuleParser::time`

Definition at line 223 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.14 `boost::spirit::qi::rule<stdair::iterator_t, boost::spirit::ascii::space_type>  
AIRRAC::YieldParserHelper::YieldRuleParser::point_of_sale`

Definition at line 223 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.15 `boost::spirit::qi::rule<stdair::iterator_t, boost::spirit::ascii::space_type>  
AIRRAC::YieldParserHelper::YieldRuleParser::cabinCode`

Definition at line 223 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.16 `boost::spirit::qi::rule<stdair::iterator_t, boost::spirit::ascii::space_type>  
AIRRAC::YieldParserHelper::YieldRuleParser::channel`

Definition at line 223 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.17 `boost::spirit::qi::rule<stdair::iterator_t, boost::spirit::ascii::space_type>  
AIRRAC::YieldParserHelper::YieldRuleParser::yield`

Definition at line 223 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.18 `boost::spirit::qi::rule<stdair::iterator_t, boost::spirit::ascii::space_type>  
AIRRAC::YieldParserHelper::YieldRuleParser::segment`

Definition at line 223 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.19 `boost::spirit::qi::rule<stdair::iterator_t, boost::spirit::ascii::space_type>  
AIRRAC::YieldParserHelper::YieldRuleParser::yield_rule_end`

Definition at line 223 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.20 `stdair::BomRoot& AIRRAC::YieldParserHelper::YieldRuleParser::_-  
bomRoot`

Definition at line 229 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

24.45.3.21 `YieldRuleStruct& AIRRAC::YieldParserHelper::YieldRuleParser::_-  
yieldRule`

Definition at line 230 of file [YieldParserHelper.hpp](#).

Referenced by [YieldRuleParser\(\)](#).

The documentation for this struct was generated from the following files:

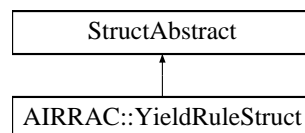
- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

## 24.46 AIRRAC::YieldRuleStruct Struct Reference

Utility Structure for the parsing of Flight-Date structures.

```
#include <airrac/bom/YieldRuleStruct.hpp>
```

Inheritance diagram for AIRRAC::YieldRuleStruct:



### Public Member Functions

- [YieldRuleStruct \(\)](#)
- [~YieldRuleStruct \(\)](#)
- [AIRRAC::YieldID\\_T getYieldID \(\) const](#)
- [stdair::AirportCode\\_T getOrigin \(\) const](#)
- [stdair::AirportCode\\_T getDestination \(\) const](#)
- [stdair::TripType\\_T getTripType \(\) const](#)
- [stdair::Date\\_T getDateRangeStart \(\) const](#)
- [stdair::Date\\_T getDateRangeEnd \(\) const](#)
- [stdair::Duration\\_T getTimeRangeStart \(\) const](#)
- [stdair::Duration\\_T getTimeRangeEnd \(\) const](#)
- [stdair::CabinCode\\_T getCabinCode \(\) const](#)
- [const stdair::CityCode\\_T getPOS \(\) const](#)

- stdair::ChannelLabel\_T [getChannel](#) () const
- stdair::YieldValue\_T [getYield](#) () const
- stdair::AirlineCode\_T [getAirlineCode](#) () const
- stdair::ClassCode\_T [getClassCode](#) () const
- const unsigned int [getAirlineListSize](#) () const
- const unsigned int [getClassCodeListSize](#) () const
- stdair::AirlineCodeList\_T [getAirlineList](#) () const
- stdair::ClassList\_StringList\_T [getClassCodeList](#) () const
- stdair::Date\_T [calculateDate](#) () const
- stdair::Duration\_T [calculateTime](#) () const
- const std::string [describe](#) () const
- void [setYieldID](#) (const AIRRAC::YieldID\_T iYieldID)
- void [setOrigin](#) (const stdair::AirportCode\_T &iOrigin)
- void [setDestination](#) (const stdair::AirportCode\_T &iDestination)
- void [setTripType](#) (const stdair::TripType\_T &iTripType)
- void [setDateRangeStart](#) (const stdair::Date\_T &iDateRangeStart)
- void [setDateRangeEnd](#) (const stdair::Date\_T &iDateRangeEnd)
- void [setTimeRangeStart](#) (const stdair::Duration\_T &iTimeRangeStart)
- void [setTimeRangeEnd](#) (const stdair::Duration\_T &iTimeRangeEnd)
- void [setCabinCode](#) (const stdair::CabinCode\_T &iCabinCode)
- void [setPOS](#) (const stdair::CityCode\_T &iPOS)
- void [setChannel](#) (const stdair::ChannelLabel\_T &iChannel)
- void [setYield](#) (const stdair::YieldValue\_T &iYield)
- void [setAirlineCode](#) (const stdair::AirlineCode\_T &iAirlineCode)
- void [setClassCode](#) (const stdair::ClassCode\_T &iClassCode)
- void [clearAirlineCodeList](#) ()
- void [clearClassCodeList](#) ()
- void [addAirlineCode](#) (const stdair::AirlineCode\_T &iAirlineCode)
- void [addClassCode](#) (const stdair::ClassCode\_T &iClassCode)

#### Public Attributes

- stdair::year\_t [\\_itYear](#)
- stdair::month\_t [\\_itMonth](#)
- stdair::day\_t [\\_itDay](#)
- stdair::hour\_t [\\_itHours](#)
- stdair::minute\_t [\\_itMinutes](#)
- stdair::second\_t [\\_itSeconds](#)

#### 24.46.1 Detailed Description

Utility Structure for the parsing of Flight-Date structures.

Definition at line 24 of file [YieldRuleStruct.hpp](#).

### 24.46.2 Constructor & Destructor Documentation

#### 24.46.2.1 AIRRAC::YieldRuleStruct::YieldRuleStruct ( )

Constructor.

Definition at line 17 of file [YieldRuleStruct.cpp](#).

#### 24.46.2.2 AIRRAC::YieldRuleStruct::~YieldRuleStruct ( )

Destructor.

Definition at line 34 of file [YieldRuleStruct.cpp](#).

### 24.46.3 Member Function Documentation

#### 24.46.3.1 AIRRAC::YieldID\_T AIRRAC::YieldRuleStruct::getYieldID ( ) const [inline]

Get the yield ID.

Definition at line 40 of file [YieldRuleStruct.hpp](#).

#### 24.46.3.2 stdair::AirportCode\_T AIRRAC::YieldRuleStruct::getOrigin ( ) const [inline]

Get the origin.

Definition at line 45 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storePOS::operator\(\)\(\)](#).

#### 24.46.3.3 stdair::AirportCode\_T AIRRAC::YieldRuleStruct::getDestination ( ) const [inline]

Get the destination.

Definition at line 50 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storePOS::operator\(\)\(\)](#).

#### 24.46.3.4 stdair::TripType\_T AIRRAC::YieldRuleStruct::getTripType ( ) const [inline]

Get the trip type.

Definition at line 55 of file [YieldRuleStruct.hpp](#).

#### 24.46.3.5 stdair::Date\_T AIRRAC::YieldRuleStruct::getDateRangeStart ( ) const [inline]

Get the date range start.

Definition at line 60 of file [YieldRuleStruct.hpp](#).

#### 24.46.3.6 stdair::Date\_T AIRRAC::YieldRuleStruct::getDateRangeEnd ( ) const [inline]

Get the date range end.

Definition at line 65 of file [YieldRuleStruct.hpp](#).

24.46.3.7 `stdair::Duration_T AIRRAC::YieldRuleStruct::getTimeRangeStart ( ) const`  
[inline]

Get the time range start.

Definition at line 70 of file [YieldRuleStruct.hpp](#).

24.46.3.8 `stdair::Duration_T AIRRAC::YieldRuleStruct::getTimeRangeEnd ( ) const`  
[inline]

Get the time range end.

Definition at line 75 of file [YieldRuleStruct.hpp](#).

24.46.3.9 `stdair::CabinCode_T AIRRAC::YieldRuleStruct::getCabinCode ( ) const`  
[inline]

Get the cabin code.

Definition at line 80 of file [YieldRuleStruct.hpp](#).

24.46.3.10 `const stdair::CityCode_T AIRRAC::YieldRuleStruct::getPOS ( ) const` [inline]

Get the point-of-sale.

Definition at line 85 of file [YieldRuleStruct.hpp](#).

24.46.3.11 `stdair::ChannelLabel_T AIRRAC::YieldRuleStruct::getChannel ( ) const`  
[inline]

Get the channel.

Definition at line 90 of file [YieldRuleStruct.hpp](#).

24.46.3.12 `stdair::YieldValue_T AIRRAC::YieldRuleStruct::getYield ( ) const` [inline]

Get the yield.

Definition at line 95 of file [YieldRuleStruct.hpp](#).

24.46.3.13 `stdair::AirlineCode_T AIRRAC::YieldRuleStruct::getAirlineCode ( ) const`  
[inline]

Get the airline code.

Definition at line 100 of file [YieldRuleStruct.hpp](#).

24.46.3.14 `stdair::ClassCode_T AIRRAC::YieldRuleStruct::getClassCode ( ) const`  
[inline]

Get the class code.

Definition at line 105 of file [YieldRuleStruct.hpp](#).

**24.46.3.15** `const unsigned int AIRRAC::YieldRuleStruct::getAirlineListSize ( ) const`  
`[inline]`

Get the size of the airline code list.

Definition at line 110 of file [YieldRuleStruct.hpp](#).

**24.46.3.16** `const unsigned int AIRRAC::YieldRuleStruct::getClassCodeListSize ( ) const`  
`[inline]`

Get the size of the class code list.

Definition at line 115 of file [YieldRuleStruct.hpp](#).

**24.46.3.17** `stdair::AirlineCodeList_T AIRRAC::YieldRuleStruct::getAirlineList ( ) const`  
`[inline]`

Get the airline code list.

Definition at line 120 of file [YieldRuleStruct.hpp](#).

**24.46.3.18** `stdair::ClassList_StringList_T AIRRAC::YieldRuleStruct::getClassCodeList ( ) const`  
`[inline]`

Get the class code list.

Definition at line 125 of file [YieldRuleStruct.hpp](#).

**24.46.3.19** `stdair::Date_T AIRRAC::YieldRuleStruct::calculateDate ( ) const`

Calculate the date from the staging details.

Definition at line 38 of file [YieldRuleStruct.cpp](#).

References [\\_itDay](#), [\\_itMonth](#), and [\\_itYear](#).

Referenced by [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)\(\)](#), and [AIRRAC::YieldParserHelper::storeDateRangeStart::operator\(\)\(\)](#).

**24.46.3.20** `stdair::Duration_T AIRRAC::YieldRuleStruct::calculateTime ( ) const`

Calculate the time from the staging details.

Definition at line 44 of file [YieldRuleStruct.cpp](#).

References [\\_itHours](#), [\\_itMinutes](#), and [\\_itSeconds](#).

Referenced by [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)\(\)](#), and [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)\(\)](#).

**24.46.3.21** `const std::string AIRRAC::YieldRuleStruct::describe ( ) const`

Give a description of the structure (for display purposes).

Definition at line 52 of file [YieldRuleStruct.cpp](#).

Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)\(\)](#).

24.46.3.22 void AIRRAC::YieldRuleStruct::setYieldID ( const AIRRAC::YieldID\_T *iYieldID* )  
[inline]

Set the yield ID.

Definition at line 143 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)](#).

24.46.3.23 void AIRRAC::YieldRuleStruct::setOrigin ( const stdair::AirportCode\_T & *iOrigin* )  
[inline]

Set the origin.

Definition at line 148 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storeOrigin::operator\(\)](#).

24.46.3.24 void AIRRAC::YieldRuleStruct::setDestination ( const stdair::AirportCode\_T & *iDestination* ) [inline]

Set the destination.

Definition at line 153 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storeDestination::operator\(\)](#).

24.46.3.25 void AIRRAC::YieldRuleStruct::setTripType ( const stdair::TripType\_T & *iTripType* )  
[inline]

Set the trip type.

Definition at line 158 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storeTripType::operator\(\)](#).

24.46.3.26 void AIRRAC::YieldRuleStruct::setDateRangeStart ( const stdair::Date\_T & *iDateRangeStart* ) [inline]

Set the date range start.

Definition at line 163 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storeDateRangeStart::operator\(\)](#).

24.46.3.27 void AIRRAC::YieldRuleStruct::setDateRangeEnd ( const stdair::Date\_T & *iDateRangeEnd* ) [inline]

Set the date range end.

Definition at line 168 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)](#).

24.46.3.28 void AIRRAC::YieldRuleStruct::setTimeRangeStart ( const stdair::Duration\_T & *iTimeRangeStart* ) [inline]

Set the time range start.

Definition at line 173 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)](#).

24.46.3.29 void AIRRAC::YieldRuleStruct::setTimeRangeEnd ( const stdair::Duration\_T & *iTimeRangeEnd* ) [inline]

Set the time range end.

Definition at line 178 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)](#).

24.46.3.30 void AIRRAC::YieldRuleStruct::setCabinCode ( const stdair::CabinCode\_T & *iCabinCode* ) [inline]

Set the cabin code.

Definition at line 183 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storeCabinCode::operator\(\)](#).

24.46.3.31 void AIRRAC::YieldRuleStruct::setPOS ( const stdair::CityCode\_T & *iPOS* ) [inline]

Set the point-of-sale.

Definition at line 188 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storePOS::operator\(\)](#).

24.46.3.32 void AIRRAC::YieldRuleStruct::setChannel ( const stdair::ChannelLabel\_T & *iChannel* ) [inline]

Set the channel.

Definition at line 193 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storeChannel::operator\(\)](#).

24.46.3.33 void AIRRAC::YieldRuleStruct::setYield ( const stdair::YieldValue\_T & *iYield* ) [inline]

Set the yield.

Definition at line 198 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storeYield::operator\(\)](#).

24.46.3.34 void AIRRAC::YieldRuleStruct::setAirlineCode ( const stdair::AirlineCode\_T & *iAirlineCode* ) [inline]

Set the airline code.

Definition at line 203 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)](#), and [AIRRAC::YieldParserHelper::storeYield](#)

**24.46.3.35** void AIRRAC::YieldRuleStruct::setClassCode ( const stdair::ClassCode\_T & *iClassCode* ) [inline]

Set the class code.

Definition at line 208 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)](#).

**24.46.3.36** void AIRRAC::YieldRuleStruct::clearAirlineCodeList ( ) [inline]

Empty the airline code list.

Definition at line 213 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)](#).

**24.46.3.37** void AIRRAC::YieldRuleStruct::clearClassCodeList ( ) [inline]

Empty the class code list.

Definition at line 218 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)](#).

**24.46.3.38** void AIRRAC::YieldRuleStruct::addAirlineCode ( const stdair::AirlineCode\_T & *iAirlineCode* ) [inline]

Add an airline code to the list.

Definition at line 223 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)](#).

**24.46.3.39** void AIRRAC::YieldRuleStruct::addClassCode ( const stdair::ClassCode\_T & *iClassCode* ) [inline]

Add a class code to the list.

Definition at line 228 of file [YieldRuleStruct.hpp](#).

Referenced by [AIRRAC::YieldParserHelper::storeClass::operator\(\)](#).

#### 24.46.4 Member Data Documentation

**24.46.4.1** stdair::year\_t AIRRAC::YieldRuleStruct::\_itYear

Staging Date.

Definition at line 235 of file [YieldRuleStruct.hpp](#).

Referenced by [calculateDate\(\)](#), and [AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser\(\)](#).

**24.46.4.2** stdair::month\_t AIRRAC::YieldRuleStruct::\_itMonth

Definition at line 236 of file [YieldRuleStruct.hpp](#).

Referenced by [calculateDate\(\)](#), and [AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser\(\)](#).

#### 24.46.4.3 stdair::day\_t AIRRAC::YieldRuleStruct::\_itDay

Definition at line 237 of file [YieldRuleStruct.hpp](#).

Referenced by [calculateDate\(\)](#), and [AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser\(\)](#).

#### 24.46.4.4 stdair::hour\_t AIRRAC::YieldRuleStruct::\_itHours

Staging Time.

Definition at line 241 of file [YieldRuleStruct.hpp](#).

Referenced by [calculateTime\(\)](#), and [AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser\(\)](#).

#### 24.46.4.5 stdair::minute\_t AIRRAC::YieldRuleStruct::\_itMinutes

Definition at line 242 of file [YieldRuleStruct.hpp](#).

Referenced by [calculateTime\(\)](#), and [AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser\(\)](#).

#### 24.46.4.6 stdair::second\_t AIRRAC::YieldRuleStruct::\_itSeconds

Definition at line 243 of file [YieldRuleStruct.hpp](#).

Referenced by [calculateTime\(\)](#), [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)\(\)](#), [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)\(\)](#) and [AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser\(\)](#).

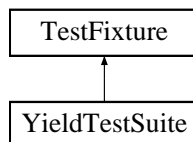
The documentation for this struct was generated from the following files:

- [airrac/bom/YieldRuleStruct.hpp](#)
- [airrac/bom/YieldRuleStruct.cpp](#)

## 24.47 YieldTestSuite Class Reference

```
#include <test/airrac/YieldTestSuite.hpp>
```

Inheritance diagram for YieldTestSuite:



### Public Member Functions

- void [simpleYield](#) ()
- [YieldTestSuite](#) ()

### Protected Attributes

- `std::stringstream _describeKey`

#### 24.47.1 Detailed Description

Utility class for CPPUNIT-based testing.

Definition at line 7 of file [YieldTestSuite.hpp](#).

#### 24.47.2 Constructor & Destructor Documentation

##### 24.47.2.1 `YieldTestSuite::YieldTestSuite ( )`

Test some error detection functionalities. Constructor.

#### 24.47.3 Member Function Documentation

##### 24.47.3.1 `void YieldTestSuite::simpleYield ( )`

Test a simple yield functionality.

#### 24.47.4 Member Data Documentation

##### 24.47.4.1 `std::stringstream YieldTestSuite::_describeKey` [protected]

Definition at line 28 of file [YieldTestSuite.hpp](#).

The documentation for this class was generated from the following file:

- [test/airrac/YieldTestSuite.hpp](#)

## 25 File Documentation

### 25.1 `airrac/AIRRAC_Service.hpp` File Reference

```
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_service_types.hpp>
#include <stdair/bom/TravelSolutionTypes.hpp>
#include <airrac/AIRRAC_Types.hpp>
```

### Classes

- class [AIRRAC::AIRRAC\\_Service](#)

Interface for the [AIRRAC](#) Services.

### Namespaces

- namespace [stdair](#)

Forward declarations.

- namespace [AIRRAC](#)

## 25.2 AIRRAC\_Service.hpp

```

00001 #ifndef __AIRRAC_SVC_AIRRAC_SERVICE_HPP
00002 #define __AIRRAC_SVC_AIRRAC_SERVICE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/stdair_service_types.hpp>
00010 #include <stdair/bom/TravelSolutionTypes.hpp>
00011 // AirRAC
00012 #include <airrac/AIRRAC_Types.hpp>
00013
00014 // Forward declarations.
00015 namespace stdair {
00016     class STDAIR_Service;
00017     struct BasLogParams;
00018     struct BasDBParams;
00019 }
00020
00021 namespace AIRRAC {
00022
00023     class AIRRAC_ServiceContext;
00024
00025     class AIRRAC_Service {
00026     public:
00027         // ////////////////////////////////// Constructors and Destructors //////////////////////////////////
00028
00029         AIRRAC_Service (const stdair::BasLogParams&);
00030
00031         AIRRAC_Service (const stdair::BasLogParams&, const stdair::BasDBParams&);
00032
00033         AIRRAC_Service (stdair::STDAIR_ServicePtr_T ioSTDAIR_ServicePtr);
00034
00035         void parseAndLoad (const YieldFilePath& iYieldFilename);
00036
00037         ~AIRRAC_Service ();
00038
00039     public:
00040         // ////////////////////////////////// Business Methods //////////////////////////////////
00041         void calculateYields (stdair::TravelSolutionList_T&);
00042
00043         void updateYields ();
00044
00045         void buildSampleBom ();
00046     };
00047 }

```

```

00131     void buildSampleTravelSolutions (stdair::TravelSolutionList_T&);
00132
00133
00134 public:
00135     // //////////// Display support methods ////////////
00143     std::string csvDisplay() const;
00144
00152     std::string csvDisplay (const stdair::TravelSolutionList_T&) const;
00153
00154
00155 private:
00156     // //////////// Construction and Destruction helper methods ////////////
00160     AIRRAC_Service();
00161
00165     AIRRAC_Service (const AIRRAC_Service&);
00166
00171     void initServiceContext();
00172
00182     stdair::STDAIR_ServicePtr_T initStdAirService (const stdair::BasLogParams&,
00183                                                    const stdair::BasDBParams&);
00184
00193     stdair::STDAIR_ServicePtr_T initStdAirService (const stdair::BasLogParams&);
00194
00203     void addStdAirService (stdair::STDAIR_ServicePtr_T,
00204                           const bool iOwnStdairService);
00205
00212     void initAirracsService();
00213
00222     void initAirracsService (const YieldFilePath& iYieldFilename);
00223
00227     void finalise();
00228
00229
00230 private:
00231     // //////////// Service Context ////////////
00235     AIRRAC_ServiceContext* _airracServiceContext;
00236 };
00237 }
00238 #endif // __AIRRAC_SVC_AIRRAC_SERVICE_HPP

```

## 25.3 airrac/AIRRAC\_Types.hpp File Reference

```

#include <vector>

#include <string>

#include <stdair/stdair_exceptions.hpp>

#include <stdair/stdair_file.hpp>

```

### Classes

- class [AIRRAC::AirportPairNotFoundException](#)
- class [AIRRAC::PosOrChannelNotFoundException](#)
- class [AIRRAC::FlightDateNotFoundException](#)
- class [AIRRAC::FlightTimeNotFoundException](#)
- class [AIRRAC::FeaturesNotFoundException](#)

- class [AIRRAC::AirlineNotFoundException](#)
- class [AIRRAC::YieldInputFileNotFoundException](#)
- class [AIRRAC::YieldFileParsingFailedException](#)
- class [AIRRAC::QuotingException](#)
- class [AIRRAC::YieldFilePath](#)

#### Namespaces

- namespace [AIRRAC](#)

#### Typedefs

- typedef boost::shared\_ptr< [AIRRAC\\_Service](#) > [AIRRAC::AIRRAC\\_ServicePtr\\_T](#)
- typedef unsigned int [AIRRAC::YieldID\\_T](#)

## 25.4 AIRRAC\_Types.hpp

```

00001 #ifndef __AIRRAC_AIRRAC_TYPES_HPP
00002 #define __AIRRAC_AIRRAC_TYPES_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <vector>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_exceptions.hpp>
00012 #include <stdair/stdair_file.hpp>
00013
00014 namespace AIRRAC {
00015
00016 // /////////// Exceptions ///////////
00017 class AirportPairNotFoundException : public stdair::ObjectNotFoundException {
00018 public:
00020     AirportPairNotFoundException (const std::string& iWhat)
00021         : stdair::ObjectNotFoundException (iWhat) {}
00022 };
00023
00024 class PosOrChannelNotFoundException : public stdair::ObjectNotFoundException {
00025 public:
00027     PosOrChannelNotFoundException (const std::string& iWhat)
00028         : stdair::ObjectNotFoundException (iWhat) {}
00029 };
00030
00031 class FlightDateNotFoundException : public stdair::ObjectNotFoundException {
00032 public:
00034     FlightDateNotFoundException (const std::string& iWhat)
00035         : stdair::ObjectNotFoundException (iWhat) {}
00036 };
00037
00038 class FlightTimeNotFoundException : public stdair::ObjectNotFoundException {
00039 public:
00041     FlightTimeNotFoundException (const std::string& iWhat)

```

```

00042         : stdair::ObjectNotFoundException (iWhat) {}
00043     };
00044
00045     class FeaturesNotFoundException : public stdair::ObjectNotFoundException {
00046     public:
00047         FeaturesNotFoundException (const std::string& iWhat)
00048             : stdair::ObjectNotFoundException (iWhat) {}
00049     };
00050
00051     class AirlineNotFoundException : public stdair::ObjectNotFoundException {
00052     public:
00053         AirlineNotFoundException (const std::string& iWhat)
00054             : stdair::ObjectNotFoundException (iWhat) {}
00055     };
00056
00057     class YieldInputFileNotFoundException : public stdair::FileNotFoundException {
00058     public:
00059         YieldInputFileNotFoundException (const std::string& iWhat)
00060             : stdair::FileNotFoundException (iWhat) {}
00061     };
00062
00063     class YieldFileParsingFailedException : public stdair::
00064     ParsingFileFailedException {
00065     public:
00066         YieldFileParsingFailedException (const std::string& iWhat)
00067             : stdair::ParsingFileFailedException (iWhat) {}
00068     };
00069
00070     class QuotingException : public stdair::RootException {
00071     };
00072
00073     // ////////// Files //////////
00074     class YieldFilePath : public stdair::InputFilePath {
00075     public:
00076         explicit YieldFilePath (const stdair::Filename_T& iFilename)
00077             : stdair::InputFilePath (iFilename) {}
00078     };
00079
00080     // ////////// Type definitions specific to AirRAC //////////
00081     class AIRRAC_Service;
00082     typedef boost::shared_ptr<AIRRAC_Service> AIRRAC_ServicePtr_T;
00083
00084     typedef unsigned int YieldID_T;
00085 }
00086 #endif // __AIRRAC_AIRRAC_TYPES_HPP
00087

```

## 25.5 airrac/basic/BasConst.cpp File Reference

```

#include <airrac/basic/BasConst_General.hpp>
#include <airrac/basic/BasConst_AIRRAC_Service.hpp>

```

### Namespaces

- namespace [AIRRAC](#)

## Variables

- `const std::string AIRRAC::DEFAULT_AIRLINE_CODE = "BA"`

## 25.6 BasConst.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 #include <airrac/basic/BasConst_General.hpp>
00005 #include <airrac/basic/BasConst_AIRRAC_Service.hpp>
00006
00007 namespace AIRRAC {
00008
00010     const std::string DEFAULT_AIRLINE_CODE = "BA";
00011
00012 }
```

## 25.7 airrac/basic/BasConst\_AIRRAC\_Service.hpp File Reference

```
#include <string>
```

## Namespaces

- namespace `AIRRAC`

## 25.8 BasConst\_AIRRAC\_Service.hpp

```

00001 #ifndef __AIRRAC_BAS_BASCONST_AIRRAC_SERVICE_HPP
00002 #define __AIRRAC_BAS_BASCONST_AIRRAC_SERVICE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 #include <string>
00008
00009 namespace AIRRAC {
00010
00012     extern const std::string DEFAULT_AIRLINE_CODE;
00013
00014 }
00015 #endif // __AIRRAC_BAS_BASCONST_AIRRAC_SERVICE_HPP
```

## 25.9 airrac/basic/BasConst\_General.hpp File Reference

## Namespaces

- namespace `AIRRAC`

## 25.10 BasConst\_General.hpp

```

00001 #ifndef __AIRRAC_BAS_BASCONST_GENERAL_HPP
00002 #define __AIRRAC_BAS_BASCONST_GENERAL_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007
00008 namespace AIRRAC {
00009
00010 }
00011 #endif // __AIRRAC_BAS_BASCONST_GENERAL_HPP

```

## 25.11 airrac/basic/BasParserTypes.hpp File Reference

```

#include <string>

#include <boost/spirit/home/classic/core.hpp>
#include <boost/spirit/home/classic/attribute.hpp>
#include <boost/spirit/home/classic/utility/functor_parser.hpp>
#include <boost/spirit/home/classic/utility/loops.hpp>
#include <boost/spirit/home/classic/utility/chset.hpp>
#include <boost/spirit/home/classic/utility/confix.hpp>
#include <boost/spirit/home/classic/iterator/file_iterator.hpp>
#include <boost/spirit/home/classic/actor/push_back_actor.hpp>
#include <boost/spirit/home/classic/actor/assign_actor.hpp>

```

### Namespaces

- namespace [AIRRAC](#)

### Typedefs

- typedef char [AIRRAC::char\\_t](#)
- typedef boost::spirit::classic::file\_iterator< char\_t > [AIRRAC::iterator\\_t](#)
- typedef boost::spirit::classic::scanner< iterator\_t > [AIRRAC::scanner\\_t](#)
- typedef boost::spirit::classic::rule< scanner\_t > [AIRRAC::rule\\_t](#)
- typedef boost::spirit::classic::int\_parser< unsigned int, 10, 1, 1 > [AIRRAC::int1\\_p\\_t](#)
- typedef boost::spirit::classic::uint\_parser< unsigned int, 10, 2, 2 > [AIRRAC::uint2\\_p\\_t](#)
- typedef boost::spirit::classic::uint\_parser< unsigned int, 10, 1, 2 > [AIRRAC::uint1\\_2\\_p\\_t](#)
- typedef boost::spirit::classic::uint\_parser< unsigned int, 10, 1, 3 > [AIRRAC::uint1\\_3\\_p\\_t](#)

- typedef boost::spirit::classic::uint\_parser< unsigned int, 10, 4, 4 > AIRRAC::uint4\_p\_t
- typedef boost::spirit::classic::uint\_parser< unsigned int, 10, 1, 4 > AIRRAC::uint1\_4\_p\_t
- typedef boost::spirit::classic::chset< char\_t > AIRRAC::chset\_t
- typedef boost::spirit::classic::impl::loop\_traits< chset\_t, unsigned int, unsigned int >::type AIRRAC::repeat\_p\_t
- typedef boost::spirit::classic::bounded< uint2\_p\_t, unsigned int > AIRRAC::bounded2\_p\_t
- typedef boost::spirit::classic::bounded< uint1\_2\_p\_t, unsigned int > AIRRAC::bounded1\_2\_p\_t
- typedef boost::spirit::classic::bounded< uint1\_3\_p\_t, unsigned int > AIRRAC::bounded1\_3\_p\_t
- typedef boost::spirit::classic::bounded< uint4\_p\_t, unsigned int > AIRRAC::bounded4\_p\_t
- typedef boost::spirit::classic::bounded< uint1\_4\_p\_t, unsigned int > AIRRAC::bounded1\_4\_p\_t

## 25.12 BasParserTypes.hpp

```

00001 #ifndef __AIRRAC_BAS_BASCOMPARSERTYPES_HPP
00002 #define __AIRRAC_BAS_BASCOMPARSERTYPES_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // Boost
00010 // #define BOOST_SPIRIT_DEBUG
00011 #include <boost/spirit/home/classic/core.hpp>
00012 #include <boost/spirit/home/classic/attribute.hpp>
00013 #include <boost/spirit/home/classic/utility/functor_parser.hpp>
00014 #include <boost/spirit/home/classic/utility/loops.hpp>
00015 #include <boost/spirit/home/classic/utility/chset.hpp>
00016 #include <boost/spirit/home/classic/utility/config.hpp>
00017 #include <boost/spirit/home/classic/iterator/file_iterator.hpp>
00018 #include <boost/spirit/home/classic/actor/push_back_actor.hpp>
00019 #include <boost/spirit/home/classic/actor/assign_actor.hpp>
00020
00021 namespace AIRRAC {
00022
00023 // //////////////////////////////////////
00024 //
00025 // Definition of Basic Types
00026 //
00027 // //////////////////////////////////////
00028 // For a file, the parsing unit is the character (char). For a string,
00029 // it is a "char const *".
00030 // typedef char const* iterator_t;
00031 typedef char char_t;
00032
00033 // The types of iterator, scanner and rule are then derived from
00034 // the parsing unit.
00035 typedef boost::spirit::classic::file_iterator<char_t> iterator_t;
00036 typedef boost::spirit::classic::scanner<iterator_t> scanner_t;

```

```

00037     typedef boost::spirit::classic::rule<scanner_t> rule_t;
00038
00039     // //////////////////////////////////////
00040     //
00041     // Parser related types
00042     //
00043     // //////////////////////////////////////
00045     typedef boost::spirit::classic::int_parser<unsigned int, 10, 1, 1> int1_p_t;
00046
00048     typedef boost::spirit::classic::uint_parser<unsigned int, 10, 2, 2> uint2_p_t;
00049
00051     typedef boost::spirit::classic::uint_parser<unsigned int, 10, 1, 2>
uint1_2_p_t;
00052
00054     typedef boost::spirit::classic::uint_parser<unsigned int, 10, 1, 3>
uint1_3_p_t;
00055
00057     typedef boost::spirit::classic::uint_parser<unsigned int, 10, 4, 4> uint4_p_t;
00058
00060     typedef boost::spirit::classic::uint_parser<unsigned int, 10, 1, 4>
uint1_4_p_t;
00061
00063     typedef boost::spirit::classic::chset<char_t> chset_t;
00064
00067     typedef boost::spirit::classic::impl::loop_traits<chset_t,
unsigned int,
00068                                     unsigned int>::type repeat_p_t;
00069
00072     typedef boost::spirit::classic::bounded<uint2_p_t, unsigned int> bounded2_p_t;
00073     typedef boost::spirit::classic::bounded<uint1_2_p_t, unsigned int>
bounded1_2_p_t;
00074     typedef boost::spirit::classic::bounded<uint1_3_p_t, unsigned int>
bounded1_3_p_t;
00075     typedef boost::spirit::classic::bounded<uint4_p_t, unsigned int> bounded4_p_t;
00076     typedef boost::spirit::classic::bounded<uint1_4_p_t, unsigned int>
bounded1_4_p_t;
00077 }
00078 #endif // __AIRRAC_BAS_BASCOMPARSERTYPES_HPP

```

## 25.13 airrac/batches/airrac.cpp File Reference

```

#include <cassert>
#include <iostream>
#include <sstream>
#include <fstream>
#include <vector>
#include <list>
#include <string>
#include <boost/date_time/posix_time/posix_time.hpp>
#include <boost/date_time/gregorian/gregorian.hpp>
#include <boost/tokenizer.hpp>
#include <boost/program_options.hpp>

```

```
#include <stdair/STDAIR_Service.hpp>
#include <stdair/bom/TravelSolutionStruct.hpp>
#include <stdair/service/Logger.hpp>
#include <airrac/AIRAC_Service.hpp>
#include <airrac/config/airrac-paths.hpp>
```

### Typedefs

- typedef std::vector< std::string > [WordList\\_T](#)

### Functions

- const std::string [K\\_AIRAC\\_DEFAULT\\_LOG\\_FILENAME](#) ("airrac.log")
- const std::string [K\\_AIRAC\\_DEFAULT\\_YIELD\\_INPUT\\_FILENAME](#) (STDAIR\_SAMPLE\_DIR"/yieldstore01.csv")
- template<class T >  
std::ostream & [operator<<](#) (std::ostream &os, const std::vector< T > &v)
- int [readConfiguration](#) (int argc, char \*argv[], bool &iolsBuiltin, stdair::Filename\_T &ioYieldInputFilename, std::string &ioLogFilename)
- int [main](#) (int argc, char \*argv[])

### Variables

- const bool [K\\_AIRAC\\_DEFAULT\\_BUILT\\_IN\\_INPUT](#) = false
- const int [K\\_AIRAC\\_EARLY\\_RETURN\\_STATUS](#) = 99

#### 25.13.1 Typedef Documentation

##### 25.13.1.1 typedef std::vector<std::string> WordList\_T

Definition at line 23 of file [airrac.cpp](#).

#### 25.13.2 Function Documentation

##### 25.13.2.1 const std::string K\_AIRAC\_DEFAULT\_LOG\_FILENAME ( "airrac.log" )

Default name and location for the log file.

Referenced by [readConfiguration\(\)](#).

##### 25.13.2.2 const std::string K\_AIRAC\_DEFAULT\_YIELD\_INPUT\_FILENAME ( STDAIR\_SAMPLE\_DIR"/yieldstore01.csv" )

Default name and location for the (CSV) input file.

Referenced by [readConfiguration\(\)](#).

25.13.2.3 `template<class T> std::ostream& operator<< ( std::ostream & os, const  
std::vector< T> & v )`

Definition at line 43 of file [airrac.cpp](#).

25.13.2.4 `int readConfiguration ( int argc, char * argv[], bool & iolsBuiltin, stdair::Filename_T  
& ioYieldInputFilename, std::string & ioLogFilename )`

Read and parse the command line options.

Definition at line 50 of file [airrac.cpp](#).

References [K\\_AIRrac\\_DEFAULT\\_BUILT\\_IN\\_INPUT](#), [K\\_AIRrac\\_DEFAULT\\_LOG\\_FILENAME\(\)](#),  
[K\\_AIRrac\\_DEFAULT\\_YIELD\\_INPUT\\_FILENAME\(\)](#), [K\\_AIRrac\\_EARLY\\_RETURN\\_STATUS](#),  
[PACKAGE\\_NAME](#), [PACKAGE\\_VERSION](#), and [PREFIXDIR](#).

Referenced by [main\(\)](#).

25.13.2.5 `int main ( int argc, char * argv[] )`

Definition at line 153 of file [airrac.cpp](#).

References [AIRrac::AIRrac\\_Service::buildSampleBom\(\)](#), [AIRrac::AIRrac\\_Service::buildSampleTravelSolutions\(\)](#),  
[AIRrac::AIRrac\\_Service::csvDisplay\(\)](#), [K\\_AIRrac\\_EARLY\\_RETURN\\_STATUS](#), [AIRrac::AIRrac\\_  
Service::parseAndLoad\(\)](#), and [readConfiguration\(\)](#).

### 25.13.3 Variable Documentation

25.13.3.1 `const bool K_AIRrac_DEFAULT_BUILT_IN_INPUT = false`

Default for the input type. It can be either built-in or provided by an input file. That latter must then be given with the -i option.

Definition at line 36 of file [airrac.cpp](#).

Referenced by [readConfiguration\(\)](#).

25.13.3.2 `const int K_AIRrac_EARLY_RETURN_STATUS = 99`

Early return status (so that it can be differentiated from an error).

Definition at line 39 of file [airrac.cpp](#).

Referenced by [main\(\)](#), and [readConfiguration\(\)](#).

## 25.14 airrac.cpp

```
00001 // STL
00002 #include <cassert>
00003 #include <iostream>
00004 #include <sstream>
00005 #include <fstream>
00006 #include <vector>
00007 #include <list>
00008 #include <string>
```

```

00009 // Boost (Extended STL)
00010 #include <boost/date_time/posix_time/posix_time.hpp>
00011 #include <boost/date_time/gregorian/gregorian.hpp>
00012 #include <boost/tokenizer.hpp>
00013 #include <boost/program_options.hpp>
00014 // StdAir
00015 #include <stdair/STDAIR_Service.hpp>
00016 #include <stdair/bom/TravelSolutionStruct.hpp>
00017 #include <stdair/service/Logger.hpp>
00018 // Airrac
00019 #include <airrac/AIRAC_Service.hpp>
00020 #include <airrac/config/airrac-paths.hpp>
00021
00022 // ////////// Type definitions //////////
00023 typedef std::vector<std::string> WordList_T;
00024
00025
00026 // ////////// Constants //////////
00027 const std::string K_AIRAC_DEFAULT_LOG_FILENAME ("airrac.log");
00028
00029
00031 const std::string K_AIRAC_DEFAULT_YIELD_INPUT_FILENAME (STDAIR_SAMPLE_DIR
00032                                                         "/yieldstore01.csv");
00033
00036 const bool K_AIRAC_DEFAULT_BUILT_IN_INPUT = false;
00037
00039 const int K_AIRAC_EARLY_RETURN_STATUS = 99;
00040
00041 // ////////// Parsing of Options & Configuration //////////
00042 // A helper function to simplify the main part.
00043 template<class T> std::ostream& operator<< (std::ostream& os,
00044                                           const std::vector<T>& v) {
00045     std::copy (v.begin(), v.end(), std::ostream_iterator<T> (std::cout, " "));
00046     return os;
00047 }
00048
00050 int readConfiguration (int argc, char* argv[], bool& ioIsBuiltin,
00051                      stdair::Filename_T& ioYieldInputFilename,
00052                      std::string& ioLogFilename) {
00053
00054     // Default for the built-in input
00055     ioIsBuiltin = K_AIRAC_DEFAULT_BUILT_IN_INPUT;
00056
00057     // Declare a group of options that will be allowed only on command line
00058     boost::program_options::options_description generic ("Generic options");
00059     generic.add_options()
00060         ("prefix", "print installation prefix")
00061         ("version,v", "print version string")
00062         ("help,h", "produce help message");
00063
00064     // Declare a group of options that will be allowed both on command
00065     // line and in config file
00066     boost::program_options::options_description config ("Configuration");
00067     config.add_options()
00068         ("builtin,b",
00069          "The sample BOM tree can be either built-in or parsed from an input file. Th
00070          at latter must then be given with the -y/--yield option")
00071         ("yield,y",
00072          boost::program_options::value< std::string >(&ioYieldInputFilename)->default
00073          _value(K_AIRAC_DEFAULT_YIELD_INPUT_FILENAME),
00074          "(CSV) input file for the yield rules")
00075         ("log,l",
00076          boost::program_options::value< std::string >(&ioLogFilename)->default_value(

```

```

        K_AIRAC_DEFAULT_LOG_FILENAME),
00075     "Filename for the logs")
00076     ;
00077
00078     // Hidden options, will be allowed both on command line and
00079     // in config file, but will not be shown to the user.
00080     boost::program_options::options_description hidden ("Hidden options");
00081     hidden.add_options()
00082         ("copyright",
00083          boost::program_options::value< std::vector<std::string> >(),
00084          "Show the copyright (license)");
00085
00086     boost::program_options::options_description cmdline_options;
00087     cmdline_options.add(generic).add(config).add(hidden);
00088
00089     boost::program_options::options_description config_file_options;
00090     config_file_options.add(config).add(hidden);
00091
00092     boost::program_options::options_description visible ("Allowed options");
00093     visible.add(generic).add(config);
00094
00095     boost::program_options::positional_options_description p;
00096     p.add ("copyright", -1);
00097
00098     boost::program_options::variables_map vm;
00099     boost::program_options::
00100         store (boost::program_options::command_line_parser (argc, argv).
00101                options (cmdline_options).positional(p).run(), vm);
00102
00103     std::ifstream ifs ("airrac.cfg");
00104     boost::program_options::store (parse_config_file (ifs, config_file_options),
00105                                   vm);
00106     boost::program_options::notify (vm); if (vm.count ("help")) {
00107         std::cout << visible << std::endl;
00108         return K_AIRAC_EARLY_RETURN_STATUS;
00109     }
00110
00111     if (vm.count ("version")) {
00112         std::cout << PACKAGE_NAME << ", version " << PACKAGE_VERSION << std::endl;
00113         return K_AIRAC_EARLY_RETURN_STATUS;
00114     }
00115
00116     if (vm.count ("prefix")) {
00117         std::cout << "Installation prefix: " << PREFIXDIR << std::endl;
00118         return K_AIRAC_EARLY_RETURN_STATUS;
00119     }
00120
00121     if (vm.count ("builtin")) {
00122         ioIsBuiltin = true;
00123     }
00124     const std::string isBuiltinStr = (ioIsBuiltin == true)? "yes": "no";
00125     std::cout << "The BOM should be built-in? " << isBuiltinStr << std::endl;
00126
00127     if (ioIsBuiltin == false) {
00128
00129         // The BOM tree should be built from parsing a yield (and O&D) file
00130         if (vm.count ("yield")) {
00131             ioYieldInputFilename = vm["yield"].as< std::string >();
00132             std::cout << "Input yield filename is: " << ioYieldInputFilename
00133                     << std::endl;
00134
00135         } else {

```

```

00136         // The built-in option is not selected. However, no yield file
00137         // is specified
00138         std::cerr << "Either one among the -b/--builtin and -y/--yield "
00139         << "options must be specified" << std::endl;
00140     }
00141 }
00142
00143 if (vm.count ("log")) {
00144     ioLogFilename = vm["log"].as< std::string >();
00145     std::cout << "Log filename is: " << ioLogFilename << std::endl;
00146 }
00147
00148 return 0;
00149 }
00150
00151
00152 // ////////////////////////////////// M A I N //////////////////////////////////
00153 int main (int argc, char* argv[]) {
00154
00155     // State whether the BOM tree should be built-in or parsed from an input file
00156     bool isBuiltin;
00157
00158     // Yield input filename
00159     stdair::Filename_T lYieldInputFilename;
00160
00161     // Output log File
00162     stdair::Filename_T lLogFilename;
00163
00164     // Call the command-line option parser
00165     const int lOptionParserStatus =
00166         readConfiguration (argc, argv, isBuiltin, lYieldInputFilename, lLogFilename);
00167
00168     if (lOptionParserStatus == K_AIRAC_EARLY_RETURN_STATUS) {
00169         return 0;
00170     }
00171
00172     // Set the log parameters
00173     std::ofstream logOutputFile;
00174     // Open and clean the log outputfile
00175     logOutputFile.open (lLogFilename.c_str());
00176     logOutputFile.clear();
00177
00178     // Initialise the AirRAC service object
00179     const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
00180
00181     AIRRAC::AIRRAC_Service airracService (lLogParams);
00182
00183     // DEBUG
00184     STDAIR_LOG_DEBUG ("Welcome to AirRAC");
00185
00186     // Build a sample list of travel solutions
00187     stdair::TravelSolutionList_T lTravelSolutionList;
00188     airracService.buildSampleTravelSolutions (lTravelSolutionList);
00189
00190     // Check whether or not a (CSV) input file should be read
00191     if (isBuiltin == true) {
00192
00193         // Build the sample BOM tree (filled with yields) for AirRAC
00194         airracService.buildSampleBom();
00195
00196     } else {

```

```

00197
00198     // Build the BOM tree from parsing a yield file
00199     AIRRAC::YieldFilePath lYieldFilePath (lYieldInputFilename);
00200     airracService.parseAndLoad (lYieldFilePath);
00201
00202 }
00203
00204 // DEBUG: Display the whole BOM tree
00205 const std::string& lBOMCSVDump = airracService.csvDisplay();
00206 STDAIR_LOG_DEBUG ("BOM tree: " << lBOMCSVDump);
00207
00208 // DEBUG: Display the travel solutions
00209 const std::string& lTSCSVDump =
00210     airracService.csvDisplay (lTravelSolutionList);
00211 STDAIR_LOG_DEBUG (lTSCSVDump);
00212
00213 // Close the Log outputFile
00214 logOutputFile.close();
00215
00216 /*
00217  Note: as that program is not intended to be run on a server in
00218  production, it is better not to catch the exceptions. When it
00219  happens (that an exception is throwned), that way we get the
00220  call stack.
00221  */
00222
00223 return 0;
00224 }

```

## 25.15 airrac/bom/YieldRuleStruct.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/service/Logger.hpp>
#include <airrac/AIRRAC_Types.hpp>
#include <airrac/bom/YieldRuleStruct.hpp>

```

### Namespaces

- namespace [AIRRAC](#)

## 25.16 YieldRuleStruct.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 // AIRRAC
00011 #include <airrac/AIRRAC_Types.hpp>
00012 #include <airrac/bom/YieldRuleStruct.hpp>
00013
00014 namespace AIRRAC {
00015
00016 // //////////////////////////////////////
00017 YieldRuleStruct::YieldRuleStruct()
00018 : _yieldId(0),
00019   _origin(""),
00020   _destination(""),
00021   _dateRangeStart (stdair::DEFAULT_DATE),
00022   _dateRangeEnd (stdair::DEFAULT_DATE),
00023   _timeRangeStart (stdair::DEFAULT_EPSILON_DURATION),
00024   _timeRangeEnd (stdair::DEFAULT_EPSILON_DURATION),
00025   _yield(0),
00026   _cabinCode(""),
00027   _pos(""),
00028   _channel(""),
00029   _airlineCode(""),
00030   _classCode("") {
00031 }
00032
00033 // //////////////////////////////////////
00034 YieldRuleStruct::~YieldRuleStruct() {
00035 }
00036
00037 // //////////////////////////////////////
00038 stdair::Date_T YieldRuleStruct::calculateDate() const {
00039     _itYear.check(); _itMonth.check(); _itDay.check();
00040     return stdair::Date_T (_itYear._value, _itMonth._value, _itDay._value);
00041 }
00042
00043 // //////////////////////////////////////
00044 stdair::Duration_T YieldRuleStruct::calculateTime() const {
00045     _itHours.check(); _itMinutes.check(); _itSeconds.check();
00046     return boost::posix_time::hours (_itHours._value)
00047         + boost::posix_time::minutes (_itMinutes._value)
00048         + boost::posix_time::seconds (_itSeconds._value);
00049 }
00050
00051 // //////////////////////////////////////
00052 const std::string YieldRuleStruct::describe() const {
00053     std::ostringstream ostr;
00054     ostr << "YieldRule: " << _yieldId << ", ";
00055
00056     ostr << _origin << "-" << _destination << " ("
00057         << _pos << "), " << _channel << ", [";
00058     ostr << _dateRangeStart << "/" << _dateRangeEnd << "]" << " - ["
00059         << boost::posix_time::to_simple_string (_timeRangeStart) << "/"
00060         << boost::posix_time::to_simple_string (_timeRangeEnd) << "], ";
00061
00062     ostr << _cabinCode << ", " << _yield << " EUR, ";
00063
00064     // Sanity check
00065     assert (_airlineCodeList.size() == _classCodeList.size());
00066
00067     // Browse the class-paths
00068     unsigned short idx = 0;
00069     stdair::ClassList_StringList_T::const_iterator itClass =
00070         _classCodeList.begin();

```

```

00071     for (stdair::AirlineCodeList_T::const_iterator itAirline =
00072           _airlineCodeList.begin();
00073           itAirline != _airlineCodeList.end(); ++itAirline, ++itClass, ++idx) {
00074         if (idx != 0) {
00075             ostr << " - ";
00076         }
00077         const stdair::AirlineCode_T lAirlineCode = *itAirline;
00078         const stdair::ClassCode_T lClassCode = *itClass;
00079         ostr << lAirlineCode << " / " << lClassCode;
00080     }
00081
00082     return ostr.str();
00083 }
00084 }

```

## 25.17 airrac/bom/YieldRuleStruct.hpp File Reference

```

#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/basic/BasParserHelperTypes.hpp>
#include <airrac/AIRAC_Types.hpp>

```

### Classes

- struct [AIRAC::YieldRuleStruct](#)  
*Utility Structure for the parsing of Flight-Date structures.*

### Namespaces

- namespace [AIRAC](#)

## 25.18 YieldRuleStruct.hpp

```

00001 #ifndef __AIRAC_BOM_YELDRULESTRUCT_HPP
00002 #define __AIRAC_BOM_YELDRULESTRUCT_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 #include <stdair/stdair_demand_types.hpp>
00013 #include <stdair/stdair_inventory_types.hpp>
00014 #include <stdair/basic/StructAbstract.hpp>
00015 #include <stdair/basic/BasParserHelperTypes.hpp>
00016 // AirRAC
00017 #include <airrac/AIRAC_Types.hpp>
00018
00019 namespace AIRRAC {
00020
00024 struct YieldRuleStruct : public stdair::StructAbstract {
00025 public:
00026     // /////////////////////////////////// Initialisation / Destruction ///////////////////////////////////
00030     YieldRuleStruct();
00031
00035     ~YieldRuleStruct();
00036
00037 public:
00038     // /////////////////////////////////// Getters ///////////////////////////////////
00040     AIRRAC::YieldID_T getYieldID () const {
00041         return _yieldId;
00042     }
00043
00045     stdair::AirportCode_T getOrigin () const {
00046         return _origin;
00047     }
00048
00050     stdair::AirportCode_T getDestination () const {
00051         return _destination;
00052     }
00053
00055     stdair::TripType_T getTripType () const {
00056         return _tripType;
00057     }
00058
00060     stdair::Date_T getDateRangeStart () const {
00061         return _dateRangeStart;
00062     }
00063
00065     stdair::Date_T getDateRangeEnd () const {
00066         return _dateRangeEnd;
00067     }
00068
00070     stdair::Duration_T getTimeRangeStart () const {
00071         return _timeRangeStart;
00072     }
00073
00075     stdair::Duration_T getTimeRangeEnd () const {
00076         return _timeRangeEnd;
00077     }
00078
00080     stdair::CabinCode_T getCabinCode () const {
00081         return _cabinCode;
00082     }
00083
00085     const stdair::CityCode_T getPOS () const {
00086         return _pos;
00087     }
00088
00090     stdair::ChannelLabel_T getChannel () const {
00091         return _channel;
00092     }
00093

```

```

00095     stdair::YieldValue_T getYield () const {
00096         return _yield;
00097     }
00098
00100     stdair::AirlineCode_T getAirlineCode () const {
00101         return _airlineCode;
00102     }
00103
00105     stdair::ClassCode_T getClassCode () const {
00106         return _classCode;
00107     }
00108
00110     const unsigned int getAirlineListSize () const {
00111         return _airlineCodeList.size();
00112     }
00113
00115     const unsigned int getClassCodeListSize () const {
00116         return _classCodeList.size();
00117     }
00118
00120     stdair::AirlineCodeList_T getAirlineList () const {
00121         return _airlineCodeList;
00122     }
00123
00125     stdair::ClassList_StringList_T getClassCodeList () const {
00126         return _classCodeList;
00127     }
00128
00129 public:
00130     // ////////////////////////////////// Display support methods //////////////////////////////////
00132     stdair::Date_T calculateDate() const;
00133
00135     stdair::Duration_T calculateTime() const;
00136
00138     const std::string describe() const;
00139
00140 public:
00141     // ////////////////////////////////// Setters //////////////////////////////////
00143     void setYieldID (const AIRRAC::YieldID_T iYieldID) {
00144         _yieldId = iYieldID;
00145     }
00146
00148     void setOrigin (const stdair::AirportCode_T& iOrigin) {
00149         _origin = iOrigin;
00150     }
00151
00153     void setDestination (const stdair::AirportCode_T& iDestination) {
00154         _destination = iDestination;
00155     }
00156
00158     void setTripType (const stdair::TripType_T& iTripType) {
00159         _tripType = iTripType;
00160     }
00161
00163     void setDateRangeStart (const stdair::Date_T& iDateRangeStart) {
00164         _dateRangeStart = iDateRangeStart;
00165     }
00166
00168     void setDateRangeEnd (const stdair::Date_T& iDateRangeEnd) {
00169         _dateRangeEnd = iDateRangeEnd;
00170     }
00171

```

```

00173     void setTimeRangeStart (const stdair::Duration_T& iTimeRangeStart) {
00174         _timeRangeStart = iTimeRangeStart;
00175     }
00176
00177     void setTimeRangeEnd (const stdair::Duration_T& iTimeRangeEnd) {
00178         _timeRangeEnd = iTimeRangeEnd;
00179     }
00180
00181
00182     void setCabinCode (const stdair::CabinCode_T& iCabinCode) {
00183         _cabinCode = iCabinCode;
00184     }
00185
00186
00187     void setPOS (const stdair::CityCode_T& iPOS) {
00188         _pos = iPOS;
00189     }
00190
00191
00192     void setChannel (const stdair::ChannelLabel_T& iChannel) {
00193         _channel = iChannel;
00194     }
00195
00196
00197     void setYield(const stdair::YieldValue_T& iYield) {
00198         _yield = iYield;
00199     }
00200
00201
00202     void setAirlineCode (const stdair::AirlineCode_T& iAirlineCode) {
00203         _airlineCode = iAirlineCode;
00204     }
00205
00206
00207     void setClassCode (const stdair::ClassCode_T& iClassCode) {
00208         _classCode = iClassCode;
00209     }
00210
00211
00212     void clearAirlineCodeList () {
00213         _airlineCodeList.clear();
00214     }
00215
00216
00217     void clearClassCodeList () {
00218         _classCodeList.clear();
00219     }
00220
00221
00222     void addAirlineCode (const stdair::AirlineCode_T& iAirlineCode) {
00223         _airlineCodeList.push_back (iAirlineCode);
00224     }
00225
00226
00227     void addClassCode (const stdair::ClassCode_T& iClassCode) {
00228         _classCodeList.push_back (iClassCode);
00229     }
00230
00231
00232 public:
00233     // ////////////////////////////////// Attributes //////////////////////////////////
00234     stdair::year_t _itYear;
00235     stdair::month_t _itMonth;
00236     stdair::day_t _itDay;
00237
00238
00239     //long _itHours;
00240     stdair::hour_t _itHours;
00241     stdair::minute_t _itMinutes;
00242     stdair::second_t _itSeconds;
00243
00244
00245 private:
00246     // ////////////////////////////////// Attributes //////////////////////////////////
00247

```

```

00249     YieldID_T _yieldId;
00250
00252     stdair::AirportCode_T _origin;
00253
00255     stdair::AirportCode_T _destination;
00256
00258     stdair::TripType_T _tripType;
00259
00261     stdair::Date_T _dateRangeStart;
00262
00264     stdair::Date_T _dateRangeEnd;
00265
00267     stdair::Duration_T _timeRangeStart;
00268
00270     stdair::Duration_T _timeRangeEnd;
00271
00273     stdair::YieldValue_T _yield;
00274
00276     stdair::CabinCode_T _cabinCode;
00277
00279     stdair::CityCode_T _pos;
00280
00282     stdair::ChannelLabel_T _channel;
00283
00285     stdair::AirlineCode_T _airlineCode;
00286
00288     stdair::ClassCode_T _classCode;
00289
00291     stdair::AirlineCodeList_T _airlineCodeList;
00292
00294     stdair::ClassList_StringList_T _classCodeList;
00295 };
00296
00297 }
00298 #endif // __AIRRAC_BOM_YIELDRULESTRUCT_HPP

```

## 25.19 airrac/command/YieldManager.cpp File Reference

```

#include <cassert>

#include <stdair/basic/BasConst_Request.hpp>

#include <stdair/bom/BomManager.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/BookingClass.hpp>

#include <stdair/bom/TravelSolutionStruct.hpp>

#include <stdair/bom/AirportPair.hpp>

```

```
#include <stdair/bom/PosChannel.hpp>
#include <stdair/bom/DatePeriod.hpp>
#include <stdair/bom/TimePeriod.hpp>
#include <stdair/bom/YieldFeatures.hpp>
#include <stdair/bom/AirlineClassList.hpp>
#include <stdair/factory/FacBomManager.hpp>
#include <stdair/service/Logger.hpp>
#include <airrac/AIRRAC_Types.hpp>
#include <airrac/command/YieldManager.hpp>
```

### Namespaces

- namespace [AIRRAC](#)

### 25.20 YieldManager.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/basic/BasConst_Request.hpp>
00008 #include <stdair/bom/BomManager.hpp>
00009 #include <stdair/bom/BomRoot.hpp>
00010 #include <stdair/bom/Inventory.hpp>
00011 #include <stdair/bom/FlightDate.hpp>
00012 #include <stdair/bom/SegmentDate.hpp>
00013 #include <stdair/bom/SegmentCabin.hpp>
00014 #include <stdair/bom/FareFamily.hpp>
00015 #include <stdair/bom/BookingClass.hpp>
00016 #include <stdair/bom/TravelSolutionStruct.hpp>
00017 #include <stdair/bom/AirportPair.hpp>
00018 #include <stdair/bom/PosChannel.hpp>
00019 #include <stdair/bom/DatePeriod.hpp>
00020 #include <stdair/bom/TimePeriod.hpp>
00021 #include <stdair/bom/YieldFeatures.hpp>
00022 #include <stdair/bom/AirlineClassList.hpp>
00023 #include <stdair/factory/FacBomManager.hpp>
00024 #include <stdair/service/Logger.hpp>
00025 // Airrac
00026 #include <airrac/AIRRAC_Types.hpp>
00027 #include <airrac/command/YieldManager.hpp>
00028
00029 namespace AIRRAC {
00030
00031 // //////////////////////////////////////
00032 YieldManager::YieldManager() {
00033     assert (false);
00034 }
00035
00036 // //////////////////////////////////////
```

```

00037 YieldManager::YieldManager (const YieldManager&) {
00038     assert (false);
00039 }
00040
00041 // //////////////////////////////////////
00042 YieldManager::~YieldManager() {
00043 }
00044
00045 // //////////////////////////////////////
00046 void YieldManager::
00047 calculateYield (stdair::TravelSolutionList_T& ioTravelSolutionList,
00048                const stdair::BomRoot& iBomRoot) {
00049
00050     // Browse the list of TravelSolution structures
00051     for (stdair::TravelSolutionList_T::iterator itTravelSolution =
00052          ioTravelSolutionList.begin();
00053          itTravelSolution != ioTravelSolutionList.end(); ++itTravelSolution) {
00054         stdair::TravelSolutionStruct& lTravelSolution = *itTravelSolution;
00055
00056         //
00057         YieldManager::calculateYield (lTravelSolution, iBomRoot);
00058     }
00059 }
00060
00061 // //////////////////////////////////////
00062 void YieldManager::
00063 calculateYield (stdair::TravelSolutionStruct& ioTravelSolution,
00064                const stdair::BomRoot& iBomRoot) {
00065
00066     // Calculate/retrieve the yield for the given travel solution
00067     //YieldStore::calculateYield (ioYield, ioTravelSolution);
00068
00069     // TODO: update the statistical attributes of the yield.
00070 }
00071
00072 // //////////////////////////////////////
00073 void YieldManager::updateYields (const stdair::BomRoot& iBomRoot) {
00074     // Browse the list of booking classes and update yield for each one.
00075     const stdair::InventoryList_T lInvList =
00076         stdair::BomManager::getList<stdair::Inventory> (iBomRoot);
00077     for (stdair::InventoryList_T::const_iterator itInv = lInvList.begin();
00078          itInv != lInvList.end(); ++itInv) {
00079         const stdair::Inventory* lInv_ptr = *itInv;
00080         assert (lInv_ptr != NULL);
00081
00082         // Retrieve the airline code.
00083         const stdair::AirlineCode_T& lAirlineCode = lInv_ptr->getAirlineCode();
00084
00085         //
00086         const stdair::FlightDateList_T& lFDList =
00087             stdair::BomManager::getList<stdair::FlightDate> (*lInv_ptr);
00088         for (stdair::FlightDateList_T::const_iterator itFD = lFDList.begin();
00089              itFD != lFDList.end(); ++itFD) {
00090             const stdair::FlightDate* lFD_ptr = *itFD;
00091             assert (lFD_ptr != NULL);
00092
00093             //
00094             const stdair::SegmentDateList_T& lSDList =
00095                 stdair::BomManager::getList<stdair::SegmentDate> (*lFD_ptr);
00096             for (stdair::SegmentDateList_T::const_iterator itSD = lSDList.begin();
00097                  itSD != lSDList.end(); ++itSD) {
00098                 const stdair::SegmentDate* lSD_ptr = *itSD;

```

```

00099         assert (lSD_ptr != NULL);
00100
00101         // Retrieve the origin and the destination
00102         const stdair::AirportCode_T& lOrigin = lSD_ptr->getBoardingPoint();
00103         const stdair::AirportCode_T& lDestination = lSD_ptr->getOffPoint();
00104
00105         // Retrieve the airport pair in the yield structure.
00106         const stdair::AirportPairKey lAirportPairKey (lOrigin, lDestination);
00107         stdair::AirportPair* lAirportPair_ptr = stdair::BomManager::
00108             getObjectPtr<stdair::AirportPair> (iBomRoot,
00109                                                 lAirportPairKey.toString());
00110         if (lAirportPair_ptr == NULL) {
00111             STDAIR_LOG_ERROR ("Cannot find yield corresponding to the airport "
00112                               << "pair: " << lAirportPairKey.toString());
00113             assert (false);
00114         }
00115
00116         // Retrieve the boarding date and time
00117         const stdair::Date_T& lDate = lSD_ptr->getBoardingDate();
00118         const stdair::Duration_T& lTime = lSD_ptr->getBoardingTime();
00119
00120         // Retrieve the corresponding date period.
00121         const stdair::DatePeriodList_T& lDatePeriodList =
00122             stdair::BomManager::getList<stdair::DatePeriod> (*lAirportPair_ptr);
00123         for (stdair::DatePeriodList_T::const_iterator itDatePeriod =
00124             lDatePeriodList.begin();
00125             itDatePeriod != lDatePeriodList.end(); ++itDatePeriod) {
00126             const stdair::DatePeriod* lDatePeriod_ptr = *itDatePeriod;
00127             assert (lDatePeriod_ptr != NULL);
00128
00129             const bool isDepartureDateValid =
00130                 lDatePeriod_ptr->isDepartureDateValid (lDate);
00131
00132             if (isDepartureDateValid == true) {
00133
00134                 // Retrieve the PoS-Channel.
00135                 const stdair::PosChannelKey lPosChannelKey (stdair::DEFAULT_POS,
00136                                                             stdair::DEFAULT_CHANNEL
00137 );
00138                 stdair::PosChannel* lPosChannel_ptr = stdair::BomManager::
00139                     getObjectPtr<stdair::PosChannel> (*lDatePeriod_ptr,
00140                                                         lPosChannelKey.toString());
00141                 if (lPosChannel_ptr == NULL) {
00142                     STDAIR_LOG_ERROR ("Cannot find yield corresponding to the PoS-"
00143                                         << "Channel: " << lPosChannelKey.toString());
00144                     assert (false);
00145                 }
00146
00147                 // Retrieve the corresponding time period.
00148                 const stdair::TimePeriodList_T& lTimePeriodList = stdair::
00149                     BomManager::getList<stdair::TimePeriod> (*lPosChannel_ptr);
00150                 for (stdair::TimePeriodList_T::const_iterator itTimePeriod =
00151                     lTimePeriodList.begin();
00152                     itTimePeriod != lTimePeriodList.end(); ++itTimePeriod) {
00153                     const stdair::TimePeriod* lTimePeriod_ptr = *itTimePeriod;
00154                     assert (lTimePeriod_ptr != NULL);
00155
00156                     const bool isDepartureTimeValid =
00157                         lTimePeriod_ptr->isDepartureTimeValid (lTime);
00158
00159                     if (isDepartureTimeValid == true) {
00160                         updateYields (*lSD_ptr, *lTimePeriod_ptr, lAirlineCode);
00161                     }
00162                 }
00163             }
00164         }
00165     }

```

```

00160         }
00161     }
00162 }
00163 }
00164 }
00165 }
00166 }
00167 }
00168
00169 // //////////////////////////////////////
00170 void YieldManager::updateYields (const stdair::SegmentDate& iSegmentDate,
00171                                 const stdair::TimePeriod& iTimePeriod,
00172                                 const stdair::AirlineCode_T& iAirlineCode) {
00173     // Browse the segment-cabin list and retrieve the corresponding
00174     // yield features.
00175     const stdair::SegmentCabinList_T& lSegmentCabinList =
00176         stdair::BomManager::getList<stdair::SegmentCabin> (iSegmentDate);
00177     for (stdair::SegmentCabinList_T::const_iterator itSC =
00178         lSegmentCabinList.begin(); itSC != lSegmentCabinList.end(); ++itSC) {
00179         const stdair::SegmentCabin* lSegmentCabin_ptr = *itSC;
00180         assert (lSegmentCabin_ptr != NULL);
00181
00182         const stdair::CabinCode_T& lCabinCode = lSegmentCabin_ptr->getCabinCode();
00183         const stdair::TripType_T lTripType (stdair::TRIP_TYPE_ONE_WAY);
00184         const stdair::YieldFeaturesKey lYieldFeaturesKey (lTripType,
00185                                                         lCabinCode);
00186         const stdair::YieldFeatures* lYieldFeatures_ptr = stdair::BomManager::
00187             getObjectPtr<stdair::YieldFeatures> (iTimePeriod,
00188                                                 lYieldFeaturesKey.toString());
00189         if (lYieldFeatures_ptr == NULL) {
00190             STDAIR_LOG_ERROR ("Cannot find the yield features corresponding to "
00191                             << iTimePeriod.describeKey() << ", "
00192                             << lCabinCode << " and " << lTripType);
00193             assert (false);
00194         }
00195
00196         // Browse the list of booking class and update the yield for each one.
00197         const stdair::FareFamilyList_T& lFFlist = stdair::BomManager::
00198             getList<stdair::FareFamily> (*lSegmentCabin_ptr);
00199         for (stdair::FareFamilyList_T::const_iterator itFF = lFFlist.begin();
00200             itFF != lFFlist.end(); ++itFF) {
00201             const stdair::FareFamily* lFF_ptr = *itFF;
00202             assert (lFF_ptr != NULL);
00203
00204             const stdair::BookingClassList_T& lBCList = stdair::BomManager::
00205                 getList<stdair::BookingClass> (*lFF_ptr);
00206             for (stdair::BookingClassList_T::const_iterator itBC = lBCList.begin();
00207                 itBC != lBCList.end(); ++itBC) {
00208                 stdair::BookingClass* lBookingClass_ptr = *itBC;
00209                 assert (lBookingClass_ptr != NULL);
00210
00211                 const stdair::ClassCode_T& lClassCode =
00212                     lBookingClass_ptr->getClassCode();
00213                 stdair::AirlineCodeList_T lAirlineCodeList;
00214                 lAirlineCodeList.push_back (iAirlineCode);
00215                 stdair::ClassList_StringList_T lClassList;
00216                 lClassList.push_back (lClassCode);
00217                 const stdair::AirlineClassListKey lACListKey (lAirlineCodeList,
00218                                                             lClassList);
00219
00220                 const stdair::AirlineClassList* lAirlineClassList_ptr = stdair::
00221                     BomManager::getObjectPtr<stdair::AirlineClassList> (*lYieldFeatures_p

```

```

        tr, lACListKey.toString());
00222         if (lAirlineClassList_ptr != NULL) {
00223             const stdair::Yield_T& lYield = lAirlineClassList_ptr->getYield();
00224             lBookingClass_ptr->setYield (lYield);
00225
00226             //DEBUG
00227             STDAIR_LOG_DEBUG ("Update yield of " << lYield << " for "
00228                             << iAirlineCode << ", "
00229                             << iSegmentDate.describeKey() << ", "
00230                             << lBookingClass_ptr->describeKey());
00231         }
00232     }
00233 }
00234 }
00235 }
00236 }

```

## 25.21 airrac/command/YieldManager.hpp File Reference

```

#include <stdair/stdair_basic_types.hpp>
#include <stdair/bom/TravelSolutionTypes.hpp>

```

### Classes

- class [AIRRAC::YieldManager](#)  
*Command wrapping the travel request process.*

### Namespaces

- namespace [stdair](#)  
*Forward declarations.*
- namespace [AIRRAC](#)

## 25.22 YieldManager.hpp

```

00001 #ifndef __AIRRAC_CMD_YELDMANAGER_HPP
00002 #define __AIRRAC_CMD_YELDMANAGER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/bom/TravelSolutionTypes.hpp>
00010
00012 namespace stdair {
00013     class BomRoot;
00014     class SegmentDate;
00015     class TimePeriod;
00016 }
00017
00018 namespace AIRRAC {

```

```

00019
00023  class YieldManager {
00027      friend class AIRRAC_Service;
00028
00029  private:
00033      static void calculateYield (stdair::TravelSolutionList_T&,
00034                                const stdair::BomRoot&);
00035
00039      static void calculateYield (stdair::TravelSolutionStruct&,
00040                                const stdair::BomRoot&);
00041
00045      static void updateYields (const stdair::BomRoot&);
00046      static void updateYields (const stdair::SegmentDate&,
00047                                const stdair::TimePeriod&,
00048                                const stdair::AirlineCode_T&);
00049
00050  private:
00054      YieldManager();
00055
00059      YieldManager(const YieldManager&);
00060
00064      ~YieldManager();
00065  };
00066
00067 }
00068 #endif // __AIRRAC_CMD_YIELDMANAGER_HPP

```

## 25.23 airrac/command/YieldParser.cpp File Reference

```

#include <cassert>
#include <string>
#include <stdair/basic/BasFileMgr.hpp>
#include <airrac/command/YieldParserHelper.hpp>
#include <airrac/command/YieldParser.hpp>

```

### Namespaces

- namespace [AIRRAC](#)

## 25.24 YieldParser.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <string>
00007 // StdAir
00008 #include <stdair/basic/BasFileMgr.hpp>
00009 // AirRAC
00010 #include <airrac/command/YieldParserHelper.hpp>
00011 #include <airrac/command/YieldParser.hpp>
00012

```

```

00013 namespace AIRRAC {
00014
00015 // //////////////////////////////////////
00016 void YieldParser::generateYieldStore (const YieldFilePath& iYieldFilename,
00017                                     stdair::BomRoot& ioBomRoot) {
00018
00019     const stdair::Filename_T lFilename = iYieldFilename.name();
00020
00021     // Check that the file path given as input corresponds to an actual file
00022     const bool doesExistAndIsReadable =
00023         stdair::BasFileMgr::doesExistAndIsReadable (lFilename);
00024     if (doesExistAndIsReadable == false) {
00025         STDAIR_LOG_ERROR ("The yield input file, '" << lFilename
00026                         << "', can not be retrieved on the file-system");
00027         throw YieldInputFileNotFoundException ("The yield file '" + lFilename
00028                                             + "' does not exist or can not "
00029                                             "be read");
00030     }
00031
00032     // Initialise the yield file parser.
00033     YieldFileParser lYieldParser (ioBomRoot, lFilename);
00034
00035     // Parse the CSV-formatted yield store input file, and generate the
00036     // corresponding Yield-related objects.
00037     lYieldParser.generateYieldStore();
00038 }
00039 }

```

## 25.25 airrac/command/YieldParser.hpp File Reference

```

#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/command/CmdAbstract.hpp>
#include <airrac/AIRRAC_Types.hpp>

```

### Classes

- class [AIRRAC::YieldParser](#)  
*Class wrapping the parser entry point.*

### Namespaces

- namespace [stdair](#)  
*Forward declarations.*
- namespace [AIRRAC](#)

## 25.26 YieldParser.hpp

```

00001 #ifndef __AIRRAC_CMD_YELDPARSER_HPP
00002 #define __AIRRAC_CMD_YELDPARSER_HPP

```

```

00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_basic_types.hpp>
00011 #include <stdair/command/CmdAbstract.hpp>
00012 //AirRAC
00013 #include <airrac/AIRAC_Types.hpp>
00014
00016 namespace stdair {
00017     class BomRoot;
00018 }
00019
00020 namespace AIRRAC {
00021
00025     class YieldParser : public stdair::CmdAbstract {
00026     public:
00036         static void generateYieldStore (const YieldFilePath&, stdair::BomRoot&);
00037     };
00038 }
00039 #endif // __AIRRAC_CMD_YIELDPARSER_HPP

```

## 25.27 airrac/command/YieldParserHelper.cpp File Reference

```

#include <cassert>
#include <fstream>
#include <vector>

#include <stdair/basic/BasFileMgr.hpp>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/service/Logger.hpp>
#include <airrac/command/YieldParserHelper.hpp>
#include <airrac/command/YieldRuleGenerator.hpp>

```

### Namespaces

- namespace [AIRRAC](#)
- namespace [AIRRAC::YieldParserHelper](#)

### Variables

- stdair::int1\_p\_t [AIRRAC::YieldParserHelper::int1\\_p](#)
- stdair::uint2\_p\_t [AIRRAC::YieldParserHelper::uint2\\_p](#)
- stdair::uint4\_p\_t [AIRRAC::YieldParserHelper::uint4\\_p](#)
- stdair::uint1\_4\_p\_t [AIRRAC::YieldParserHelper::uint1\\_4\\_p](#)

- stdair::hour\_p\_t AIRRAC::YieldParserHelper::hour\_p
- stdair::minute\_p\_t AIRRAC::YieldParserHelper::minute\_p
- stdair::second\_p\_t AIRRAC::YieldParserHelper::second\_p
- stdair::year\_p\_t AIRRAC::YieldParserHelper::year\_p
- stdair::month\_p\_t AIRRAC::YieldParserHelper::month\_p
- stdair::day\_p\_t AIRRAC::YieldParserHelper::day\_p

## 25.28 YieldParserHelper.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <fstream>
00007 #include <vector>
00008 // StdAir
00009 #include <stdair/basic/BasFileMgr.hpp>
00010 #include <stdair/basic/BasConst_Request.hpp>
00011 #include <stdair/bom/BomRoot.hpp>
00012 #include <stdair/service/Logger.hpp>
00013 // Airrac
00014 #include <airrac/command/YieldParserHelper.hpp>
00015 #include <airrac/command/YieldRuleGenerator.hpp>
00016
00017 namespace AIRRAC {
00018
00019     namespace YieldParserHelper {
00020
00021         // //////////////////////////////////////
00022         // Semantic actions
00023         // //////////////////////////////////////
00024
00025         ParserSemanticAction::
00026         ParserSemanticAction (YieldRuleStruct& ioYieldRule)
00027             : _yieldRule (ioYieldRule) {
00028         }
00029
00030         // //////////////////////////////////////
00031         storeYieldId::
00032         storeYieldId (YieldRuleStruct& ioYieldRule)
00033             : ParserSemanticAction (ioYieldRule) {
00034         }
00035
00036         // //////////////////////////////////////
00037         void storeYieldId::operator() (unsigned int iYieldId,
00038                                         boost::spirit::qi::unused_type,
00039                                         boost::spirit::qi::unused_type) const {
00040             _yieldRule.setYieldID (iYieldId);
00041
00042             // DEBUG
00043             //STDAIR_LOG_DEBUG ( "Yield Id: " << _yieldRule.getYieldID ());
00044
00045             const stdair::AirlineCode_T lEmptyAirlineCode ("");
00046             _yieldRule.setAirlineCode(lEmptyAirlineCode);
00047             _yieldRule.clearAirlineCodeList();
00048             const stdair::ClassCode_T lEmptyClassCode ("");
00049             _yieldRule.setClassCode(lEmptyClassCode);
00050             _yieldRule.clearClassCodeList();

```

```

00051     _yieldRule._itSeconds = 0;
00052
00053 }
00054
00055 // //////////////////////////////////////
00056 storeOrigin ::
00057 storeOrigin (YieldRuleStruct& ioYieldRule)
00058 : ParserSemanticAction (ioYieldRule) {
00059 }
00060
00061 // //////////////////////////////////////
00062 void storeOrigin::operator() (std::vector<char> iChar,
00063                               boost::spirit::qi::unused_type,
00064                               boost::spirit::qi::unused_type) const {
00065     const stdair::AirportCode_T lOrigin (iChar.begin(), iChar.end());
00066     _yieldRule.setOrigin (lOrigin);
00067     // DEBUG
00068     //STDAIR_LOG_DEBUG ( "Origin: " << _yieldRule.getOrigin ());
00069 }
00070
00071 // //////////////////////////////////////
00072 storeDestination ::
00073 storeDestination (YieldRuleStruct& ioYieldRule)
00074 : ParserSemanticAction (ioYieldRule) {
00075 }
00076
00077 // //////////////////////////////////////
00078 void storeDestination::operator() (std::vector<char> iChar,
00079                                    boost::spirit::qi::unused_type,
00080                                    boost::spirit::qi::unused_type) const {
00081     const stdair::AirportCode_T lDestination (iChar.begin(), iChar.end());
00082     _yieldRule.setDestination (lDestination);
00083     // DEBUG
00084     //STDAIR_LOG_DEBUG ( "Destination: " << _yieldRule.getDestination ());
00085 }
00086
00087 // //////////////////////////////////////
00088 storeTripType ::
00089 storeTripType (YieldRuleStruct& ioYieldRule)
00090 : ParserSemanticAction (ioYieldRule) {
00091 }
00092
00093 // //////////////////////////////////////
00094 void storeTripType::operator() (std::vector<char> iChar,
00095                                 boost::spirit::qi::unused_type,
00096                                 boost::spirit::qi::unused_type) const {
00097     const stdair::TripType_T lTripType (iChar.begin(), iChar.end());
00098     if (lTripType == "OW" || lTripType == "RT") {
00099         _yieldRule.setTripType (lTripType);
00100     } else {
00101         // ERROR
00102         STDAIR_LOG_ERROR ("Invalid trip type " << lTripType);
00103     }
00104     // DEBUG
00105     //STDAIR_LOG_DEBUG ("TripType: " << _yieldRule.getTripType ());
00106 }
00107
00108 // //////////////////////////////////////
00109 storeDateRangeStart ::
00110 storeDateRangeStart (YieldRuleStruct& ioYieldRule)
00111 : ParserSemanticAction (ioYieldRule) {

```

```

00113     }
00114
00115     // ////////////////////////////////////////
00116     void storeDateRangeStart::operator() (boost::spirit::qi::unused_type,
00117                                           boost::spirit::qi::unused_type,
00118                                           boost::spirit::qi::unused_type) const {
00119
00119         const stdair::Date_T& lDateStart = _yieldRule.calculateDate ();
00120         _yieldRule.setDateRangeStart (lDateStart);
00121         // DEBUG
00122         //STDAIR_LOG_DEBUG ("Date Range Start: "<< _yieldRule.getDateRangeStart ());
00123     };
00124
00125     // ////////////////////////////////////////
00126     storeDateRangeEnd::
00127     storeDateRangeEnd(YieldRuleStruct& ioYieldRule)
00128         : ParserSemanticAction (ioYieldRule) {
00129     }
00130
00131     // ////////////////////////////////////////
00132     void storeDateRangeEnd::operator() (boost::spirit::qi::unused_type,
00133                                         boost::spirit::qi::unused_type,
00134                                         boost::spirit::qi::unused_type) const {
00135
00135         const stdair::Date_T& lDateEnd = _yieldRule.calculateDate ();
00136         // As a Boost date period (DatePeriod_T) defines the last day of
00137         // the period to be end-date - one day, we have to add one day to that
00138         // end date before.
00139         const stdair::DateOffset_T oneDay (1);
00140         const stdair::Date_T lBoostDateEnd = lDateEnd + oneDay;
00141         _yieldRule.setDateRangeEnd (lBoostDateEnd);
00142         // DEBUG
00143         //STDAIR_LOG_DEBUG ("Date Range End: " << _yieldRule.getDateRangeEnd ());
00144     }
00145
00146     // ////////////////////////////////////////
00147     storeStartRangeTime::
00148     storeStartRangeTime (YieldRuleStruct& ioYieldRule)
00149         : ParserSemanticAction (ioYieldRule) {
00150     }
00151
00152     // ////////////////////////////////////////
00153     void storeStartRangeTime::operator() (boost::spirit::qi::unused_type,
00154                                           boost::spirit::qi::unused_type,
00155                                           boost::spirit::qi::unused_type) const {
00156
00156         const stdair::Duration_T& lTimeStart = _yieldRule.calculateTime ();
00157         _yieldRule.setTimeRangeStart (lTimeStart);
00158         // DEBUG
00159         //STDAIR_LOG_DEBUG ("Time Range Start: " << _yieldRule.getTimeRangeStart ());
00160     };
00161     // Reset the number of seconds
00162     _yieldRule._itSeconds = 0;
00163 }
00164
00165     // ////////////////////////////////////////
00166     storeEndRangeTime::
00167     storeEndRangeTime (YieldRuleStruct& ioYieldRule)
00168         : ParserSemanticAction (ioYieldRule) {
00169     }
00170
00171     // ////////////////////////////////////////

```

```

00171 void storeEndRangeTime::operator() (boost::spirit::qi::unused_type,
00172                                     boost::spirit::qi::unused_type,
00173                                     boost::spirit::qi::unused_type) const {
00174     const stdair::Duration_T& lTimeEnd = _yieldRule.calculateTime ();
00175     _yieldRule.setTimeRangeEnd (lTimeEnd);
00176     // DEBUG
00177     //STDAIR_LOG_DEBUG ("Time Range End: " << _yieldRule.getTimeRangeEnd ());
00178     // Reset the number of seconds
00179     _yieldRule._itSeconds = 0;
00180 }
00181
00182 // //////////////////////////////////////
00183 storePOS ::
00184 storePOS (YieldRuleStruct& ioYieldRule)
00185 : ParserSemanticAction (ioYieldRule) {
00186 }
00187
00188 // //////////////////////////////////////
00189 void storePOS::operator() (std::vector<char> iChar,
00190                             boost::spirit::qi::unused_type,
00191                             boost::spirit::qi::unused_type) const {
00192     const stdair::CityCode_T lPOS (iChar.begin(), iChar.end());
00193     if (lPOS == _yieldRule.getOrigin() || lPOS == _yieldRule.getDestination() )
00194 {
00195         _yieldRule.setPOS (lPOS);
00196     } else if (lPOS == "ROW") {
00197         const stdair::CityCode_T lPOSROW ("ROW");
00198         _yieldRule.setPOS (lPOSROW);
00199     } else if (lPOS == stdair::DEFAULT_POS) {
00200         _yieldRule.setPOS (stdair::DEFAULT_POS);
00201     } else {
00202         // ERROR
00203         STDAIR_LOG_ERROR ("Invalid point of sale " << lPOS);
00204     }
00205     // DEBUG
00206     //STDAIR_LOG_DEBUG ("POS: " << _yieldRule.getPOS ());
00207 }
00208
00209 // //////////////////////////////////////
00210 storeCabinCode ::
00211 storeCabinCode (YieldRuleStruct& ioYieldRule)
00212 : ParserSemanticAction (ioYieldRule) {
00213 }
00214
00215 // //////////////////////////////////////
00216 void storeCabinCode::operator() (char iChar,
00217                                   boost::spirit::qi::unused_type,
00218                                   boost::spirit::qi::unused_type) const {
00219     std::ostringstream ostr;
00220     ostr << iChar;
00221     const std::string& cabinCodeStr = ostr.str();
00222     const stdair::CabinCode_T lCabinCode (cabinCodeStr);
00223     _yieldRule.setCabinCode (lCabinCode);
00224
00225     // DEBUG
00226     //STDAIR_LOG_DEBUG ("Cabin Code: " << _yieldRule.getCabinCode ());
00227 }
00228
00229 // //////////////////////////////////////
00230 storeChannel ::

```

```

00231     storeChannel (YieldRuleStruct& ioYieldRule)
00232     : ParserSemanticAction (ioYieldRule) {
00233     }
00234
00235     // //////////////////////////////////////
00236     void storeChannel::operator() (std::vector<char> iChar,
00237                                     boost::spirit::qi::unused_type,
00238                                     boost::spirit::qi::unused_type) const {
00239         const stdair::ChannelLabel_T lChannel (iChar.begin(), iChar.end());
00240         if (lChannel != "IN" && lChannel != "IF" && lChannel != "DN"
00241             && lChannel != "DF" && lChannel != stdair::DEFAULT_CHANNEL) {
00242             // ERROR
00243             STDAIR_LOG_ERROR ("Invalid channel " << lChannel);
00244         }
00245         _yieldRule.setChannel (lChannel);
00246         // DEBUG
00247         //STDAIR_LOG_DEBUG ("Channel: " << _yieldRule.getChannel ());
00248     }
00249
00250     // //////////////////////////////////////
00251     storeYield::
00252     storeYield (YieldRuleStruct& ioYieldRule)
00253     : ParserSemanticAction (ioYieldRule) {
00254     }
00255
00256     // //////////////////////////////////////
00257     void storeYield::operator() (double iYield,
00258                                     boost::spirit::qi::unused_type,
00259                                     boost::spirit::qi::unused_type) const {
00260         const stdair::YieldValue_T lYield= iYield;
00261         _yieldRule.setYield (lYield);
00262         // DEBUG
00263         //STDAIR_LOG_DEBUG ("Yield: " << _yieldRule.getYield ());
00264     }
00265
00266     // //////////////////////////////////////
00267     storeAirlineCode ::
00268     storeAirlineCode (YieldRuleStruct& ioYieldRule)
00269     : ParserSemanticAction (ioYieldRule) {
00270     }
00271
00272     // //////////////////////////////////////
00273     void storeAirlineCode::operator() (std::vector<char> iChar,
00274                                     boost::spirit::qi::unused_type,
00275                                     boost::spirit::qi::unused_type) const {
00276
00277         const stdair::AirlineCode_T lAirlineCode (iChar.begin(), iChar.end());
00278         // Update the airline code
00279         _yieldRule.setAirlineCode (lAirlineCode);
00280         // Insertion of this airline Code list in the whole AirlineCode name
00281         _yieldRule.addAirlineCode (lAirlineCode);
00282         // DEBUG
00283         //STDAIR_LOG_DEBUG ( "Airline code: " << lAirlineCode);
00284     }
00285
00286     // //////////////////////////////////////
00287     storeClass ::
00288     storeClass (YieldRuleStruct& ioYieldRule)
00289     : ParserSemanticAction (ioYieldRule) {
00290     }
00291
00292     // //////////////////////////////////////

```

```

00293 void storeClass::operator() (std::vector<char> iChar,
00294                             boost::spirit::qi::unused_type,
00295                             boost::spirit::qi::unused_type) const {
00296     std::ostringstream ostr;
00297     for (std::vector<char>::const_iterator lItVector = iChar.begin();
00298          lItVector != iChar.end();
00299          lItVector++) {
00300         ostr << *lItVector;
00301     }
00302     const std::string& classCodeStr = ostr.str();
00303     const stdair::ClassCode_T lClassCode (classCodeStr);
00304     // Insertion of this class Code list in the whole classCode name
00305     _yieldRule.addClassCode (lClassCode);
00306     // DEBUG
00307     //STDAIR_LOG_DEBUG ("Class Code: " << classCodeStr);
00308 }
00309
00310 // //////////////////////////////////////
00311 doEndYield::
00312 doEndYield (stdair::BomRoot& ioBomRoot,
00313             YieldRuleStruct& ioYieldRule)
00314 : ParserSemanticAction (ioYieldRule,
00315                        _bomRoot (ioBomRoot) {
00316 }
00317
00318 // //////////////////////////////////////
00319 void doEndYield::operator() (boost::spirit::qi::unused_type,
00320                             boost::spirit::qi::unused_type,
00321                             boost::spirit::qi::unused_type) const {
00322     // DEBUG
00323     // STDAIR_LOG_DEBUG ("Do End");
00324     // Generation of the yield rule object.
00325     YieldRuleGenerator::createAirportPair (_bomRoot, _yieldRule);
00326     STDAIR_LOG_DEBUG (_yieldRule.describe());
00327 }
00328
00329 // //////////////////////////////////////
00330 //
00331 // Utility Parsers
00332 //
00333 // //////////////////////////////////////
00335 namespace bsq = boost::spirit::qi;
00336 namespace bsa = boost::spirit::ascii;
00337
00339 stdair::int1_p_t int1_p;
00340
00342 stdair::uint2_p_t uint2_p;
00343
00345 stdair::uint4_p_t uint4_p;
00346
00348 stdair::uint1_4_p_t uint1_4_p;
00349
00351 stdair::hour_p_t hour_p;
00352 stdair::minute_p_t minute_p;
00353 stdair::second_p_t second_p;
00354
00356 stdair::year_p_t year_p;
00357 stdair::month_p_t month_p;
00358 stdair::day_p_t day_p;
00359
00360 // //////////////////////////////////////
00361 // (Boost Spirit) Grammar Definition

```

```

00362 // //////////////////////////////////////
00363 // //////////////////////////////////////
00364 // //////////////////////////////////////
00365 YieldRuleParser::YieldRuleParser (stdair::BomRoot& ioBomRoot,
00366                                     YieldRuleStruct& ioYieldRule) :
00367     YieldRuleParser::base_type(start),
00368     _bomRoot(ioBomRoot), _yieldRule(ioYieldRule) {
00369
00370     start = *(comments | yield_rule);
00371
00372     comments = (bsq::lexeme[bsq::repeat(2)[bsa::char_('/')]
00373                 >> +(bsa::char_ - bsq::eol)
00374                 >> bsq::eol]
00375                 | bsq::lexeme[bsa::char_('/') >> bsa::char_('*')
00376                 >> +(bsa::char_ - bsa::char_('*'))
00377                 >> bsa::char_('*') >> bsa::char_('/')]);
00378
00379     yield_rule = yield_id
00380         >> ';' >> origin >> ';' >> destination
00381         >> ';' >> tripType
00382         >> ';' >> dateRangeStart >> ';' >> dateRangeEnd
00383         >> ';' >> timeRangeStart >> ';' >> timeRangeEnd
00384         >> ';' >> point_of_sale >> ';' >> cabinCode
00385         >> ';' >> channel >> ';' >> yield
00386         >> +(';' >> segment)
00387         >> yield_rule_end[doEndYield(_bomRoot, _yieldRule)];
00388     ;
00389
00390     yield_id = uint1_4_p[storeYieldId(_yieldRule)];
00391
00392     origin = bsq::repeat(3)[bsa::char_("A-Z")][storeOrigin(_yieldRule)];
00393
00394     destination =
00395         bsq::repeat(3)[bsa::char_("A-Z")][storeDestination(_yieldRule)];
00396
00397
00398     tripType =
00399         bsq::repeat(2)[bsa::char_("A-Z")][storeTripType(_yieldRule)];
00400
00401     dateRangeStart = date[storeDateRangeStart(_yieldRule)];
00402
00403     dateRangeEnd = date[storeDateRangeEnd(_yieldRule)];
00404
00405     date = bsq::lexeme
00406         [year_p[boost::phoenix::ref(_yieldRule._itYear) = bsq::labels::_1]
00407         >> '-'
00408         >> month_p[boost::phoenix::ref(_yieldRule._itMonth) = bsq::labels::_1]
00409         >> '-'
00410         >> day_p[boost::phoenix::ref(_yieldRule._itDay) = bsq::labels::_1] ];
00411
00412     timeRangeStart = time[storeStartRangeTime(_yieldRule)];
00413
00414     timeRangeEnd = time[storeEndRangeTime(_yieldRule)];
00415
00416     time = bsq::lexeme
00417         [hour_p[boost::phoenix::ref(_yieldRule._itHours) = bsq::labels::_1]
00418         >> ':'
00419         >> minute_p[boost::phoenix::ref(_yieldRule._itMinutes) = bsq::labels::_1]
00420         >> - (':' >> second_p[boost::phoenix::ref(_yieldRule._itSeconds) = bsq::l
00421             abels::_1]) ];

```

```

00422     point_of_sale = bsq::repeat(3)[bsa::char_("A-Z")][storePOS(_yieldRule)];
00423
00424     cabinCode = bsa::char_("A-Z")[storeCabinCode(_yieldRule)];
00425
00426     channel = bsq::repeat(2)[bsa::char_("A-Z")][storeChannel(_yieldRule)];
00427
00428     yield = bsq::double_[storeYield(_yieldRule)];
00429
00430     segment = bsq::repeat(2)[bsa::char_("A-Z")][storeAirlineCode(_yieldRule)]
00431     >> ';';
00432     >> bsq::repeat(1,bsq::inf)[bsa::char_("A-Z")][storeClass(_yieldRule)];
00433
00434     yield_rule_end = bsa::char_(';');
00435
00436     // BOOST_SPIRIT_DEBUG_NODE (YieldParser);
00437     BOOST_SPIRIT_DEBUG_NODE (start);
00438     BOOST_SPIRIT_DEBUG_NODE (comments);
00439     BOOST_SPIRIT_DEBUG_NODE (yield_rule);
00440     BOOST_SPIRIT_DEBUG_NODE (yield_id);
00441     BOOST_SPIRIT_DEBUG_NODE (origin);
00442     BOOST_SPIRIT_DEBUG_NODE (destination);
00443     BOOST_SPIRIT_DEBUG_NODE (tripType);
00444     BOOST_SPIRIT_DEBUG_NODE (dateRangeStart);
00445     BOOST_SPIRIT_DEBUG_NODE (dateRangeEnd);
00446     BOOST_SPIRIT_DEBUG_NODE (date);
00447     BOOST_SPIRIT_DEBUG_NODE (timeRangeStart);
00448     BOOST_SPIRIT_DEBUG_NODE (timeRangeEnd);
00449     BOOST_SPIRIT_DEBUG_NODE (time);
00450     BOOST_SPIRIT_DEBUG_NODE (point_of_sale);
00451     BOOST_SPIRIT_DEBUG_NODE (cabinCode);
00452     BOOST_SPIRIT_DEBUG_NODE (channel);
00453     BOOST_SPIRIT_DEBUG_NODE (yield);
00454     BOOST_SPIRIT_DEBUG_NODE (segment);
00455     BOOST_SPIRIT_DEBUG_NODE (yield_rule_end);
00456
00457 }
00458
00459 }
00460
00461
00462 //
00463 // Entry class for the file parser
00464 //
00465 //
00466
00467 // //////////////////////////////////////
00468 YieldFileParser::YieldFileParser (stdair::BomRoot& ioBomRoot,
00469                                   const std::string& iFilename)
00470     : _filename (iFilename), _bomRoot (ioBomRoot) {
00471     init();
00472 }
00473
00474 // //////////////////////////////////////
00475 void YieldFileParser::init() {
00476
00477     // Check that the file exists and is readable
00478     const bool doesExistAndIsReadable =
00479         stdair::BasFileMgr::doesExistAndIsReadable (_filename);
00480
00481     if (doesExistAndIsReadable == false) {
00482         STDAIR_LOG_ERROR ("The yield schedule file " << _filename
00483                          << " does not exist or can not be read.");
00484     }
00485 }

```

```

00486         throw YieldInputFileNotFoundException ("The yield file " + _filename + " does not exist or can not be read");
00487     }
00488 }
00489
00490 // //////////////////////////////////////
00491 void YieldFileParser::generateYieldStore () {
00492     STDAIR_LOG_DEBUG ("Parsing yield input file: " << _filename);
00493
00494     // File to be parsed
00495     std::ifstream fileToBeParsed (_filename.c_str(), std::ios_base::in);
00496
00497     // Check the filename exists and can be open
00498     if (fileToBeParsed == false) {
00499         STDAIR_LOG_ERROR ("The yield store file " << _filename
00500             << " can not be open."
00501             << std::endl);
00502
00503         throw YieldInputFileNotFoundException ("The file " + _filename
00504             + " does not exist or can not be read");
00505     }
00506
00507     // Create an input iterator
00508     stdair::base_iterator_t inputBegin (fileToBeParsed);
00509
00510     // Convert input iterator to an iterator usable by spirit parser
00511     stdair::iterator_t
00512     start (boost::spirit::make_default_multi_pass (inputBegin));
00513     stdair::iterator_t end;
00514
00515     // Initialise the parser (grammar) with the helper/staging structure.
00516     YieldParserHelper::YieldRuleParser lYParser(_bomRoot, _yieldRule);
00517
00518     // Launch the parsing of the file and, thanks to the doEndYield
00519     // call-back structure, the building of the whole BomRoot BOM
00520     const bool hasParsingBeenSuccessful =
00521         boost::spirit::qi::phrase_parse (start, end, lYParser,
00522             boost::spirit::ascii::space);
00523
00524     if (hasParsingBeenSuccessful == false) {
00525         // TODO: decide whether to throw an exception
00526         STDAIR_LOG_ERROR ("Parsing of yield input file: " << _filename
00527             << " failed");
00528         throw YieldFileParsingFailedException ("Parsing of yield input file: "
00529             + _filename + " failed");
00530     }
00531
00532     if (start != end) {
00533         // TODO: decide whether to throw an exception
00534         STDAIR_LOG_ERROR ("Parsing of yield input file: " << _filename
00535             << " failed");
00536         throw YieldFileParsingFailedException ("Parsing of yield input file: "
00537             + _filename + " failed");
00538     }
00539     if (hasParsingBeenSuccessful == true && start == end) {
00540         STDAIR_LOG_DEBUG ("Parsing of yield input file: " << _filename
00541             << " succeeded");
00542     }
00543 }
00544 }
00545

```

```
00546 }
```

## 25.29 airrac/command/YieldParserHelper.hpp File Reference

```
#include <string>
#include <stdair/basic/BasParserTypes.hpp>
#include <stdair/command/CmdAbstract.hpp>
#include <airrac/AIRRAC_Types.hpp>
#include <airrac/bom/YieldRuleStruct.hpp>
```

### Classes

- struct [AIRRAC::YieldParserHelper::ParserSemanticAction](#)
- struct [AIRRAC::YieldParserHelper::storeYieldId](#)
- struct [AIRRAC::YieldParserHelper::storeOrigin](#)
- struct [AIRRAC::YieldParserHelper::storeDestination](#)
- struct [AIRRAC::YieldParserHelper::storeTripType](#)
- struct [AIRRAC::YieldParserHelper::storeDateRangeStart](#)
- struct [AIRRAC::YieldParserHelper::storeDateRangeEnd](#)
- struct [AIRRAC::YieldParserHelper::storeStartRangeTime](#)
- struct [AIRRAC::YieldParserHelper::storeEndRangeTime](#)
- struct [AIRRAC::YieldParserHelper::storePOS](#)
- struct [AIRRAC::YieldParserHelper::storeCabinCode](#)
- struct [AIRRAC::YieldParserHelper::storeChannel](#)
- struct [AIRRAC::YieldParserHelper::storeYield](#)
- struct [AIRRAC::YieldParserHelper::storeAirlineCode](#)
- struct [AIRRAC::YieldParserHelper::storeClass](#)
- struct [AIRRAC::YieldParserHelper::doEndYield](#)
- struct [AIRRAC::YieldParserHelper::YieldRuleParser](#)
- class [AIRRAC::YieldFileParser](#)

### Namespaces

- namespace [stdair](#)  
*Forward declarations.*
- namespace [AIRRAC](#)
- namespace [AIRRAC::YieldParserHelper](#)

## 25.30 YieldParserHelper.hpp

```

00001 #ifndef __AIRRAC_CMD_YELDPARSERHELPER_HPP
00002 #define __AIRRAC_CMD_YELDPARSERHELPER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // #define BOOST_SPIRIT_DEBUG
00010 // StdAir
00011 #include <stdair/basic/BasParserTypes.hpp>
00012 #include <stdair/command/CmdAbstract.hpp>
00013 // Airrac
00014 #include <airrac/AIRRAC_Types.hpp>
00015 #include <airrac/bom/YieldRuleStruct.hpp>
00016
00017 // Forward declarations
00018 namespace stdair {
00019     class BomRoot;
00020 }
00021
00022 namespace AIRRAC {
00023
00024     namespace YieldParserHelper {
00025
00026         // //////////////////////////////////////
00027         // Semantic actions
00028         // //////////////////////////////////////
00030         struct ParserSemanticAction {
00032             ParserSemanticAction (YieldRuleStruct&);
00034             YieldRuleStruct& _yieldRule;
00035         };
00036
00038         struct storeYieldId : public ParserSemanticAction {
00040             storeYieldId (YieldRuleStruct&);
00042             void operator() (unsigned int,
00043                             boost::spirit::qi::unused_type,
00044                             boost::spirit::qi::unused_type) const;
00045         };
00046
00048         struct storeOrigin : public ParserSemanticAction {
00050             storeOrigin (YieldRuleStruct&);
00052             void operator() (std::vector<char>,
00053                             boost::spirit::qi::unused_type,
00054                             boost::spirit::qi::unused_type) const;
00055         };
00056
00058         struct storeDestination : public ParserSemanticAction {
00060             storeDestination (YieldRuleStruct&);
00062             void operator() (std::vector<char>,
00063                             boost::spirit::qi::unused_type,
00064                             boost::spirit::qi::unused_type) const;
00065         };
00066
00068         struct storeTripType : public ParserSemanticAction {
00070             storeTripType (YieldRuleStruct&);
00072             void operator() (std::vector<char>,
00073                             boost::spirit::qi::unused_type,
00074                             boost::spirit::qi::unused_type) const;
00075         };

```

```

00076
00078     struct storeDateRangeStart : public ParserSemanticAction {
00080         storeDateRangeStart (YieldRuleStruct&);
00082         void operator() (boost::spirit::qi::unused_type,
00083                         boost::spirit::qi::unused_type,
00084                         boost::spirit::qi::unused_type) const;
00085     };
00086
00088     struct storeDateRangeEnd : public ParserSemanticAction {
00090         storeDateRangeEnd (YieldRuleStruct&);
00092         void operator() (boost::spirit::qi::unused_type,
00093                         boost::spirit::qi::unused_type,
00094                         boost::spirit::qi::unused_type) const;
00095     };
00096
00098     struct storeStartRangeTime : public ParserSemanticAction {
00100         storeStartRangeTime (YieldRuleStruct&);
00102         void operator() (boost::spirit::qi::unused_type,
00103                         boost::spirit::qi::unused_type,
00104                         boost::spirit::qi::unused_type) const;
00105     };
00106
00108     struct storeEndRangeTime : public ParserSemanticAction {
00110         storeEndRangeTime (YieldRuleStruct&);
00112         void operator() (boost::spirit::qi::unused_type,
00113                         boost::spirit::qi::unused_type,
00114                         boost::spirit::qi::unused_type) const;
00115     };
00116
00118     struct storePOS : public ParserSemanticAction {
00120         storePOS (YieldRuleStruct&);
00122         void operator() (std::vector<char>,
00123                         boost::spirit::qi::unused_type,
00124                         boost::spirit::qi::unused_type) const;
00125     };
00126
00128     struct storeCabinCode : public ParserSemanticAction {
00130         storeCabinCode (YieldRuleStruct&);
00132         void operator() (char,
00133                         boost::spirit::qi::unused_type,
00134                         boost::spirit::qi::unused_type) const;
00135     };
00136
00138     struct storeChannel : public ParserSemanticAction {
00140         storeChannel (YieldRuleStruct&);
00142         void operator() (std::vector<char>,
00143                         boost::spirit::qi::unused_type,
00144                         boost::spirit::qi::unused_type) const;
00145     };
00146
00148     struct storeYield : public ParserSemanticAction {
00150         storeYield (YieldRuleStruct&);
00152         void operator() (double,
00153                         boost::spirit::qi::unused_type,
00154                         boost::spirit::qi::unused_type) const;
00155     };
00156
00158     struct storeAirlineCode : public ParserSemanticAction {
00160         storeAirlineCode (YieldRuleStruct&);
00162         void operator() (std::vector<char>,
00163                         boost::spirit::qi::unused_type,
00164                         boost::spirit::qi::unused_type) const;

```

```

00165     };
00166
00167     struct storeClass : public ParserSemanticAction {
00170         storeClass (YieldRuleStruct&);
00172         void operator() (std::vector<char>,
00173                         boost::spirit::qi::unused_type,
00174                         boost::spirit::qi::unused_type) const;
00175     };
00176
00177     struct doEndYield : public ParserSemanticAction {
00180         doEndYield (stdair::BomRoot&, YieldRuleStruct&);
00182         void operator() (boost::spirit::qi::unused_type,
00183                         boost::spirit::qi::unused_type,
00184                         boost::spirit::qi::unused_type) const;
00186         stdair::BomRoot& _bomRoot;
00187     };
00188
00190     //
00191     // (Boost Spirit) Grammar Definition
00192     //
00194
00214     struct YieldRuleParser :
00215         public boost::spirit::qi::grammar<stdair::iterator_t,
00216                                         boost::spirit::ascii::space_type> {
00217
00218         YieldRuleParser (stdair::BomRoot&, YieldRuleStruct&);
00219
00220         // Instantiation of rules
00221         boost::spirit::qi::rule<stdair::iterator_t,
00222                                boost::spirit::ascii::space_type>
00223         start, comments, yield_rule, yield_id, origin, destination, tripType,
00224         dateRangeStart, dateRangeEnd, date, timeRangeStart, timeRangeEnd,
00225         time, point_of_sale, cabinCode, channel, yield, segment,
00226         yield_rule_end;
00227
00228         // Parser Context
00229         stdair::BomRoot& _bomRoot;
00230         YieldRuleStruct& _yieldRule;
00231     };
00232
00233 }
00234
00236 //
00237 // Entry class for the file parser
00238 //
00240
00246     class YieldFileParser : public stdair::CmdAbstract {
00247     public:
00249         YieldFileParser (stdair::BomRoot&,
00250                         const stdair::Filename_T& iYieldInputFilename);
00251
00253         void generateYieldStore ();
00254
00255     private:
00257         void init();
00258
00259     private:
00260
00261         // Attributes
00263         stdair::Filename_T _filename;
00264
00266         stdair::BomRoot& _bomRoot;

```

```

00267
00269     YieldRuleStruct _yieldRule;
00270 };
00271
00272 }
00273 #endif // __AIRRAC_CMD_YIELD_PARSER_HELPER_HPP

```

## 25.31 airrac/command/YieldRuleGenerator.cpp File Reference

```

#include <cassert>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/AirportPair.hpp>
#include <stdair/bom/PosChannel.hpp>
#include <stdair/bom/DatePeriod.hpp>
#include <stdair/bom/TimePeriod.hpp>
#include <stdair/bom/YieldFeatures.hpp>
#include <stdair/bom/AirlineClassList.hpp>
#include <stdair/factory/FacBomManager.hpp>
#include <stdair/service/Logger.hpp>
#include <airrac/bom/YieldRuleStruct.hpp>
#include <airrac/command/YieldRuleGenerator.hpp>

```

### Namespaces

- namespace [AIRRAC](#)

## 25.32 YieldRuleGenerator.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/bom/BomManager.hpp>
00008 #include <stdair/bom/BomRoot.hpp>
00009 #include <stdair/bom/AirportPair.hpp>
00010 #include <stdair/bom/PosChannel.hpp>
00011 #include <stdair/bom/DatePeriod.hpp>
00012 #include <stdair/bom/TimePeriod.hpp>
00013 #include <stdair/bom/YieldFeatures.hpp>
00014 #include <stdair/bom/AirlineClassList.hpp>
00015 #include <stdair/factory/FacBomManager.hpp>
00016 #include <stdair/service/Logger.hpp>
00017 // AirRAC

```

```

00018 #include <airrac/bom/YieldRuleStruct.hpp>
00019 #include <airrac/command/YieldRuleGenerator.hpp>
00020
00021 namespace AIRRAC {
00022
00023 // //////////////////////////////////////
00024 void YieldRuleGenerator::
00025 createAirportPair (stdair::BomRoot& ioBomRoot,
00026                   const YieldRuleStruct& iYieldRuleStruct) {
00027
00028     // Set the airport-pair primary key.
00029     const stdair::AirportCode_T& lBoardPoint = iYieldRuleStruct.getOrigin ();
00030     const stdair::AirportCode_T& lOffPoint = iYieldRuleStruct.getDestination ();
00031     const stdair::AirportPairKey lAirportPairKey (lBoardPoint, lOffPoint);
00032
00033     // Check that the airport-pair object is not already existing. If an
00034     // airport-pair object with the same key has not already been created,
00035     // create it and link it to the ioBomRoot object.
00036     stdair::AirportPair* lAirportPair_ptr = stdair::BomManager::
00037         getObjectPtr<stdair::AirportPair> (ioBomRoot, lAirportPairKey.toString());
00038     if (lAirportPair_ptr == NULL) {
00039         lAirportPair_ptr = &stdair::FacBom<stdair::AirportPair>::
00040             instance().create (lAirportPairKey);
00041         stdair::FacBomManager::addToListAndMap (ioBomRoot, *lAirportPair_ptr);
00042         stdair::FacBomManager::linkWithParent (ioBomRoot, *lAirportPair_ptr);
00043     }
00044     // Sanity check.
00045     assert (lAirportPair_ptr != NULL);
00046
00047     stdair::AirportPair& lAirportPair = *lAirportPair_ptr;
00048     // Generate the date-period object corresponding to the given
00049     // yieldRule.
00050     createDateRange (lAirportPair, iYieldRuleStruct);
00051
00052 }
00053
00054 // //////////////////////////////////////
00055 void YieldRuleGenerator::
00056 createDateRange (stdair::AirportPair& iAirportPair,
00057                 const YieldRuleStruct& iYieldRuleStruct) {
00058
00059     // Create the yield date-period primary key.
00060     const stdair::Date_T& lDateRangeStart =
00061         iYieldRuleStruct.getDateRangeStart ();
00062     const stdair::Date_T& lDateRangeEnd =
00063         iYieldRuleStruct.getDateRangeEnd ();
00064     const stdair::DatePeriod_T lDatePeriod (lDateRangeStart, lDateRangeEnd);
00065     const stdair::DatePeriodKey lYieldDatePeriodKey (lDatePeriod);
00066
00067     // Check that the date-period object is not already existing.
00068     // If a date-period object with the same key has not already been
00069     // created, create it and link it to the airport-pair object.
00070     stdair::DatePeriod* lYieldDatePeriod_ptr = stdair::BomManager::
00071         getObjectPtr<stdair::DatePeriod> (iAirportPair,
00072                                           lYieldDatePeriodKey.toString());
00073     if (lYieldDatePeriod_ptr == NULL) {
00074         lYieldDatePeriod_ptr = &stdair::FacBom<stdair::DatePeriod>::
00075             instance().create (lYieldDatePeriodKey);
00076         stdair::FacBomManager::
00077             addToListAndMap (iAirportPair, *lYieldDatePeriod_ptr);
00078         stdair::FacBomManager::

```

```

00080         linkWithParent (iAirportPair, *lYieldDatePeriod_ptr);
00081     }
00082     // Sanity check.
00083     assert (lYieldDatePeriod_ptr != NULL);
00084
00085     stdair::DatePeriod& lDateRange = *lYieldDatePeriod_ptr;
00086     // Generate the point_of_sale-channel object corresponding to
00087     // the given yieldRule.
00088     createPOSSchannel (lDateRange, iYieldRuleStruct);
00089
00090 }
00091
00092 // //////////////////////////////////////
00093 void YieldRuleGenerator::
00094 createPOSSchannel (stdair::DatePeriod& iDatePeriod,
00095                  const YieldRuleStruct& iYieldRuleStruct) {
00096
00097     // Create the point-of-sale-channel primary key.
00098     const stdair::CityCode_T& lPoS = iYieldRuleStruct.getPOS ();
00099     const stdair::ChannelLabel_T& lChannel = iYieldRuleStruct.getChannel ();
00100     const stdair::PosChannelKey lYieldPosChannelKey (lPoS, lChannel);
00101
00102     // Check that the point_of_sale-channel object is not already existing.
00103     // If a point_of_sale-channel object with the same key has not already
00104     // been created, create it and link it to the date-period object.
00105     stdair::PosChannel* lYieldPosChannel_ptr = stdair::BomManager::
00106         getObjectPtr<stdair::PosChannel> (iDatePeriod,
00107                                           lYieldPosChannelKey.toString());
00108     if (lYieldPosChannel_ptr == NULL) {
00109         lYieldPosChannel_ptr = &stdair::FacBom<stdair::PosChannel>::
00110             instance().create (lYieldPosChannelKey);
00111         stdair::FacBomManager::
00112             addToListAndMap (iDatePeriod, *lYieldPosChannel_ptr);
00113         stdair::FacBomManager::
00114             linkWithParent (iDatePeriod, *lYieldPosChannel_ptr);
00115     }
00116     // Sanity check.
00117     assert (lYieldPosChannel_ptr != NULL);
00118
00119     stdair::PosChannel& lPosChannel = *lYieldPosChannel_ptr;
00120     // Generate the time-period object corresponding to the given
00121     // yieldRule.
00122     createTimeRange (lPosChannel, iYieldRuleStruct);
00123
00124 }
00125
00126 // //////////////////////////////////////
00127 void YieldRuleGenerator::
00128 createTimeRange (stdair::PosChannel& iPosChannel,
00129                 const YieldRuleStruct& iYieldRuleStruct) {
00130
00131     // Create the yield time-period primary key.
00132     const stdair::Time_T& lTimeRangeStart
00133         = iYieldRuleStruct.getTimeRangeStart ();
00134     const stdair::Time_T& lTimeRangeEnd
00135         = iYieldRuleStruct.getTimeRangeEnd ();
00136     const stdair::TimePeriodKey lYieldTimePeriodKey (lTimeRangeStart,
00137                                                       lTimeRangeEnd);
00138
00139     // Check that the time-period object is not already existing.
00140     // If a time-period object with the same key has not already been
00141     // created, create it and link it to the point_of_sale-channel object.

```

```

00142     stdair::TimePeriod* lYieldTimePeriod_ptr = stdair::BomManager::
00143         getObjectPtr<stdair::TimePeriod> (iPosChannel,
00144             lYieldTimePeriodKey.toString());
00145     if (lYieldTimePeriod_ptr == NULL) {
00146         lYieldTimePeriod_ptr = &stdair::FacBom<stdair::TimePeriod>::
00147             instance().create (lYieldTimePeriodKey);
00148         stdair::FacBomManager::
00149             addToListAndMap (iPosChannel, *lYieldTimePeriod_ptr);
00150         stdair::FacBomManager::
00151             linkWithParent (iPosChannel, *lYieldTimePeriod_ptr);
00152     }
00153     // Sanity check.
00154     assert (lYieldTimePeriod_ptr != NULL);
00155
00156     stdair::TimePeriod& lTimeRange = *lYieldTimePeriod_ptr;
00157     // Generate the yield-features object corresponding to the given
00158     // yieldRule.
00159     createYieldFeatures (lTimeRange, iYieldRuleStruct);
00160
00161 }
00162
00163 // //////////////////////////////////////
00164 void YieldRuleGenerator::
00165     createYieldFeatures (stdair::TimePeriod& iTimePeriod,
00166         const YieldRuleStruct& iYieldRuleStruct) {
00167
00168     // Create the yield-features primary key.
00169     const stdair::TripType_T& lTripType = iYieldRuleStruct.getTripType ();
00170     stdair::CabinCode_T lCabinCode = iYieldRuleStruct.getCabinCode ();
00171     const stdair::YieldFeaturesKey lYieldFeaturesKey (lTripType, lCabinCode);
00172
00173     // Check that the yield features object is not already existing.
00174     // If a yield features object with the same key has not already been
00175     // created, create it and link it to the time-period object.
00176     stdair::YieldFeatures* lYieldFeatures_ptr = stdair::BomManager::
00177         getObjectPtr<stdair::YieldFeatures> (iTimePeriod,
00178             lYieldFeaturesKey.toString());
00179     if (lYieldFeatures_ptr == NULL) {
00180         lYieldFeatures_ptr = &stdair::FacBom<stdair::YieldFeatures>::
00181             instance().create (lYieldFeaturesKey);
00182         stdair::FacBomManager::
00183             addToListAndMap (iTimePeriod, *lYieldFeatures_ptr);
00184         stdair::FacBomManager::
00185             linkWithParent (iTimePeriod, *lYieldFeatures_ptr);
00186     }
00187     // Sanity check.
00188     assert (lYieldFeatures_ptr != NULL);
00189
00190     stdair::YieldFeatures& lYieldFeatures = *lYieldFeatures_ptr;
00191     // Generate the airline-class list object corresponding to the
00192     // given yieldRule
00193     createAirlineClassList (lYieldFeatures, iYieldRuleStruct);
00194
00195 }
00196
00197 // //////////////////////////////////////
00198 void YieldRuleGenerator::
00199     createAirlineClassList (stdair::YieldFeatures& iYieldFeatures,
00200         const YieldRuleStruct& iYieldRuleStruct) {
00201
00202     // Create the AirlineClassList primary key.
00203     const unsigned int lAirlineListSize =

```

```

00204     iYieldRuleStruct.getAirlineListSize();
00205     const unsigned int lClassCodeListSize =
00206         iYieldRuleStruct.getClassCodeListSize();
00207     assert (lAirlineListSize == lClassCodeListSize);
00208     const stdair::AirlineClassListKey
00209         lAirlineClassListKey (iYieldRuleStruct.getAirlineList() ,
00210                               iYieldRuleStruct.getClassCodeList());
00211     const stdair::Yield_T& lYield = iYieldRuleStruct.getYield ();
00212
00213     // Create the airline class list object and link it to the yieldures
00214     // object.
00215     stdair::AirlineClassList* lAirlineClassList_ptr =
00216         &stdair::FacBom<stdair::AirlineClassList>::instance().
00217         create(lAirlineClassListKey);
00218     lAirlineClassList_ptr->setYield (lYield);
00219     stdair::FacBomManager::addToListAndMap (iYieldFeatures,
00220                                             *lAirlineClassList_ptr);
00221     stdair::FacBomManager::linkWithParent (iYieldFeatures,
00222                                             *lAirlineClassList_ptr);
00223 }
00224
00225 }
00226

```

## 25.33 airrac/command/YieldRuleGenerator.hpp File Reference

```

#include <stdair/command/CmdAbstract.hpp>
#include <airrac/AIRRAC_Types.hpp>

```

### Classes

- class [AIRRAC::YieldRuleGenerator](#)

### Namespaces

- namespace [stdair](#)  
*Forward declarations.*
- namespace [AIRRAC](#)
- namespace [AIRRAC::YieldParserHelper](#)

## 25.34 YieldRuleGenerator.hpp

```

00001 #ifndef __AIRRAC_CMD_YELDRULEGENERATOR_HPP
00002 #define __AIRRAC_CMD_YELDRULEGENERATOR_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/command/CmdAbstract.hpp>
00009 // AirRAC
00010 #include <airrac/AIRRAC_Types.hpp>

```

```

00011
00012 namespace stdair {
00013     class BomRoot;
00014     class YieldRule;
00015     class AirportPair;
00016     class DatePeriod;
00017     class PosChannel;
00018     class TimePeriod;
00019     class YieldFeatures;
00020     class AirlineClassList;
00021 }
00022
00023 namespace AIRRAC {
00024
00025     // Forward declarations
00026     struct YieldRuleStruct;
00027     namespace YieldParserHelper {
00028         struct doEndYield;
00029     }
00030
00031     class YieldRuleGenerator : public stdair::CmdAbstract {
00032     // Only the following class may use methods of YieldGenerator.
00033     // Indeed, as those methods build the BOM, it is not good to expose
00034     // them public.
00035     friend class YieldFileParser;
00036     friend struct YieldParserHelper::doEndYield;
00037     friend class YieldParser;
00038
00039     private:
00040
00041     static void createAirportPair (stdair::BomRoot&,
00042                                     const YieldRuleStruct&);
00043
00044     static void createDateRange (stdair::AirportPair&,
00045                                     const YieldRuleStruct&);
00046
00047     static void createPOSChannel (stdair::DatePeriod&,
00048                                     const YieldRuleStruct&);
00049
00050     static void createTimeRange (stdair::PosChannel&,
00051                                     const YieldRuleStruct&);
00052
00053     static void createYieldFeatures (stdair::TimePeriod&,
00054                                     const YieldRuleStruct&);
00055
00056     static void createAirlineClassList (stdair::YieldFeatures&,
00057                                     const YieldRuleStruct&);
00058
00059     };
00060
00061 }
00062 #endif // __AIRRAC_CMD_YIELDRULEGENERATOR_HPP

```

## 25.35 airrac/config/airrac-paths.hpp File Reference

### Defines

- #define `PACKAGE` "airrac"
- #define `PACKAGE_NAME` "AIRRAC"

- #define [PACKAGE\\_VERSION](#) "0.2.1"
- #define [PREFIXDIR](#) "/usr"
- #define [EXEC\\_PREFIX](#) "/usr"
- #define [BINDIR](#) "/usr/bin"
- #define [LIBDIR](#) "/usr/lib64"
- #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/airrac-0.2.1"
- #define [MANDIR](#) "/usr/share/man"
- #define [INFODIR](#) "/usr/share/info"
- #define [HTMLDIR](#) "/usr/share/doc/airrac-0.2.1/html"
- #define [PDFDIR](#) "/usr/share/doc/airrac-0.2.1/html"
- #define [STDAIR\\_SAMPLE\\_DIR](#) "/usr/share/stdair/samples"

#### 25.35.1 Define Documentation

##### 25.35.1.1 #define PACKAGE "airrac"

Definition at line 4 of file [airrac-paths.hpp](#).

##### 25.35.1.2 #define PACKAGE\_NAME "AIRRAC"

Definition at line 5 of file [airrac-paths.hpp](#).

Referenced by [readConfiguration\(\)](#).

##### 25.35.1.3 #define PACKAGE\_VERSION "0.2.1"

Definition at line 6 of file [airrac-paths.hpp](#).

Referenced by [readConfiguration\(\)](#).

##### 25.35.1.4 #define PREFIXDIR "/usr"

Definition at line 7 of file [airrac-paths.hpp](#).

Referenced by [readConfiguration\(\)](#).

##### 25.35.1.5 #define EXEC\_PREFIX "/usr"

Definition at line 8 of file [airrac-paths.hpp](#).

##### 25.35.1.6 #define BINDIR "/usr/bin"

Definition at line 9 of file [airrac-paths.hpp](#).

25.35.1.7 `#define LIBDIR "/usr/lib64"`

Definition at line 10 of file [airrac-paths.hpp](#).

25.35.1.8 `#define LIBEXECDIR "/usr/libexec"`

Definition at line 11 of file [airrac-paths.hpp](#).

25.35.1.9 `#define SBINDIR "/usr/sbin"`

Definition at line 12 of file [airrac-paths.hpp](#).

25.35.1.10 `#define SYSCONFDIR "/usr/etc"`

Definition at line 13 of file [airrac-paths.hpp](#).

25.35.1.11 `#define INCLUDEDIR "/usr/include"`

Definition at line 14 of file [airrac-paths.hpp](#).

25.35.1.12 `#define DATAROOTDIR "/usr/share"`

Definition at line 15 of file [airrac-paths.hpp](#).

25.35.1.13 `#define DATADIR "/usr/share"`

Definition at line 16 of file [airrac-paths.hpp](#).

25.35.1.14 `#define DOCDIR "/usr/share/doc/airrac-0.2.1"`

Definition at line 17 of file [airrac-paths.hpp](#).

25.35.1.15 `#define MANDIR "/usr/share/man"`

Definition at line 18 of file [airrac-paths.hpp](#).

25.35.1.16 `#define INFODIR "/usr/share/info"`

Definition at line 19 of file [airrac-paths.hpp](#).

25.35.1.17 `#define HTMLDIR "/usr/share/doc/airrac-0.2.1/html"`

Definition at line 20 of file [airrac-paths.hpp](#).

25.35.1.18 `#define PDFDIR "/usr/share/doc/airrac-0.2.1/html"`

Definition at line 21 of file [airrac-paths.hpp](#).

25.35.1.19 `#define STDAIR_SAMPLE_DIR "/usr/share/stdair/samples"`

Definition at line 22 of file [airrac-paths.hpp](#).

**25.36 airrac-paths.hpp**

```

00001 #ifndef __AIRRAC_PATHS_HPP__
00002 #define __AIRRAC_PATHS_HPP__
00003
00004 #define PACKAGE "airrac"
00005 #define PACKAGE_NAME "AIRRAC"
00006 #define PACKAGE_VERSION "0.2.1"
00007 #define PREFIXDIR "/usr"
00008 #define EXEC_PREFIX "/usr"
00009 #define BINDIR "/usr/bin"
00010 #define LIBDIR "/usr/lib64"
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/airrac-0.2.1"
00018 #define MANDIR "/usr/share/man"
00019 #define INFODIR "/usr/share/info"
00020 #define HTMLDIR "/usr/share/doc/airrac-0.2.1/html"
00021 #define PDFDIR "/usr/share/doc/airrac-0.2.1/html"
00022 #define STDAIR_SAMPLE_DIR "/usr/share/stdair/samples"
00023
00024 #endif // __AIRRAC_PATHS_HPP__

```

**25.37 airrac/factory/FacAircracServiceContext.cpp File Reference**

```

#include <cassert>
#include <stdair/service/FacSupervisor.hpp>
#include <airrac/factory/FacAircracServiceContext.hpp>
#include <airrac/service/AIRRAC_ServiceContext.hpp>

```

**Namespaces**

- namespace [AIRRAC](#)

**25.38 FacAircracServiceContext.cpp**

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/service/FacSupervisor.hpp>
00008 // AIRRAC Common
00009 #include <airrac/factory/FacAircracServiceContext.hpp>
00010 #include <airrac/service/AIRRAC_ServiceContext.hpp>
00011
00012 namespace AIRRAC {
00013

```

```

00014  FacAirracsServiceContext* FacAirracsServiceContext::_instance = NULL;
00015
00016  // //////////////////////////////////////
00017  FacAirracsServiceContext::~FacAirracsServiceContext() {
00018      _instance = NULL;
00019  }
00020
00021  // //////////////////////////////////////
00022  FacAirracsServiceContext& FacAirracsServiceContext::instance() {
00023
00024      if (_instance == NULL) {
00025          _instance = new FacAirracsServiceContext();
00026          assert (_instance != NULL);
00027
00028          stdair::FacSupervisor::instance().registerServiceFactory (_instance);
00029      }
00030      return *_instance;
00031  }
00032
00033  // //////////////////////////////////////
00034  AIRRAC_ServiceContext& FacAirracsServiceContext::create() {
00035      AIRRAC_ServiceContext* aServiceContext_ptr = NULL;
00036
00037      aServiceContext_ptr = new AIRRAC_ServiceContext();
00038      assert (aServiceContext_ptr != NULL);
00039
00040      // The new object is added to the Bom pool
00041      _pool.push_back (aServiceContext_ptr);
00042
00043      return *aServiceContext_ptr;
00044  }
00045
00046  }

```

## 25.39 airrac/factory/FacAirracsServiceContext.hpp File Reference

```

#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/service/FacServiceAbstract.hpp>

```

### Classes

- class [AIRRAC::FacAirracsServiceContext](#)  
*Factory for the service context.*

### Namespaces

- namespace [AIRRAC](#)

## 25.40 FacAirracsServiceContext.hpp

```

00001  #ifndef __AIRRAC_FAC_FACAIRRACSERVICECONTEXT_HPP

```

```

00002 #define __AIRRAC_FAC_FACAIRRACSERVICECONTEXT_HPP
00003 // //////////////////////////////////////
00004 // Import section
00005 // //////////////////////////////////////
00006 // STL
00007 #include <string>
00008 // StdAir
00009 #include <stdair/stdair_basic_types.hpp>
00010 #include <stdair/service/FacServiceAbstract.hpp>
00011
00012 namespace AIRRAC {
00013
00015     class AIRRAC_ServiceContext;
00016
00017
00021     class FacAirracServiceContext : public stdair::FacServiceAbstract {
00022     public:
00023
00030         static FacAirracServiceContext& instance();
00031
00038         ~FacAirracServiceContext();
00039
00047         AIRRAC_ServiceContext& create();
00048
00049
00050     protected:
00056         FacAirracServiceContext() {}
00057
00058
00059     private:
00063         static FacAirracServiceContext* _instance;
00064     };
00065
00066 }
00067 #endif // __AIRRAC_FAC_FACAIRRACSERVICECONTEXT_HPP

```

## 25.41 airrac/service/AIRRAC\_Service.cpp File Reference

```

#include <cassert>

#include <boost/make_shared.hpp>

#include <stdair/basic/BasChronometer.hpp>
#include <stdair/bom/BomDisplay.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/STDAIR_Service.hpp>
#include <airrac/basic/BasConst_AIRRAC_Service.hpp>
#include <airrac/factory/FacAirracServiceContext.hpp>
#include <airrac/command/YieldParser.hpp>
#include <airrac/command/YieldManager.hpp>
#include <airrac/service/AIRRAC_ServiceContext.hpp>
#include <airrac/AIRRAC_Service.hpp>

```

## Namespaces

- namespace [AIRRAC](#)

## 25.42 AIRRAC\_Service.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // Boost
00007 #include <boost/make_shared.hpp>
00008 // StdAir
00009 #include <stdair/basic/BasChronometer.hpp>
00010 #include <stdair/bom/BomDisplay.hpp>
00011 #include <stdair/service/Logger.hpp>
00012 #include <stdair/STDAIR_Service.hpp>
00013 // Airrac
00014 #include <airrac/basic/BasConst_AIRRAC_Service.hpp>
00015 #include <airrac/factory/FacAirracServiceContext.hpp>
00016 #include <airrac/command/YieldParser.hpp>
00017 #include <airrac/command/YieldManager.hpp>
00018 #include <airrac/service/AIRRAC_ServiceContext.hpp>
00019 #include <airrac/AIRRAC_Service.hpp>
00020
00021 namespace AIRRAC {
00022
00023 // //////////////////////////////////////
00024 AIRRAC_Service::AIRRAC_Service() : _airracServiceContext (NULL) {
00025     assert (false);
00026 }
00027
00028 // //////////////////////////////////////
00029 AIRRAC_Service::AIRRAC_Service (const AIRRAC_Service& iService) {
00030     assert (false);
00031 }
00032
00033 // //////////////////////////////////////
00034 AIRRAC_Service::AIRRAC_Service (const stdair::BasLogParams& iLogParams)
00035     : _airracServiceContext (NULL) {
00036
00037     // Initialise the STDAIR service handler
00038     stdair::STDAIR_ServicePtr_T lSTDAIR_Service_ptr =
00039         initStdAirService (iLogParams);
00040
00041     // Initialise the service context
00042     initServiceContext();
00043
00044     // Add the StdAir service context to the AIRRAC service context
00045     // \note AIRRAC owns the STDAIR service resources here.
00046     const bool ownStdairService = true;
00047     addStdAirService (lSTDAIR_Service_ptr, ownStdairService);
00048
00049     // Initialise the (remaining of the) context
00050     initAirracService();
00051 }
00052
00053 // //////////////////////////////////////
00054 AIRRAC_Service::AIRRAC_Service (const stdair::BasLogParams& iLogParams,

```

```

00055         const stdair::BasDBParams& iDBParams)
00056     : _airracServiceContext (NULL) {
00057
00058         // Initialise the STDAIR service handler
00059         stdair::STDAIR_ServicePtr_T lSTDAIR_Service_ptr =
00060             initStdAirService (iLogParams, iDBParams);
00061
00062         // Initialise the service context
00063         initServiceContext();
00064
00065         // Add the StdAir service context to the AIRRAC service context
00066         // \note AIRRAC owns the STDAIR service resources here.
00067         const bool ownStdairService = true;
00068         addStdAirService (lSTDAIR_Service_ptr, ownStdairService);
00069
00070         // Initialise the (remaining of the) context
00071         initAirracService();
00072     }
00073
00074     // //////////////////////////////////////
00075     AIRRAC_Service::
00076     AIRRAC_Service (stdair::STDAIR_ServicePtr_T ioSTDAIR_Service_ptr)
00077     : _airracServiceContext (NULL) {
00078
00079         // Initialise the service context
00080         initServiceContext();
00081
00082         // Store the STDAIR service object within the (AIRRAC) service context
00083         // \note Airrac does not own the STDAIR service resources here.
00084         const bool doesNotOwnStdairService = false;
00085         addStdAirService (ioSTDAIR_Service_ptr, doesNotOwnStdairService);
00086
00087         // Initialise the context
00088         initAirracService();
00089     }
00090
00091     // //////////////////////////////////////
00092     AIRRAC_Service::~AIRRAC_Service() {
00093         // Delete/Clean all the objects from memory
00094         finalise();
00095     }
00096
00097     // //////////////////////////////////////
00098     void AIRRAC_Service::finalise() {
00099         assert (_airracServiceContext != NULL);
00100         // Reset the (Boost.)Smart pointer pointing on the STDAIR_Service object.
00101         _airracServiceContext->reset();
00102     }
00103
00104     // //////////////////////////////////////
00105     void AIRRAC_Service::initServiceContext() {
00106         // Initialise the service context
00107         AIRRAC_ServiceContext& lAIRRAC_ServiceContext =
00108             FacAirracServiceContext::instance().create();
00109         _airracServiceContext = &lAIRRAC_ServiceContext;
00110     }
00111
00112     // //////////////////////////////////////
00113     stdair::STDAIR_ServicePtr_T AIRRAC_Service::
00114     initStdAirService (const stdair::BasLogParams& iLogParams,
00115         const stdair::BasDBParams& iDBParams) {
00116

```

```

00124     stdair::STDAIR_ServicePtr_T lSTDAIR_Service_ptr =
00125         boost::make_shared<stdair::STDAIR_Service> (iLogParams, iDBParams);
00126
00127     return lSTDAIR_Service_ptr;
00128
00129 }
00130
00131 // //////////////////////////////////////
00132 stdair::STDAIR_ServicePtr_T AIRRAC_Service::
00133 initStdAirService (const stdair::BasLogParams& iLogParams) {
00134
00142     stdair::STDAIR_ServicePtr_T lSTDAIR_Service_ptr =
00143         boost::make_shared<stdair::STDAIR_Service> (iLogParams);
00144
00145     return lSTDAIR_Service_ptr;
00146 }
00147
00148 // //////////////////////////////////////
00149 void AIRRAC_Service::
00150 addStdAirService (stdair::STDAIR_ServicePtr_T ioSTDAIR_Service_ptr,
00151                 const bool iOwnStdairService) {
00152
00153     // Retrieve the Airrac service context
00154     assert (_airracServiceContext != NULL);
00155     AIRRAC_ServiceContext& lAIRRAC_ServiceContext = *_airracServiceContext;
00156
00157     // Store the STDAIR service object within the (AIRRAC) service context
00158     lAIRRAC_ServiceContext.setSTDAIR_Service (ioSTDAIR_Service_ptr,
00159                                              iOwnStdairService);
00160 }
00161
00162 // //////////////////////////////////////
00163 void AIRRAC_Service::initAirracService() {
00164     // Do nothing at this stage. A sample BOM tree may be built by
00165     // calling the buildSampleBom() method
00166 }
00167
00168 // //////////////////////////////////////
00169 void AIRRAC_Service::
00170 parseAndLoad (const YieldFilePath& iYieldFilename) {
00171
00172     // Retrieve the BOM root object.
00173     assert (_airracServiceContext != NULL);
00174     AIRRAC_ServiceContext& lAIRRAC_ServiceContext = *_airracServiceContext;
00175     stdair::STDAIR_Service& lSTDAIR_Service =
00176         lAIRRAC_ServiceContext.getSTDAIR_Service();
00177     stdair::BomRoot& lBomRoot = lSTDAIR_Service.getBomRoot();
00178
00179     // Initialise the airline inventories
00180     YieldParser::generateYieldStore (iYieldFilename, lBomRoot);
00181 }
00182
00183 // //////////////////////////////////////
00184 void AIRRAC_Service::buildSampleBom() {
00185
00186     // Retrieve the AirRAC service context
00187     if (_airracServiceContext == NULL) {
00188         throw stdair::NonInitialisedServiceException ("The AirRAC service has not"
00189                                                         " been initialised");
00190     }
00191     assert (_airracServiceContext != NULL);
00192

```

```

00193     // Retrieve the AirRAC service context and whether it owns the Stdair
00194     // service
00195     AIRRAC_ServiceContext& lAIRRAC_ServiceContext = *_airracServiceContext;
00196     const bool doesOwnStdairService =
00197         lAIRRAC_ServiceContext.getOwnStdairServiceFlag();
00198
00199     // Retrieve the StdAir service object from the (AirRAC) service context
00200     stdair::STDAIR_Service& lSTDAIR_Service =
00201         lAIRRAC_ServiceContext.getSTDAIR_Service();
00202
00203     if (doesOwnStdairService == true) {
00204         //
00205         lSTDAIR_Service.buildSampleBom();
00206     }
00207 }
00208
00209 // //////////////////////////////////////
00210 void AIRRAC_Service::
00211 buildSampleTravelSolutions(stdair::TravelSolutionList_T& ioTravelSolutionList){
00212
00213     // Retrieve the AIRRAC service context
00214     if (_airracServiceContext == NULL) {
00215         throw stdair::NonInitialisedServiceException ("The AirRAC service has not"
00216             " been initialised");
00217     }
00218     assert (_airracServiceContext != NULL);
00219
00220     AIRRAC_ServiceContext& lAIRRAC_ServiceContext = *_airracServiceContext;
00221
00222     // Retrieve the STDAIR service object from the (AirRAC) service context
00223     stdair::STDAIR_Service& lSTDAIR_Service =
00224         lAIRRAC_ServiceContext.getSTDAIR_Service();
00225
00226     // Delegate the BOM building to the dedicated service
00227     lSTDAIR_Service.buildSampleTravelSolutions (ioTravelSolutionList);
00228 }
00229
00230 // //////////////////////////////////////
00231 std::string AIRRAC_Service::csvDisplay() const {
00232
00233     // Retrieve the AIRRAC service context
00234     if (_airracServiceContext == NULL) {
00235         throw stdair::NonInitialisedServiceException ("The Airrac service "
00236             "has not been initialised");
00237     }
00238     assert (_airracServiceContext != NULL);
00239
00240     AIRRAC_ServiceContext& lAIRRAC_ServiceContext = *_airracServiceContext;
00241
00242     // Retrieve the STDAIR service object from the (Airrac) service context
00243     stdair::STDAIR_Service& lSTDAIR_Service =
00244         lAIRRAC_ServiceContext.getSTDAIR_Service();
00245
00246     // Get the root of the BOM tree, on which all of the other BOM objects
00247     // are attached
00248     stdair::BomRoot& lBomRoot = lSTDAIR_Service.getBomRoot();
00249
00250     // Delegate the BOM display to the dedicated service
00251     std::ostream oCSVStr;
00252     stdair::BomDisplay::csvSimFQTairRACDisplay (oCSVStr, lBomRoot);

```

```

00273     return oCSVStr.str();
00274
00275 }
00276
00277 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00278 std::string AIRRAC_Service::
00279 csvDisplay (const stdair::TravelSolutionList_T& ioTravelSolutionList) const {
00280
00281     // Retrieve the AirRAC service context
00282     if (_airracServiceContext == NULL) {
00283         throw stdair::NonInitialisedServiceException ("The AirRAC service has not"
00284                                                         " been initialised");
00285     }
00286     assert (_airracServiceContext != NULL);
00287
00288     // Retrieve the AirRAC service context
00289     AIRRAC_ServiceContext& lAIRRAC_ServiceContext = *_airracServiceContext;
00290
00291     // Retrieve the STDAIR service object from the (AirRAC) service context
00292     stdair::STDAIR_Service& lSTDAIR_Service =
00293         lAIRRAC_ServiceContext.getSTDAIR_Service();
00294
00295     // Delegate the BOM building to the dedicated service
00296     return lSTDAIR_Service.csvDisplay (ioTravelSolutionList);
00297 }
00298
00299 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00300 void AIRRAC_Service::
00301 calculateYields (stdair::TravelSolutionList_T& ioTravelSolutionList) {
00302
00303     // Retrieve the Airrac service context
00304     if (_airracServiceContext == NULL) {
00305         throw stdair::NonInitialisedServiceException ("The AirRAC service has not"
00306                                                         " been initialised");
00307     }
00308     assert (_airracServiceContext != NULL);
00309     AIRRAC_ServiceContext& lAIRRAC_ServiceContext = *_airracServiceContext;
00310
00311     // Retrieve the StdAir service context
00312     stdair::STDAIR_Service& lSTDAIR_Service =
00313         lAIRRAC_ServiceContext.getSTDAIR_Service();
00314
00315     // Get the root of the BOM tree, on which all of the other BOM objects
00316     // will be attached
00317     stdair::BomRoot& lBomRoot = lSTDAIR_Service.getBomRoot();
00318
00319     // Delegate the booking to the dedicated command: set the yields
00320     // for each travel solution of the given list
00321     stdair::BasChronometer lYieldChronometer;
00322     lYieldChronometer.start();
00323     YieldManager::calculateYield (ioTravelSolutionList, lBomRoot);
00324     const double lYieldMeasure = lYieldChronometer.elapsed();
00325
00326     // DEBUG
00327     STDAIR_LOG_DEBUG ("Yield calculation: " << lYieldMeasure << " - "
00328                       << lAIRRAC_ServiceContext.display());
00329 }
00330
00331 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00332 void AIRRAC_Service::updateYields () {
00333     // Retrieve the AirRAC service context
00334     assert (_airracServiceContext != NULL);

```

```

00335     AIRRAC_ServiceContext& lAIRRAC_ServiceContext = *_airracServiceContext;
00336
00337     // Retrieve the StdAir service context
00338     stdair::STDAIR_Service& lSTDAIR_Service =
00339         lAIRRAC_ServiceContext.getSTDAIR_Service();
00340
00341     // Get the root of the BOM tree, on which all of the other BOM objects
00342     // will be attached
00343     stdair::BomRoot& lBomRoot = lSTDAIR_Service.getBomRoot();
00344
00345     // Update the default yields to the booking classes.
00346     YieldManager::updateYields (lBomRoot);
00347 }
00348 }

```

### 25.43 airrac/service/AIRRAC\_ServiceContext.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <airrac/basic/BasConst_AIRRAC_Service.hpp>
#include <airrac/service/AIRRAC_ServiceContext.hpp>

```

#### Namespaces

- namespace [AIRRAC](#)

### 25.44 AIRRAC\_ServiceContext.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Airrac
00008 #include <airrac/basic/BasConst_AIRRAC_Service.hpp>
00009 #include <airrac/service/AIRRAC_ServiceContext.hpp>
00010
00011 namespace AIRRAC {
00012
00013     // //////////////////////////////////////
00014     AIRRAC_ServiceContext::AIRRAC_ServiceContext() : _ownStdairService (false) {
00015     }
00016
00017     // //////////////////////////////////////
00018     AIRRAC_ServiceContext::AIRRAC_ServiceContext (const AIRRAC_ServiceContext&)
00019         : _ownStdairService (false) {
00020         assert (false);
00021     }
00022
00023     // //////////////////////////////////////
00024     AIRRAC_ServiceContext::~AIRRAC_ServiceContext () {
00025     }
00026

```

```

00027 // //////////////////////////////////////
00028 const std::string AIRRAC_ServiceContext::shortDisplay() const {
00029     std::ostringstream ostr;
00030     ostr << "AIRRAC_ServiceContext -- Owns StdAir service: "
00031         << _ownStdairService;
00032     return ostr.str();
00033 }
00034
00035 // //////////////////////////////////////
00036 const std::string AIRRAC_ServiceContext::display() const {
00037     std::ostringstream ostr;
00038     ostr << shortDisplay();
00039     return ostr.str();
00040 }
00041 // //////////////////////////////////////
00042 const std::string AIRRAC_ServiceContext::describe() const {
00043     return shortDisplay();
00044 }
00045
00046 // //////////////////////////////////////
00047 void AIRRAC_ServiceContext::reset() {
00048     if (_ownStdairService == true) {
00049         _stdairService.reset();
00050     }
00051 }
00052
00053 }

```

## 25.45 airrac/service/AIRRAC\_ServiceContext.hpp File Reference

```

#include <string>
#include <stdair/stdair_service_types.hpp>
#include <stdair/service/ServiceAbstract.hpp>
#include <airrac/AIRRAC_Types.hpp>

```

### Classes

- class [AIRRAC::AIRRAC\\_ServiceContext](#)  
Inner class holding the context for the [AIRRAC](#) Service object.

### Namespaces

- namespace [stdair](#)  
Forward declarations.
- namespace [AIRRAC](#)

## 25.46 AIRRAC\_ServiceContext.hpp

```

00001 #ifndef __AIRRAC_SVC_AIRRACSERVICECONTEXT_HPP
00002 #define __AIRRAC_SVC_AIRRACSERVICECONTEXT_HPP

```

```

00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_service_types.hpp>
00011 #include <stdair/service/ServiceAbstract.hpp>
00012 // Airrac
00013 #include <airrac/AIRRAC_Types.hpp>
00014
00016 namespace stdair {
00017     class STDAIR_Service;
00018 }
00019
00020 namespace AIRRAC {
00021
00025     class AIRRAC_ServiceContext : public stdair::ServiceAbstract {
00031         friend class AIRRAC_Service;
00032         friend class FacAirracServiceContext;
00033
00034     private:
00035         // ////////// Getters //////////
00039         stdair::STDAIR_ServicePtr_T getSTDAIR_ServicePtr() const {
00040             return _stdairService;
00041         }
00042
00046         stdair::STDAIR_Service& getSTDAIR_Service() const {
00047             assert (_stdairService != NULL);
00048             return *_stdairService;
00049         }
00050
00054         const bool getOwnStdairServiceFlag() const {
00055             return _ownStdairService;
00056         }
00057
00058     private:
00060         // ////////// Setters //////////
00064         void setSTDAIR_Service (stdair::STDAIR_ServicePtr_T ioSTDAIR_ServicePtr,
00065                                 const bool iOwnStdairService) {
00066             _stdairService = ioSTDAIR_ServicePtr;
00067             _ownStdairService = iOwnStdairService;
00068         }
00069
00070     private:
00072         // ////////// Display Methods //////////
00076         const std::string shortDisplay() const;
00077
00081         const std::string display() const;
00082
00086         const std::string describe() const;
00087
00088     private:
00090         // ////////// Construction / initialisation //////////
00094         AIRRAC_ServiceContext();
00095
00099         AIRRAC_ServiceContext (const AIRRAC_ServiceContext&);
00100

```

```
00104     ~AIRRAC_ServiceContext ();
00105
00109     void reset();
00110
00111
00112     private:
00113         // //////////// Attributes ////////////
00117         stdair::STDAIR_ServicePtr_T _stdairService;
00118
00122         bool _ownStdairService;
00123     };
00124
00125 }
00126 #endif // __AIRRAC_SVC_AIRRACSERVICECONTEXT_HPP
```

## 25.47 doc/local/authors.doc File Reference

## 25.48 doc/local/codingrules.doc File Reference

## 25.49 doc/local/copyright.doc File Reference

## 25.50 doc/local/documentation.doc File Reference

## 25.51 doc/local/features.doc File Reference

## 25.52 doc/local/help\_wanted.doc File Reference

## 25.53 doc/local/howto\_release.doc File Reference

## 25.54 doc/local/index.doc File Reference

## 25.55 doc/local/installation.doc File Reference

## 25.56 doc/local/linking.doc File Reference

## 25.57 doc/local/test.doc File Reference

## 25.58 doc/local/users\_guide.doc File Reference

## 25.59 doc/local/verification.doc File Reference

## 25.60 doc/tutorial/tutorial.doc File Reference

## 25.61 test/airrac/YieldTestSuite.cpp File Reference

## 25.62 YieldTestSuite.cpp

00001

```

00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <sstream>
00010 #include <fstream>
00011 #include <string>
00012 // Boost Unit Test Framework (UTF)
00013 #define BOOST_TEST_DYN_LINK
00014 #define BOOST_TEST_MAIN
00015 #define BOOST_TEST_MODULE YieldTestSuite
00016 #include <boost/test/unit_test.hpp>
00017 // StdAir
00018 #include <stdair/basic/BasLogParams.hpp>
00019 #include <stdair/basic/BasDBParams.hpp>
00020 #include <stdair/basic/BasFileMgr.hpp>
00021 #include <stdair/bom/TravelSolutionStruct.hpp>
00022 #include <stdair/service/Logger.hpp>
00023 // Airrac
00024 #include <airrac/AIRAC_Service.hpp>
00025 #include <airrac/config/airrac-paths.hpp>
00026
00027 namespace boost_utf = boost::unit_test;
00028
00029 // (Boost) Unit Test XML Report
00030 std::ofstream utfReportStream ("YieldTestSuite_utfresults.xml");
00031
00032 struct UnitTestConfig {
00033     UnitTestConfig() {
00034         boost_utf::unit_test_log.set_stream (utfReportStream);
00035         boost_utf::unit_test_log.set_format (boost_utf::XML);
00036         boost_utf::unit_test_log.set_threshold_level (boost_utf::log_test_units);
00037         //boost_utf::unit_test_log.set_threshold_level (boost_utf::log_successful_tes
00038     };
00039 }
00040 ~UnitTestConfig() {
00041 }
00042 };
00043
00044 // ////////////////////////////////// Main: Unit Test Suite //////////////////////////////////
00045
00046 // Set the UTF configuration (re-direct the output to a specific file)
00047 BOOST_GLOBAL_FIXTURE (UnitTestConfig);
00048
00049 // Start the test suite
00050 BOOST_AUTO_TEST_SUITE (master_test_suite)
00051
00052 BOOST_AUTO_TEST_CASE (airrac_simple_yield) {
00053     // Travel solution
00054     stdair::TravelSolutionStruct lTravelSolution;
00055     stdair::TravelSolutionList_T lTravelSolutionList;
00056
00057     // Input file name
00058     const stdair::Filename_T lYieldInputFilename (STDAIR_SAMPLE_DIR
00059                                                     "/yieldstore01.csv");
00060
00061     // Check that the file path given as input corresponds to an actual file
00062     bool doesExistAndIsReadable =

```

```

00073     stdair::BasFileMgr::doesExistAndIsReadable (lYieldInputFilename);
00074     BOOST_CHECK_MESSAGE (doesExistAndIsReadable == true,
00075         "The '" << lYieldInputFilename
00076         << "' input file can not be open and read");
00077
00078     // Output log File
00079     const stdair::Filename_T lLogFilename ("YieldTestSuite.log");
00080
00081     // Set the log parameters
00082     std::ofstream logOutputFile;
00083     // Open and clean the log outputfile
00084     logOutputFile.open (lLogFilename.c_str());
00085     logOutputFile.clear();
00086
00087     // Initialise the list of classes/buckets
00088     const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
00089
00090     AIRRAC::AIRRAC_Service airracService (lLogParams);
00091
00092     // Build the BOM tree from parsing a yield file
00093     AIRRAC::YieldFilePath lYieldFilePath (lYieldInputFilename);
00094     airracService.parseAndLoad (lYieldFilePath);
00095
00096     // Calculate the yields for the given travel solution
00097     lTravelSolutionList.push_back(lTravelSolution);
00098     airracService.calculateYields (lTravelSolutionList);
00099
00100     // Close the log file
00101     logOutputFile.close();
00102 }
00103
00104 // End the test suite
00105 BOOST_AUTO_TEST_SUITE_END()
00106
00107

```

## 25.63 test/airrac/YieldTestSuite.hpp File Reference

```

#include <iosfwd>

#include <cppunit/extensions/HelperMacros.h>

```

### Classes

- class [YieldTestSuite](#)

### Functions

- [CPPUNIT\\_TEST\\_SUITE\\_REGISTRATION](#) ([YieldTestSuite](#))

#### 25.63.1 Function Documentation

##### 25.63.1.1 CPPUNIT\_TEST\_SUITE\_REGISTRATION ( [YieldTestSuite](#) )

**25.64 YieldTestSuite.hpp**

```
00001 // STL
00002 #include <iosfwd>
00003 // CPPUNIT
00004 #include <cppunit/extensions/HelperMacros.h>
00005
00007 class YieldTestSuite : public CppUnit::TestFixture {
00008     CPPUNIT_TEST_SUITE (YieldTestSuite);
00009     CPPUNIT_TEST (simpleYield);
00010     // CPPUNIT_TEST (errorCase);
00011     CPPUNIT_TEST_SUITE_END ();
00012 public:
00013
00015     void simpleYield();
00016
00018     // void errorCase ();
00019
00021     YieldTestSuite ();
00022
00023 private:
00025     void simpleYieldHelper();
00026
00027 protected:
00028     std::stringstream _describeKey;
00029 };
00030
00031 CPPUNIT_TEST_SUITE_REGISTRATION (YieldTestSuite);
```

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