

OTA Based Communication Model



Versions

Date	Version	Name	Revision
23 Mar.. 2007	1.7	Klaus Blass	Previous versions
1 Feb. 2008	2.0	Sam Jaarsma	Revision lay-out
8 Feb. 2008	2.1	Klaus Blass	Full updated version
15 Feb. 2008	2.2	various	Revision
29 Feb. 2008	2.3	Klaus Blass	Major revision Message Implementation
25 Apr. 2008	2.4	Klaus Blass	HotelInvNotifRQ and "Rate Update" sections
18 Jul. 2008	2.5	Klaus Blass	Updated Promotional Offers section
01 Aug. 2008	2.6	Klaus Blass	Rate plans with Supplements
22 Sep. 2008	2.7	Klaus Blass	Updated service codes
27 Oct. 2008	2.8	Klaus Blass	Updated service codes
11 Nov. 2008	2.9	Klaus Blass	Refined Supplements section
04 Dec. 2008	3.0	Klaus Blass	New occupancy element in InvNotifRQ and RatePlanNotifRQ
27 May 2009	3.1	Klaus Blass	Relationship between NumberOfGuests and AdditionalGuestNumber (4.2.4.2 and 4.2.4.4)
05 Aug. 2009	3.2	Klaus Blass	Clarified Rate Update Exclusivity (4.2.1)

Technical Documentation (TD)

OTA Based Communication Model

Version: 4.06

Date	Version	Name	Revision
10 Sep. 2009	3.3	Klaus Blass	New attributes in <Discount> (4.2.1)
25 Nov. 2009	3.4	Klaus Blass	New attribute ChargeType in <Supplement> (4.2.4.9)
09 Dec. 2009	3.5	Klaus Blass	New values for attribute ChargeType in <Supplement> (4.2.4.9). Start/End dates in <SellableProduct> (4.1)
12 Jan. 2010	3.6	Klaus Blass	New attribute InfantsAreCounted (4.2.1) New attribute NoOffersAllowed (4.2.4.2)
14 Jan. 2010	3.6	Klaus Blass	<ExcludedOccupancies> (4.1) <Amenities> (4.1)
26 Feb. 2010	3.7	Klaus Blass	Generic feature suffix (TA/.../TG) (4.1)
12 May 2010	3.8	Klaus Blass	New room code values
1-7-2010	4.0	Sam Jaarsma	Integration of models into one document, provision of new functionalities, complete rewrite.
1-8-2010	4.01	All	Revision by all teams and commercial
1-10-2010	4.02	Sam Jaarsma	Addition of some initial examples and testcases
18-3-2011	4.03	Sam Jaarsma	<ul style="list-style-type: none">• More examples and testcase, incorporation of customer feedback• Better explain 1st child is oldest child• Inclusion of packages• Inclusion of switch to OTA_HotelAvailRQ to return location list in the RS• Inclusion of <sellable product> "roomcode-baseboard" in all examples• Inclusion of stop-sale for board.
	4.04	Sam Jaarsma	<ul style="list-style-type: none">• Inclusion of comments field in OTA_HotelResRQ/RS• Inclusion of a pull message for notifications (to be released before 31-5-2011)• Inclusion of Cancellation Policies• CancelByDate better explained

Technical Documentation (TD)

OTA Based Communication Model

Version: 4.06

Date	Version	Name	Revision
			<ul style="list-style-type: none"> Revision of testcases
	4.05	Sam Jaarsma Alberto Palmer	<ul style="list-style-type: none"> Inclusion of multiple room searches in OTA_HotelAvailRQ Update of room code dimensions Amended switches and paging for OTA_HotelDescriptiveInfo Amended enrichment of OTA_HotelAvailRQ Added switches for specifying Languages Improved compression doc Better explained search behaviour for children and infants Added multi resort search
	4.06	Sam Jaarsma Alberto Palmer	<ul style="list-style-type: none"> Updated OTA_Read response information Message compression set as mandatory. Old connector deprecated Age logic changed from booking date to arrival date Added EchoToken control Added example short stay supplement with SupplementRule Added service to obtain all possible elements and values for OTA_HotelDescriptiveInfoRS (development and maintenance) New Image section structure in OTA_HotelDescriptiveInfoRS Added early booking discount pre-payment due date and value in OTA_HotelRes Enabled multi room booking across multiple hotels and dates in OTA_HotelRes Added transfer realtime messaging, OTA_Groundxxx Update Integration test diagram and testcases Update room code appendix

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1 Introduction

The documentation of the AxisData XML API consists of 4 elements:

- This descriptive document explaining the workflow of the various message sets, detailing isolated concepts and providing a vast amount of “how to’s”.
- The agreement annex, which specifies contractual particularities of an on-line cooperation and has to be signed before go-live.
- OTA (www.opentravel.org) compliant XML schemas as implemented by AxisData in the form of .xsd’s
- Examples of messages taken from the configured testcases in our integration test environment

1.1 Changes compared to version 3.8

Verion 4.02 of the documentation has been completely re-written, full message examples have been removed and are now supplied separately and many of previous implementation questions, implementation flaws or traps have been included in the explanation.

Existing clients benefit from a full backward compatibility and are not required to implement any changes on their part to keep the interface working as it is today.

Never the less, we have been making some significant improvements and conclusively we recommend using the new features described in this document. Especially in the area of mapping, real-time searches, rateplan and availability, the new features can enhance commercial options, reduce errors and improve the end-user booking experience.

The implementation and roll-out of our new TravelKISS (Travel – Keep It Super Simple) platform make the new features possible. It also provides a largely flexible, uniform and structured contracting platform. Data inconsistency and multiple ways to achieve the same results are now annoyances of the past.

2 Management Overview

This document defines a messaging protocol for communications between AxisData and its Business Partners for the purpose of replacing administrative tasks with automated processes. Two aspects require serious attention from both partners:

- Automation of administrative tasks means removing the human handling the work:
 - This eliminates workload (positive)
 - This eliminates human errors (positive)
 - This eliminates a human assessment (negative)
 - This requires investment and careful assessment of impact (neutral)
 - Does not replace marketing, communication about the product on-sale,...
- No system has exactly matching functions
 - XML is only a formatted text format to pass information
 - If that information does not fit, XML does not automatically resolve that
 - These “gaps” are “business problems to discuss and resolve”

In order to start the implementation, a commercial agreement and non disclosure agreement has to be signed (“agreement annex”). Our partner further details the cooperation with each of the destination managers. Some aspects of the integration are important and must be signed for in the “agreement annex”:

- A complete integration workflow must be implemented. Our system does not provide ad-hoc “flat files”, nor can we allow part of the process to be conducted “off-line” (cancellations in order to liberate occupied rooms, transfers in order to keep the link between hotel service and transfer service,...)
- The confirmed booking value is the invoice value. The value in the “quote” confirms the booking value, prior to booking and our partner can decide to commit to that value prior to confirming the booking.

2.1 Integration models

Notification based model (“push”)

Partners that package our hotels and transfers with flights need to hold the rates and availability in their system to create the packages with the available flights. To provide this functionality, the „notification based model“ has to be implemented. This model consists of “pushing” the rates and availabilities to our partners system in near real-time and quote, book, cancel messages in real-time.

The partner uses the notification data to reply to customer searches. When a customer decides to book a certain product the quote and booking request is sent to our systems, which respond with a confirmation or an error code if the booking could not be accepted.

Transactional model („pull“)

Partners that sell „hotel only“ or have implemented a dynamic packaging model using a shopping basket with providers for different products can use the transactional model to submit customer searches to our systems. This model consists of “pulling” the rates and availabilities for each customer search and quote, book, cancel messages in real-time.

When a customer decides to book a certain product the quote and booking request is sent to our systems, which respond with a confirmation or an error code if the booking could not be accepted.

2.2 Making a choice between the 2 models

As described above, the partner system and workflow largely decides which model to implement. However there are two observations:

- In the "Transactional model", the partner has little control over the rates and availability of the product we provide. That can be achieved by sophisticated reporting on the searches, but often it is more economical to implement (part of) the notifications for product management.
- In the "Notifications based model", the quote is designed to be a confirmation prior to booking. As this message calculates values as actually held in the database, it is not a high performance message and should not be used for anything similar to a "search".

It is important to understand that the search is a high performance message based on pre-calculated data and the quote is a final step before booking, to reassure the hotel room is still available, since the search data was provided. The quote is calculated over the database with real-time values, while the search might lag behind – we strive the search data to be updated within 7 seconds from when the update is "on-sale". A typical search response is provided in 100 to 200 ms, while a quote takes between 1 and 2 seconds. More important: the search does not access the database, which leaves more capacity and performance for responding in an adequate time to our partners most important message: the booking!

Note: For "Notifications based model" usage observations: the ratio between quote and book may never exceed 1000 to 1. We would urgently contact partners performing at these ratios, to understand what can be improved in the implementation or even consider converting the quote to a search. Partners performing at a quote/book ratio between 100 to 1 and 1000 to 1 are considered in the danger zone and we would work together to understand which part of the implementation should be improved.

- We foresee that partners currently exclusively working on one of the two models, will convene towards a mix of both models, using more and more elements of both models.

2.3 Notifications

Notifications must be stored by partners to ensure a swift transmission process and to ensure our system is not slowed down by incidents in processing capacity. This is also recommended, in case our partner system requires a certain order to (re)load content. For example: a new hotel is being provided, but has not yet been mapped. The inventory message, rateplan and availability messages cannot be processed. Once mapping is complete, the latest inventory message, rateplan and availability notifications can be loaded and the new accommodation or room is on-sale immediately.

In case a new rateplan is received and this results to „open“ for all dates, the partner is responsible to process the last full availability notification, followed by all deltas received since the last full.

2.4 Mapping

Both models require an understanding between systems regarding hotel codes, room codes, board codes,... This functionality is extremely important to enable portfolio changes rapidly.

Example is: new rooms becoming available as part of a promotion: the “promo room” needs to be mapped immediately to ensure the turn-around time of an offer is minimal. Another example is: a hotel that discontinues a board during high-season. Or a hotel being (temporary) removed from our portfolio because of an emergency or dispute on the quality of service.

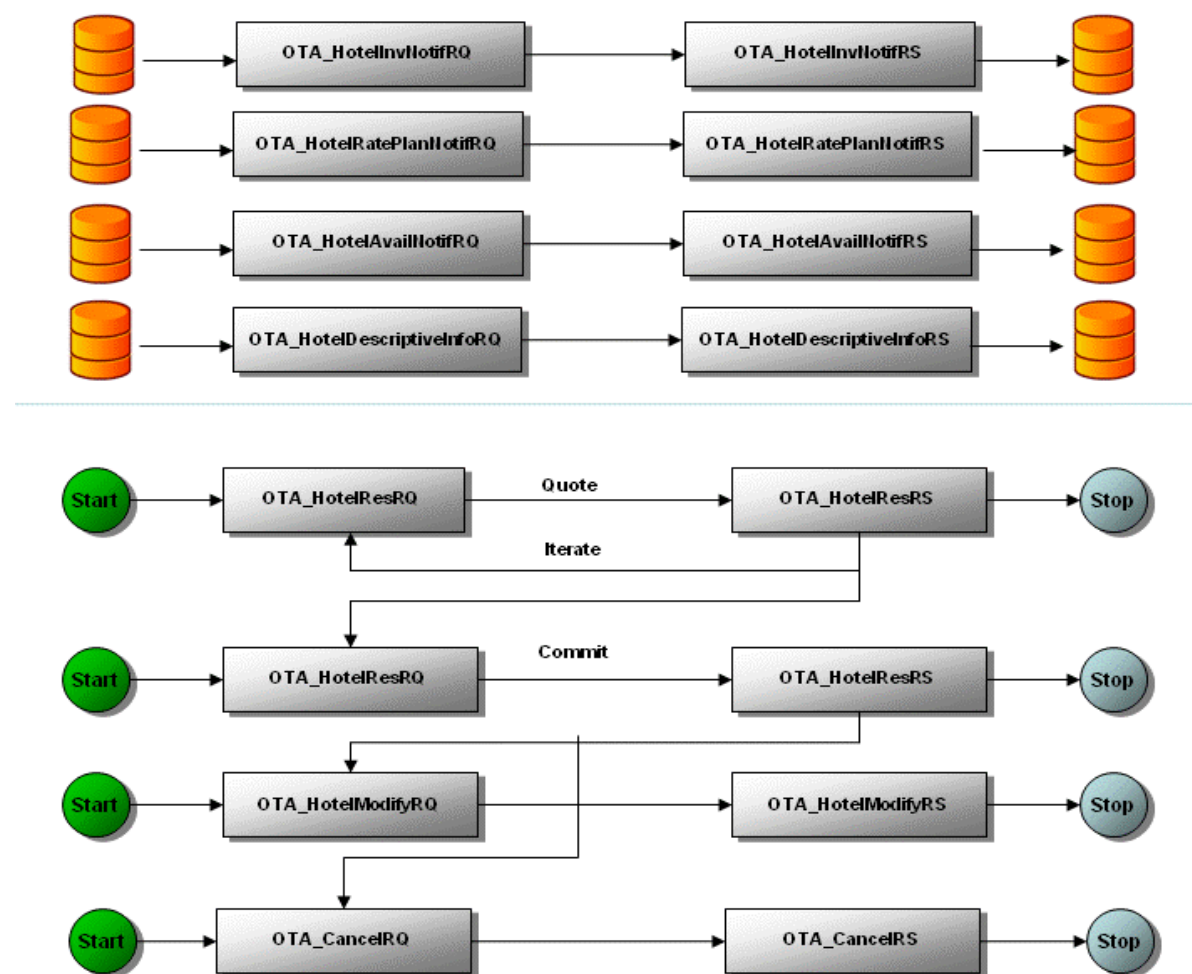
2.5 Filtering

In a multi provider situation, applicable to both models, it is important to have an open communication regarding filtering of product and the technical rules behind the filtering. We need to be sure filtering is taking place on a “like for like” basis and our superior room with all inclusive is not removed from presentation to the end customer, “filtered away” by a promo room with bed and breakfast, from a competitor. The actual filtering logic and code will be requested and analyzed to ensure a successful implementation.

3 Workflow

The AxisData systems are developed with a certain process in mind. Apart from storing price and availability on the partner side or not, incorporation of new hotels, rooms and offers is key to ensure a short „time to market“. For an efficient process the right information needs to be available in the adequate message for an efficient process. The order of reception and processing the data is important.

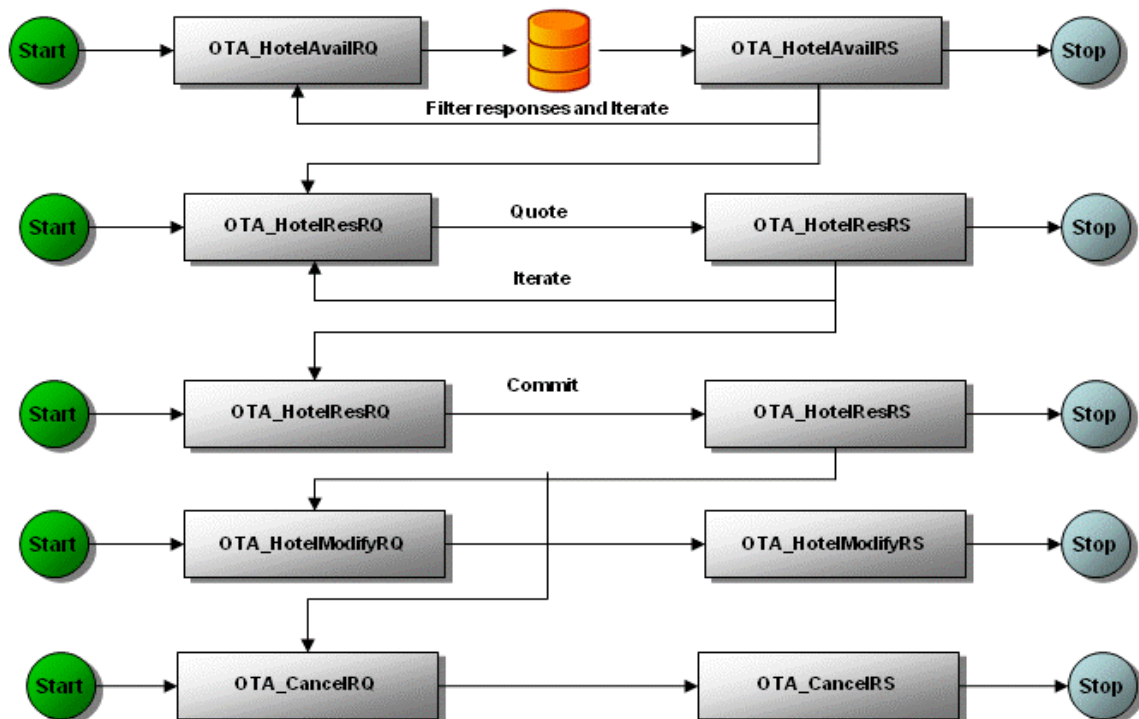
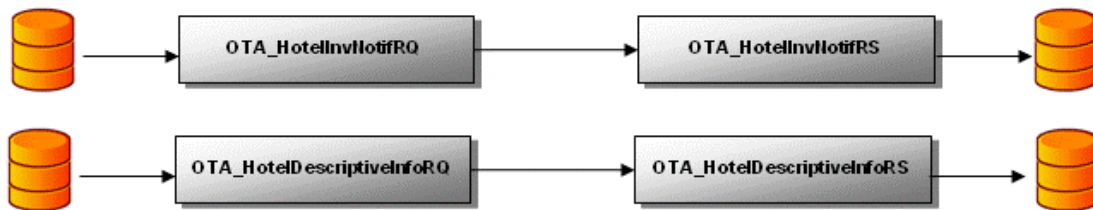
Notification based model



The notification based model allows our partners to store data, including rates and availability, in their system. Main objectives:

- Packaging of multiple products (i.e. flight, transfer and hotel)
- Product management control

Transactional model



Partners using the transactional model only store “basic hotel data” and “descriptive info” (factsheets, images,..) in their system. Rates and availability are obtained in real-time. No need to keep partner system updated and no interpretation of contract logic (base rates, supplements, offers, extras,..) on partner side. Compared to Notification based model:

- Less complicated
- Quicker integration
- Less maintenance
- No insight in rates and availability due to missing prices and stock.
- Packaging only possible with shopping basket or parallel searches for multiple products.

Note: Notification based partners, often use search (HotelAvailRQ) for “undefined quotes” – availability and price checks, before the end customer has supplied pax names etc.

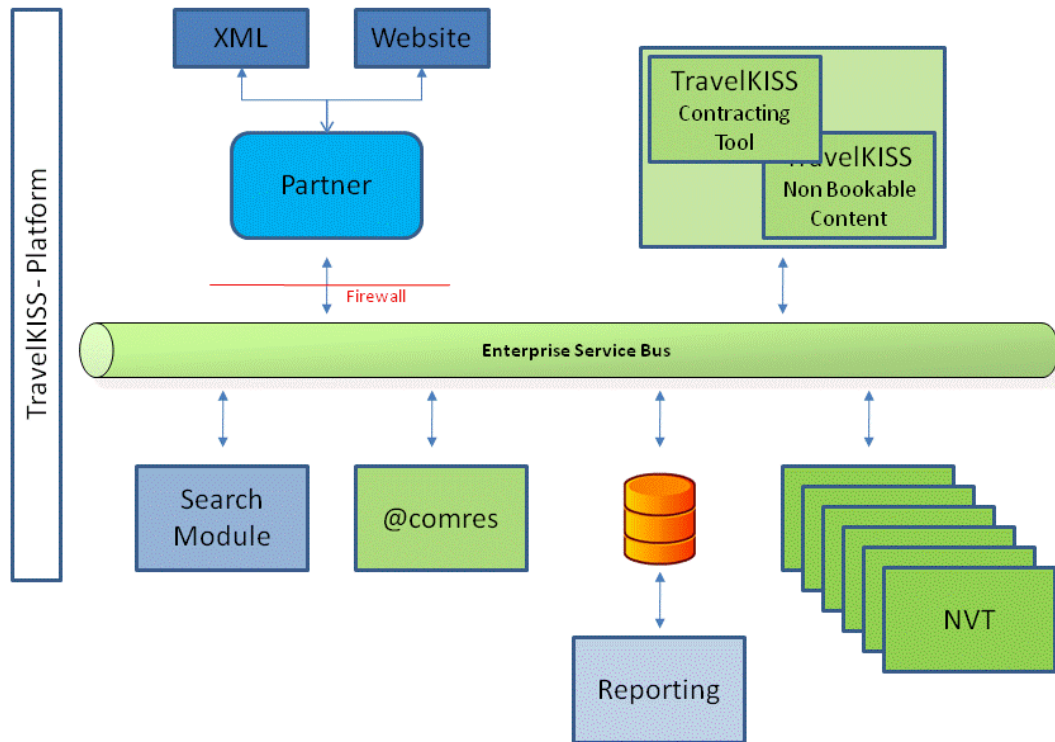
4 Architecture

The AxisData architecture is based on several main components as described below and as displayed in the „architecture diagram“.

Our infrastructure consists of the following main modules:

- ESB: „Enterprise Service Bus“, JBoss ESB, routing and conversion
- TravelKISS contract management: application for contracting available to our destinations. Contract management functions (offers, stop-sales, portfolio management,..) and Non-Bookable-Content (NBC)
- Search Module: high performance application with sole functionality to respond to searches (OTA_Avail RQ/RS)
- @comres: unique controller of allotment and calculation
- Database: storage of contract and booking data
- NVT: decentralized application, controlling booking management, transfers, hotelpayment, invoicing conciliation and accounting (decentralized to ensure operations when internet is not available in the destination).

Simplified Architecture diagram:



The „Enterprise Service Bus“ is not only responsible for routing data messages to the required systems/modules, but also translates any message format to the receptive system format and back. Conclusively, we can adopt a stable customer format message set and translate it to the required native formats. This option is not available in case the customer's format is changed frequently, for maintenance reasons. Activity must be authorised and prioritized within the AxisData projects

5 Technical Information

The protocol basically consists of message request/response pairs defined in the OTA specification from www.opentravel.org.

5.1 OTA

The www.opentravel.org website is extremely helpful for your integration with our systems. Every year an „A“ and „B“ update of the specifications are provided. We do not always follow immediately to keep our interface stable, but we sometimes are ahead of the next implementation, when we propose functionality as an OTA member.

We recommend:

- Download of the latest .xsd's and installation of a graphical viewing tool like XML spy
- Use of the Model Viewer provided by PilotFish, available under specifications.
- Become a registered user to use the forum – most of your questions will be listed there!

5.2 WSDL's

Our schemas can be downloaded from:

<http://acctesb.axisdata.net:54321/TravelKissConnector/OTAConnector?wsdl>

5.3 Incorrect message

If a message is rejected during parsing or validation an OTA_ErrorRS is sent to the originator:

```
<?xml version="1.0"?>
<prefix_0:OTA_ErrorRS xmlns:prefix_0="http://www.opentravel.org/OTA/2003/05"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" ErrorCode="Unknown" ErrorMessage="Internal error"
Version="0"></prefix_0:OTA_ErrorRS>
```

Or

```
<OTA_HotelAvailRS xmlns = "http://www.opentravel.org/OTA/2003/05" Version = "1.0">
  <Errors>
    <Error Code = "400" Type = "3">Error - Request is wrongly formatted</Error>
  </Errors>
</OTA_HotelAvailRS>
```

5.4 Invalid or non process able information

Other errors caused by the message contents are communicated through <Error> and <Warning> elements in the corresponding response message (see the OTA_HotelResRS examples further down in this document).

We do not support “byte order marks” in our messages. For more info see:

http://en.wikipedia.org/wiki/Byte_Order_Mark

5.5 Access to our systems

The access to our test and production systems is protected by a firewall which requires our partners' external IP's to be liberated in our firewalls. This step should be executed by experienced networking IT Systems specialists in order to avoid a lengthy troubleshooting process. The following steps are to be taken in account:

1. Definition of protocol and transport
 - Which processes will be executed via FTP and WS
 - Which protocol will be used (SOAP (preferred), HTTP or HTTPS)
2. Partner provides list of IP's to be liberated in our firewall
3. Partner enables their firewall:
 - If FTP is used, set-up of FTP accounts and enabling incoming FTP in firewall
 - Outgoing WS to the URL's provided
4. Axisdata confirms liberation of IP's..
5. Testing of connectivity and sample messages (see note below)

Note: When your IT systems team can do a telnet to ota.axisdata.net and get an empty screen, your IP has been successfully enabled. If our firewall blocks your telnet session, then “Connecting To xml.axisdata.net...Could not open connection to the host, on port 54321: Connect failed”. But the empty screen might also pop-up if your firewall blocks the out-going connection. That is why your IT Systems people should do these tests... Programmers in general do not master firewalls and networks.

Partner access to our test system (ACCT):

HTTP: <http://acctesb.axisdata.net:54321/apu-test/ota>

SOAP: <http://acctesb.axisdata.net:54321/apu-test/ota/services/HotelService>

Partner access to our production system (PROD):

This will only be enabled after successful completion of sample test cases

HTTP: <http://xml.axisdata.net:54321/apu/ota>

SOAP: <http://xml.axisdata.net:54321/apu/ota/services/HotelService>

The OTA_PingRQ can be implemented to test availability of the system.

5.6 Message compression

Message compression is mandatory for any communication with our webservice and must be implemented and working to certify an integration.

Message compression is based on standard HTTP compression and supports gzip compression format, described in [RFC2616](#) and [RFC1952](#). Compression can be switched on in the HTTP header of the message using *Accept-Encoding: gzip* parameter.

5.7 Partner identification

A request message identifies the message source through the <POS> (point of sale) tag. The mandatory attributes are shown in the example below:

```
<POS>
  <Source>
    <RequestorID Type="22" ID="TEST" ID_Context="AxisData"/>
  </Source>
</POS>
```

RequestorID Type: a Unique Identifier Type, such as an obligatory main identifier:
 11 Tour Operator
 or
 22 ERSP (Electronic Reservation Service Provider)

And optional additional sub-identifiers:
 (5 Travel Agency)
 29 Booking agent – we consider this option as “brand” or “sales channel”

Usually only ID's 11 or 22 are used. But frequently an additional identifier (29) is also used to identify sales channels, corporate brands, etc by simply repeating the <Source> element with an additional <RequestorID>. Code 29 can be the basis for special requests regarding administrative processes like invoicing etc. (to be agreed with your accountmanager)

```
<POS>
  <Source>
    <RequestorID Type="22" ID="TEST" ID_Context="AxisData"/>
  </Source>
  <Source>
    <RequestorID Type="29" ID="BRAND" ID_Context="AxisData"/>
  </Source>
</POS>
```

The additional ID code 5 may only be used upon special request and agreement, as there is special back-office functionality assigned to the use of this ID.

ID: a unique ID assigned to this client
ID_Context: always "AxisData", indicating that the ID is defined by AxisData
Instance: an AxisData defined code which identifies message format details.

Main Identifier:

The ID of the partner determines the market in which the partner is active. If a partner is active in multiple markets for which it is likely that hoteliers provide AxisData with contracts containing different seasonality, rates and offers, multiple ID's have to be used. The main ID determines market and portfolio, as well as currency settings.

Only one of two currency settings are possible for each RequestorID:

- One selling currency: i.e. Partner agrees to a currency (like EUR) and if a hotel contracts in the system is not in EUR, the prices will be converted to EUR.
- Contract Currency=Client Currency: i.e. partner agrees that no currency conversions take place and the partner will assume this responsibility. Note: one search response (OTA_HotelAvailRS) might have a mix of currencies.

The Type number is defined by OTA:

"Type A reference to the type of object defined by the UniqueID element. Refer to OpenTravel Code List Unique ID Type (UIT)"

5.7.1 Access to test system for integration

A test system is available which we internally call ACCT (acceptance test environment). The test system has a set of hotels with contracts that cover all functionality (see „going live“). The testcases that have been set-up in these hotels range from simple to complex.

Access to the test system is not unique. Only one „test client“ is available. Use an easily recognizable „client reference“ and pax names to filter your test bookings.

Access:

```
<POS>  
  <Source>  
    <RequestorID Type="22" ID="TEST" ID_Context="AxisData"/>  
  </Source>  
</POS>
```

It is recommended to start the integration with the http and implement the SOAP messaging, once confident with the messages.

5.7.2 Access to Production

Once all the testcases have been successfully implemented and test results have been provided a switch to „go-live“ can be prepared. This requires coordination by HQ and the destination managers.

You will be supplied with a unique ID for the <POS> element.

5.8 Extranet access

An extranet is available in Production only, where partners can view their bookings. The username is the ID in the POS element. The account will be created once access to our production environment has been granted and the password will be supplied. The access is: <http://travelkiss.axisdata.net:54323/qa3>

5.9 Transaction control

In order to identify all messages related to a specific transaction, all messages within the same transaction (searches, quote, commit) should use the same EchoToken identification. Each response will include the EchoToken attribute with a value identical to the one in the request.

```
<OTA_HotelAvailRQ xmlns="http://www.opentravel.org/OTA/2003/05"
EchoToken="807e760a7257422c8313f1b19651e112">
```

6 Mapping

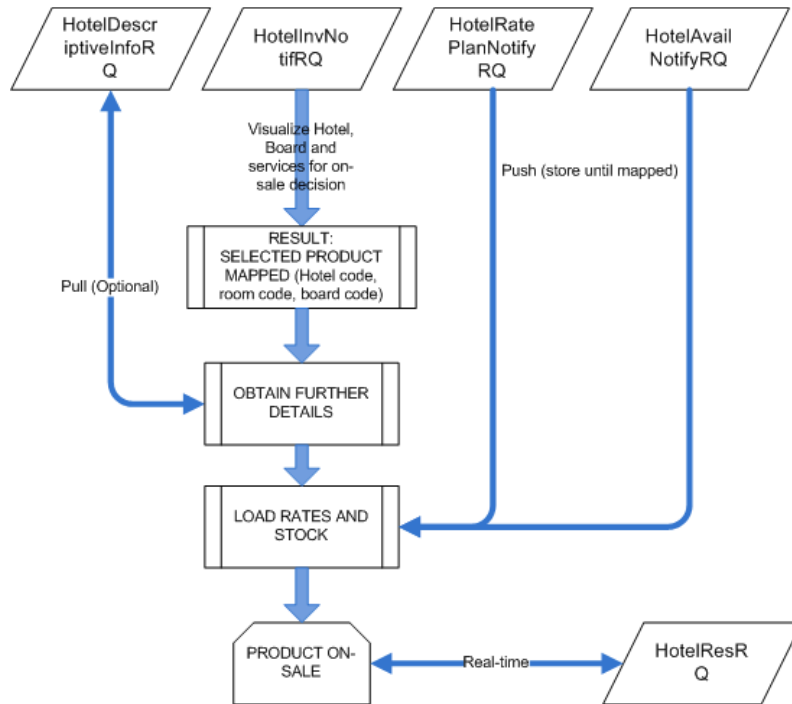
The mapping process requires an interactive and highly automated „matching application“ on the partner side to quickly turn-around product changes.

The following steps are envisaged:

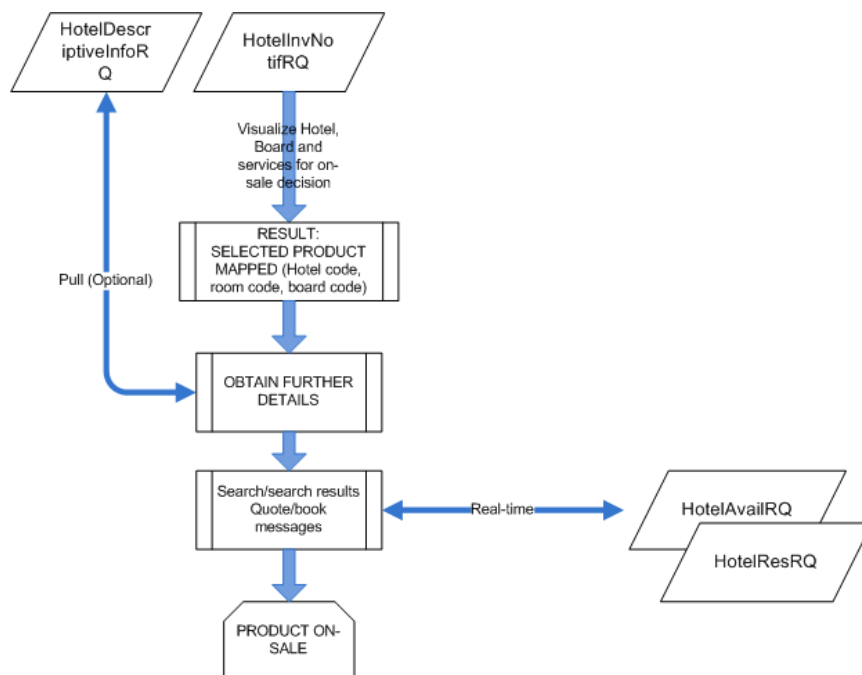
- Display portfolio changes and decide whether to incorporate the new hotel/room/service
 - map the rooms and services: OTA_HotelInvNotifRQ/RS
 - Hotel codes (see appendix)
 - Room codes (see appendix)
 - Board codes (see appendix)
 - Extras and other services
 - Amenities
 - Date ranges and rules
- Map the hotel: OTA_HotelDescriptiveInfoRQ/RS with various switches
 - With Address, GIATA code only
 - With location codes (Country, Destination, Region Resort)
 - With factsheets
 - With multimedia (image location)
- Either rates and availability is loaded to facilitate packaging and searches (Notification based model)
- Or the search module is enabled to pass searches to AxisData systems (Transactional model)

NOTE: The OTA_HotelDescriptiveInfo message with switch ContactInfo SendData="true" replaces the downloadable "portfolio.csv", in use up to now to obtain basic hotel data. The provision of portfolio.csv via FTP will not be stopped for current implementations.

Schematic mapping process for Notification based model:



Schematic mapping process for Transactional model:



6.1 OTA_HotellnvNotifRQ/RS

For each hotel in a client's portfolio a complete list of available services is sent through the **OTA_HotellnvNotifRQ/RS** message pair. The messages for all hotels are sent for initial data load and whenever there is updated information to be communicated.

Since the data volume involved is relatively small most clients receive a full set of messages as part of the daily data notifications.

6.1.1 Purpose

Provide information regarding contracted rooms, services, extras and descriptions of these. Provide rules as to their availability and application.

6.1.2 OTA_HotellnvNotifRQ/RS information

Hotel services can be grouped into three types:

ROOM services
BOARD services
EXTRA services

ROOM type services are communicated as room codes and occupancy ranges defining all possible occupancy combinations. The <Occupancy> element under <GuestRoom> identifies a pax type through an age range and/or an AgeQualifyingCode. Minimum and maximum permitted occupancy values for a pax type are specified in the attributes MinOccupancy and MaxOccupancy respectively. An <Occupancy> element without pax type attributes defines total pax limits.

Exceptions to these occupancy rules can be defined in <ExcludedOccupancies> which contains up to 5 <ExcludedOccupancy> elements, each of which defines an occupancy which is not permitted for the room.

Infants do not normally contribute to the pax count, but may do so in exceptional cases. If the attribute InfantsAreCounted in <Occupancy> is "true", infants are considered members of the pax type whose occupancy is being defined in this occupancy tag, typically the total pax (irrespective of age) and therefore count towards minimum and maximum occupancy. In addition to these occupancy limits the minimum number of billable pax irrespective of the actual number of persons in the room is given by the attribute MinBillableGuests in the <Quantities> element:

MinBillableGuests indicates the minimum number of guests for which a room charge will be applied, even if there are fewer guests in the room.

Information under <SellableProduct> can be qualified by a Start and End date defining the period of validity for the specified occupancy. The <SellableProduct> element can be repeated

with different (non-overlapping) Start/End dates defining different occupancy rules for different periods (see example below).

[Note: *Some occupancy definitions can be included in the <GuestRoom> element of the OTA_HotelRatePlanNotifRQ***]**

Room codes are assembled from various room characteristics in the room code elements. For a full list of values see "Room Codes" in **Appendix B**.

Board codes define the available meal plans s.a. "Half Board", "All Inclusive", etc.

For a full list of valid codes see "Board Codes" in Appendix B.

Services defined under EXTRA include New Year's gala dinners etc.

A standard room description is listed under the <SellableProduct> tag. An additional special description may appear under the <GuestRoom> tag.

Standardized room features may also be listed under the <Amenities> tag.

6.1.3 Delta OTA_HotelInvNotifRQ/RS

However, the daily transmission of full inventories is repetitive generation, transmission and processing of the same data over and over again and it is strongly recommended to implement the OTA_HotelInvNotifRQ/RS delta notifications which we can schedule to push upon change.

Upon change of the contracted rooms, boards, extras, occupancies (per period), a full inventory notification is triggered (not the changed values). The objective of triggering a full inventory notification, is to allow a re-evaluation of the selected services a customer has on-sale:

- Previously a hotel has not been selected for distribution because it only offers board SC. The contract has been amended with BB, HB and AI – If we would provide the change only the PM would not know SC is also available.
- Previously a hotel offered 5 roomtypes, of which a partner selected 3 roomtypes to be distributed. The contract is amended with 3 roomtypes of the 5 contracted, for single use. But not those which the partner has on-sale. To properly evaluate which of the total room portfolio of this hotel the partner PM wants to distribute, it is imperative to receive all rooms available in this hotel.

DEACTIVATED

When a property is removed from the portfolio, an "empty" inventory message will be send once as delta, upon removal of the hotel from the portfolio. This is a permanent change, unlike the "deactivated" in the rateplan (in the rateplan deactivated means we have no valid contract in the system for future dates). In the inventory message "deactivated" means we have removed this hotel from the partner portfolio and (if the PM of the partner agrees or has requested this removal) the mapping can be removed in the partner system.

Example "deactivated" inventory message:

```
<?xml version="1.0" encoding="UTF-8"?>
<OTA_HotelInvNotifRQ xmlns="http://www.opentravel.org/OTA/2003/05" xmlns:xsi =
"http://www.w3.org/2001/XMLSchema-instance" Version = "2006" Target = "Production" EchoToken = "1278938824554"
xsi:schemaLocation = "http://www.w3.org/2001/XMLSchema-instance" xsi:type = "OTA_HotelInvNotifRQ">
  <SellableProducts HotelName = "Belconti Resort" HotelCode = "AMTSES0011">
```

```
<Deactivated>
  <Description>
    <Text>Removed from portfolio</Text>
  </Description>
</SellableProducts>
</OTA_HotelInvNotifRQ>
```

NOTE: Delta InvNotif will become available at the end of November 2010.

6.1.4 Room amenities

The Inventory message specifies which features are available in a room. The “amenities” also hold an “additional description” which is a free text field – in the example “2 Rooms with connection door”:

```
<Description>
  <Text>FamilyRoom_Standard/TypeA</Text>
</Description>
....
<Amenities>
  <Amenity AmenityValue = "2 Rooms with connection door"/>
  <Amenity AmenityValue = "Balcony"/>
  <Amenity AmenityValue = "Bathroom"/>
</Amenities>
```

6.1.5 One room contracted with more than one base board

For partners that store rates and availabilities in their database, special attention must be given to properties that have rooms with a different board base per season. For example Bed and Breakfast is not available in high season, the lowest available board could be Half Board. This is expressed in the OTA_HotelAvailNotifyRQ/RS, sellable product element.

In cases where for example All Inclusive is not available outside high season, the rateplan and search responses simply do not include prices for these periods

6.1.6 Multiple Occupancies per period:

```
<SellableProducts HotelCode="MTS1234" HotelName="AXIS INN">
  <SellableProduct InvCode="DBLSTD0000" InvType="ROOM" Start="2008-11-01" End="2009-04-30">
    <GuestRoom>
      <Quantities MinBillableGuests="2"/>
      <Occupancy MinOccupancy="1" MaxOccupancy="4"/>
      <Occupancy MinAge="16" AgeQualifyingCode="10" MinOccupancy="1" MaxOccupancy="3"/>
      <Occupancy MinAge="2" MaxAge="15" AgeQualifyingCode="8" MaxOccupancy="2"/>
    </GuestRoom>
    <Description>
      <Text>Standard Double Room</Text>
    </Description>
  </SellableProduct>
  <SellableProduct InvCode="DBLSTD0000" InvType="ROOM" Start="2009-05-01" End="2009-10-31">
    <GuestRoom>
      <Quantities MinBillableGuests="2"/>
      <Occupancy MinOccupancy="1" MaxOccupancy="3"/>
      <Occupancy MinAge="16" AgeQualifyingCode="10" MinOccupancy="1" MaxOccupancy="3"/>
      <Occupancy MinAge="2" MaxAge="15" AgeQualifyingCode="8" MaxOccupancy="2"/>
    </GuestRoom>
    <Description>
      <Text>Standard Double Room</Text>
    </Description>
  </SellableProduct>
</SellableProducts>
```

6.1.7 Excluded occupancies:

```
<SellableProducts HotelName = "Club Hotel Ephesus Princess" HotelCode = "BJVCEPH">
  <SellableProduct InvType = "ROOM" InvCode = "DBLSTD00SV" End = "2010-10-31" Start = "2010-04-27">
    <GuestRoom>
      <Quantities MinBillableGuests = "2"/>
      <Occupancy MaxOccupancy = "4" MinOccupancy = "2" InfantsAreCounted = "true"/>
      <Occupancy MinAge = "13" AgeQualifyingCode = "10" MaxOccupancy = "3" MinOccupancy = "2"/>
      <Occupancy MaxAge = "12" MinAge = "2" AgeQualifyingCode = "8" MaxOccupancy = "2" MinOccupancy =
"0"/>
      <ExcludedOccupancies>
        <ExcludedOccupancy>
          <Occupancy MaxAge = "12" MinAge = "2" AgeQualifyingCode = "8" MaxOccupancy = "1"
MinOccupancy = "1"/>
          <Occupancy MinAge = "13" AgeQualifyingCode = "10" MaxOccupancy = "3" MinOccupancy = "3"/>
        </ExcludedOccupancy>
      </ExcludedOccupancies>
      <Amenities/>
    </GuestRoom>
    <Description>
      <Text>Room_Standard/Double/SeaView</Text>
    </Description>
  </SellableProduct>
```

6.1.8 Infant count as pax

Infants do not normally contribute to the pax count, but may do so in exceptional cases. If the attribute `InfantsAreCounted` in `<Occupancy>` is "true", infants are considered members of the pax type whose occupancy is being defined in this occupancy tag, typically the total pax (irrespective of age) and therefore count towards minimum and maximum occupancy.

Ex. `<Occupancy MaxOccupancy = "5" MinOccupancy = "2" InfantsAreCounted = "true"/>`

6.1.9 Specific number of infants and/or infants not allowed

In some cases, the contract with the hotel specifies the number of infants that can be accommodated in the room, often in combination with „Infant count as pax“, but not necessarily. In these cases, an occupancy line with `AgeQualifyingCode=7` is included. When infants are not allowed, both min and max specify 0.

Example:

```
<GuestRoom>
  <Quantities MinBillableGuests = "2"/>
  <Occupancy MaxOccupancy = "3" MinOccupancy = "2"/>
  <Occupancy MaxOccupancy = "3" MinOccupancy = "2" MinAge = "13" AgeQualifyingCode = "10"/>
  <Occupancy MaxOccupancy = "1" MinOccupancy = "0" MaxAge = "12" MinAge = "3" AgeQualifyingCode = "8"/>
  <Occupancy MaxOccupancy = "0" MinOccupancy = "0" MaxAge = "2" MinAge = "0" AgeQualifyingCode = "7"/>
  <ExcludedOccupancies/>
  <Amenities/>
</GuestRoom>
```

6.1.10 Extras payable upon arrival

Some hotels or apartment complexes charge fees/cost upon arrival. This can vary from a touristic tax to payable heating, water, but also optional services like cost and caution for a safe-deposit box, television, etc.

As these costs should be advised prior to booking, partners should be able to present this information, but do not need to include it in the price (as they are paid directly to the hotel upon arrival. These extras, payable upon arrival are included in the amenities, with price and obligatory/optional.

Example heating payable upon arrival:

```
<Amenities>
  <Amenity AmenityValue = "Heating" Price="25" Currency="EUR" Frequency="per week" Obligatory="Yes"/>
  <Amenity AmenityValue = "Safety-Deposit Box" Price="5" Currency="EUR" Frequency="per week" Obligatory="No"/>
  <Amenity AmenityValue = "Safety-Deposit Box" Price="50" Currency="EUR" Frequency="once" Obligatory="No"/>
  <Amenity AmenityValue = "No.Bedrooms: 119"/>
  <Amenity AmenityValue = "Shower"/>
</Amenities>
```

6.1.11 Inventory message options

The inventory message can be enriched with information that is customer specific. One example is to provide partner codes for rooms, views, etc in case the partner can provide a mapping table from our room code element structure (see Appendix). Such codes conversion can be maintained by AxisData.

An example for a standard apartment with seaview including partner codes (and single use with child, but the partner has no coding for that)

```
<SellableProduct InvTypeCode="GT04-AP,GT04-SD,GT13-SV" InvType="ROOM"
InvCode="APSDSCSV00" End="2010-10-31" Start="2010-04-01">
<GuestRoom>
<Quantities MinBillableGuests="1"/>
<Occupancy MaxOccupancy="2" MinOccupancy="1"/>
<Occupancy MinAge="12" AgeQualifyingCode="10" MaxOccupancy="1" MinOccupancy="1"/>
<Occupancy MaxAge="11" MinAge="2" AgeQualifyingCode="8" MaxOccupancy="1"
MinOccupancy="0"/>
<ExcludedOccupancies/>
<Amenities/>
</GuestRoom>
<Description>
<Text>Apartment_Standard/Single w.Child</Text>
</Description>
</SellableProduct>
```

6.2 OTA_HotelDescriptiveInfoRQ/RS

The OTA_HotelDescriptiveInfoRQ/RS can be requested by partners to update their database with the most recent data. Several switches are available to include specific elements.

The TravelKISS platform allows the destination offices to register descriptive information in a structured manner and maintain the updates on a seasonal frequency. The HotelDescriptiveInfo has several switches to provide partners with exactly that information, which is required for the actual process in their workflow and the display of selected/mapped elements according to the structure of the distribution channel.

6.2.1 Purpose

Provide all required information about the property in order to map adequately to customer object information. Provide descriptive information regarding features as contracted, to avoid end-customer claims regarding location, services, features and amenities.

NBC stands for "Non Bookable Content" and includes all static data, facts, descriptive texts and images the destinations sign with the hotel. The OTA_HotelDescriptiveInfoRQ/RS can be

requested with different switches to download this information. Please refer to the sample RS included to this documentation to see the results (they are quite extensive)

6.2.2 Language

A language may be specified for any descriptive texts returned in the OTA_HotelDescriptiveInfoRS. In fact 2 languages may be specified (but this is to be reviewed for future release).

Example:

```
<OTA_HotelDescriptiveInfoRQ PrimaryLangID="PT" AltLangID="ES"..>
```

- If PrimaryLangID is not specified, default PrimaryLangID='EN' is set; if AltLangID is not specified default AltLangID='EN' is set
- If the description for PrimaryLangID exists, it is used; if not exists, then AltLangID is used
- If the description for AltLangID exists, it is used; otherwise no description returned

This switch only applies to texts actually stored in various languages, which currently only include the „descriptions“. Available languages and coverage is constantly increasing, so this information will be discussed at the start of the integration.

6.2.3 Obtaining full product list via web service („HotelList“)

Retrieving the full product list is supported, but you have to request this without any details (SendData="false", ...). As the enabled switches increase the cost of processing, this will only work with all switches set to false. Depending on the number of hotels available for a partner, only 1000 hotels will be returned, unless all switches are set to „false“. See also „Paging“.

Example of message to retrieve full hotel list in one response:

```
<OTA_HotelDescriptiveInfoRQ xmlns="http://www.opentravel.org/OTA/2003/05" Version="2009.1" PrimaryLangID="PT"
AltLangID="ES">
  <POS>
    <Source>
      <RequestorID Type="22" ID="TEST" ID_Context="AxisData"/>
    </Source>
  </POS>
  <HotelDescriptiveInfos>
    <HotelDescriptiveInfo BrandCode="TEST">
      <ContactInfo SendData="false"/>
      <HotelInfo SendData="false"/>
      <AreaInfo SendRefPoints="false"/>
      <AffiliationInfo SendAwards="false"/>
      <MultimediaObjects SendData="false"/>
    </HotelDescriptiveInfo>
  </HotelDescriptiveInfos>
</OTA_HotelDescriptiveInfoRQ>
```

The client portfolio example - contains only basic hotel data, no additional paging required:

```
<?xml version="1.0" encoding="UTF-8"?>
<OTA_HotelDescriptiveInfoRS xmlns="http://www.opentravel.org/OTA/2003/05" Version="2009.1" EchoToken="Rw"
TransactionIdentifier="1-31/31">
  <Success/>
```

```

    <HotelDescriptiveContents>
      <HotelDescriptiveContent HotelCode="AAUTO10IO" HotelName="Auto_test release min/max stay"/>
      <HotelDescriptiveContent HotelCode="AAUTO14TC" HotelName="Client Integration test hotel 1"
HotelCodeContext="1000001"/>
      <HotelDescriptiveContent HotelCode="AAUTO14TK" HotelName="Client Integration test hotel 2"
HotelCodeContext="1000002"/>
      <HotelDescriptiveContent HotelCode="AAUTO14U0" HotelName="Client Integration test hotel 4"
HotelCodeContext="1000004"/>
      <HotelDescriptiveContent HotelCode="AAUTO14U8" HotelName="Client Integration test hotel 3"
HotelCodeContext="1000003"/>
      ...
    </HotelDescriptiveContents>
  </OTA_HotelDescriptiveInfoRS>

```

Note: Giata code is provided in the element: HotelCodeContext = "1000001" All Giata codes in the test environment are fake.

6.2.4 Information included in the response

Example RQ with explanation of switches. Following enrichment filters have effects. If any of those does not exist or is not 'false', the default value 'true' is applied according to the following logic:

- HotelInfo – The elements “descriptions” and “services” are omitted if @SendData=“false”
- ContactInfo – the address information of hotel is omitted if @SendData=“false”
- AreaInfo – The geographical location information is omitted if @SendRefPoints=“false”
- AffiliationInfo – The start rating is omitted if @SendAwards=“false”
- MultimediaObjects – Image information is omitted if @SendData=“false”

Example:

```

<OTA_HotelDescriptiveInfoRQ xmlns="http://www.opentravel.org/OTA/2003/05" Version="2009.1" PrimaryLangID="PT"
AltLangID="ES">
  <POS>
    <Source>
      <RequestorID Type="22" ID="TEST" ID_Context="AxisData"/>
    </Source>
  </POS>
  <HotelDescriptiveInfos>
    <HotelDescriptiveInfo BrandCode="TEST">
      <ContentInfos>
        <ContentInfo Code="Airport" Name="LPA"/>
      </ContentInfos>
      <HotelInfo SendData="false"/>
      <AffiliationInfo SendAwards="false"/>
      <MultimediaObjects SendData="false"/>
      <ContactInfo SendData="false"/>
      <!--AreaInfo SendRefPoints="false"/-->
    </HotelDescriptiveInfo>
  </HotelDescriptiveInfos>
</OTA_HotelDescriptiveInfoRQ>

```

6.2.5 Obtain data for multiple hotels using filters

Any combination of the ContentInfo Codes listed can be used to filter the hotels to be returned. These codes have a maximum length of 8 chars and work according to the following logic:

- Country – country specified for the accommodation in our system
- CountryC – Country Code corresponding to the country - ISO Codes
- Destinat – Destination specified for the accommodation
- Region – Region specified for the accommodation
- Resort – Resort specified for the accommodation
- ResortCo – discontinued: use structured text in “Resort” for readability
- Airport – ‘Closest Airport’ specified for the accommodation

```
<OTA_HotelDescriptiveInfoRQ xmlns="http://www.opentravel.org/OTA/2003/05" Version="2009.1" PrimaryLangID="PT"
AltLangID="ES">
  <POS>
    <Source>
      <RequestorID Type="22" ID="TEST" ID_Context="AxisData"/>
    </Source>
  </POS>
  <HotelDescriptiveInfos>
    <HotelDescriptiveInfo BrandCode="TEST">
      <HotelInfo SendData="false"/>
      <AffiliationInfo SendAwards="false"/>
      <ContentInfos>
        <ContentInfo Code="Country" Name="Egypt"/>
        <ContentInfo Code="CountryC" Name="EG"/>
        <ContentInfo Code="Destinat" Name="Inland"/>
        <ContentInfo Code="Region" Name="Cairo"/>
        <ContentInfo Code="Resort" Name="Cairo"/>
        <ContentInfo Code="Airport" Name="CAI"/>
      </ContentInfos>
      <MultimediaObjects SendData="false"/>
    </HotelDescriptiveInfo>
  </HotelDescriptiveInfos>
</OTA_HotelDescriptiveInfoRQ>
```

Example for all hotels which have LPA assigned as the closest airport:

```
<OTA_HotelDescriptiveInfoRQ xmlns="http://www.opentravel.org/OTA/2003/05" Version="2009.1" PrimaryLangID="DE"
AltLangID="EN" SequenceNmbr="1" MaxResponses="500">
  <POS>
    <Source>
      <RequestorID Type="22" ID="TEST" ID_Context="AxisData"/>
    </Source>
  </POS>
  <HotelDescriptiveInfos>
    <HotelDescriptiveInfo BrandCode="TEST">
      <ContentInfos>
        <ContentInfo Code="Airport" Name="LPA"/>
      </ContentInfos>
    </HotelDescriptiveInfo>
  </HotelDescriptiveInfos>
</OTA_HotelDescriptiveInfoRQ>
```

Example message to provide all information available for one hotel in the Portuguese language, if PT not available, please return ES:

```
<OTA_HotelDescriptiveInfoRQ xmlns="http://www.opentravel.org/OTA/2003/05" Version="2009.1" PrimaryLangID="PT"
AltLangID="ES">
  <POS>
    <Source>
      <RequestorID Type="22" ID="TEST" ID_Context="AxisData"/>
    </Source>
  </POS>
  <HotelDescriptiveInfos>
    <HotelDescriptiveInfo HotelCode="AAUTO14TC" BrandCode="TEST"/>
  </HotelDescriptiveInfos>
</OTA_HotelDescriptiveInfoRQ>
```

Which would return (note Raw text and encoding):

```
<OTA_HotelDescriptiveInfoRS xmlns="http://www.opentravel.org/OTA/2003/05" Version="2009.1" EchoToken="Rw"
TransactionIdentifier="1-1/1">
  <Success/>
  <HotelDescriptiveContents>
    <HotelDescriptiveContent HotelCode="AAUTO14TC" HotelName="Client Integration test hotel 1"
HotelCodeContext="1000001">
      <HotelInfo>
        <Descriptions>
          <DescriptiveText>
            Hotel muito agrad&#225;vel e simples
            contratos para os primeiros testes

            exemplo de texto falso

            localiza&#231;&#227;o
            Este complexo de apartamentos est&#225; localizado no centro da cidade e est&#225; a apenas 800 m da praia ea
            500 m do centro da est&#226;ncia. Plaza del Charco, Paseo San Telmo e Lago Marti&#195; &#161;nez est&#227;o localizados nas
            imedia&#231;&#245;es. As piscinas de &#225;gua salgada nata&#231;&#227;o s&#227;o apenas 900 metros do hotel.

            instala&#231;&#245;es
            Este complexo de apartamentos foi constru&#237;do em 1976, renovado em 2006 e &#233; composto de 6 andares
            com um total de 49 habita&#231;&#245;es. O complexo oferece um servi&#231;o de recep&#231;&#227;o 24 horas, elevador, um
            bar e um restaurante. H&#225; tamb&#233;m parque de estacionamento &#224; disposi&#231;&#227;o para os h&#243;spedes.

            Quartos
            Os est&#250;dios est&#227;o equipados com casa de banho, sala / quarto, telefone com liga&#231;&#227;o directa,
            televis&#227;o via sat&#233;lite (taxa extra), kitchenete, mini-frigor&#237;fco e cofre.

            Desporto / Lazer
            No telhado os h&#243;spedes ir&#227;o encontrar uma piscina de &#225;gua doce, bem como um terra&#231;o
            com espregui&#231;adeiras e guarda-s&#243;is. Dentro do hotel, &#233; poss&#237;vel jogar bilhar e h&#225; um campo de golfe
            localizado a 1 km de dist&#226;ncia.
          </DescriptiveText>
        </Descriptions>
      </HotelInfo>
    </HotelDescriptiveContent>
  </HotelDescriptiveContents>
</OTA_HotelDescriptiveInfoRS>
```

There is a special content info code to get structured data based of a specifi type, it only returns data when amenities are set and is not compatible with any other enrichment switch. When this content info code is used, any other switch will be ignored. Structured data follows this format:

```
CodeDetail ="SERVICE_TYPE_CODE | SERVICE_TYPE_CHILD_CODE | SERVICE_CODE | SERVICE_PROPERTY_CODE |
VALUE | MEASURE_UNIT_CODE"
```

< DescriptiveText > SERVICE_TYPE_NAME | SERVICE_TYPE_CHILD_NAME | SERVICE_NAME | SERVICE_PROPERTY_NAME | VALUE | MEASURE_UNIT_NAME < DescriptiveText >

6.2.6 OTA_HotelDescriptiveInfoRS all possible elements and values (template)

The „Template service“ is available to display all possible NBC attributes and values as a service. This functionality has been developed to quickly determine improvements in the NBC content like new attributes and/or new values. For example: the destinations require a new value called „free sombrero“ in addition to the „deckchair“ and „towels“. Or a hotel might require that we display „the client’s luggage will be carried to the room“ service, which would be a new attribute.

example template function:

```
<OTA_HotelDescriptiveInfoRQ xmlns="http://www.opentravel.org/OTA/2003/05" Version="2009.1" PrimaryLangID="PT"
AltLangID="ES">
  <POS>
    <Source>
      <RequestorID Type="22" ID="TEST" ID_Context="AxisData"/>
    </Source>
  </POS>
  <HotelDescriptiveInfos>
    <HotelDescriptiveInfo BrandCode="TEST">
      <ContentInfos>
        <ContentInfo Code="Template" Name="STOCK"/>
        <!--ContentInfo Code="Template" Name="STOCKUNIT"/>
        <ContentInfo Code="Template" Name="SUBSERVICE"/>
      </ContentInfos>
    </HotelDescriptiveInfo>
  </HotelDescriptiveInfos>
</OTA_HotelDescriptiveInfoRQ>
```

No more than one service (stock, stockunit or subservice) may be retrieved at a time so the possible requests are:

It is expected a new revision to allow the use of this content info compatible with all other switches and not dependant on amenities by end of Q2 2013

- Type – Values can be: STOCK for hotel data, UNIT for room data and SUBSERVICE for board data.

```
<OTA_HotelDescriptiveInfoRQ xmlns="http://www.opentravel.org/OTA/2003/05" Version="2009.1" PrimaryLangID="PT"
AltLangID="ES">
  <POS>
    <Source>
      <RequestorID Type="22" ID="TEST" ID_Context="AxisData"/>
    </Source>
  </POS>
  <HotelDescriptiveInfos>
    <HotelDescriptiveInfo BrandCode="TEST">
      <ContentInfos>
        <ContentInfo Code="Type" Name="UNIT"/>
      </ContentInfos>
    </HotelDescriptiveInfo>
  </HotelDescriptiveInfos>
```

</OTA_HotelDescriptiveInfoRQ>

```
<OTA_HotelDescriptiveInfoRS xmlns="http://www.opentravel.org/OTA/2003/05" Version="2009.1" EchoToken="Rw" >
  <Success/>
  <HotelDescriptiveContents>
    ....
    <HotelDescriptiveContent HotelCode=" AAUTO14TC " HotelName="Client Integration test hotel 1">
      <FacilityInfo>
        <GuestRooms>
          <GuestRoom Code="RMSDDB0000">
            <Amenities>
              <Amenity CodeDetail="UNITA|GENERAL|UA_TV|TVTYPE|Flat Screen|">
                <DescriptiveText>Unit Amenities|General|TV|TV Type:|Flat Screen|</DescriptiveText>
              </Amenity>
              ...
              <Amenity CodeDetail="UNITA|GENERAL|UA_FINALCLEANUP|||">
                <DescriptiveText>Unit Amenities|General|Final Cleanup|||</DescriptiveText>
              </Amenity>
            </Amenities>
            <Features>
              <Feature CodeDetail="UNITF|GENERAL|UA_FLOOR|FLOORTYPE|Tiled|">
                <DescriptiveText>Unit Facilities|General|Floor-Type|Floor Type:|Tiled|</DescriptiveText>
              </Feature>
              ...
              <Feature CodeDetail="UNITF|GENERAL|UF_WHEELCHAIR|||">
                <DescriptiveText>Unit Facilities|General|Wheelchair Accessibility|||</DescriptiveText>
              </Feature>
              <Feature CodeDetail="UNITF|GENERAL|UF_HANDICAPBATH|||">
                <DescriptiveText>Unit Facilities|General|Handicapped Bathroom|||</DescriptiveText>
              </Feature>
            </Features>
            <DescriptiveText>Room_Standard/Double</DescriptiveText>
          </GuestRoom>
          ...
        </GuestRooms>
      </FacilityInfo>
    </HotelDescriptiveContent>
    ...
  </HotelDescriptiveContents>
</OTA_HotelDescriptiveInfoRS>
```

6.2.7 Paging

The amount of data can be huge. To guarantee proper response time, paging functionality has been applied to the OTA_HotelDescriptiveInfoRQ/RS. Paging information is supposed to be set in the request by the client, specifying the expected portion of data/hotels in the response. If no paging information sent, response will contains only first 100 hotels. One can request maximal 1000 hotels per page

Paging can be requested as follows:

```
<OTA_HotelDescriptiveInfoRQ ... SequenceNmbr="" MaxResponses=""...>
```

Where;

- SequenceNmbr – page number (default 1)
- MaxResponses – hotels per page (default 100); maximum 1000

In the response there is a paging indicator:

<OTA_HotelDescriptiveInfoRS ... TransactionIdentifier="1-10/8980" ...> which specifies which portion of data has been delivered.

For any request where paging exceeds number of hotels, eg: SequenceNmbr= "100" MaxResponses= "100" which results to an expected 10000 hotels, but only 8862 are in the partners portfolio, the last response includes one last hotel with information TransactionIdentifier="8862-8862/8862" which indicates: "this is last hotel"

The partner is able to put the chain of requests in series:

1. <OTA_HotelDescriptiveInfoRQ SequenceNmbr= "1" MaxResponses= "100" >
2. <OTA_HotelDescriptiveInfoRQ SequenceNmbr= "2" MaxResponses= "100" >
3. <OTA_HotelDescriptiveInfoRQ SequenceNmbr= "3" MaxResponses= "100" >
-

There is an exception case for that defined for the convenience for our client, when one want to get only the hotel list and specifies all switches to ="false" in the request:

In this case if non paging info is specified, the full list of hotels will be returned with eg @TransactionIdentifier="1-8855/8855", if there would be 8855 hotels in the portfolio.

6.2.8 Some detail on OTA_HotelDescriptiveInfoRS

Examples valid for the available test hotels in ACCT, are provided in the included examples directory of the documentation set.

The data is stored in a hierarchy in below example grouped to "Location", "Airport", the first airport specific to this hotel "LD_AIRPORT1". Each service is specified separately, so customers are not required to match our structure. The hierarchy is provided in codes and texts, separated by pipes ("|").

```
<Service CodeDetail="LOCATION|AIRPORT|LD_AIRPORT1|AIRPORT">
  <Features>
    <Feature CodeDetail="Airport:">
      <DecriptiveText>FAO</DecriptiveText>
    </Feature>
  </Features>
  <DecriptiveText>Locations & Distances|Airport|Airport 1:|Airport:</DecriptiveText>
</Service>
<Service CodeDetail="LOCATION|AIRPORT|LD_AIRPORT1|DISTANCE">
  <Features>
    <Feature CodeDetail="Distance (ca.):">
      <DecriptiveText>40 km</DecriptiveText>
    </Feature>
  </Features>
  <DecriptiveText>Locations & Distances|Airport|Airport 1:|Distance (ca.):</DecriptiveText>
</Service>
<Service CodeDetail="LOCATION|AIRPORT|LD_AIRPORT1|TRFTIME">
  <Features>
    <Feature CodeDetail="Transfer Time (ca.):">
      <DecriptiveText>45 min</DecriptiveText>
    </Feature>
  </Features>
  <DecriptiveText>Locations & Distances|Airport|Airport 1:|Transfer Time (ca.):</DecriptiveText>
```

</Service>

Another example regarding the beach and pool under the chapters “Bathing Facilities”, “Beach” or “Swimming Pool”:

```

<Services>
  <Service CodeDetail="HOTELTYPE|GENERAL|BEACH_HOTEL|">
    <DescriptiveText>Hotel Type|General|Beach Hotel|</DescriptiveText>
  </Service>
  <Service CodeDetail="BATH|BEACH|BF_BEACH|BEACHNATURE">
    <Features>
      <Feature CodeDetail="Beach Type:">
        <DescriptiveText>sand</DescriptiveText>
      </Feature>
    </Features>
    <DescriptiveText>Bathing Facilities|Beach|Beach Type:|Beach Type:</DescriptiveText>
  </Service>
  <Service CodeDetail="BATH|SWIMPOOL|BF_CLUBHOUSE|">
    <DescriptiveText>Bathing Facilities|Swimming Pool|Clubhouse at Pool|</DescriptiveText>
  </Service>
  <Service CodeDetail="BATH|SWIMPOOL|BF_DECKCHAIRPOOL|ISONCHARGE">
    <Features>
      <Feature CodeDetail="Charge Type:">
        <DescriptiveText>free of charge</DescriptiveText>
      </Feature>
    </Features>
    <DescriptiveText>Bathing Facilities|Swimming Pool|Deckchairs at Pool|Charge
Type:</DescriptiveText>
  </Service>
  <Service CodeDetail="BATH|SWIMPOOL|BF_LANDSCAPE|">
    <DescriptiveText>Bathing Facilities|Swimming Pool|Pool Landscape|</DescriptiveText>
  </Service>
  <Service CodeDetail="BATH|SWIMPOOL|BF_MATTRESSPOOL|ISONCHARGE">
    <Features>
      <Feature CodeDetail="Charge Type:">
        <DescriptiveText>free of charge</DescriptiveText>
      </Feature>
    </Features>
    <DescriptiveText>Bathing Facilities|Swimming Pool|Mattresses at Pool|Charge
Type:</DescriptiveText>
  </Service>
  <Service CodeDetail="BATH|SWIMPOOL|BF_POOL|POOLCHD">
    <Features>
      <Feature CodeDetail="Pool Child Basin:">
        <DescriptiveText>Integrated</DescriptiveText>
      </Feature>
    </Features>
    <DescriptiveText>Bathing Facilities|Swimming Pool|Outdoor Pool|Pool Child
Basin:</DescriptiveText>
  </Service>
  <Service CodeDetail="BATH|SWIMPOOL|BF_POOL|POOLWATER">
    <Features>
      <Feature CodeDetail="Pool Water:">
        <DescriptiveText>Freshwater</DescriptiveText>
      </Feature>
    </Features>
    <DescriptiveText>Bathing Facilities|Swimming Pool|Outdoor Pool|Pool Water:</DescriptiveText>
  </Service>
  <Service CodeDetail="BATH|SWIMPOOL|BF_POOL|QUANTITY_NUMBER">
    <Features>
      <Feature CodeDetail="Number:">
        <DescriptiveText>1</DescriptiveText>
      </Feature>
    </Features>
    <DescriptiveText>Bathing Facilities|Swimming Pool|Outdoor Pool|Number:</DescriptiveText>
  </Service>

```

Technical Documentation (TD)

```
</Service>
<Service CodeDetail="BATH|BEACH|BF_PRIVBEACH|">
  <DescriptiveText>Bathing Facilities|Beach|Hotel Private Beach|</DescriptiveText>
</Service>
<Service CodeDetail="BATH|BEACH|BF_ROUTE|ROUTE">
  <Features>
    <Feature CodeDetail="Route:">
      <DescriptiveText>footpath</DescriptiveText>
    </Feature>
  </Features>
  <DescriptiveText>Bathing Facilities|Beach|Route to Beach:|Route:</DescriptiveText>
</Service>
<Service CodeDetail="BATH|SWIMPOOL|BF_SUNSHADEPOOL|ISONCHARGE">
  <Features>
    <Feature CodeDetail="Charge Type:">
      <DescriptiveText>free of charge</DescriptiveText>
    </Feature>
  </Features>
  <DescriptiveText>Bathing Facilities|Swimming Pool|Sunshades at Pool|Charge
Type:</DescriptiveText>
</Service>
<Service CodeDetail="BATH|SWIMPOOL|BF_SUNTERRACE|">
  <DescriptiveText>Bathing Facilities|Swimming Pool|Sun Terrace|</DescriptiveText>
</Service>
<Service CodeDetail="BATH|SWIMPOOL|BF_TOWELPOOL|ISONCHARGE">
  <Features>
    <Feature CodeDetail="Charge Type:">
      <DescriptiveText>free of charge</DescriptiveText>
    </Feature>
  </Features>
  <DescriptiveText>Bathing Facilities|Swimming Pool|Towels at Pool|Charge Type:</DescriptiveText>
</Service>

Provision of geocodes and transfer time/distance:

<Service CodeDetail="OBJECT|GENERAL|OI_GPS|LATITUD">
  <Features>
    <Feature CodeDetail="Latitude:">
      <DescriptiveText>25.0802156</DescriptiveText>
    </Feature>
  </Features>
  <DescriptiveText>Object Information|General|GPS-Coordinates:|Latitude:</DescriptiveText>
</Service>
<Service CodeDetail="OBJECT|GENERAL|OI_GPS|LONGITUD">
  <Features>
    <Feature CodeDetail="Longitude:">
      <DescriptiveText>55.1370871</DescriptiveText>
    </Feature>
  </Features>
  <DescriptiveText>Object Information|General|GPS-Coordinates:|Longitude:</DescriptiveText>
</Service>
<Service CodeDetail="OBJECT|GENERAL|OI_GPS_VERIFIED|YESNO">
  <Features>
    <Feature CodeDetail="Yes or No:">
      <DescriptiveText>Yes</DescriptiveText>
    </Feature>
  </Features>
  <DescriptiveText>Object Information|General|GPS-Coordinates Verified?|Yes or
No:</DescriptiveText>
</Service>
.....
<Service CodeDetail="LOCATION|AIRPORT|LD_AIRPORT1|DISTANCE">
  <Features>
    <Feature CodeDetail="Distance:">
      <DescriptiveText>5 km</DescriptiveText>
    </Feature>
  </Features>
```

```

        </Features>
        <DescriptiveText>Locations &amp; Distances|Airport|Airport 1:|Distance:</DescriptiveText>
    </Service>
    <Service CodeDetail="LOCATION|AIRPORT|LD_AIRPORT1|TRFTIME">
        <Features>
            <Feature CodeDetail="Transfer Time:">
                <DescriptiveText>5 min</DescriptiveText>
            </Feature>
        </Features>
        <DescriptiveText>Locations &amp; Distances|Airport|Airport 1:|Transfer Time:</DescriptiveText>
    </Service>
</Services>

```

6.2.9 Geographical location information

Geographical information are provided for mapping and search functions. Those information

```

<ArealInfo>
    <RefPoints>
        <RefPoint Name="Cape Verde" RefPointName="Country"/>
        <RefPoint Name="Boavista" RefPointName="Destination"/>
        <RefPoint Name="Sal Rei" RefPointName="Region"/>
        <RefPoint Name="Chaves" RefPointName="Resort"/>
        <RefPoint Name="SID" RefPointName="Airport"/>
    </RefPoints>
</ArealInfo>

```

Note: See also: *OTA_HotelAvailRQ* with type “AreaList”

6.2.10 Image download

The TravelKISS platform includes maintenance of images in standardized sizes and qualities. Images can be downloaded upon change and stored in the partner system. Our image server is not suitable for serving images for every display of search results or hotel-info.

There are 4 image sizes in two qualities. If the original image is of sufficient quality, the images will be converted to the following standard sizes, quality 1 and 2 are for catalog production, where images 3 and 4 are for internet use:

1. 2400 pix width or height at 300DPI and classified as "print_lead" (circa 2,5 MB)
2. 1200 pix width or height at 300DPI and classified as "print" (circa 1 MB)
3. 450 pix width or height at 72 or 96 DPI and classified as "display" (circa 130 KB)
4. 200 pix width or height at 72 or 96 DPI and classified as "thumbnail" (circa 40 KB)

Aspect ratio of the original image is maintained, no automatic cropping or manipulation is applied. A mild compression is implemented.

Any number of images can be uploaded for one property. The images need to be classified in the following categories:

Hotel, Pool, Reception, Restaurant, Garden, Beach, Room, Lobby, Spa, Miscellaneous, Not classified.

There are also possibilities to enter a textual short description and long description.

On Q1 2013 categories will follow OTA PIC (Picture Category Code) values, so Category attribute will change from a string to a PIC value following the table below:

Actual code	OTA PIC code	OTA PIC description
HOTEL	1	Exterior view
RECEPTION , LOBBY	2	Lobby view
POOL	3	Pool view
RESTAURANT	4	Restaurant
ROOM	6	Guest room
BEACH	11	Beach
SPA	12	Spa
MISCELLANEOUS , UNKOWN	20	Miscellaneous
GARDEN	22	Property amenity

NOTE: If a property only supplies a limited number of low quality images, not all categories and quality levels can be created.

NOTE: Different image sizes might be available than specified in above 4 categories, if the original image was not meeting the minimum "Display" requirements (i.e. "ImageFormat Width = "102" Height = "386"").

In the OTA_HotelDescriptiveInfoRS, only the filename is mentioned. The full path has to be added. Images may not be downloaded for each display from our servers. Images must be stored by the customer to serve their applications.

(image download not available on test systems – only from production)

AMTSPT0236

```
<MultimediaDescriptions>
  <MultimediaDescription>
    <ImageItems>
      <ImageItem Category="5" Version="1.0">
        <ImageFormat Width="102" Height="386" Title="Hotel Description" RecordID="1">
          <URL>512773064_60fbc94680.jpg</URL>
        </ImageFormat>
        <Description Caption="Room"/>
      </ImageItem>
      ...
    </ImageItems>
  </MultimediaDescription>
</MultimediaDescriptions>
```

On Q1 2013 image format section will be improved to specify all image formats, sizes and give more accurate information.

```
<MultimediaDescriptions>
  <MultimediaDescription>
    <ImageItems>
      <ImageItem Category="11" ID="1">
        <ImageFormat RecordID="1" Title="Beach" Height="30" Width="40"
        DimensionCategory="thumbnail" FileName="Melia Grand Hermitage_Aerial View.jpg" Format="6" UnitOfMeasureCode="9"/>
        <ImageFormat RecordID="2" Title="Beach" Height="300" Width="400"
        DimensionCategory="display" FileName="Melia Grand Hermitage_Aerial View.jpg" Format="6" UnitOfMeasureCode="9"/>
        <ImageFormat RecordID="3" Title="Beach" Height="900" Width="1200"
        DimensionCategory="print" FileName="Melia Grand Hermitage_Aerial View.jpg" Format="6" UnitOfMeasureCode="9"/>
        <ImageFormat RecordID="4" Title="Beach" Height="1800" Width="2400"
        DimensionCategory="print_lead" FileName="Melia Grand Hermitage_Aerial View.jpg" Format="6" UnitOfMeasureCode="9"/>
        <Description Caption="Aerial view"/>
      </ImageItem>
    </ImageItems>
  </MultimediaDescription>
</MultimediaDescriptions>
```

Imagepath to download an image of quality “displayed” and to resize maintaining aspect ratio to partner standard size (height of 300 pix):

http://tkimages.axisdata.net/ImageConverter.php?size=display&height=300&hotel=AMTS*****&filename=*****.jpg

7 Storing price and availability in the partner system

Partners that package our products with for example flights, transfers, rent-a-car, cruises, require to store and process price and availability information in their system, to be able to create the packages and distribute them. Searches for packages are supported by their systems.

Partners that sell isolated products and/or “package on the fly” from multiple providers using a shopping basket principle, normally search our system for price and availability in real-time. Each different search yields a different response and most partners using this model require limited price and availability information to be stored on their side, to be able to have an insight in available product and to be able to manage product with the destinations.

7.1 Notification schedule

Notifications can be scheduled to provide partners with updated information. AxisData and partner agree which number of months in advance is included in the notifications. A typical notification period would be 12 months or 18 months.

Notification types:

- Full notification – Inventories, rates and/or availabilities are transmitted for all properties and for the full notification period
- Delta notification:
 - o Inventory: upon change of any of the services in the OTA_HotelInvNotif message, including occupancy changes or amenity changes. The entire information for one property will be transmitted.
 - o Stock: upon status change of any day inside the notification period from open to close (or from close to open) an OTA_HotelAvailNotif message will be transmitted, **only including the dates affected**.
 - o Rates: upon any contract change affecting rates like additional offers, corrections, an additional contract for a following season, a full OTA_HotelRateplanNotif message will be transmitted for the entire notification period of the affected property.

To avoid repetitive generation, transmission and processing of the same data over and over again, **full notifications can be scheduled with a maximum frequency of once per week**, preferably with a lower frequency, up to once a month.

Ticket to be registered to allow frequencies less than once per week

Delta notifications can be scheduled in two manners:

- Grouped scheduling: i.e. every 30 minutes between 09:00 and 23:00 h. It is thought that the maximum frequency should be no less than 30 minutes to avoid overlapping process, when larger sets of modifications are being transmitted.

- In real-time: upon change of data an isolated notification is transmitted within one minute of activation of the change (i.e. publication of a new offer or a “close” for a stop-sale/sold-out)

7.2 Rateplan Notification messages

This message is the most complex element of the integration. It represents the full complexity of our contracting application and all functionality is translated into rateplan elements. It is unlikely that functionalities in our contracting system match the available functionality in the distribution system to the full extent. Conclusively the implemented result of the processed rateplans gives a „price idea“ and not a guaranteed booking value. When implementing the rateplans, our partners have to make decisions regarding elements that do not match in functionality. This might include ignoring offer conditions or entire offers and affects competitiveness at first presentation, but also drop-off percentages when a „quote“ is executed in the booking process.

- **The only valid availability and invoicing amount is the amount returned in the OTA_HotelResRQ/RS.**
- **For this reason, partners must never commit to fixed bookings at fixed selling prices, based on Notifications.**
- **Partners must never commit to fixed bookings at fixed selling prices, based on Searches.**

The information provided in the rateplan is outdated as soon as it is generated per definition. Partner implementation, processing and updates in their distribution are not in our control. Conclusively no rights can be derived from the content of the rateplans. Your Agreement Annex specifically mentions this aspect and before go-live, the signed annex must be in possession of our HQ. Without a signed Agreement Annex, your IP's will not be liberated to access our production environment.

7.3 Purpose

Provide adequate price information and application rules to package holidays and to enable adequate product management, through insight of product available and the rates per arrival.

7.4 OTA_HotelRatePlanNotifyRQ/RS

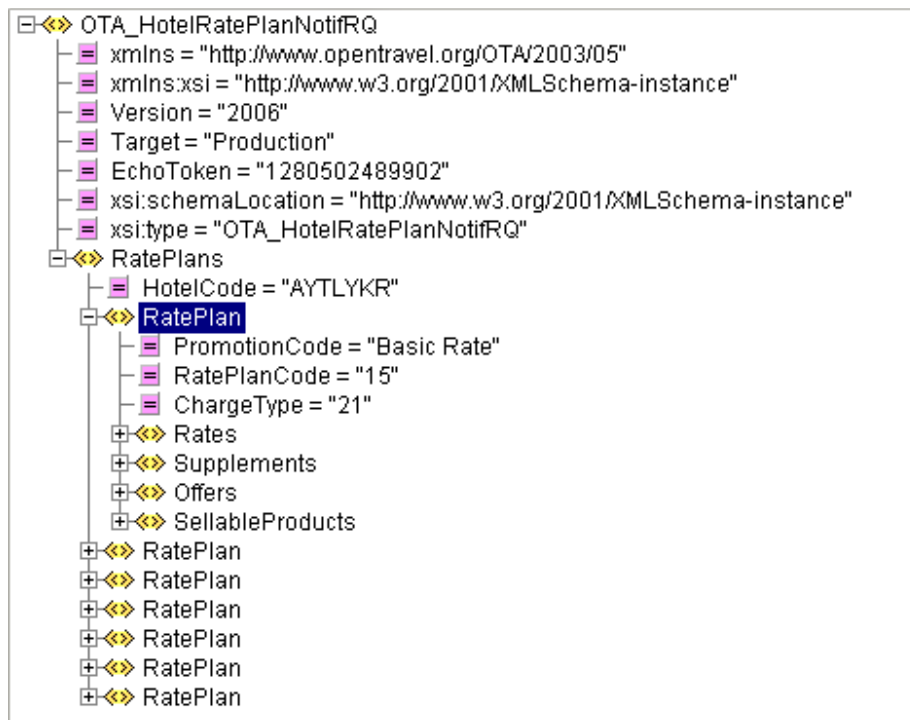
Hotel price information is communicated to our business partners using the OTA_HotelRatePlanNotifyRQ message who then send an OTA_HotelRatePlanNotifyRS back to our system to acknowledge its correct reception when the rateplans are sent via WS. When Rateplans are sent via FTP, correct reception is assumed by our system

Each message sends a collection of **rate plans** describing all possible prices for a given **hotel property** for a certain period (say, 18 months).

Each **rate plan** contains **rates** for a specific product subject to certain **booking rules**, listing the rates for all possible room occupancy combinations (e.g. 2 ADT + 1 CHD).

A product usually consists of a **room** type combined with a **board** type (e.g. a double room with breakfast included).

Schematic representation:



7.4.1 Basic and Special Rates:

The basic rate plan lists the contract rates and is labelled **“Basic Rate”** (attribute PromotionCode). Usually at the end of the rate plan a list of promotional offers is included which may apply to the basic rates.

If a hotel establishes **use conditions** which apply to all rate plans they are repeated in the booking rules for each rate plan. A common case of use conditions is the requirement of a minimum stay length.

7.4.2 Price type

Attribute ChargeType for <RatePlan> element.
Code values taken from OTA Code Table CHG.

Ex.: `<RatePlan ChargeType="21" PromotionCode="Basic Rate">`
`<!-- 21 - per person per night, 19 - per room per night -->`

7.4.3 SellableProducts and Room Occupancies (see also InventoryNotif)

The information about the room and optionally the valid pax combinations for this room is given in the <SellableProducts> section.

A typical SellableProducts element consists of:

```
<SellableProducts>
  <SellableProduct End = "2011-03-31" Start = "2010-07-30" InvType = "ROOM" InvCode = "RMSDDB0000-HB">
    <GuestRoom>
      <Quantities MinBillableGuests = "2"/>
    </GuestRoom>
  </SellableProduct>
</SellableProducts>
```

The inclusion of The <Occupancy> element under <GuestRoom> is no longer supported and customers should refer to the same element in the inventory message. The number of Infants that are allowed in the room is no longer correct in the <Occupancy> element in the OTA_HotelRatePlanNotifRQ

The InvCode is a contraction of the Room code and the base board (i.e. RMSDDB0000-HB), in order to facilitate an easy detection of the board included in the base rates. Previously customers had to detect the board supplement specifying 0,00€ to detect the board included.

7.4.4 Basic rate (full paying pax)

A number of <Rate> elements define the validity (Start and End dates) of the rate amount in the subsequent <BaseByGuestAmount> elements.

A Boolean attribute NoOffersAllowed controls whether or not the <Offers> collection further down in the rate plan can be applied to this rate or not. In the absence of this attribute the action defaults to allowing offers.

Note: If a booking spans days with no offers allowed and others with offers allowed, the offers can be applied on the respective days.

Example: In November the rate is €34.00 for the first two guests with no offers allowed.

```
<Rate Start="2007-11-01" End="2007-11-30" NoOffersAllowed="true">
  <BaseByGuestAmts>
    <BaseByGuestAmt AmountAfterTax="34.00" CurrencyCode="EUR"
      NumberOfGuests="2"/>
  </BaseByGuestAmts>
</Rate>
```

For charge type 21 (per person per night) the <BaseByGuestAmount> element states the price for a full paying pax. The NumberOfGuests attribute specifies the no. of full paying pax.

For charge type 19 (per room per night) the <BaseByGuestAmount> element states the price for the room with standard occupancy. The NumberOfGuests attribute specifies the no. of pax included in this amount.

Ex.: `<BaseByGuestAmt AmountAfterTax="100.00" CurrencyCode="EUR" NumberOfGuests="2"/>`

The NumberOfGuests attribute represents the offset from which adult pax supplements are counted by the AdditionalGuest attribute. In other words, a pax supplement applies to guest NumberOfGuests + AdditionalGuest.

Ex.: `<BaseByGuestAmt AmountAfterTax="100.00" CurrencyCode="EUR" NumberOfGuests="2"/>`

`<Supplement SupplementType="Pax" AdditionalGuestNumber="1" MinAge="18"
Amount="-20.00" CurrencyCode="EUR" AddToBasicRate="true"/>`

This pax supplement is valid for the 3rd adult:

$$\text{NumberOfGuests} + \text{AdditionalGuestNumber} = 2 + 1 = 3$$

Note: The NumberOfGuests (internally called FullPayer), also determines the number of children that will be converted to an adult, if MinOccupancy for AgeQualifyingCode = "10" is less than the NumberOfGuests

In addition to these occupancy limits the minimum number of billable pax irrespective of the actual number of persons in the room is given by the attribute MinBillableGuests in the <Quantities> element:

MinBillableGuests indicates the minimum number of guests for which a room charge will be applied, even if there are fewer guests in the room.

7.4.5 Booking Rules:

BookingRules are used to specify certain conditions that must be met in order to qualify for these rates:

- "Minimum length of stay is 2 days":

```
<BookingRule Start="2008-01-01" End="2008-03-15">
  <LengthsOfStay>
    <LengthOfStay Time="2" TimeUnit="Day" MinMaxMessageType="SetMinLOS"/>
  </LengthsOfStay>
</BookingRule>
```

- "This rate plan is valid only for bookings made within a certain date range":

```
<BookingRule>
  <Description>
    <Text Formatted = "true">SELLING_FROM 2009-09-08</Text>
    <Text Formatted = "true">SELLING_TO 2010-03-31</Text>
  </Description>
</BookingRule>
```

- "This hotel does not allow children":

```
<BookingRule>
  <Description>
    <Text Formatted="true">MIN_AGE_ALLOWED 18</Text>
  </Description>
</BookingRule>
```

7.4.6 Cancellation policy notification

A generic cancellation policy or special restrictions for individual hotels and periods is included in the BookingRules.

Two types of "Deadline OffsetDropTime" exist:

- Counted from the booking moment: in general used to specify a „cool-off“ period without cancellation cost.
- Counted from the arrival day: in general used to increase the cancellation cost nearer the arrival.

BasisType can have the values:

- FullStay: the percentage is applied on the total booking value.
- 1Day
- 2Days
- 3Days

AmountPercent can have the values:

- Percent (of the BasisType or specified NmbrOfNights)
- Amount (flat amount)

Note:

- OffsetUnitMultiplier = "0" OffsetTimeUnit = "Day" means the „same day“ – i.e. booking date or arrival date!
- AfterBooking conditions have a higher priority than BeforeArrival conditions

In the below example:

- Booking can be cancelled free of charge if made the same day.
- Cancellation within 3 days of arrival: full booking must be paid.
- Cancellation from 60 to 4 days before arrival: 20% of booking value must be paid.
- Cancellation from 100 to 61 days before arrival: 5% of the booking value must be paid.
- If the booking is made exactly or less than 100 days before arrival, still the same day free cancellation applies for the booking day.
- If the booking is made 101 days or more before arrival, the free cancellation policy is extended to the first day payable cancellation applies (day 100 before arrival in this case).

```
<BookingRules>
  <BookingRule>
```

```
<CancelPenalties>
  <CancelPenalty>
    <Deadline OffsetDropTime = "AfterBooking" OffsetUnitMultiplier = "0" OffsetTimeUnit = "Day"/>
    <AmountPercent Percent = "0" BasisType = "FullStay"/>
  </CancelPenalty>
  <CancelPenalty End = "2011-12-31" Start = "2011-10-01">
    <Deadline OffsetDropTime = "BeforeArrival" OffsetUnitMultiplier = "100" OffsetTimeUnit = "Day"/>
    <AmountPercent Percent = "5" BasisType = "FullStay"/>
  </CancelPenalty>
  <CancelPenalty End = "2011-12-31" Start = "2011-10-01">
    <Deadline OffsetDropTime = "BeforeArrival" OffsetUnitMultiplier = "60" OffsetTimeUnit = "Day"/>
    <AmountPercent Percent = "20" BasisType = "FullStay"/>
  </CancelPenalty>
  <CancelPenalty End = "2011-12-31" Start = "2011-10-01">
    <Deadline OffsetDropTime = "BeforeArrival" OffsetUnitMultiplier = "3" OffsetTimeUnit = "Day"/>
    <AmountPercent Percent = "100" BasisType = "FullStay"/>
  </CancelPenalty>
  ....
```

Amount based cancellation policies, do not hold the BasisType, but indicate the currency:

```
<CancelPenalty End = "2011-12-31" Start = "2011-10-01">
  <Deadline OffsetDropTime = "BeforeArrival" OffsetUnitMultiplier = "3" OffsetTimeUnit = "Day"/>
  <AmountPercent Amount = "64.25" CurrencyCode="EUR"/>
```

7.4.7 Some conditions are specified at the Rate level

- A date range during which these rates apply:

```
<Rate Start="2006-01-01" End="2006-09-30">
```

- A stay duration for which this rate is applicable,
E.g. the minimum length of stay (LOS):

```
<Rate Start="2006-01-01" End="2006-09-30" MinLOS="3">
```

- If the rate depends on the day of week, e.g. only applies on weekends, the days on which it applies are explicitly mentioned (alternatively, certain days can be explicitly excluded):

```
<Rate Start="2006-01-01" End="2006-09-30" Fri="true" Sat="true">
```

Example: Weekend rates with no arrivals on Sunday and no departures on Saturday.

```
<BookingRule>
  <DOW_Restrictions>
    <AvailableDaysOfWeek Fri="true" Sat="true" Sun="true"/>
    <ArrivalDaysOfWeek Sun="false"/>
    <DepartureDaysOfWeek Sat="false"/>
  </DOW_Restrictions>
</BookingRule>
```

The following rules for specifying the days of week under each tag:

- If not a single day is specified => all days are assumed to be "true", i.e. permitted.
- If only days with "true" are specified => all other days are assumed to be "false"
- If only days with "false" are specified => all other days are assumed to be "true"

NOTE: The system also allows registering "exploded basic rate ranges", specifically in use when in one weekend the Friday is weekend rate, but in the next weekend the Friday is week-day rate or other combinations of high/low season (events in cities). Conclusively for one year rates, 52 week-day rate periods and 52 weekend rate periods can be communicated in the RatePlan!

- If the rate is part of an offer, replacing the contracted rate, mostly no other offers may be applied. This is expressed in the NoOffersAllowed element:

```
<Rate NoOffersAllowed = "true" End = "2010-08-31" Start = "2010-08-29">
  <BaseByGuestAmts>
    <BaseByGuestAmt MinAge = "12" NumberOfGuests = "2" CurrencyCode = "EUR"
    AmountAfterTax = "79.38"/>
  </BaseByGuestAmts>
</Rate>
```

7.4.8 Supplements

Supplements of all types are specified in a new <Supplement> element under the <Supplements> collection. Supplements basically consist of additional payments for

additional guests	SupplementType="Pax"
higher priced meal plans	SupplementType="Board"
extra services provided	SupplementType="Extra"

The <Supplement> element contains attributes to define the period of validity, the inventory this supplement refers to, the pax type and the amount or percentage of the base value which is charged.

- For pax supplements (SupplementType="Pax") Percent refers to the basic rate defined in <BaseByGuestAmount>.
- For board supplements (SupplementType="Board") refers to the respective amount paid by the first adult.
- Extra supplements (SupplementType="Extra") Percent refers to the respective amount paid by the first adult.

A <Supplement> can have child elements defining additional conditions for the supplement to apply:

- <RoomCompanions> defines restrictions on the number and type of other persons in the room. (Ex.: a child accompanied by at least 2 adults).
- <PrerequisiteInventory> defines other services which must be booked in connection with this supplement. (Ex.: supplement only valid with half board booked).

7.4.8.1 Pax supplements

Supplements for additional pax (3rd adult, 1st child, 2nd child etc.) are defined in <Supplement> elements with a SupplementType="Pax". The pax types referred to are defined by their respective age ranges.

The no. of the additional pax of each pax type is specified in the AdditionalGuestNumber attribute. If AdditionalGuestNumber is not specified the supplement applies to all pax of the specified type (adults, child, any, etc.).

Note:

If **no** pax supplement is defined for a certain pax type, but the room occupancy permits additional guests of this type, **the additional pax pay the basic rate** in <BaseByGuestAmount>, even though the NumberOfGuests is lower than the additional guests' count.

The supplement can be specified as a percentage value which applies to the basic rate or an amount which replaces the basic rate. In cases where an amount must be added to the basic rate the attribute AddToBasicRate is set to "true" (otherwise it is assumed to substitute the basic rate).

Ex.: <Supplement SupplementType="Pax" AdditionalGuestNumber="1" MinAge="18"
Amount="70.00" CurrencyCode="EUR"/>
"1st additional adult pays 70€"

Ex.: <Supplement SupplementType="Pax" AdditionalGuestNumber="2" MinAge="2" MaxAge="17"
Percent="-70.00"/>
"2nd child gets a 70% reduction on (pays 30% of) the basic rate"

Ex.: <Supplement SupplementType="Pax" AdditionalGuestNumber="1" MinAge="18"
Amount="-20.00" CurrencyCode="EUR" AddToBasicRate="true"/>
"1st additional adult pays 20€ less than basic rate"

Ex.: <Supplement SupplementType="Pax" AdditionalGuestNumber="1" MinAge="18"
Amount="-20.00" CurrencyCode="EUR" AddToBasicRate="true"/>

```
<Supplement
  MandatoryIndicator = "true"
  AddToBasicRate = "true"
  CurrencyCode = "EUR"
  Amount = "6.00"
  AgeQualifyingCode = "10"
  InvType = "Extra"
  InvCode = "XSS1"
  ChargeType = "21"
  End = "2011-10-31"
  Start = "2011-05-01"
  SupplementType = "Extra"/>
  "1st additional adult pays 20€ less than basic rate"
```

A pax supplement may be specific to a certain room type and/or a certain board type.

If it is tied to a certain room type it will only appear in the rate plans for that room.
If it is tied to a certain board type the board code must be mentioned in the InvCode attribute of the <Supplement> tag.

Ex.: `<Supplement SupplementType="Pax" AdditionalGuestNumber="1" MinAge="18" Amount="70.00" CurrencyCode="EUR">
<PrerequisiteInventory InvCode="AI"/>
</Supplement>`
"1st additional adult in this room pays 70€ if "All Inclusive" board is booked."

Often the child policy of a hotel links the rate to the number of adult companions in the room. These conditions are specified in the <RoomCompanions> child element of <Supplement>.

Ex.: `<Supplement SupplementType="Pax" AdditionalGuestNumber="1" MinAge="2" MaxAge="17" Amount="00.00">
<RoomCompanions MinAge="18" MinCompanions="1" MaxCompanions="1"/>
</Supplement>`

or (equivalent):

Ex.: `<Supplement SupplementType="Pax" AdditionalGuestNumber="1" MinAge="2" MaxAge="17" Percent="-100.00">
<RoomCompanions MinAge="18" MinCompanions="1" MaxCompanions="1"/>
</Supplement>`

"1st child is free if accompanied by exactly one adult"

7.4.8.1.1 Child profile

Many contracts specify different rates or discount percentages according to child age. This is expressed by a repeated child supplement for the same dates with different min and max ages:

`<Supplement SupplementType="Pax" MinAge="2" MaxAge="7" Percent="-100.00">
<Supplement SupplementType="Pax" MinAge="8" MaxAge="14" Percent="-50.00">`

In addition to specific rates or discounts per age, this might also be applied by child number. In other words, the first and second child do not have the same rate or discount.

`<Supplement SupplementType="Pax" AgeQualifyingCode="8" AdditionalGuestNumber="1" Amount="00.00">
<Supplement SupplementType="Pax" AgeQualifyingCode="8" AdditionalGuestNumber="2" Amount="10.00">`

NOTE: extremely important is the assignment of the first and further children. Children are assigned by descending age order: i.e. **the oldest child is assigned to be the first child** and so on until the youngest child is assigned last.

NOTE: children definitions for age and first and second child for the room-rate are independent of the definition of the board upgrades.

7.4.8.2 Single Use Supplements

Whereas in many hotel contracts the rates for a “double room for single use” are specified by assigning a separate room code for this situation it is possible to express the additional amount to be paid for single use as a supplement to the basic rate.

Example:

In the rate plan for a double room the basic rate is 100€ per pax per night.
The same room for single use is available at an additional supplement of 70€ per night.

```
<BaseByGuestAmt AmountAfterTax="100.00" CurrencyCode="EUR" NumberOfGuests="2"/>
...
<Supplement SupplementType="Pax" MinAge="18" Amount="70.00" CurrencyCode="EUR"
  SingleUse="true"/>
```

7.4.8.3 Board supplements

Supplements for board types are also specified in the <Supplement> element with a SupplementType="Board". Each occurrence of <Supplement> defines an additional amount to be charged for the stated board type for the stated pax type. If no pax type is mentioned (i.e. no age ranges given) the supplement is valid for all pax types (except infants as always).

Ex.: <Supplement SupplementType="Board" InvCode="HB" InvType="Board" MinAge="12"
 MaxAge="17" Amount="6.00" CurrencyCode="EUR"/>
 “For Half Board there is a 6€ additional payment for children between 12 and 17 years”

<Supplement SupplementType="Board" InvCode="HB" InvType="Board" MinAge="18"
 Amount="12.00" CurrencyCode="EUR"/>
 “For Half Board there is a 12€ additional payment for adults”

7.4.8.4 Included board (board base)

The board which is included in the basic rate is specified as a board supplement with a zero amount.

Ex.: <Supplement SupplementType="Board" InvCode="BB" InvType="Board" Amount="0.00"
 CurrencyCode="EUR"/>
 “Breakfast is included in the basic room rate”

The board base is also indicated in the contracted “room code – board code” in the InvType of the SellableProduct:

```
<SellableProducts>
  <SellableProduct End = "2011-03-31" Start = "2010-07-30" InvType = "ROOM" InvCode = "RMSDDB0000-HB">
    <GuestRoom>
      <Quantities MinBillableGuests = "2"/>
    </GuestRoom>
  </SellableProduct>
</SellableProducts>
```

7.4.8.5 Extras

Other extra services can be specified as supplements. Extras may either be optional or mandatory. A typical mandatory extra service is the Christmas Eve or New Year Gala Dinner which must be booked and paid for on the respective dates.

Ex.: `<Supplement SupplementType="Extra" Start="2008-12-25" End="2008-12-25" InvCode="CGNB" InvType="Extra" Amount="35.00" CurrencyCode="EUR" MandatoryIndicator="true"/>`
 "On Dec. 25th add 35€ for mandatory Christmas Eve gala dinner"

Extra supplements can also have different targets and frequencies of application. This information is communicated in the attribute ChargeType which encodes all combinations of

Application Target	X	Application Frequency
once		per stay
per room		per day
per person		per week

Therefore, ChargeType can currently take on the following values from the OTA code table Charge Type (CHG):

12	(once) per stay
1	(once) daily
17	(once) weekly
18	per room per stay
19	per room per night
32*	per room per week
20	per person per stay
21	per person per night
33*	per person per week

* *These values have been applied for with the OTA standards committee, but are not confirmed.*

Ex.: `<Supplement SupplementType="Extra" Start="2009-11-01" End="2009-12-17" ChargeType="19" InvCode="CAR_TYPE_D" InvType="Extra" Amount="18.00" CurrencyCode="EUR" AddToBasicRate="true" MandatoryIndicator="true"/>`
 "Daily rental car charge of 18€ for the room"

Note:

If the ChargeType attribute is omitted the default value of "21" (per person per night) is assumed.

7.4.8.6 Supplements and extras by Length Of Stay

Supplements and extras can vary by the duration of the stay being booked. This is often used in a typical „short stay supplement“ of when a package is offered and the additional service varies if booked for a longer period. For example if a rent-a-car is included, the price per day is higher when booked for two days than when it is booked for a week and again cheaper when booked for a two week stay.

example supplement for short stay using SupplementRules:

```
.....
<Supplement AddToBasicRate = "true" AgeQualifyingCode = "10" ChargeType = "21" End = "2014-10-31" InvCode = "SMS1"
InvType = "Extra" MandatoryIndicator = "true" Percent = "2.00" Start = "2014-05-01" SupplementType = "Extra">
  <SupplementRules>
    <SupplementRule>
      <LengthsOfStay>
        <LengthOfStay MinMaxMessageType = "MinLOS" Time = "3" TimeUnit = "Day"/>
      </LengthsOfStay>
    </SupplementRule>
  </SupplementRules>
</Supplement>
...
```

7.4.8.7 Second Order Supplements

There are supplements referring to other supplements, e.g. board supplements referring to other board supplements. These are also defined in the <Supplement> element.

Example:

- Adult board supplement of 8€ for HB and 15€ for AI.
- Children (2-12) pay 50% of adult board supplements.

```
<Supplement SupplementType="Board" InvCode="HB" MinAge="13" InvType="Board"
AmountAfterTax="8.00" CurrencyCode="EUR"/>
<Supplement SupplementType="Board" InvCode="AI" MinAge="13" InvType="Board"
AmountAfterTax="15.00" CurrencyCode="EUR"/>
<Supplement SupplementType="Board" InvType="Board" MinAge="2" MaxAge="12" Percent="-50.00"/>
```

7.4.1 Promotional Offers

Promotional offers s.a. early booking discounts, free nights and long stay offers can be communicated as rules which are applied to the basic rates instead of separate rate plans containing the rates with one or more offers applied. This approach minimizes data volume and is suitable for client platforms which require offer specifications to be supplied as parameters.

As of OTA specification version 2007A the OTA_HotelRatePlanNotifRQ includes an additional element <Offers> which describes promotional offers for a particular hotel.

If promotional offers pertain to all rate plans of a hotel the **<Offers>** element is specified at the top level of the message. Promotional offers which are specific to a rate plan are defined in an **<Offers>** element within the rate plan.

Each offer is described in its own **<Offer>** element which can have attributes **OfferCode**, **RPH** which allows this offer to be referred to by other offers and **OperationOrder** which defines the order in which offers should be applied. **OfferCode** is an optional unformatted string defined by the hotel or destination office. We are planning to unify offer codes so they can be used to identify the type of offer at hand. Currently the type of offer must be determined by the use of elements and attributes in the **<Offer>** element.

Technically an offer consists of a number of conditions which must hold for the offer to be applied on the one hand, and the procedure defining the actual price reduction on the other.

- **<OfferRules>** combines all conditions which must be met and represents a superset of the **<BookingRules>** and **<Supplements>** elements found under the **previous chapters**. Conclusively all elements previously mentioned must be taken in account for an **accurate implementation**.

The attribute **MaxContiguousBookings** determines how often the offer can be applied (e.g. "1" for once only per booking, and "99" for unlimited application).

MinAdvancedBookingOffset can be used to define a rolling booking window like "must be booked at least 30 days before arrival". Complexity in this matter increases in case of increasing consecutive rolling early-booking offers. A **MaxAdvancedBookingOffset** is used to clearly identify the limitations and the TravelKISS contracting application actually requires the specific insertion of min and max advance days. When for example a 10% discount is given between 90 and 60 days before arrival, a 20% discount is given between 120 and 90 days before arrival and 30% is given between 365 and 120 days, the AdvancedBookingOffset will look like this:

```
<Offer OperationOrder = "10" RPH = "0" OfferCode = "EBR1">
  <OfferRules>
    ...
    <OfferRule MinAdvancedBookingOffset = "P120D" MaxAdvancedBookingOffset = "P365D"/>

<Offer OperationOrder = "11" RPH = "1" OfferCode = "EBR2">
  <OfferRules>
    ....
    <OfferRule MinAdvancedBookingOffset = "P90D" MaxAdvancedBookingOffset = "P119D"/>

<Offer OperationOrder = "12" RPH = "2" OfferCode = "EBR3">
  <OfferRules>
    .....
    <OfferRule MinAdvancedBookingOffset = "P60D" MaxAdvancedBookingOffset = "P89D"/>
```

Disadvantage in this case is that our system will not apply the discount if the booking is made 366 days or more before arrival.

A **<DateRestriction>** specifies start and end dates on arrival, stay, departure and booking. **<LengthOfStay>** defines conditions imposed on the length of stay. **MinMaxMessageType** indicates the type of condition:

FixedLOS	exact stay duration required
MinLOS	minimum stay duration
MaxLOS	maximum stay duration

Time and **TimeUnit** define the value of the LOS (eg. 1 week, 12 days, etc.)

Day of week restrictions (<**DOW_Restrictions**>) can be imposed on stay (<**AvailableDaysOfWeek**>), arrival (<**ArrivalDaysOfWeek**>) or departure (<**DepartureDaysOfWeek**>). In addition to these permitted days compulsory stay days can be specified in <**RequiredDaysOfWeek**>.

Some offers depend on the combination of persons in a booking. The element <**Occupancy**> is used to define minimum and maximum occupancies per age group.

The <**Inventories**> element lists compulsory inventory items in the booking necessary for the offer to be applied.

A certain discount (on the booking total) may for instance only be applicable to persons who have booked full board (<Inventory InvCode="FB"/>).

If all the conditions for a promotional offer are met it can be applied by reducing certain rates in the rate plan. Which prices and how they are reduced is defined by the remaining tags.

<**Discount**> specifies a percentage or flat reduction for one or more stay days. If the discount applies to the complete stay only the **Amount** or **Percent** attributes are needed. For "Nth Night Free" type offers the **NightsRequired** and **NightsDiscounted** attributes are used.

Example "7th Night Free":

<Discount NightsRequired="7" NightsDiscounted="1" Percent="100"/>.

If an offer also specifies which nights will be discounted (the first, the last, etc.), the **DiscountPattern**, **DiscountFirstBookingDays** or **DiscountLastBookingDays** attributes are used. Such an offer also specifies which nights will be discounted.

There are three possible cases:

- The first nights of the booking are discounted:
this is indicated by setting the attribute DiscountFirstBookingDays to "true".
- The last nights of the booking are discounted:
this is indicated by setting the attribute DiscountLastBookingDays to "true".
- Specific days of each offer cycle (of NightsRequired days) are discounted:
these days are defined by the **DiscountPattern** which shows a letter for each day of the offer cycle (NightsRequired days in total). Each day of the cycle to be discounted is set to 'Y', each charged for day to 'N'.

Examples:

<Discount NightsRequired="7" NightsDiscounted="1" Percent="100"
DiscountLastBookingDays="true"/>

For a 10 day booking the 10th day will be fully discounted.

```
<Discount NightsRequired="7" NightsDiscounted="2" DiscountPattern="YNNNNNY"
Percent="50"/>
```

states that every 7 nights the first and last nights are half price.

```
<Discount NightsRequired="7" NightsDiscounted="1" DiscountPattern="NNNNNNY"
Percent="100"/>
```

For a 10 day booking the 7th day will be discounted.

For a 20 day booking the 7th and 14th day will be discounted (if MaxContiguousBookings > 1).

The optional attribute **ChargeUnitCode** can take on values 7 and 12 currently, where 7 means "per person" and 12 "per stay". This attribute is only used in connection with fixed amount discounts.

One category of promotional offers substitutes a higher priced service for another service maintaining the lower price or offers a service for the price of another lower priced service. A typical example is offering full board for the price of half board.

<FreeUpgrade> is the element defining this type of offer through its child tags **<UpgradeFrom>** for the (lower priced) service charged and **<UpgradeTo>** for the (higher priced) service provided. Which of the two services has to appear in the booking depends on the hotel contract and can be defined as the value of the attribute **UpgradeBookingCode** in **<FreeUpgrade>**.

The above example could be coded as:

```
<FreeUpgrade UpgradeBookingCode="HB">
<UpgradeFrom InvCode="HB"/>
<UpgradeTo InvCode="FB"/>
</FreeUpgrade>
```

Note: here, half board must be booked although full board is provided.

Another example from the European leisure industry where rates are given per pax rather than per room would be:

"Double room for single use at the same rate (per pax) of the double room with double occupancy":

```
<FreeUpgrade UpgradeBookingCode="SGL">
<UpgradeFrom InvCode="DBL"/>
<UpgradeTo InvCode="SGL"/>
</FreeUpgrade>
```

Note: single occupancy must be booked although only the rate for double occupancy is charged.

A rate plan which provides different promotional offers several of which could potentially be applied to a single booking must define which offers can be cumulative with which other offers.

<CompatibleOffers> defines these relationships. Each **<CompatibleOffer>** tag defines the compatibility of the current offer with one or more other offers. By choosing the appropriate value for the **IncompatibleOfferIndicator** attribute either compatibility or incompatibility can be specified. Within an offer either the compatibility relationships with all other offers should be explicitly stated or, alternatively, only the compatible (or incompatible, depending on

IncompatibleOfferIndicator) offers are listed under the assumption that the remaining offers have the inverse compatibility relationship.

Since in the majority of cases offers are incompatible with other offers we have an agreement with our clients to assume an offer to be incompatible with all other offers unless stated otherwise, i.e. only compatible offers must be specified.

Example: if among 10 offers offer no. 9 (say, an early booking discount if you book 90 days in advance) and offer no. 10 (another early booking discount if you book 30 days in advance) are mutually exclusive but compatible with any other offer, and all other offers are mutually exclusive, then offer no. 10 should state:

<CompatibleOffer OfferRPH="9" IncompatibleOfferIndicator="true"/>
(implying it is compatible with all others)

and offer no. 9:

<CompatibleOffer OfferRPH="10" IncompatibleOfferIndicator="true"/>
(implying it is compatible with all others)

while all other offers could state:

<CompatibleOffer OfferRPH="10" IncompatibleOfferIndicator="false"/>
<CompatibleOffer OfferRPH="9" IncompatibleOfferIndicator="false"/>
(implying they are incompatible with all other offers, but absence of this identification means offers are NOT combinable).

When several incompatible offers can be applied the **OperationOrder** attribute in the **<Offer>** tag determines which one has precedence over the other. If the **OperationOrder** is identical for two offers, the offer with the **lowest OfferRPH** must be applied first and if this offer does not indicate further combinable OfferRPH's, no further offers can be applied.

The target of an offer may not always be the booking total but, for instance, only the room rate excluding board or extras. The inventory a promotional offer refers to can be restricted in the **<Inventories>** element. If it is omitted it is assumed that the offer refers to all available services in the parent rate plan or, if the **<Offers>** are defined on the top level, to all available services in all rate plans.

Note: not to be confused with **<Inventories>** as part of an **<OfferRule>** stipulating compulsory services in order for the offer to be applied.

- See example testhotel 3 specifically included for this note.

Example 1: "a discount applicable to accommodation only (not to meals and extras)":

<Inventory InvType="Room" AppliesToIndicator="true"/>

Example 2: "discount applicable to everything except deluxe apartments":

<Inventory InvCode="APTDLX" AppliesToIndicator="false"/>.

Finally, an offer may be applicable only for specific guests, e.g. the 2nd child or the 3rd adult. In such a case the definition of guests the offer applies to is given in the **<Guests>** element. The **<GuestByAgeGroup>** tag can be repeated for different age groups. The **FromOrder** and **ToOrder** attributes set the range of guests of the respective age group.

Example: The 3rd adult in the room receives a daily discount of 4€ on the half board supplement.

```
<Offer OfferCode="OF01" RPH="0" OperationOrder="0">
  <OfferRules>
    <OfferRule MaxContiguousBookings="1">
      <DateRestriction RestrictionType="booking"
        Start="2008-03-26" End="2008-06-30"/>
      <DateRestriction RestrictionType="stay"
        Start="2008-05-01" End="2008-06-30"/>
    </OfferRule>
  </OfferRules>
  <Discount ChargeUnitCode="7" Amount="4.00" CurrencyCode="EUR"/>
  <Inventories>
    <Inventory AppliesToIndicator="true"
      InvCode="HB" InvType="BOARD"/>
  </Inventories>
  <Guests>
    <GuestByAgeGroup FromOrder="3" ToOrder="3" AgeQualifyingCode="10"/>
  </Guests>
</Offer>
```

Offers (like Extras & Supplements) can also have different targets and frequencies of application. This information is communicated in the attribute ChargeType which encodes all combinations of

Application Target	X	Application Frequency
once		per stay
per room		per day
per person		per week

Therefore, ChargeType can currently take on the following values from the OTA code table Charge Type (CHG):

12	(once) per stay
1	(once) daily
17	(once) weekly
18	per room per stay
19	per room per night
32 *	per room per week
20	per person per stay
21	per person per night
33 *	per person per week

* These values have been applied for with the OTA standards committee, but are not confirmed.

Ex.: `<Supplement SupplementType="Extra" Start="2009-11-01" End="2009-12-17" ChargeType="19" InvCode="CAR_TYPE_D" InvType="Extra" Amount="18.00" CurrencyCode="EUR" AddToBasicRate="true" MandatoryIndicator="true"/>`
 "Daily rental car charge of 18€ for the room"

Note:

If the ChargeType attribute is omitted the default value of "21" (per person per night) is assumed.

Use case: Rate plan including Turbo early booking

Typical Turbo EB, which consists of two offers, combinable, not applicable on extras, fixed discount for adults only and applicable per week:

Fixed 20€ discount per person per week (the `<OfferRule MaxContiguousBookings = "99"/>` means that if you have 99 weeks or more in a booking, you can apply the offer as many times as there are weeks, with a maximum of 99). The fixed discount only applies to the Adults (often used in case children are free)

```
<Offer OperationOrder = "90" RPH = "1" OfferCode = "AOO1">
  <OfferRules>
    <OfferRule>
      <DateRestriction End = "2010-09-30" Start = "2010-06-17" RestrictionType = "booking"/>
      <DateRestriction End = "2011-03-31" Start = "2010-11-08" RestrictionType = "arrival"/>
    </OfferRule>
    <OfferRule>
      <LengthsOfStay>
        <LengthOfStay MinMaxMessageType = "MinLOS" TimeUnit = "Day" Time = "7"/>
      </LengthsOfStay>
    </OfferRule>
    <OfferRule MaxContiguousBookings = "99"/>
  </OfferRules>
  <Discount CurrencyCode = "EUR" Amount = "20.00" ChargeUnitCode = "33"/>
  <CompatibleOffers>
    <CompatibleOffer IncompatibleOfferIndicator = "false" OfferRPH = "2"/>
    <CompatibleOffer IncompatibleOfferIndicator = "false" OfferRPH = "3"/>
    <CompatibleOffer IncompatibleOfferIndicator = "false" OfferRPH = "4"/>
    <CompatibleOffer IncompatibleOfferIndicator = "false" OfferRPH = "5"/>
    <CompatibleOffer IncompatibleOfferIndicator = "false" OfferRPH = "6"/>
    <CompatibleOffer IncompatibleOfferIndicator = "false" OfferRPH = "7"/>
    <CompatibleOffer IncompatibleOfferIndicator = "false" OfferRPH = "8"/>
  </CompatibleOffers>
  <Inventories>
    <Inventory InvType = "Room" AppliesToIndicator = "true"/>
    <Inventory InvType = "Board" AppliesToIndicator = "true"/>
    <Inventory InvType = "Extra" InvCode = "NYE1" AppliesToIndicator = "false"/>
  </Inventories>
  <Guests>
    <GuestByAgeGroup MinAge = "13" AgeQualifyingCode = "10"/>
  </Guests>
</Offer>
```

And the percentage part of the Turbo early booking offer:

```
<Offer OperationOrder = "90" RPH = "2" OfferCode = "DPO2">
  <OfferRules>
    <OfferRule>
      <DateRestriction End = "2010-10-31" Start = "2010-03-16" RestrictionType = "booking"/>
    </OfferRule>
  </OfferRules>
</Offer>
```

```

        <DateRestriction End = "2010-10-31" Start = "2010-10-22" RestrictionType = "arrival"/>
    </OfferRule>
    <OfferRule MaxContiguousBookings = "99"/>
</OfferRules>
<Discount ChargeUnitCode = "21" Percent = "15.00"/>
<CompatibleOffers>
    <CompatibleOffer IncompatibleOfferIndicator = "false" OfferRPH = "1"/>
    <CompatibleOffer IncompatibleOfferIndicator = "false" OfferRPH = "3"/>
    <CompatibleOffer IncompatibleOfferIndicator = "false" OfferRPH = "4"/>
    <CompatibleOffer IncompatibleOfferIndicator = "false" OfferRPH = "5"/>
    <CompatibleOffer IncompatibleOfferIndicator = "false" OfferRPH = "6"/>
    <CompatibleOffer IncompatibleOfferIndicator = "false" OfferRPH = "7"/>
    <CompatibleOffer IncompatibleOfferIndicator = "false" OfferRPH = "8"/>
</CompatibleOffers>
<Inventories>
    <Inventory InvType = "Room" AppliesToIndicator = "true"/>
    <Inventory InvType = "Board" AppliesToIndicator = "true"/>
    <Inventory InvType = "Extra" InvCode = "NYE1" AppliesToIndicator = "false"/>
</Inventories>
</Offer>

```

OTA Discount ChargeUnitCode table implementation:

18 per room per stay
 19 per room per night
 32 * per room per week
 20 per person per stay
 21 per person per night
 33* per person per week

* Codes marked with an * have been submitted to OTA for inclusion, but at the time of establishment of this documentation, have not been granted.

Use case: Rate plan including complex promotional offers

The Palma Playa Hotel in Mallorca offers a number of special discounts which depend on the booking date, arrival and stay dates and the stay duration:

- an early booking discount of 17% for bookings until January, 31st. This discount is not cumulative with any other discounts.
- an early booking discount of 10% for bookings until April, 30th. This discount is cumulative with other discounts except for the Long Stay Offer.
- a Long Stay discount of 15% for stays longer than 21 days on everything except Extras.
- a "7th Night Free" offer for all arrivals between 04/25 and 05/01 or 06/12 and 06/19 or 10/08 and 10/23
- a "3 Nights Free" offer for stays of 14 or more days with arrivals between 04/25 and 05/01 or 06/12 and 06/19 or 10/08 and 10/16.
- a "5 Nights Free" offer for stays of exactly 21 days and arrivals between 04/25 and 05/01
- a double room for single use at the same rate as for double occupancy for all arrivals during September and October.

The corresponding rate plan would look like this:

```
<OTA_HotelRatePlanNotifRQ xmlns="http://www.opentravel.org/OTA/2003/05"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.opentravel.org/OTA/2003/05
C:\OTA\OTASPE~1\2006BR~1\_OTA2006B_PublicReviewXMLSchema\newOTA_HotelRatePlanNotifRQ.xsd"
EchoToken="117521" Version="3.1415926535897932384626433832795">
  <RatePlans HotelCode="XYL8079">
    <RatePlan>
      <Rates>
        <Rate Start="2007-04-01" End="2007-12-31">
          <BaseByGuestAmts>
            <BaseByGuestAmt AmountAfterTax="86.00" CurrencyCode="EUR"/>
          </BaseByGuestAmts>
        </Rate>
      </Rates>
      <SellableProducts>
        <SellableProduct InvCode="HB" InvType="BOARD">
          <GuestRoom/>
        </SellableProduct>
        <SellableProduct InvCode="SGL" InvType="ROOM">
          <GuestRoom/>
        </SellableProduct>
      </SellableProducts>
    </RatePlan>
    <RatePlan>
      <Rates>
        <Rate Start="2007-04-01" End="2007-12-31">
          <BaseByGuestAmts>
            <BaseByGuestAmt AmountAfterTax="65.00" CurrencyCode="EUR"/>
          </BaseByGuestAmts>
          <AdditionalGuestAmounts>
            <AdditionalGuestAmount MaxAdditionalGuests="1" MinAge="2" MaxAge="12" Amount="36.00"
CurrencyCode="EUR"/>
          </AdditionalGuestAmounts>
        </Rate>
      </Rates>
      <SellableProducts>
        <SellableProduct InvCode="HB" InvType="BOARD">
          <GuestRoom/>
        </SellableProduct>
        <SellableProduct InvCode="DBL" InvType="ROOM">
          <GuestRoom/>
        </SellableProduct>
      </SellableProducts>
    </RatePlan>
    <RatePlan>
      <Rates>
        <Rate Start="2007-04-01" End="2007-12-31">
          <BaseByGuestAmts>
            <BaseByGuestAmt AmountAfterTax="98.00" CurrencyCode="EUR"/>
          </BaseByGuestAmts>
        </Rate>
      </Rates>
      <SellableProducts>
        <SellableProduct InvCode="HB" InvType="BOARD">
          <GuestRoom/>
        </SellableProduct>
        <SellableProduct InvCode="DBIN" InvType="ROOM">
          <GuestRoom/>
        </SellableProduct>
      </SellableProducts>
    </RatePlan>
  </RatePlans>
</OTA_HotelRatePlanNotifRQ>
```

```

</RatePlans>
<Offers>
  <Offer OfferCode="EB1" OperationOrder="1" RPH="1">
    <OfferRules>
      <OfferRule>
        <DateRestriction End="2007-01-31" RestrictionType="booking"/>
      </OfferRule>
    </OfferRules>
    <Discount Percent="17"/>
    <OfferDescription>
      <Text>Non-cumulative Early Booking Discount</Text>
    </OfferDescription>
    <CompatibleOffers>
      <CompatibleOffer IncompatibleOfferIndicator="true" OfferRPH="2 3 4 5 6 7"/>
    </CompatibleOffers>
  </Offer>
  <Offer OfferCode="EB2" OperationOrder="2" RPH="2">
    <OfferRules>
      <OfferRule>
        <DateRestriction End="2007-04-30" Start="2007-02-01" RestrictionType="booking"/>
      </OfferRule>
    </OfferRules>
    <Discount Percent="10"/>
    <OfferDescription>
      <Text>Early Booking discount cumulative with all but the Long Stay offer</Text>
    </OfferDescription>
    <CompatibleOffers>
      <CompatibleOffer OfferRPH="3" IncompatibleOfferIndicator="true"/>
    </CompatibleOffers>
  </Offer>
  <Offer OfferCode="LS" OperationOrder="3" RPH="3">
    <OfferRules>
      <OfferRule>
        <LengthsOfStay>
          <LengthOfStay Time="22" TimeUnit="Day" MinMaxMessageType="SetMinLOS"/>
        </LengthsOfStay>
      </OfferRule>
    </OfferRules>
    <Discount Percent="15"/>
    <OfferDescription>
      <Text>stay at least 22 days to get a long-stay discount of 15%</Text>
    </OfferDescription>
    <Inventories>
      <Inventory InvCode="Extra" AppliesToIndicator="false"/>
    </Inventories>
  </Offer>
  <Offer OfferCode="21*16" OperationOrder="4" RPH="4">
    <OfferRules>
      <OfferRule>
        <DateRestriction Start="2007-04-25" End="2007-05-01" RestrictionType="arrival"/>
        <LengthsOfStay>
          <LengthOfStay Time="21" TimeUnit="Day" MinMaxMessageType="FixedLOS"/>
        </LengthsOfStay>
      </OfferRule>
    </OfferRules>
    <Discount NightsRequired="21" NightsDiscounted="5" Percent="100"/>
    <OfferDescription>
      <Text>stay 21 - pay 16 nights</Text>
    </OfferDescription>
  </Offer>
  <Offer OfferCode="14*11" OperationOrder="5" RPH="5">
    <OfferRules>

```

```

    <OfferRule>
      <DateRestriction Start="2007-04-25" End="2007-05-01" RestrictionType="arrival"/>
    </OfferRule>
    <OfferRule>
      <DateRestriction Start="2007-06-12" End="2007-06-19" RestrictionType="arrival"/>
    </OfferRule>
    <OfferRule>
      <DateRestriction Start="2007-10-08" End="2007-10-16" RestrictionType="arrival"/>
    </OfferRule>
  </OfferRules>
  <Discount NightsRequired="14" NightsDiscounted="3" Percent="100"/>
  <OfferDescription>
    <Text>stay 14 - pay 11 nights</Text>
  </OfferDescription>
</Offer>
<Offer OfferCode="7*6" OperationOrder="6" RPH="6">
  <OfferRules>
    <OfferRule>
      <DateRestriction Start="2007-04-25" End="2007-05-01" RestrictionType="arrival"/>
    </OfferRule>
    <OfferRule>
      <DateRestriction Start="2007-06-12" End="2007-06-19" RestrictionType="arrival"/>
    </OfferRule>
    <OfferRule>
      <DateRestriction Start="2007-10-08" End="2007-10-23" RestrictionType="arrival"/>
    </OfferRule>
  </OfferRules>
  <Discount NightsRequired="7" NightsDiscounted="1" Percent="100"/>
  <OfferDescription>
    <Text>stay 7 - pay 6 nights</Text>
  </OfferDescription>
</Offer>
<Offer OfferCode="DBL=DBIN" OperationOrder="7" RPH="7">
  <OfferRules>
    <OfferRule>
      <DateRestriction Start="2007-09-01" End="2007-10-31" RestrictionType="stay"/>
    </OfferRule>
  </OfferRules>
  <FreeUpgrade UpgradeBookingCode="DBIN">
    <UpgradeFrom InvCode="DBL"/>
    <UpgradeTo InvCode="DBIN"/>
  </FreeUpgrade>
  <OfferDescription>
    <Text>stay in a double for individual use and pay only the rate for double occupancy</Text>
  </OfferDescription>
</Offer>
</Offers>
<TPA_Extensions/>
</OTA_HotelRatePlanNotifRQ>

```

7.4.2 OTA_HotelRatePlanNotifyRS

When a partner system receives and processes an OTA_HotelRatePlanNotifRQ via WS it sends a positive OTA_HotelRatePlanNotifyRS if all went well:

```

<?xml version="1.0" encoding="UTF-8"?>
<OTA_HotelRatePlanNotifRS xmlns="http://www.opentravel.org/OTA/2003/05"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.opentravel.org/OTA/2003/05

```

```
C:\OTASPE~1\2005a\_OTA2005A_XML\OTA_HotelRatePlanNotifRS.xsd" EchoToken="1195558192512" Version="2006 ">
    <Success/>
</OTA_HotelRatePlanNotifRS>
```

If an error related to the wellformedness of the message is encountered an OTA_ErrorRS should be returned:

```
<?xml version="1.0"?>
<prefix_0:OTA_ErrorRS xmlns:prefix_0="http://www.opentravel.org/OTA/2003/05"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" ErrorCode="Unknown" ErrorMessage="Internal error"
Version="0"></prefix_0:OTA_ErrorRS>
```

If an error related to the contents of the message is encountered an OTA_HotelRatePlanNotifRS is sent communicating the type of error

7.4.3 Empty Rate Plans

An OTA_HotelRatePlanNotifyRQ may also be used to communicate that a hotel is being taken off-sales. This is done by sending a RatePlanStatusType of "Deactivated". Any previously communicated rates should be deleted in this case from the partner system until a future non-empty rate plan defines new rates.

This same situation occurs on the last day of the last valid contract in our system for a specific property. Because no future rates and stock are available for notification, the system will provide a "deactivated" message.

Note: mapping of hotel, rooms, boards etc should remain in place as this property is expected to return to on-sale shortly.

```
<OTA_HotelRatePlanNotifRQ xmlns="http://www.opentravel.org/OTA/2003/05" [^]
EchoToken="1229079988014" Target="Production" Version="2006">
    <RatePlans HotelCode="SKG0401">
        <RatePlan RatePlanStatusType="Deactivated"/>
    </RatePlans>
</OTA_HotelRatePlanNotifRQ>
```

NOTE: In case AxisData and partner have agreed to remove the property from the client portfolio permanently, an OTA_HotelInvNotifRQ will be transmitted with the status "deactivated" (see appropriate section)

7.5 Stock Notification messages

To communicate product availabilities to our partners we send a set of OTA_HotelAvailNotifyRQ messages (each of which should be acknowledged by an OTA_HotelAvailNotifyRS message in case of communication via WS - not in case of transmission via FTP):

```
<?xml version="1.0" encoding="UTF-8"?>
<OTA_HotelAvailNotifRS xmlns="http://www.opentravel.org/OTA/2003/05" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xsi:schemaLocation="http://www.opentravel.org/OTA/2003/05
C:\OTASPE~1\2005a\OTA2005A_XML\OTA_HotelAvailNotifRS.xsd" EchoToken="765553"
Version="3.1415926535897932384626433832795">
  <Success/>
</OTA_HotelAvailNotifRS>
```

Again, in case of a problem either an OTA_HotelAvailNotifRS with an Error element instead of Success or an OTA_ErrorRS is sent.

7.6 OTA_HotelAvailNotifyRQ/RS

The availability status can have one of the following values:

Open
Close

Each message lists the availability status for products of a single hotel property and specifies whether a room is available or not for a period of time. Note that the "InvCode" is a join of the room code and the base-board. For example InvCode = "RMSDSG0000-HB"

- It is possible to contract one room with different allotments. For example a double standard room with BB (5 units) and the same double standard with HB (20 units). Conclusively the stock situation might be different as bookings enter. Also one of the combinations might be closed for certain periods. For clients that cannot handle room-baseboard combinations, we can disable the transmission of room-baseboard in the InvCode. In that case we will include the most optimistic situation (i.e. if the double standard with BB is closed and the double standard with HB is open, the notification will state „open“).

7.6.1 One room with multiple base-boards

```
<AvailStatusMessages HotelCode = "AMTSES11B4">
  <AvailStatusMessage Override = "false">
    <StatusApplicationControl
      InvCode = "RMSDSG0000-HB"
      End = "2010-07-14"
      Start = "2010-06-24"/>
    <RestrictionStatus Status = "Close"/>
  </AvailStatusMessage>
  <AvailStatusMessage Override = "false">
    <StatusApplicationControl
      InvCode = "RMSDSG0000-BB"
      End = "2010-06-24"
      Start = "2010-06-24"/>
    <RestrictionStatus Status = "Close"/>
  </AvailStatusMessage>
  <AvailStatusMessage Override = "false">
    <StatusApplicationControl
      InvCode = "RMSDSG0000-BB"
```

```

End = "2010-07-14"
Start = "2010-06-25"/>
<RestrictionStatus Status = "Open"/>
</AvailStatusMessage>

```

7.6.2 Stop-Sale for board

Unavailability of a specific board for a certain period across all rooms or for a specific room is a common situation. This is expressed in the stock notification using „block“ in the InvType attribute. Below example shows an FB board closes in combination with a specific room and the board BB being unavailable for all rooms:

```

<AvailStatusMessage Override = "false">
  <StatusApplicationControl
    InvType = "Block"
    InvCode = "RMSDDB0000"
    End = "2011-05-08"
    Start = "2011-05-01"
    SubBlockCode = "FB"/>
  <RestrictionStatus Status = "Close"/>
</AvailStatusMessage>
<AvailStatusMessage Override = "false">
  <StatusApplicationControl
    InvType = "Block"
    End = "2011-06-30"
    Start = "2011-06-01"
    SubBlockCode = "BB"/>
  <RestrictionStatus Status = "Close"/>
</AvailStatusMessage>

```

The different stock notifications can be expressed in the following table, where case 1 is only available optionally, for situations where a partner system is unable to handle the combination of “room-code”-“board-code”:

Cases	InvCode	InvType	InvBlockCode	SubBlockCode	Description
1	RMDBSD0000	Room			Allotment status for a room
2	RMDBSD0000-BB	Room			Allotment status for a room, specifying the base board
3		Block		HB	Allotment status for a board
4		Block	RMDBSD0000	AI	Allotment status for room+board combination

7.6.3 Delta OTA_HotelAvailNotifyRQ/RS

The Override attribute specifies whether the message contains baseline (`Override="false"`) or incremental (`Override="true"`) information.

Baseline data are typically transmitted once a week while incremental data can be notified with a much higher frequency like once every 30 minutes from 09:00 to 20:00 h.

`<AvailStatusMessage Override="true">`

If a “stop sales” is communicated for a product an incremental message with “Close” status is transmitted. In addition, while the “stop sales” persists the baseline message communicates a **“Close” status omitting the Start and End dates**. This uniquely identifies a “stop sales” situation for the entire room being taken off-sale. A normal stop-sale for a short period because the room is sold-out, of course includes start and end-dates.

The order of application, on the last full stock notification is extremely important to achieve the correct availability situation end-result:

So if you receive a full stock notification on Saturday `<AvailStatusMessage Override="false">`
That specifies for a specific hotel and room:

15-7-2011 to 1-8-2011 – close
2-8-2011 to 15-9-2011 – open
16-9-2011 to 20-9-2011 – close
21-9-2011 to 30-4-2012 – open
1-5-2012 to 20-7-2012 – close

And a delta on Monday morning `<AvailStatusMessage Override="true">`:
10-9-2011 to 14-9-2011 – close

A delta on Monday afternoon:
12-9-2011 to 18-9-2011 – open

Another delta on Monday afternoon late:
13-9-2011 to 14-9-2011 – close

The end result on Monday evening must be:

15-7-2011 to 1-8-2011 – close
2-8-2011 to 10-9-2011 – open
11-9-2011 to 11-9-2011 – close
12-9-2011 to 12-9-2011 – open
13-9-2011 to 18-9-2011 – close
19-9-2011 to 19-9-2011 – open
20-9-2011 to 20-9-2011 – close
21-9-2011 to 30-4-2012 – open
1-5-2012 to 20-7-2012 – close

As these deltas must be applied on the last full received and in the order of reception (date/time stamp).

7.7 Packages

There are two ways packages can be created, usually separated by two different concepts.

- The most common is a combination of two products (for example hotel and rent-a-car). Two different products are combined to a new hotelcode (in this example the hotelcode with a C at the end). But also different hotels can be combined to a round-trip package this way
- Hotel supplied extras are often offered as a different room code containing a compulsory extra. This is most commonly used for offers that include for example spa treatments. Disadvantage is poor visibility of room descriptions in the German market and dependency on room descriptions in the search results in other markets.

Specific testcases are included to illustrate these cases.

7.8 Pulling a notification message (OTA_HotelGetMsgRQ) –

In the mapping process it can be useful to trigger the reception of notifications in order to ensure the mapping process can continue, when the previously provided notifications are not available anymore, or when a full notification with the latest data is required. Normally this function is provided to product managers who can “load services, rates and availability on demand” through a one click solution per hotel.

In order to “pull” a notification message the OTA_HotelGetMsgRQ can be used. The result will only be a “success” response while we trigger the delivery of the notification via the normal notification mechanism. Hotel code and notification type must be specified and optionally the number of days to be notified and/or the start date can be included using xs:duration format

```
<OTA_HotelGetMsgRQ xmlns="http://www.opentravel.org/OTA/2003/05" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="OTA_HotelGetMsgRQ.xsd" Version="2008.1" EchoToken="12345">
  <UniqueID ID="TEST" ID_Context="AxisData" Type="22"/>
  <Messages>
    <Message HotelCode="AAUTO14TK" Duration="P365D" Start="2011-04-20" MessageType="Inv"/>
    <Message HotelCode="AAUTO14TK" Duration="P365D" Start="2011-04-20" MessageType="Avail"/>
    <Message HotelCode="AAUTO14TK" Duration="P365D" Start="2011-04-20" MessageType="RatePlan"/>
  </Messages>
</OTA_HotelGetMsgRQ>
```

The length of the MessageType identification is limited in OTA and conclusively we specify a “short name” for the three messages (OTA_Hotel**RatePlan**NotifRQ, OTA_Hotel**Avail**NotifRQ y OTA_Hotel**Inv**NotifRQ).

Response message

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```
<OTA_HotelGetMsgRS xmlns="http://www.opentravel.org/OTA/2003/05" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="OTA_HotelGetMsgRS.xsd" Version="1" EchoToken="12345">
  <Success/>
</OTA_HotelGetMsgRS>
```

8 Real-time search messages

Before trying to book a product, availability and pricing information will typically be requested by the booking source for all available accommodations matching search criteria.

To be able to respond such a massive calculation in sub-second system response time, our Search Module is loaded with the rates and availabilities as specified in the contract. It processes the information to a precalculated storage. When a search for many hotels is received, the Search Module only finds and combines the correct price elements to respond. Average response times are below 200 ms for 1 hotel and also for all the hotels in a destination or country, through parallel processing.

The search module is updated in real-time for each individual contract update. Contract updates are generally available within one minute. An update affecting many hotels or many modifications from destinations executed at the same time can result to a queue of updates being processed. Delays in updates of the Search Module are always under 30 minutes.

- **The only valid availability and invoicing amount is the amount returned in the booking messages (OTA_HotelResRS, OTA_GroundBookRS, etc)**
- **For this reason, partners must never commit to fixed bookings at fixed selling prices, based on Searches.**
- **Partners must never commit to fixed bookings at fixed selling prices, based on Notifications.**

Your Agreement Annex specifically mentions this aspect and before go-live, the signed annex must be in possession of our HQ. Without a signed Agreement Annex, your IP's will not be liberated to access our production environment.

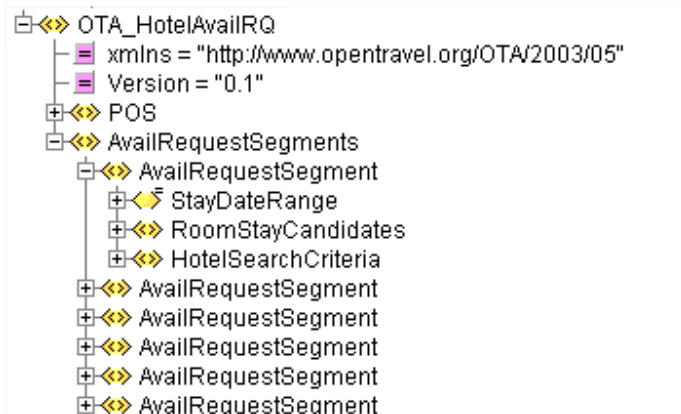
Different users may have different requirements regarding the format and detail of this information. The <POS> element is used to identify the requesting client. The "Instance" attribute of the <RequestorID> element determines the exact format of the information returned in the OTA_HotelAvailRS.

8.1 OTA_HotelAvailRQ – basic content

Each room type is requested in a separate <RoomStayCandidate> element followed by the GuestCounts of Adults (*AgeQualifyingCode="10"*) and Children (*AgeQualifyingCode="8"*). Children age has to be specified for each child. If the child age is exceeding the maximum child age for a specific hotel, the child is converted to an adult and the correct price is given for the specified stay and occupancy for that property. Regarding infants the client has the possibility to search with a child specified with an age of 0 or 1 years old and similar to children exceeding the max child age, the child is converted to an infant in the calculation. This is the preferred method, as the start-age of children can vary. Alternatively an infant can be specified (*AgeQualifyingCode="7"*) and again, if the age specified exceeds the min child age, the calculation will convert the infant to a child and return the correct rates. This behaviour is exactly the same in the HotelResRQ/RS.

The room type is essentially defined by the occupancy data.

Typical OTA_HotelAvailRQ structure:



Example AvailRequestSegment for 2 adults and 2 children (3 and 11) by hotel code:

```

....
<AvailRequestSegments>
  <AvailRequestSegment>
    <StayDateRange End="2010-10-30" Start="2010-10-23"></StayDateRange>
    <RoomStayCandidates>
      <RoomStayCandidate RPH="0">
        <GuestCounts>
          <GuestCount Age="30" AgeQualifyingCode="10" Count="2"></GuestCount>
          <GuestCount Age="3" AgeQualifyingCode="8" Count="1"></GuestCount>
          <GuestCount Age="11" AgeQualifyingCode="8" Count="1"></GuestCount>
        </GuestCounts>
      </RoomStayCandidate>
    </RoomStayCandidates>
    <HotelSearchCriteria>
      <Criterion ExactMatch="true">
        <HotelRef HotelCode="HOTEL1"></HotelRef>
      </Criterion>
    </HotelSearchCriteria>
  </AvailRequestSegment>
....
    
```

8.2 Paging and number of search results

With reference to Chapter 6.1.2.4, paging can be used to increase performance and only obtain a limited number of responses. The sorting is by price (cheapest) and the max number of RoomStay elements included in any search is 1.000.

Example reducing search results for the first page to 10 roomstay elements (hotel, room and board combinations) by adding the SequenceNmbr = "1" MaxResponses = "10" elements:

```

<OTA_HotelAvailRQ xmlns = "http://www.opentravel.org/OTA/2003/05" SequenceNmbr = "1" MaxResponses = "10" Version = "0.1">
  <POS>
    <Source>
      <RequestorID Instance = "MF002" ID_Context = "AxixData" ID = "TEST" Type = "22"/>
    </Source>
  </POS>
</OTA_HotelAvailRQ>
    
```

```

        <BookingChannel Type = "2"/>
    </Source>
</POS>
<AvailRequestSegments>
    <AvailRequestSegment InfoSource = "0">
        <StayDateRange End = "2012-07-05" Start = "2012-06-28"/>
        <RoomStayCandidates>
            <RoomStayCandidate>
                <GuestCounts>
                    <GuestCount Count = "2" AgeQualifyingCode = "10"/>
                </GuestCounts>
            </RoomStayCandidate>
        </RoomStayCandidates>
        <HotelSearchCriteria>
            <Criterion>
                <RefPoint CodeContext = "Country">Spain</RefPoint>
            </Criterion>
        </HotelSearchCriteria>
    </AvailRequestSegment>
</AvailRequestSegments>
</OTA_HotelAvailRQ>

```

8.3 Search response including “all rooms and boards” or “cheapest room/board combination”

To facilitate applications where the workflow is oriented to an initial search results display of just one room and board combination, the option to just display the cheapest combination is offered. A secondary step specifying the HotelCode in the search request, allows the end user to make a choice of superior room types and boards. This is an efficient approach in terms of data volume.

8.3.1 Maximum 1.000 rooms and boards included in a search response

The limitation of returning no more than 1.000 search results is important in case larger geographical searches are enabled or common. When specifying the MF002 a maximum of 1.000 hotels (with only one room and board) will be returned. When specifying MF001 for the same search, the number of hotels included will be significantly less, assuming there will be a substantial number of hotels with 2 or more rooms and boards available. The 1.000 search results limitation is applied on the number of room and board combinations.

8.3.2 OTA_HotelAvailRQ/RS MF0x1 – All available Room/Board combinations per hotel

Using a value of 1 in the third number of the instance attribute MF0x1, requests all available combinations of room and board for a given search for one or more hotels. The pax composition and booking dates must be sent as part of the request, in combination with a list of hotel codes or geographical definition.

The message response lists all available room/board combinations for the given booking parameters along with the price totals. Only available combinations are returned.

```

<OTA_HotelAvailRQ xmlns = "http://www.opentravel.org/OTA/2003/05" Version = "0.1">

```

```
<POS>
  <Source>
    <RequestorID Instance = "MF001" ID_Context = "AxisData" ID = "TEST" Type = "22"/>
    <BookingChannel Type = "2"/>
  </Source>
</POS>
```

The OTA_HotelAvailRS uses a separate <RoomStay> element for each room in every combination of rooms we return.

Each <RoomStay> element refers to a room stay candidate from the request through the RoomStayCandidateRPH attribute.

The RPH attribute is used to uniquely number bookable combinations. Different combinations may consist of different room types (which support the requested guest count, of course) or combine a previous room combination with a different board type.

The RoomStays in the response can therefore be regarded as a matrix with columns representing the requested room types indexed through the RoomStayCandidateRPH value and rows representing bookable combinations of rooms satisfying the requested criteria (indexed through the RPH value).

This switch is fully compatible with the values used for multi room searches, specified in section 8.7, so both MF001 and MF011 are valid.

8.3.3 OTA_HotelAvailRQ/RS MF0x2 – cheapest Room/Board combination per hotel

Using a value of 2 in the third number of the instance attribute MF0x2, requests only the cheapest combination of room and board for a given booking for one or more hotels. Although more rooms and boards might be available, only one option per hotel will be included in the OTA_HotelAvailRS.

```
<OTA_HotelAvailRQ xmlns = "http://www.opentravel.org/OTA/2003/05" Version = "0.1">
  <POS>
    <Source>
      <RequestorID Instance = "MF002" ID_Context = "AxisData" ID = "TEST" Type = "22"/>
      <BookingChannel Type = "2"/>
    </Source>
  </POS>
```

This switch is fully compatible with the values used for multi room searches, specified in section 8.7, so both MF002 and MF012 are valid.

8.4 OTA_HotelAvailRQ – hotel list or geographical definition

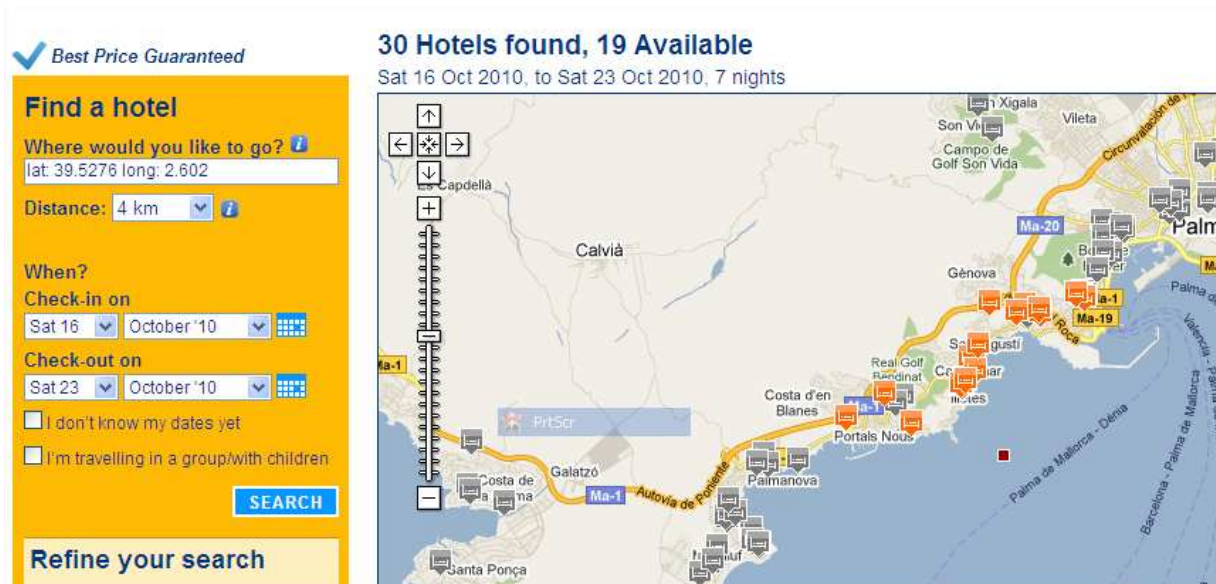
The search can be executed either providing a list of hotels or by specifying a geographical definition.

Geographical searches are often quite laborious due to different geographical structures between partner and supplier. For example the supplier has separated Tenerife in North and South, where the partner has Tenerife as destination and then the different resorts.

Implementation of search by hotel list seems to be the current tendency, where an automated mapping procedure largely assigns hotels to the geographical definition of the distribution channel.

Another aspect is the increasing use of “search by map” functionality, where the search is defined by geo coordinates and the extremities of the map, an end-user has selected as search criteria. The partner has stored the hotelcodes and geocodes of each hotel, converts the coordinates to a corresponding list of hotel codes, where the geo codes are inside the extremities of the map. The list of hotels is included in the OTA_HotelAvailRQ submitted to MTS systems.

Search by geocodes example from booking.com using “show prices and availability for displayed hotels” function:



8.4.1 OTA_HotelAvailRQ – hotel list

Mapped hotels can be linked to the partners search functionalities and the OTA_HotelAvailRQ can be created using the hotel list function. Important is a highly automated mapping process to cater for additions, modifications and deletions in the portfolio. An unattended manual mapping process leads to non productive searches for hotels no longer in the portfolio and omitting the inclusion of new properties or corrections (see OTA_HotelDescriptiveInfo and OTA_HotelInvNotif).

There are no limitations to the number of hotels included in one single search, other than that one search may not include hotel codes of more than one country.

OTA_HotelAvailRQ hotel list:

.....

```
<AvailRequestSegments>
  <AvailRequestSegment>
    <StayDateRange End="2010-10-17T00:00:00" Start="2010-10-15T00:00:00"></StayDateRange>
    <RoomStayCandidates>
      <RoomStayCandidate RPH="0">
        <GuestCounts>
          <GuestCount Age="30" AgeQualifyingCode="10" Count="2"></GuestCount>
        </GuestCounts>
      </RoomStayCandidate>
    </RoomStayCandidates>
    <HotelSearchCriteria>
      <Criterion ExactMatch="true">
        <HotelRef HotelCode="HOTEL1"></HotelRef>
      </Criterion>
    </HotelSearchCriteria>
  </AvailRequestSegment>
  <AvailRequestSegment>
    <StayDateRange End="2010-10-17T00:00:00" Start="2010-10-15T00:00:00"></StayDateRange>
    <RoomStayCandidates>
      <RoomStayCandidate RPH="1">
        <GuestCounts>
          <GuestCount Age="30" AgeQualifyingCode="10" Count="2"></GuestCount>
        </GuestCounts>
      </RoomStayCandidate>
    </RoomStayCandidates>
    <HotelSearchCriteria>
      <Criterion ExactMatch="true">
        <HotelRef HotelCode="HOTEL2"></HotelRef>
      </Criterion>
    </HotelSearchCriteria>
  </AvailRequestSegment>
  ....

```

8.4.2 OTA_HotelAvailRQ – geographical list

The <AvailRequestSegment ResponseType="AreaList"> element in the OTA_HotelAvailRQ allows the customer to refresh the available geographical locations. This RQ depends on the portfolio configured for the ID and only returns locations in which hotels are available in the portfolio.

```
<OTA_HotelAvailRQ xmlns = "http://www.opentravel.org/OTA/2003/05" AvailRatesOnly = "false" Version = "0.1">
  <POS>
    <Source>
      <RequestorID Instance = "MF001" ID_Context = "AxisData" ID = "TEST" Type = "22"/>
      <BookingChannel Type = "2"/>
    </Source>
  </POS>
  <AvailRequestSegments>
    <AvailRequestSegment ResponseType="AreaList">
    </AvailRequestSegment>
  </AvailRequestSegments>
</OTA_HotelAvailRQ>

```

8.4.3 OTA_HotelAvailRQ – geographical definition

Searches can also be executed using our 4-tier geographical segmentation tree of Country, Destination, Region or Resort or by using the destination airport code according to IATA. This information is provided in the AreaInfo element of the OTA_HotelDescriptiveInfo which can be pulled upon reception of the OTA_HotelInvNotif for specific (set of) hotels.

All available hotels for one country can be searched:

```
...
<AvailRequestSegments>
  <AvailRequestSegment>
    <StayDateRange End = "2010-10-09" Start = "2010-10-02"/>
    <RoomStayCandidates>
      <RoomStayCandidate>
        <GuestCounts>
          <GuestCount Count = "2" AgeQualifyingCode = "10"/>
        </GuestCounts>
      </RoomStayCandidate>
    </RoomStayCandidates>
    <HotelSearchCriteria>
      <Criterion>
        <RefPoint CodeContext = "Country">Portugal</RefPoint>
      </Criterion>
    </HotelSearchCriteria>
  </AvailRequestSegment>
</AvailRequestSegments>
...
```

Or a complete drill-down to a specific resort can be requested:

```
....
<HotelSearchCriteria>
  <Criterion>
    <RefPoint CodeContext = "Country">Portugal</RefPoint>
    <RefPoint CodeContext = "Destination">Algarve</RefPoint>
    <RefPoint CodeContext = "Region">Albufeira</RefPoint>
    <RefPoint CodeContext = "Resort">Balaia</RefPoint>
  </Criterion>
</HotelSearchCriteria>
.....
```

Or all hotels associated to an airport can be requested:

```
.....
<HotelSearchCriteria>
  <Criterion>
    <RefPoint CodeContext = "Country">Portugal</RefPoint>
    <RefPoint CodeContext = "Airport">FAO</RefPoint>
  </Criterion>
</HotelSearchCriteria>
.....
```

Multiple Region Resorts or regions can be requested in a single request:

```
.....
<HotelSearchCriteria>
  <Criterion>
    <RefPoint CodeContext = "Country">Portugal</RefPoint>
    <RefPoint CodeContext = "Destination">Algarve</RefPoint>
    <RefPoint CodeContext = "Region">Albufeira</RefPoint>
    <RefPoint CodeContext = "Resort">Balaia</RefPoint>
    <RefPoint CodeContext = "Resort">Salgados</RefPoint>
  </Criterion>
</HotelSearchCriteria>
.....
```

8.5 Search by hotel name

Customers familiar with a certain hotel or comparing various distribution channels, often search by hotel name. Although partners might have implemented this feature based on the stored Basic Hotel Data, we provide a feature to return all hotels which contain the specified (part of) the name:

```
....
<HotelSearchCriteria>
  <Criterion>
    <RefPoint CodeContext = "Country">Portugal</RefPoint>
    <HotelRef HotelName = "club"/>
  </Criterion>
....
```

Which would return:

```
....
<HotelStays>
  <HotelStay>
    <BasicPropertyInfo HotelCodeContext = "46643" AreaID = "8" HotelName = "Clube Maria Luisa" HotelCode =
"AMTSPT0041">
  ...
    <HotelStay>
    <BasicPropertyInfo HotelCodeContext = "41054" AreaID = "1" HotelName = "Turim Rural Clube D'Azeitao" HotelCode =
"AMTSPT168S">
  ....
    <HotelStay>
    <BasicPropertyInfo HotelCodeContext = "2117" AreaID = "2" HotelName = "Dom Pedro Meia Praia Beach Club" HotelCode
= "AMTSPT0100">
  ....
```

(Message enriched with GIATA code, AreaID and HotelName – see appropriate section).

8.6 Upfront filtering features

Although most searches are generic and filtering is usually applied on the search results, a search can be limited to only include specific criteria.

A typical search might limit the responses to a certain board or room type:

```
....
<HotelSearchCriteria>
  <Criterion>
    <RefPoint CodeContext = "Country">Portugal</RefPoint>
    <RefPoint CodeContext = "Destination">Algarve</RefPoint>
    <RefPoint CodeContext = "Region">Albufeira</RefPoint>
    <RefPoint CodeContext = "Resort">Balaia</RefPoint>
    <Award Rating = "4 Star"/>
    <RatePlanCandidates>
      <RatePlanCandidate>
        <MealsIncluded MealPlanCodes = "HB"/>
      </RatePlanCandidate>
    </RatePlanCandidates>
    <RoomStayCandidates>
      <RoomStayCandidate RoomClassificationCode = "ST"/>
    </RoomStayCandidates>
  </Criterion>
....
```

```
</Criterion>
</HotelSearchCriteria>
.....
```

This search only returns 4 star properties as defined in the „Award“ element, board type Half Board as defined in the „RatePlanCandidates“ and room type Studio as defined in the „RoomStayCandidates“ element.

A specific room code can be requested as well:

```
....
<HotelSearchCriteria>
  <Criterion>
    <RefPoint CodeContext = "Country">Portugal</RefPoint>
    <RefPoint CodeContext = "Destination">Algarve</RefPoint>
    <RefPoint CodeContext = "Region">Albufeira</RefPoint>
    <RefPoint CodeContext = "Resort">Balaia</RefPoint>
    <Award Rating = "3 Star"/>
    <RoomStayCandidates>
      <RoomStayCandidate RoomType = "APSD000000"/>
    </RoomStayCandidates>
  </Criterion>
</HotelSearchCriteria>
.....
```

This search only returns 3 star properties as defined in the „Award“ element with room code APSD000000 as defined in the „RoomStayCandidates“ element.

8.7 Multiple room searches

A multi-room booking search allows doing an availability search of multiple rooms in a single request. The response format can be returned as remaining units or available combinations.

- by remaining units: the complexity of possible combinations must be calculated in the client side (smaller response message)
- by available combinations: all possible combinations are provided in a pre-calculated manner (larger response message)

8.7.1 Multiple room search by remaining units

This mode returns a list of rooms as specified in the request. Each returned room will specify number of units available. Valid combinations should be built in client side.

This model offers a lower message size but room combinations must be performed in the client side taking into account the NumberOfUnits and RoomStayCandidateRPH.

To get this format use a 0 in the second number of the instance attribute MF00x. This switch is fully compatible with the values used for room/board combinations, specified in sections 8.2 and 8.3, so both MF001 and MF002 are valid

```
<POS>
  <Source>
    <RequestorID Instance = "MF001" ID_Context = "AxisData" ID = "TEST" Type = "22"/>
    <BookingChannel Type = "2"/>
  </Source>
```

</POS>

For each room stay candidate specified in the request, response will contain a list of room stays, one per each room where the room candidate fits. If two room stay candidates fit in the same room, and there is only one remaining unit, it cannot be offered twice.

Each room stay will contain number of remaining units in attribute "NumberOfUnits" in element <RoomRate>, this attribute is not returned in case room has free sales.

Each <RoomStay> element has a unique RPH value.

If two or more room stay candidates fit in the same room, same amount of room stays for the same room will be returned, one for each room stay candidate.

We want to execute a simple search for hotel AMTSXX0000, for one day (from 1st of December to 2nd of December). This hotel has three rooms with following occupancy conditions and rates:

Room	MinPax	MaxPax	MinAdt	MaxAdt	MinChd	MaxChd	Price per pax
SGL – Single Room	1	1	1	1	0	0	50
DBL – Double Room	1	3	1	2	0	2	100
APT – Apartment	2	2	2	2	0	0	200

The current availability in the system is (remaining units):

	29/11/2012	30/11/2012	01/12/2012	02/12/2012	03/12/2012	04/12/2012
SGL	10	10	10	10	9	8
DBL	1	1	1	1	1	1
APT	2	2	2	2	2	2

In this case the only board available is **BB**, i.e. there will be only one room&board combination for each room.

A customer wants to search available rooms (all combinations room and board) for hotel AMTSXX0000, for 2 rooms, with the following pax distribution: 1ADT and 2ADT. According to hotel room characteristics, 1 ADT fits in SGL and DBL rooms, and 2ADT fit in DBL and APT.

Request

<OTA_HotelAvailRQ xmlns="http://www.opentravel.org/OTA/2003/05" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="OTA_HotelAvailRQ.xsd" Version="0.1" EchoToken="123322344">

<POS>

<Source>

<RequestorID Instance="MF001" ID_Context="AxisData" ID="TEST" Type="22"/>

</Source>

</POS>

<AvailRequestSegments>

<AvailRequestSegment>

<StayDateRange End="2011-12-01" Start="2011-12-02"/>

<RoomStayCandidates>

<RoomStayCandidate Quantity="1" RPH="111">

<GuestCounts>

<GuestCount AgeQualifyingCode="10" Count="1"/>

</GuestCounts>

</RoomStayCandidate>

<RoomStayCandidate Quantity="1" RPH="222">

<GuestCounts>

<GuestCount AgeQualifyingCode="10" Count="2"/>

</GuestCounts>

```

        </RoomStayCandidate>
    </RoomStayCandidates>
    <HotelSearchCriteria>
        <Criterion ExactMatch="true">
            <HotelRef HotelCode="AMTSXX0000"/>
        </Criterion>
    </HotelSearchCriteria>
</AvailRequestSegment>
</AvailRequestSegments>
</OTA_HotelAvailRQ>

```

Response will contain a room stay for each room available (room and board combination, but in the example, only BB is offered) for each room stay candidate, i.e., 4 room stays:

- SGL and DBL for 1ADT
- DBL and APT for 2ADT

Response

```

<OTA_HotelAvailRS xmlns="http://www.opentravel.org/OTA/2003/05" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="OTA_HotelAvailRS.xsd" TransactionIdentifier="1-1/1" Version="0.1" EchoToken="123322344">
    <Success/>
    <RoomStays>
        <!--RPH="0": 1ADT fits in the SGL, that has 10 units remaining-->
        <RoomStay ResponseType="PropertyList" RPH="0" RoomStayCandidateRPH="111">
            <RoomTypes>
                <RoomType RoomTypeCode="SGL">
                    <RoomDescription>
                        <Text Language="EN">Single</Text>
                    </RoomDescription>
                </RoomType>
            </RoomTypes>
            <RoomRates>
                <RoomRate RoomTypeCode="SGL" NumberOfUnits="10">
                    <Rates>
                        <Rate>
                            <Base CurrencyCode="EUR" AmountAfterTax="50.00"/>
                            <Total CurrencyCode="EUR" AmountAfterTax="50.00"/>
                        </Rate>
                    </Rates>
                    <Features>
                        <Feature>
                            <Description>
                                <Text>BB</Text>
                            </Description>
                        </Feature>
                    </Features>
                </RoomRate>
            </RoomRates>
            <GuestCounts>
                <GuestCount Count="1" AgeQualifyingCode="10"/>
            </GuestCounts>
            <TimeSpan End="2011-12-02" Start="2011-12-01"/>
            <BasicPropertyInfo HotelCode="AMTSXX0000"/>
            <Reference ID="LCTG" Type="22"/>
        </RoomStay>
        <!-- RPH="1": 1 ADT fits in the DBL, that has 1 unit remaining-->
        <RoomStay ResponseType="PropertyList" RPH="1" RoomStayCandidateRPH="111">
            <RoomTypes>
                <RoomType RoomTypeCode="DBL">
                    <RoomDescription>
                        <Text Language="EN">Double</Text>
                    </RoomDescription>
                </RoomType>
            </RoomTypes>

```

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```

</RoomTypes>
<RoomRates>
  <RoomRate RoomTypeCode="APT" NumberOfUnits="2">
    <Rates>
      <Rate>
        <Base CurrencyCode="EUR" AmountAfterTax="400.00"/>
        <Total CurrencyCode="EUR" AmountAfterTax="400.00"/>
      </Rate>
    </Rates>
    <Features>
      <Feature>
        <Description>
          <Text>BB</Text>
        </Description>
      </Feature>
    </Features>
  </RoomRate>
</RoomRates>
<GuestCounts>
  <GuestCount Count="2" AgeQualifyingCode="10"/>
</GuestCounts>
<TimeSpan End="2011-12-02" Start="2011-12-01"/>
<BasicPropertyInfo HotelCode="AMTSXX0000"/>
<Reference ID="LCTG" Type="22"/>
</RoomStay>
</RoomStays>
</OTA_HotelAvailRS>

```

According to information received, DBL room has only one unit remaining and it is available for both room stay candidates (both pax distributions fit in the DBL room), so 1ADT and 2ADT cannot book two DBL rooms.

8.7.2 Multiple room search by available combinations

This mode returns all valid and available combinations based on the request criteria. All room stays of same combination are linked using same "RPH" attribute and, as in the previous mode, each room stay is linked to the room stay candidate specified in the request.

Client only has to group those room stays belonging to same combination.

This model offers a higher message size but room combinations are already prepared. To get this format use a 1 in the second number of the instance attribute MF01¹x. This switch is fully compatible with the values used for room/board combinations, specified in sections 8.2 and 8.3, so both MF011 and MF012 are valid

```

<POS>
  <Source>
    <RequestorID Instance = "MF011" ID_Context = "AxisData" ID = "TEST" Type = "22"/>
    <BookingChannel Type = "2"/>
  </Source>
</POS>

```

Response will contain a valid combination (identified with same RPH) for room stay candidates specified in the request.

For each room stay candidate specified in the request, response will contain a list of room stays, one per each room where the room candidate fits;

Attribute "NumberOfUnits" is not provided in this mode. In the previous example requested rooms (2ADT and 2ADT+1CHD) fit in the same room type (STSD000000), both returned room stays belong to same combination (RPH="0"), each room is identified by the RoomStayCandidateRPH attribute.

In this mode attribute "Quantity" in <RoomStayCandidate> (in the request) should missing or equal to 1.

We want to execute a simple search for hotel AMTSXX0000, for one day (from 1st of December to 2nd of December). This hotel has three rooms with following occupancy conditions and rates:

Room	MinPax	MaxPax	MinAdt	MaxAdt	MinChd	MaxChd	Price per pax
SGL – Single Room	1	1	1	1	0	0	50
DBL – Double Room	1	3	1	2	0	2	100
APT – Apartment	2	2	2	2	0	0	200

The current availability in the system is (remaining units):

	29/11/2012	30/11/2012	01/12/2012	02/12/2012	03/12/2012	04/12/2012
SGL	10	10	10	10	9	8
DBL	1	1	1	1	1	1
APT	2	2	2	2	2	2

In this case the only board available is **BB**, i.e. there will be only one room&board combination for each room.

A customer wants to search available rooms (all combinations room and board) for hotel AMTSXX0000, for 2 rooms, with the following pax distribution: 1ADT and 2ADT. According to hotel room characteristics, 1 ADT fits in SGL and DBL rooms, and 2ADT fit in DBL and APT.

Request

```
<OTA_HotelAvailRQ xmlns="http://www.opentravel.org/OTA/2003/05" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="OTA_HotelAvailRQ.xsd" Version="0.1" EchoToken="443223321">
  <POS>
    <Source>
      <RequestorID Instance="MF011" ID_Context="OTS" ID="TEST" Type="22"/>
    </Source>
  </POS>
  <AvailRequestSegments>
    <AvailRequestSegment>
      <StayDateRange End="2011-12-01" Start="2011-12-02"/>
      <RoomStayCandidates>
        <RoomStayCandidate Quantity="1" RPH="111">
          <GuestCounts>
            <GuestCount AgeQualifyingCode="10" Count="1"/>
          </GuestCounts>
        </RoomStayCandidate>
        <RoomStayCandidate Quantity="1" RPH="222">
          <GuestCounts>
            <GuestCount AgeQualifyingCode="10" Count="2"/>
          </GuestCounts>
        </RoomStayCandidate>
      </RoomStayCandidates>
    </AvailRequestSegment>
  </AvailRequestSegments>
</OTA_HotelAvailRQ>
```

```

        </GuestCounts>
      </RoomStayCandidate>
    </RoomStayCandidates>
  <HotelSearchCriteria>
    <Criterion ExactMatch="true">
      <HotelRef HotelCode="AMTSXX0000"/>
    </Criterion>
  </HotelSearchCriteria>
</AvailRequestSegment>
</AvailRequestSegments>
</OTA_HotelAvailRQ>

```

Response will contain 6 room stays, grouped in 3 combinations (identified by RPH: 0, 1 and 2). Ideally it should return 4 combinations (8 room stays), however combination of 2 DBLs is not valid (only one remaining unit), these are returned combinations:

	1 ADT		2ADT	
RPH	Room	Rate	Room	Rate
0	SGL	50	DBL	200
1	SGL	50	APT	400
2	DBL	100	APT	400

Response

```

<OTA_HotelAvailRS xmlns="http://www.opentravel.org/OTA/2003/05" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="OTA_HotelAvailRS.xsd" TransactionIdentifier="1-1/1" Version="0.1" EchoToken="443223321">
  <Success/>
  <RoomStays>
    <!-- RPH="0" 1ADT in the SGL, 2ADT in the DBL-->
    <RoomStay ResponseType="PropertyList" RPH="0" RoomStayCandidateRPH="111">
      <RoomTypes>
        <RoomType RoomTypeCode="SGL">
          <RoomDescription>
            <Text Language="EN">Single</Text>
          </RoomDescription>
        </RoomType>
      </RoomTypes>
      <RoomRates>
        <RoomRate RoomTypeCode="SGL">
          <Rates>
            <Rate>
              <Base CurrencyCode="EUR" AmountAfterTax="50.00"/>
              <Total CurrencyCode="EUR" AmountAfterTax="50.00"/>
            </Rate>
          </Rates>
          <Features>
            <Feature>
              <Description>
                <Text>BB</Text>
              </Description>
            </Feature>
          </Features>
        </RoomRate>
      </RoomRates>
      <GuestCounts>
        <GuestCount Count="1" AgeQualifyingCode="10"/>
      </GuestCounts>
      <TimeSpan End="2011-12-02" Start="2011-12-01"/>
      <BasicPropertyInfo HotelCode="AMTSXX0000"/>
      <Reference ID="LCTG" Type="22"/>
    </RoomStay>
  </RoomStays>

```

Technical Documentation (TD)

```
</RoomStay>
<RoomStay ResponseType="PropertyList" RPH="0" RoomStayCandidateRPH="222">
  <RoomTypes>
    <RoomType RoomTypeCode="DBL">
      <RoomDescription>
        <Text Language="EN">Double</Text>
      </RoomDescription>
    </RoomType>
  </RoomTypes>
  <RoomRates>
    <RoomRate RoomTypeCode="DBL">
      <Rates>
        <Rate>
          <Base CurrencyCode="EUR" AmountAfterTax="200.00"/>
          <Total CurrencyCode="EUR" AmountAfterTax="200.00"/>
        </Rate>
      </Rates>
      <Features>
        <Feature>
          <Description>
            <Text>BB</Text>
          </Description>
        </Feature>
      </Features>
    </RoomRate>
  </RoomRates>
  <GuestCounts>
    <GuestCount Count="2" AgeQualifyingCode="10"/>
  </GuestCounts>
  <TimeSpan End="2011-12-02" Start="2011-12-01"/>
  <BasicPropertyInfo HotelCode="AMTSXX0000"/>
</RoomStay>
<!-- RPH="1" 1ADT in the SGL, 2ADT in the APT-->
<RoomStay ResponseType="PropertyList" RPH="1" RoomStayCandidateRPH="111">
  <RoomTypes>
    <RoomType RoomTypeCode="SGL">
      <RoomDescription>
        <Text Language="EN">Single</Text>
      </RoomDescription>
    </RoomType>
  </RoomTypes>
  <RoomRates>
    <RoomRate RoomTypeCode="SGL">
      <Rates>
        <Rate>
          <Base CurrencyCode="EUR" AmountAfterTax="50.00"/>
          <Total CurrencyCode="EUR" AmountAfterTax="50.00"/>
        </Rate>
      </Rates>
      <Features>
        <Feature>
          <Description>
            <Text>BB</Text>
          </Description>
        </Feature>
      </Features>
    </RoomRate>
  </RoomRates>
  <GuestCounts>
    <GuestCount Count="1" AgeQualifyingCode="10"/>
  </GuestCounts>
  <TimeSpan End="2011-12-02" Start="2011-12-01"/>
  <BasicPropertyInfo HotelCode="AMTSXX0000"/>
  <Reference ID="LCTG" Type="22"/>
</RoomStay>
<RoomStay ResponseType="PropertyList" RPH="1" RoomStayCandidateRPH="222">
```

Technical Documentation (TD)

```
<RoomTypes>
  <RoomType RoomTypeCode="APT">
    <RoomDescription>
      <Text Language="EN">Apartment</Text>
    </RoomDescription>
  </RoomType>
</RoomTypes>
<RoomRates>
  <RoomRate RoomTypeCode="APT">
    <Rates>
      <Rate>
        <Base CurrencyCode="EUR" AmountAfterTax="400.00"/>
        <Total CurrencyCode="EUR" AmountAfterTax="400.00"/>
      </Rate>
    </Rates>
    <Features>
      <Feature>
        <Description>
          <Text>BB</Text>
        </Description>
      </Feature>
    </Features>
  </RoomRate>
</RoomRates>
<GuestCounts>
  <GuestCount Count="2" AgeQualifyingCode="10"/>
</GuestCounts>
<TimeSpan End="2011-12-02" Start="2011-12-01"/>
<BasicPropertyInfo HotelCode="AMTSXX0000"/>
<Reference ID="LCTG" Type="22"/>
</RoomStay>
<!-- RPH="2" 1ADT in the DBL, 2ADT in the APT-->
<RoomStay ResponseType="PropertyList" RPH="2" RoomStayCandidateRPH="111">
  <RoomTypes>
    <RoomType RoomTypeCode="DBL">
      <RoomDescription>
        <Text Language="EN">Double</Text>
      </RoomDescription>
    </RoomType>
  </RoomTypes>
  <RoomRates>
    <RoomRate RoomTypeCode="DBL">
      <Rates>
        <Rate>
          <Base CurrencyCode="EUR" AmountAfterTax="100.00"/>
          <Total CurrencyCode="EUR" AmountAfterTax="100.00"/>
        </Rate>
      </Rates>
      <Features>
        <Feature>
          <Description>
            <Text>BB</Text>
          </Description>
        </Feature>
      </Features>
    </RoomRate>
  </RoomRates>
  <GuestCounts>
    <GuestCount Count="1" AgeQualifyingCode="10"/>
  </GuestCounts>
  <TimeSpan End="2011-12-02" Start="2011-12-01"/>
  <BasicPropertyInfo HotelCode="AMTSXX0000"/>
</RoomStay>
<RoomStay ResponseType="PropertyList" RPH="2" RoomStayCandidateRPH="222">
  <RoomTypes>
    <RoomType RoomTypeCode="APT">
```

```

        <RoomDescription>
          <Text Language="EN">Apartment</Text>
        </RoomDescription>
      </RoomType>
    </RoomTypes>
    <RoomRates>
      <RoomRate RoomTypeCode="APT">
        <Rates>
          <Rate>
            <Base CurrencyCode="EUR" AmountAfterTax="400.00"/>
            <Total CurrencyCode="EUR" AmountAfterTax="400.00"/>
          </Rate>
        </Rates>
        <Features>
          <Feature>
            <Description>
              <Text>BB</Text>
            </Description>
          </Feature>
        </Features>
      </RoomRate>
    </RoomRates>
    <GuestCounts>
      <GuestCount Count="2" AgeQualifyingCode="10"/>
    </GuestCounts>
    <TimeSpan End="2011-12-02" Start="2011-12-01"/>
    <BasicPropertyInfo HotelCode="AMTSXX0000"/>
    <Reference ID="LCTG" Type="22"/>
  </RoomStay>
</RoomStays>
</OTA_HotelAvailRS>

```

8.8 OTA_HotelAvailRS

An OTA_HotelAvailRS message is received in response to the request. The presence of the `<Success/>` element indicates successful processing of the request, otherwise a list of errors is returned.

Note: No available rooms found in any of the requested hotels returns:

```

<OTA_HotelAvailRS xmlns="http://www.opentravel.org/OTA/2003/05" Version="0.1">
  <Errors>
    <Error Code="204" Type="3">No Content: null</Error>
  </Errors>
</OTA_HotelAvailRS>

```

The available rooms are returned in repeated `<RoomStay>` elements detailing the room codes (actual booking codes), the total price for the room, the guest counts and the hotel code. Each different hotel returned has a unique RPH, multiple room and/or board combinations for the same hotel, share the same RPH for grouping purposes.

An RPH specified is echoed in the RS (i.e if the RQ specifies RoomStayCandidateRPH = "8204176", you will find this same value in the RS).

The lowest RPH indicates the cheapest hotel according to our sorting.

```

.....
<RoomStays>
  <RoomStay ResponseType = "PropertyList" RPH = "11" RoomStayCandidateRPH = "0">
    <RoomTypes>
      <RoomType RoomTypeCode = "APSDDDB0000"></RoomType>
    </RoomTypes>
    <RoomRates>
      <RoomRate RoomTypeCode = " APSDDDB0000">
        <Rates>
          <Rate>
            <Base CurrencyCode = "EUR" AmountAfterTax = "95.90"></Base>
            <Total CurrencyCode = "EUR" AmountAfterTax = "95.90"></Total>
          </Rate>
        </Rates>
        <Features>
          <Feature>
            <Description>
              <Text>SC</Text>
            </Description>
          </Feature>
        </Features>
      </RoomRate>
    </RoomRates>
    <GuestCounts>
      <GuestCount Count = "3" Age = "30" AgeQualifyingCode = "10"></GuestCount>
    </GuestCounts>
    <TimeSpan End = "2010-10-13" Start = "2010-10-08"></TimeSpan>
    <BasicPropertyInfo HotelCode = "HOTEL1"></BasicPropertyInfo>
  </RoomStay>
  <RoomStay ResponseType = "PropertyList" RPH = "12" RoomStayCandidateRPH = "0">
    <RoomTypes>
      <RoomType RoomTypeCode = "RMSD00000E"></RoomType>
    </RoomTypes>
    <RoomRates>
      <RoomRate RoomTypeCode = " RMSD00000E ">
        <Rates>
          <Rate>
            <Base CurrencyCode = "EUR" AmountAfterTax = "134.78"></Base>
            <Total CurrencyCode = "EUR" AmountAfterTax = "134.78"></Total>
          </Rate>
        </Rates>
        <Features>
          <Feature>
            <Description>
              <Text>SC</Text>
            </Description>
          </Feature>
        </Features>
      </RoomRate>
    </RoomRates>
    <GuestCounts>
      <GuestCount Count = "3" Age = "30" AgeQualifyingCode = "10"></GuestCount>
    </GuestCounts>
    <TimeSpan End = "2010-10-13" Start = "2010-10-08"></TimeSpan>
    <BasicPropertyInfo HotelCode = "HOTEL2"></BasicPropertyInfo>
  </RoomStay>
.....

```

8.9 Search response enrichment

Currently all search responses are enriched with additional information. Filters will be implemented to switch-off groups of elements, which allow slightly faster and smaller responses.

Due to less collisions during the internet transport, the response time variation will decrease and the user experience improve (see also zipped responses)

Enrichment of search responses is only slight enlarging system response times as through caching the repetitively generated information can be included at little expense. However the additional information has to be transmitted via internet and has to be processed by partners from the XML, every time the hotel is displayed. Repetitive transmission and processing of the same data is inefficient.

AvailRatesOnly = "true"

Enrichment can be switched off by setting the AvailRatesOnly = "true" element in the header of the OTA_HotelAvailRQ: this function **is discontinued**, but it will remain active for backwards compatibility reasons

```
<OTA_HotelAvailRQ xmlns = "http://www.opentravel.org/OTA/2003/05" AvailRatesOnly = "true" Version = "0.1">
```

InfoSource

The "InfoSource" attribute in the OTA_HotelAvailRQ has been developed as the indicator for response details level. This will give our clients the possibility to choose the amount of data they need/want to receive in the OTA_HotelAvailRS, since the response data size and the transportation time is the main factor in overall performance.

The possible values for the InfoSource attribute are:

not defined - full enrichment

0 - no enrichment

1 - HotelStays only enrichment

2 - Areas only enrichment

3 - Amenities only enrichment

4 - RoomDescription only enrichment

5 - BoardDescription only enrichment

Combination of more than one infosource is completely supported, I.E. InfoSource="12" specifies HotelStays + Areas

Example:

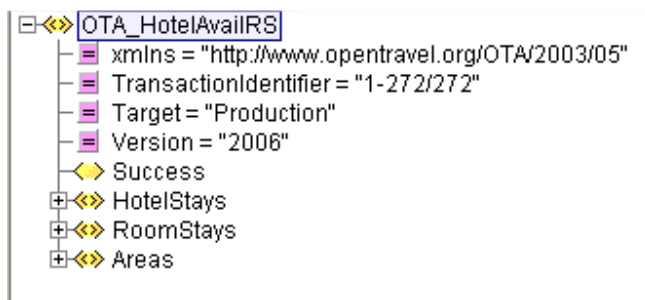
```
<OTA_HotelAvailRQ xmlns = "http://www.opentravel.org/OTA/2003/05" Version = "0.1">
  <POS>
    <Source>
      <RequestorID Instance = "MF002" ID_Context = "AxisData" ID = "TEST" Type = "22"/>
      <BookingChannel Type = "2"/>
    </Source>
  </POS>
  <AvailRequestSegments>
    <AvailRequestSegment InfoSource = "12">
      <StayDateRange End = "2012-07-05" Start = "2012-06-28"/>
      <RoomStayCandidates>
        <RoomStayCandidate>
          <GuestCounts>
            <GuestCount Count = "2" AgeQualifyingCode = "10"/>
          </GuestCounts>
        </RoomStayCandidate>
      </RoomStayCandidates>
    </AvailRequestSegment>
  </AvailRequestSegments>
</OTA_HotelAvailRQ>
```

```

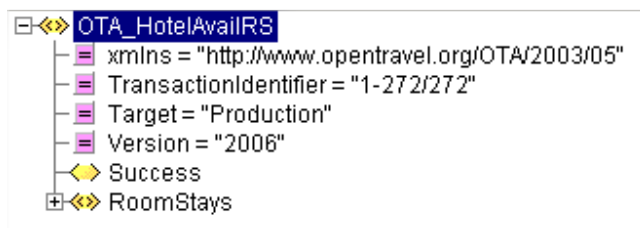
</RoomStayCandidates>
<HotelSearchCriteria>
  <Criterion>
    <RefPoint CodeContext = "Country">Spain</RefPoint>
  </Criterion>
</HotelSearchCriteria>
</AvailRequestSegment>
</AvailRequestSegments>
</OTA_HotelAvailRQ>

```

Which results in the inclusion of the “HotelStays” and “Areas” elements:



Whereas the “InfoSource=0” would only include the “RoomStays” element:



Additional hotel information

As an example, the HotelStay element can be enriched with GIATA ID, HotelName, thumbnail image name, rating,...

```

.....
<HotelStay>
  <BasicPropertyInfo HotelCodeContext = "49243" AreaID = "5" HotelName = "Solmonte Apartments" HotelCode =
"AMTSPT0YHI">
    <VendorMessages>
      <VendorMessage>
        <SubSection>
          <Paragraph>
            <Image>hotel.jpg</Image>
          </Paragraph>
        </SubSection>
      </VendorMessage>
    </VendorMessages>
    <Award Rating = "3 Key"/>
  </BasicPropertyInfo>
</HotelStay>
.....

```

These can include geographical information:

```
...
<Area ArealD = "5">
  <AreaDescription Name = "Country">
    <Text>Portugal</Text>
  </AreaDescription>
  <AreaDescription Name = "Destination">
    <Text>Algarve</Text>
  </AreaDescription>
  <AreaDescription Name = "Region">
    <Text>Potimao</Text>
  </AreaDescription>
  <AreaDescription Name = "Resort">
    <Text>Praia da Rocha</Text>
  </AreaDescription>
</Area>
....
```

Additional room information featuring amenities:

```
.....
<RoomStay RoomStayCandidateRPH = "0" RPH = "53" ResponseType = "PropertyList">
  <RoomTypes>
    <RoomType RoomTypeCode = "APSD000000">
      <RoomDescription>
        <Text>Apartment_Standard</Text>
      </RoomDescription>
      <Amenities>
        <Amenity>Shower</Amenity>
        <Amenity>Kitchenette</Amenity>
        <Amenity>Bathtub</Amenity>
        <Amenity>Bathroom</Amenity>
        <Amenity>Balcony</Amenity>
        <Amenity>TV</Amenity>
        <Amenity>Safe</Amenity>
        <Amenity>Phone</Amenity>
        <Amenity>Mini Fridge</Amenity>
        <Amenity>Heating</Amenity>
        <Amenity>Hairdryer</Amenity>
      </Amenities>
    </RoomType>
  </RoomTypes>
.....
```

8.10 OTA_GroundAvailRQ

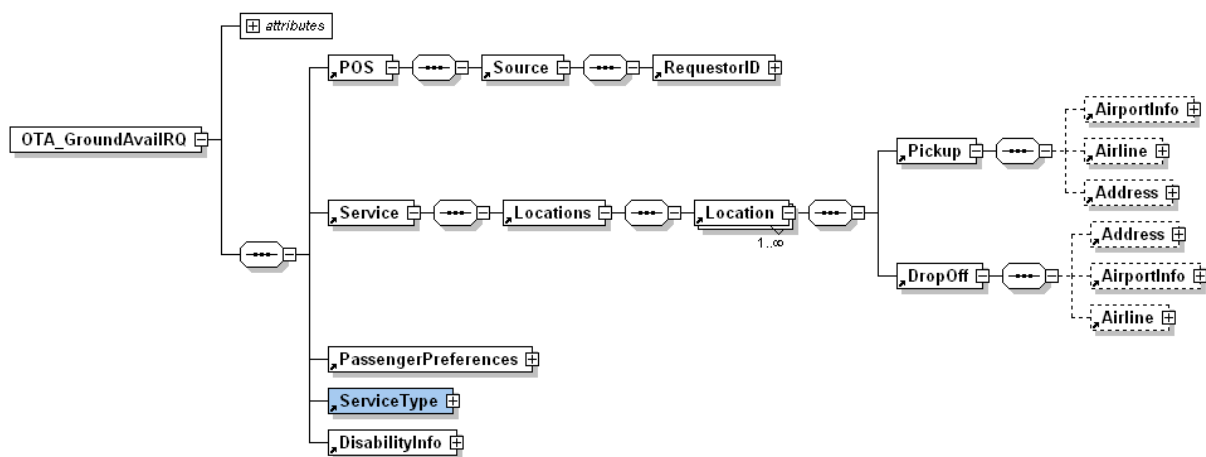
Available in Q1/2013 and included for implementation preparation

A simple one way transfer service can be requested specifying the pickup and dropoff locations in the [<Service>](#) section. A hotel pickup/dropoff point is specified by its hotel code in the [<LocationType>](#) section, code follows OTA UIT (Unique Id Type). An airport pickup/dropoff point is identified by the flight information and the airport IATA code in Arrival/departure section, depending if pickup or dropoff. Please note the element containing the airport information is different depending of the flight type (arrival or departure)

The number of pax for the requested service must be indicated in the [PassengerPreferences](#) section, and it's mandatory in order to deliver the available vehicles for the indicated occupancy. In case of a disabled person present in the pax group, it must be indicated in the [DisabilityInfo](#) section

VehicleType attribute in Vehicleprefs has been changed from VEC code (Vehicle Category) to TRP code (Transportation Code). This change is to be submitted to OTA for approval. OTA Ground messaging pack is available since 2012A specification, so version for all OTA ground messages is [Version="2012.1"](#). Some elements have been introduced like [Locations](#) in [OTA_GroundAvailRQ](#), this modifications are a work in progress standardization proposal to OTA in order to allow a better structured transfer descriptions.

Typical [OTA_GroundAvailRQ](#) structure:



A simple one way example of transfer service request:

```

<OTA_GroundAvailRQ xmlns="http://www.opentravel.org/OTA/2003/05" Version="2012.1" EchoToken="1234">
  <POS>
    <Source>
      <RequestorID ID="URLAUBS" ID_Context="OTS" Type="22"/>
    </Source>
  </POS>
  <Service>
    <Locations>
      <Location>
        <Pickup>
          <AirportInfo>
            <Arrival CodeContext="IATA" LocationCode="PMI"/>
          </AirportInfo>
          <Airline FlightNumber="1234" Code="AB" FlightDateTime="2009-07-08T14:00:00"/>
        </Pickup>
        <DropOff>
          <Address>
            <LocationType Code="10" UniqueId="AMTSES0000"/>
          </Address>
        </DropOff>
      </Location>
    </Locations>
  </Service>
</OTA_GroundAvailRQ>
  
```

```

        </Locations>
    </Service>
    <PassengerPreferences MaximumPassengers="2"/>
    <ServiceType Code="TRANSFER"/>
    <DisabilityInfo RequiredInd="false"/>
</OTA_GroundAvailRQ>

```

To specify a full transfer service, Airport-Hotel and Hotel-Airport, additional `<Location>` elements must be used to specify the additional transfer services.

Example request of a full transfer service, airport to hotel and hotel to airport:

```

<OTA_GroundAvailRQ xmlns="http://www.opentravel.org/OTA/2003/05" Version="2012.1" EchoToken="1234">
  <POS>
    <Source>
      <RequestorID ID="URLAUBS" ID_Context="OTS" Type="22"/>
    </Source>
  </POS>
  <Service>
    <Locations>
      <Location>
        <Pickup>
          <AirportInfo>
            <Arrival CodeContext="IATA" LocationCode="PMI"/>
          </AirportInfo>
          <Airline FlightNumber="1234" Code="AB" FlightDateTime="2009-07-08T14:00:00"/>
        </Pickup>
        <DropOff>
          <Address>
            <LocationType Code="10" UniqueId="AMTSES0000"/>
          </Address>
        </DropOff>
      </Location>
      <Location>
        <Pickup>
          <Address>
            <LocationType Code="10" UniqueId="AMTSES0000"/>
          </Address>
        </Pickup>
        <DropOff>
          <AirportInfo>
            <Departure CodeContext="IATA" LocationCode="PMI"/>
          </AirportInfo>
          <Airline FlightNumber="1234" Code="AB" FlightDateTime="2009-07-18T10:00:00"/>
        </DropOff>
      </Location>
    </Locations>
  </Service>
  <PassengerPreferences MaximumPassengers="2"/>
  <ServiceType Code="TRANSFER"/>
  <DisabilityInfo RequiredInd="false"/>
</OTA_GroundAvailRQ>

```

8.11 OTA_GroundAvailRS

An OTA_GroundAvailRS message is received in response to the request. The presence of the `<Success/>` element indicates successful processing of the request, otherwise a list of errors is returned. In case no services are available for the requested parameters, the result will have an empty GroundServices section

```
<OTA_GroundAvailRS>
  <Success/>
  <GroundServices/>
</OTA_GroundAvailRS>
```

The available services are returned in repeated **<GroundService>** elements detailing the vehicle type code, the total price for the service, the service conditions and occupancy. VehicleType is an OTA TRP code (Transportation Code), typical values are:

- 3: Bus
- 20: Taxi
- 17: Shuttle

Service rates can be defined as per service or per pax depending on the service type. A private taxi is normally expressed as service cost and a shuttle bus as a per pax cost. Per service rates are not taking into account the number of passengers indicated in the request, I.E The taxi rates of a 6 pax request is for each taxi required for the service, not the total amount for the 2 taxis.

Any service fee that may apply will be indicated in the fees section. Fee rates are applied for each element needed. I.E. a Bicycle supplement will be applied for each bicycle transported. Purpose code is an OTA VCP code (Vehicle Charge Purpose), typical values are:

- 28: Optional
- 35: Base Rate
- 36: Mandatory

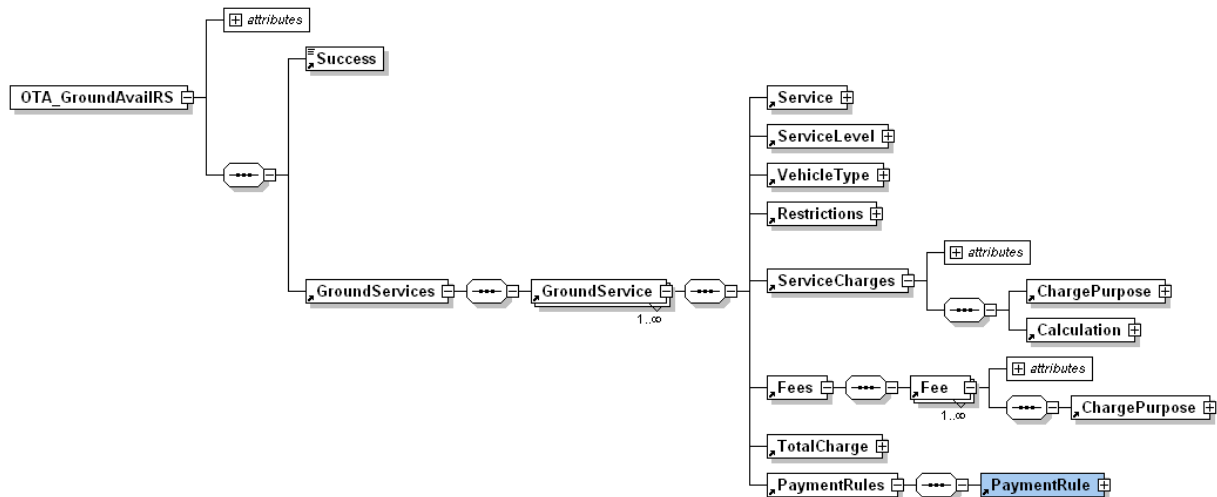
CalculationPenaltyInd in **<Restrictions>** section indicates a penalty can be applied in case of the cancellation of the service. The amount and conditions are indicated in the **<PaymentRules>** section as a cancel rule. RuleType value is an OTA RUL code (Rule Type), typical value is:

- 1 : Cancel

In case more than one cancellation rule applies the nearest to the service start date applies. I.E.: A service with start date 2014-07-06 cancelled on 2014-07-09 would have a 10€ cancellation fee.

```
<PaymentRules>
  <PaymentRule RuleType="1" Amount="20" CurrencyCode="EUR" AbsoluteDeadline="2014-07-06T00:00:00"/>
  <PaymentRule RuleType="1" Amount="10" CurrencyCode="EUR" AbsoluteDeadline="2014-07-10T00:00:00"/>
  <PaymentRule RuleType="1" Amount="0" CurrencyCode="EUR" AbsoluteDeadline="2014-07-15T00:00:00"/>
</PaymentRules>
```

Typical OTA_GroundAvailRS structure:



Example response of a full transfer service, airport to hotel and hotel to airport:

```
<OTA_GroundAvailRS xmlns="http://www.opentravel.org/OTA/2003/05" Version="2012.1" EchoToken="1234">
  <Success/>
  <GroundServices>
    <GroundService>
      <Service MaximumPassengers="4" DisabilityVehicleInd="false"/>
      <ServiceLevel Code="TRANSFER"/>
      <VehicleType Code="20" Description="Private Taxi"/>
      <Restrictions CancellationPenaltyInd="true"/>
      <ServiceCharges Amount="100" CurrencyCode="EUR">
        <ChargePurpose Code="35" Description="Base Rate"/>
        <Calculation Quantity="1" UnitName="SERVICE" UnitCharge="100"/>
      </ServiceCharges>
      <Fees>
        <Fee Amount="16" CurrencyCode="EUR">
          <ChargePurpose Code="28" Description="Bicycle supplement"/>
        </Fee>
        <Fee Amount="10" CurrencyCode="EUR">
          <ChargePurpose Code="28" Description="Extra Baggage"/>
        </Fee>
      </Fees>
      <TotalCharge CurrencyCode="EUR" EstimatedTotalAmount="100"/>
      <PaymentRules>
        <PaymentRule RuleType="1" Amount="90" CurrencyCode="EUR" AbsoluteDeadline="2009-07-08T00:00:00"/>
      </PaymentRules>
    </GroundService>
    <GroundService>
      <Service MaximumPassengers="50" DisabilityVehicleInd="false"/>
      <ServiceLevel Code="TRANSFER"/>
      <VehicleType Code="3" Description="Bus"/>
      <Restrictions CancellationPenaltyInd="true"/>
      <ServiceCharges Amount="20" CurrencyCode="EUR">
        <ChargePurpose Code="35" Description="Base Rate"/>
        <Calculation Quantity="1" UnitName="PAX" UnitCharge="20"/>
      </ServiceCharges>
      <Fees>
        <Fee Amount="16" CurrencyCode="EUR">
          <ChargePurpose Code="28" Description="Bicycle supplement"/>
        </Fee>
      </Fees>
    </GroundService>
  </GroundServices>
</OTA_GroundAvailRS>
```

```

        </Fee>
        <Fee Amount="10" CurrencyCode="EUR">
            <ChargePurpose Code="28" Description="Extra Baggage"/>
        </Fee>
    </Fees>
    <TotalCharge CurrencyCode="EUR" EstimatedTotalAmount="20"/>
    <PaymentRules>
        <PaymentRule RuleType="1" Amount="10" CurrencyCode="EUR" AbsoluteDeadline="2009-07-
08T00:00:00"/>
    </PaymentRules>
</GroundService>
</GroundServices>
</OTA_GroundAvailRS>
    
```

8.12 Response times and proceeding to the reservation

Searches are responded from a precalculated cache which is updated in real-time for isolated changes (i.e. only one hotel, for one room and board, supplement, offer for a limited period can be updated). This provides our partner with a search response time of circa 200 ms plus internet transport time, for the OTA_HotelAvailRQ message with hotel list and the OTA_HotelAvailRS message that is not enriched.

The number of hotels requested is irrelevant as each hotel in the list is calculated in parallel. The occupancy, number of rooms/boards available and offers applicable only slightly affects the processing time, as these concepts are also precalculated to a detailed extend.

Due to processing time of a change in availability or rates, the precalculation of all the possible arrival dates, lengths of stay and occupancies for the affected combinations, a search response and a quote might show a different result in a small period of time.

Customers dwelling on “search results” displays, analyzing “hotel information” and images and comparing offers of interest, could be affected by a change.

Conclusively partners are recommended to execute a search for a single hotel, when end customers navigate through pages following an initial search.

Customers using the **notification based model**, are recommended to implement the single hotel search for navigation, until the paxnames have been provided and an OTA_HotelResRQ of type quote (BA-B) can be transmitted.

On the navigation towards “please provide pax names” the **OTA_HotelResRQ** of the type **“Quote”** must implemented. This message verifies price and availability against the database and provides cancellation conditions. This prevents disappointment before providing all the participants data, in case the room is not available anymore or the rate bookable is different.

In case the quote differs from the search response, partners must correct the price towards the end-customer, or partners advertising up-front final pricing must accept differences. Under no circumstance AxisData accepts prices differences originating from searches or notifications, also in case of technical errors (see agreement annex).

9 Real-time booking messages

A service is booked online using the OTA_HotelResRQ for Hotel based bookings and OTA_GroundResRQ for transfer ones. A consultation whether the specific hotel, room and board are still available for the travelling occupancy can be executed with the OTA_HotelResRQ and ResStatus="Quote", same applies for OTA_GroundResRQ.

A definitive reservation is requested through the OTA_HotelResRQ or OTA_GroundResRQ message with a "Commit" value for ResStatus. This is necessary to trigger a response with a ResID_Value which confirms and uniquely identifies the reservation (our reference).

The ResID_Value type "client" is mandatory to register the partner reference. This reference is passed to the hotel as the voucher number. An additional "external reference" can be included.

On the navigation towards "please provide pax names" the **OTA_HotelResRQ** and **OTA_GroundResRQ** of the type "**Quote**" is highly recommended to be implemented. This message verifies price and availability against the database and provides cancellation conditions. This prevents disappointment before providing all the participants data, in case the room is not available anymore or the rate bookable is different.

9.1 Purpose

The OTA_HotelResRQ/RS and OTA_GroundResRQ/RS message sets are designed to be used with "quote" and "commit" status, at the very last steps of the booking process and require specific customer names etc. The Quote and Book messages are not high performance messages and are calculated in real-time on the database. Response times for the quote are mostly below 1 second, but the commit can take up to 6 seconds.

If early in the booking process, when customer names are not available, price and availability in our systems must be checked and compared to stored data, the OTA_HotelAvailRQ/RS (for a single hotel, room and board) and OTA_GroundAvailRQ/RS should be used. Response times for both RQs are sub-second. Alternatively, all conditions (rooms and/or boards, locations) for the specific dates can be requested, in order to offer the customer more options and achieve up-selling objectives.

9.2 Reservation OTA_HotelResRQ/RS – Services

Each subservice such as a room stay, board and transfer is detailed in the request. Rooms are defined in the <RoomStays> element, all other services in the <Services> element. Pax details are specified in the <ResGuests> section.

Each non-room service and each pax is assigned a reference place holder (RPH) by means of which it can be linked to another element. Each room receives a list of pax RPHs in <ResGuestRPHs> the first of which should be the adult responsible for the room. If there are other services associated with the room stay, s.a. board or extras, their RPHs go into the <ServiceRPHs> container.

Services not directly associated with a room stay, s.a. transfer are linked to pax RPHs in their respective <ResGuestRPHs> section.

The ResGuest element specifies Adults (*AgeQualifyingCode*="10"), Children (*AgeQualifyingCode*="8") and Infants (*AgeQualifyingCode*="7"). Children age has to be specified for each child and infant, but the exact birthdate is preferred. If the child age is exceeding the maximum child age for a specific hotel, the child is converted to an adult and the correct price is given for the specified stay and occupancy for that property. Regarding infants the client has the possibility to specify a child specified with an age of 0 or 1 year old and similar to children exceeding the max child age, the child is converted to an infant in the calculation. Alternatively an infant can be specified (*AgeQualifyingCode*="7") and again, if the age or birthdate specified exceeds the min child age, the calculation will convert the infant to a child and return the correct rates. Note that the start-age of children can vary and is not 2 years across all hotels.

9.3 Reservation OTA_HotelResRQ/RS - Quote request

The OTA_HotelResRQ can also be used to make an inquiry whether a particular reservation is possible, requesting the availability and total price for the booking.

This is done by using the value "Quote" in the *ResStatus* attribute in <OTA_HotelResRQ>.

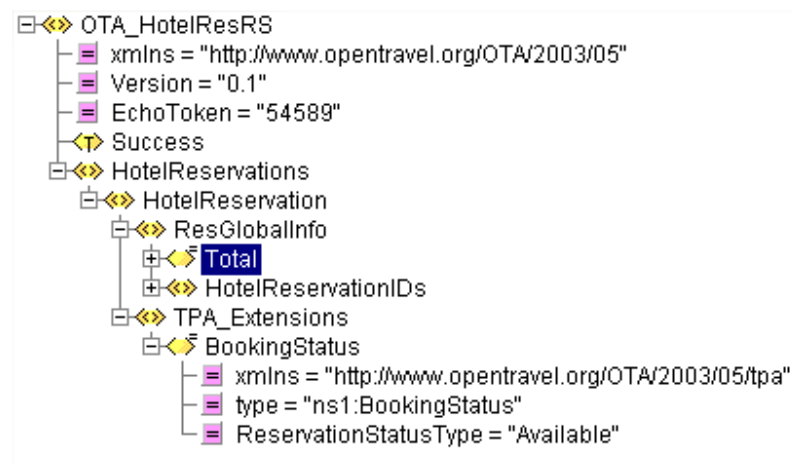
The pax profiles (name details) may be omitted. If no client reservation ID is specified the <ResGlobalInfo> element may be omitted. The following is a "Quote" request for a room stay, transfer.

Note: no actual booking is requested, just the confirmation of the price and availability!

Structure of an OTA_HotelResRQ:



If the requested services can be booked an OTA_HotelResRS with a **ReservationStatusType** of "Available" is received.



Note: No actual booking has been created and no reservation ID assigned. The client reservation ID specified is echoed in the response.

If the booking is not possible or if there was an error processing the request an OTA_HotelResRS with no <Success/> element is sent and the error message will detail the problem that occurred in <Errors>

Note that more than one <Error Tag> can exist inside <Errors>:

```
<OTA_HotelResRS xmlns = "http://www.opentravel.org/OTA/2003/05" Version = "0.1" EchoToken =
"12860279785574751543217105">
  <Errors>
    <Error Tag = "ATCOM" ShortText = "E0879" Type = "3">Room occupancy invalid for Club Konakli Hotel -
FamilyRoom_Standard/2 Bedrooms/TypeA</Error>
    <Error Tag = "ATCOM" ShortText = "E0525" Type = "3">Too many Children assigned.</Error>
  </Errors>
</OTA_HotelResRS>
```

Occupancy does not fit in the specified room:

```
<OTA_HotelResRS xmlns = "http://www.opentravel.org/OTA/2003/05" Version = "0.1" EchoToken = "54589">
  <Errors>
    <Error Tag = "ATCOM" ShortText = "E0879" Type = "3">Room occupancy invalid for Aspendos Beach -
FamilyRoom_Standard</Error>
  </Errors>
</OTA_HotelResRS>
```

Typical "not available" message:

```
<OTA_HotelResRS xmlns = "http://www.opentravel.org/OTA/2003/05" Version = "0.1" EchoToken =
"12860279512793021457447852">
  <Errors>
    <Error Tag = "ATCOM" ShortText = "E10968" Type = "3">Inventory not on sale - Accommodation Stop Sale</Error>
    <Error Tag = "ATCOM" ShortText = "E0138" Type = "3">Inventory Error</Error>
    <Error Tag = "ATCOM" ShortText = "E1735" Type = "3">Adora Golf Resort</Error>
  </Errors>
</OTA_HotelResRS>
```

In some error cases, alternative available options are suggested

- board requested not valid, AI+ can be booked:

```
<OTA_HotelResRS xmlns = "http://www.opentravel.org/OTA/2003/05" Version = "0.1" EchoToken =
"12860275678734771207867888">
  <Errors>
    <Error Tag = "ATCOM" ShortText = "E1253" Type = "3">Valid Board Basis codes for Hotel - AMTSTR123M. Room -
RMSDIN0000: AI+</Error>
  </Errors>
</OTA_HotelResRS>
```

- room not valid, available room code provided:

```
<OTA_HotelResRS xmlns = "http://www.opentravel.org/OTA/2003/05" Version = "0.10" EchoToken = "_12345_">
  <Errors>
    <Error Tag = "ATCOM" ShortText = "E1252" Type = "3">Valid room codes for Hotel - AMTSES0FFG: JSDL00GV00
JSDL00SV00 JSDLINGV00 JSDLINSV00</Error>
  </Errors>
</OTA_HotelResRS>
```

Fatal error with the content of the RQ (often due to unexpected empty spaces in codes or due to ISO encoding instead of UTF-8):

```
<OTA_HotelResRS xmlns = "http://www.opentravel.org/OTA/2003/05" Version = "0.10" EchoToken = "_12345_">
  <Errors>
    <Error>Unrecognized or wrongly formatted Request</Error>
  </Errors>
</OTA_HotelResRS>
```

9.3.1 Cancellation policy

For each OTA_HotelResRQ (both of the type “quote” and the type “commit”) the cancellation policy is included in the OTA_HotelResRS. For details see [the appropriate section](#) in “storing price and availability in the partner system” (hyperlink to this section). The OTA_HotelResRS holds the exact same “CancelPenalties” element under ResGlobalInfo.

Fees and deadlines setup: client can choose to have either calculated or by rules fees and deadlines configured:

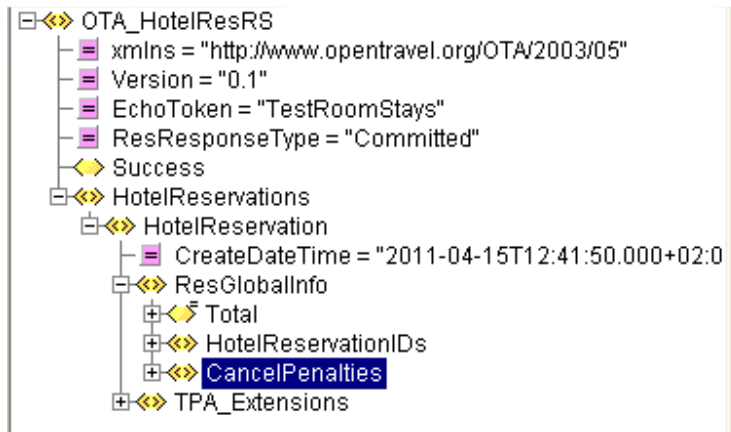
- If client has a calculated cancellation policy setup, absolute deadline dates and fees will be shown. This date specifies the starting date the cancellation fee will be applied.
- If client has a rules based setup, relative deadlines and fees will be shown.

calculated fees and deadlines

```
<CancelPenalties>
  <CancelPenalty>
    <Deadline AbsoluteDeadline="2012-06-05" OffsetDropTime="BeforeArrival"
OffsetTimeUnit="Day" OffsetUnitMultiplier="0"/>
    <AmountPercent Amount="877.99" CurrencyCode="EUR"/>
  </CancelPenalty>
  <CancelPenalty>
    <Deadline AbsoluteDeadline="2012-06-02" OffsetDropTime="BeforeArrival"
OffsetTimeUnit="Day" OffsetUnitMultiplier="3"/>
    <AmountPercent Amount="478.9" CurrencyCode="EUR"/>
  </CancelPenalty>
</CancelPenalties>
```

fees and deadlines by rules

```
<CancelPenalties>
  <CancelPenalty>
    <Deadline OffsetUnitMultiplier="1" OffsetTimeUnit="Day" OffsetDropTime="BeforeArrival"/>
    <AmountPercent Percent="14.29" BasisType="FullStay"/>
  </CancelPenalty>
</CancelPenalties>
```



9.4 The Booking Request

This is a definite booking request with a ResStatus="Commit". If accepted by the reservation system this is a binding commitment with possible penalties in the case of cancellations or modifications. The booking request is the exact same message as the quote request and technically the exact same modules are used, where in case of a booking the transaction is committed, whereas in the "quote" the transaction is rolled-back.

The RequestorID identifies the booking source with implications for the exact message formats. AxisData requires a separate RoomStay declaration for each room. This must include all ResGuestRPHs assigned to the room. The adult with the lowest order RPH is considered the person responsible for the room. The person responsible for the first room becomes also the one responsible for the entire booking. This can be overruled by specifying the RPH of another guest in HotelReservationID. A NamePrefix (Mr., Mrs., etc.) is mandatory for all adult pax in a booking. HotelReservationID assigns a booking code (voucher no.) to a booking identifying the origin of the code (AxisData, client, intermediary or external).

9.4.1 Partner reference

The partner reference is an obligatory element for obvious reasons regarding voucher numbers and arrival at the hotel. But also to enable:

- Implementation of the cancel/RS with partner references
- Avoid double bookings (if a partner tries to make two bookings with the same partner reference, the system will respond „booking already exists“).
- This reference must be printed on the voucher
- This reference will be passed as voucher number to the hotel

Note: the max field length of client reference is 20 characters (not 64 as specified by OTA)


```
<RoomStays>
  <RoomStay>
    <RoomTypes>
      <RoomType RoomTypeCode = "RMSDDB0000"></RoomType>
    </RoomTypes>
    <TimeSpan End = "2010-11-20" Start = "2010-11-09"></TimeSpan>
    <Total AmountAfterTax = "614.12" CurrencyCode = "EUR"></Total>
    <BasicPropertyInfo HotelCode = "AMTSPT003X"></BasicPropertyInfo>
    <ResGuestRPHs>
```

.....

9.4.4.1 Purpose of expected booking value

The expected booking value can detect inconsistencies or undesired complications in contract conditions. In any case, it helps the partnership to create full transparency of higher or lower expected booking value, *at the booking moment*.

- When the expected value is lower than the booking value, the partner and the destination can discuss causes and avoid publication of low rates which are not bookable.
- When the expected value is higher than the booking value, the partner and destination can work together to match functionality or understand for example certain complex contract conditions are hard to manage in distribution and lead to in competitiveness.

There is no other functionality other than storing the expected booking value as part of the booking details.

9.4.5 Early booking discount – due date and pre-payment value

The inclusion of the <Instance="E"> attribute in the <RequestorID> element, switches the inclusion of early booking payment conditions as agreed within the contract with the hotel. The "EBPrepayment Value" and "PaymentDueDate" attributes are included in the TPA Extension of the OTA_HotelResRS **of the type "Commit" only** (the Instance can be included in the Quote, but it will be ignored)

```
<OTA_HotelResRQ xmlns="http://www.opentravel.org/OTA/2003/05" ResStatus="Commit" Version="0.1">
  <POS>
    <Source>
      <RequestorID Instance="P" Type="22" ID="TEST" ID_Context="OTS" Instance="E"/>
    </Source>
  </POS>
  <HotelReservations>
    ...
```

OTA_HotelResRS:

```
...
<TPA_Extensions>
  <EBPrepayment Value="123.45" PaymentDueDate="2012-12-24"/>
  <ns1:BookingStatus xmlns:ns1="http://www.opentravel.org/OTA/2003/05/tpa" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="ns1:BookingStatus" ReservationStatusType="Reserved"/>
</TPA_Extensions>
</HotelReservation>
...
```

9.4.6 Child age:

ResGuests holds pax details, including age information. Age is important to determine the applicable rate. The detail available at reservation time depends on the booking source: **age at the time of arrival or full birth date.**

```
<ResGuest AgeQualifyingCode = "8" ResGuestRPH = "2">
  <Profiles>
    <ProfileInfo>
      <Profile>
        <Customer BirthDate="2003-01-27">

<ResGuest AgeQualifyingCode = "8" ResGuestRPH = "2">
  .....
  <GuestCounts>
    <GuestCount Age = "4"></GuestCount>
```

- If a hotel defines children to become adults at 13 years old and today a booking is made for one year in advance, a child of 12 years old at the moment of the booking should be indicated as 13 years old to avoid a wrong of the child.

It is highly recommended to use <Customer Birthdate> for all participants!

The <Success> tag indicates that the booking was processed correctly and the booking status for the request is specified with a ReservationStatusType="Reserved"

At present there is no "on request" status possible for a booking.

Sometimes a booking request is rejected for a formal or business reason, which is indicated by the <Errors> element and the absence of "success" and "reserved":

```
<OTA_HotelResRS xmlns = "http://www.opentravel.org/OTA/2003/05" EchoToken = "54589" ResStatus = "Commit" Version
= "0.1" schemaLocation = "http://www.opentravel.org/OTA/2003/05
http://www.opentravel.org/2005B/OTA_HotelResRQ.xsd">
  <Errors>
    <Error Code = "127" Type = "3">Booking with client reference: xxxxxxxxxx already exists</Error>
  </Errors>
</OTA_HotelResRS>
```

9.4.7 Multiple room bookings

Through duplicating the <RoomStay> element inside <RoomStays>, partners can cater for the typical 4 adults in two rooms request while checking availability for both rooms (i.e. remaining quantity of the total nr of rooms is validated) in one request under one booking reference. This is obligatory for requests where the same roomtype is requested multiple times as multiple requests would only check for 1 unit.

The same logic can be applied for group bookings with varying lengths of stays, by varying the dates of each RoomStay element. RoundTrips can be booked applying the same logic, by specification of subsequential dateranges and different hotelcodes for each RoomStay element.

complex example extract (see OTA_HotelRes folder):

```

.....
<RoomStays>
  <RoomStay>
    <RoomTypes>
      <RoomType RoomTypeCode = "RMSD000000"></RoomType>
    </RoomTypes>
    <TimeSpan Start = "2013-05-15" End = "2013-05-24"></TimeSpan>
    <Total AmountAfterTax = "500.00" CurrencyCode = "EUR"></Total>
    <BasicPropertyInfo HotelCode = "AAUTO14TC"></BasicPropertyInfo>
  </RoomStay>
  <RoomStay>
    <RoomTypes>
      <RoomType RoomTypeCode = "RMSD000000"></RoomType>
    </RoomTypes>
    <TimeSpan Start = "2013-05-24" End = "2013-05-31"></TimeSpan>
    <Total AmountAfterTax = "500.00" CurrencyCode = "EUR"></Total>
    <BasicPropertyInfo HotelCode = "AAUTO14TK"></BasicPropertyInfo>
  </RoomStay>
</RoomStays>
<ResGlobalInfo>
  <HotelReservationIDs>
    <HotelReservationID ResID_Value = "MultiRoomBooking1001" ResID_Source = "TEST"
    ResID_SourceContext = "Client"></HotelReservationID>
  </HotelReservationIDs>
</ResGlobalInfo>
.....

```

9.4.8 Transfer Information - uncalculated

With new transfer realtime messaging (OTA_Ground pack) this model will be deprecated in the near future

Transfers, normally between the airport and the hotel, constitute a service which requires additional information in order to be created at the operational level. Therefore the reservation request needs to include details about the arriving and departing flights respectively. Since OTA does not provide an element for transfers AxisData has designed a TransferInfoType TPA Extension [**Appendix A**].

To identify a transfer service the transfer origin (e.g. airport code) and destination (e.g. hotel code), the date and time of the transfer and possibly the transportation type (bus, taxi, etc.) would be sufficient. But in order to create the transfer service additional information is required:

- airline and flight no. (one string)
- remote airport code and date/time:
 - for a transfer-in this is the departure airport and date/time of the arriving flight.
 - for a transfer out this is the destination airport and arrival date/time of the departing flight.

A special case arises when the arriving or departing flight consists of multiple legs. In this case the required information depends on the direction of the flight:

- on arrival:
 - arrival airport and date/time
 - arriving flight (no. and company) – last leg
 - **last leg origin airport and date/time**
- on departure:
 - departure airport and date/time
 - departing flight (no. and company) – first leg
 - **final destination airport and date/time**

NOTE: the arrival and departure times are required to register new flights (flights for which we do not have bookings). Flight arrival **time** or flight departure **time** changes are irrelevant and do not require notification from our partners. Flight **time** information is automatically obtained and updated in our systems (planned for roll-out: Q4 2010).

Flight **date** changes MUST be communicated and could require a cancel and re-book for the accommodation.

Flight **number** changes MUST be communicated as the clients must be re-grouped to a different transfer.

9.4.8.1 Transfer rate calculation:

Transfers are not calculated at the time of booking and the total price only includes the hotel reservation. Transfer rates are expected to be stored and calculated at the partner side. For this purpose a uniform transfer rate export is available from each destination office. For transfer bookings with real-time price calculation the OTA_Ground pack messages need to be used.

9.4.8.2 Typical transfer specification

```

.....
<Services>
  <Service ServiceInventoryCode = "TRF-IN+OUT AYT" ServiceRPH = "1">
.....
<TPA_Extensions>
  <TransferInfoType>
    <TransferLeg>
      <TransferOrigin>
        <ConnectingTransport ArrivalDateTime = "2010-09-21T23:40:00" DepartureDateTime = "2010-09-
21T19:35:00">
          <DepartureAirport LocationCode = "FMM"></DepartureAirport>
          <ArrivalAirport LocationCode = "AYT"></ArrivalAirport>
          <OperatingAirline FlightNumber = "XQ287"></OperatingAirline>
        </ConnectingTransport>
      </TransferOrigin>
      <TransferDestination>
        <Hotel HotelCode = "AYTEURO"></Hotel>
      </TransferDestination>
    </TransferLeg>

```

```

    <TransferLeg>
      <TransferOrigin>
        <Hotel HotelCode = "AYTEURO"></Hotel>
      </TransferOrigin>
      <TransferDestination>
        <ConnectingTransport ArrivalDateTime = "2010-10-02T08:20:00" DepartureDateTime = "2010-10-
02T06:00:00">
          <DepartureAirport LocationCode = "AYT"></DepartureAirport>
          <ArrivalAirport LocationCode = "FMM"></ArrivalAirport>
          <OperatingAirline FlightNumber = "KK305"></OperatingAirline>
        </ConnectingTransport>
      </TransferDestination>
    </TransferLeg>
  </TransferInfoType>
</TPA_Extensions>

```

9.4.9 Special transfers

In case of round trips (arrival flight, multiple hotel stays, departure flight), city hopping (arrival flight, hotel stay, connection flight, hotel stay, departure flight) or combinations with other types of holidays like cruise and hotel, a more extensive transfer specification is required. For these cases and for inclusion of extras like bicycles, golfbags, etc the OTA_Ground pack messages must be used.

9.4.10 Transfer-Only

A transfer-only booking can be made by simply omitting the specification of the hotelstay and only include the transfer service. As a special feature, transfer-only bookings can be made by specifying the GIATA code, in case the AxisData hotelcode is not available at the time of booking.

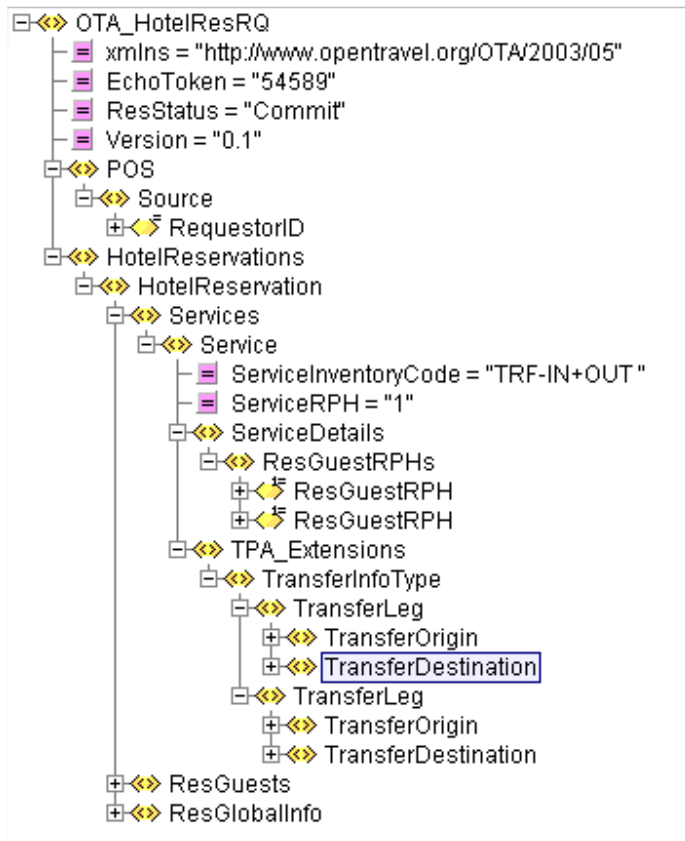
The GIATA code can simply replace the AxisData hotel code:

```

<TransferDestination>
  <Hotel HotelCode = "75856"></Hotel>
</TransferDestination>

```

The schema of a transfer only booking would be similar to:



9.4.11 Flight booking tour operator and flight booking reference

In case a return flight must be confirmed with the organization where the flight was purchased, the vendor and the flight purchase reference must be included in the OTA_HotelResRQ. Most airlines do not accept re-confirmations, in case the flight was not purchased through them. Conclusively, the vendor can be different from the airline.

Inside ExtensionGlobalInfo, FlightReservationIDs, the elements ResID_Source can be used to specify the vendor and ResID_Value can be used to specify the flight purchase reference to be confirmed.

Below example might apply to an AirBerlin flight, purchased through any vendor:

```
<TPA_Extensions>
  <ExtensionGlobalInfo>
    <FlightReservationIDs>
      <FlightReservationID ResID_Type = "14" ResID_Value = "873625" ResID_Source = "TOxxxx"
ResID_SourceContext = "Client" ResGuestRPH = "0"></FlightReservationID>
    </FlightReservationIDs>
  </ExtensionGlobalInfo>
```

9.5 OTA_HotelResModifyRQ/RS

In principle the online system does not support booking modifications. If a booking suffers a change affecting price or availability, the old reservation is cancelled and a new one created. Currently there is one exception to this for minor changes, NOT affecting price and availability: flight details in the `<TransferInfoType>` of a transfer reservation may be modified using the OTA_HotelResModifyRQ. This caters to situations where complete flight details are not available at the time of booking, and cases where the flight on which the booked transfer is based is subsequently replaced by another flight.

NOTE: the arrival and departure times are required to register new flights (flights for which we do not have bookings). Flight arrival **time** or flight departure **time** changes are irrelevant and do not require notification from our partners. Flight **time** information is automatically obtained and updated in our systems .

Flight **date** changes MUST be communicated and could require a cancel and re-book for the accommodation.

Flight **number** changes MUST be communicated as the clients must be re-grouped to a different transfer.

The OTA_HotelResModifyRQ works by sending a full overlay of the original reservation to which the modifications are applied. In our current implementation this means that a client who wants to update flight information for a transfer booking resends the full reservation data of the original booking request, the only modified data being in the `<ConnectingTransport>` element and its children.

Example: In the following transfer leg the arriving flight no. (and therefore also departure and arrival times) are unknown.

```
<TPA_Extensions>
  <TransferInfoType>
    <TransferLeg>
      <TransferOrigin>
        <ConnectingTransport DepartureDateTime="2006-01-15T00:00:00"
          ArrivalDateTime="2006-01-15T00:00:00">
          <DepartureAirport LocationCode="MUC"/>
          <ArrivalAirport LocationCode="AYT"/>
          <OperatingAirline FlightNumber="XX9999"/>
        </ConnectingTransport>
      </TransferOrigin>
      <TransferDestination>
        <Hotel HotelCode="AYT4321"/>
      </TransferDestination>
    </TransferLeg>
  </TransferInfoType>
</TPA_Extensions>
```

A flight code of "XX9999" indicates that the flight is unknown. This should be accompanied by arrival and departure times of "T00:00:00". The dates should of course contain valid information.

The Arrival Airport in the Inbound Transfer Leg and the Departure Airport in the Outbound Transfer Leg must hold one of the airports from which this hotel can be served.

At a later stage a specific flight for this reservation is booked and the full reservation overlay in the OTA_HotelResModifyRQ will contain the new `<ConnectingTransport>` information. At this stage missing airport info or incorrect airport info can also be corrected, similar to a complete flight change.

```
<TPA_Extensions>
  <TransferInfoType>
    <TransferLeg>
      <TransferOrigin>
        <ConnectingTransport DepartureDateTime="2006-01-15T10:15:00"
          ArrivalDateTime="2006-01-15T14:25:00">
          <DepartureAirport LocationCode="MUC"/>
          <ArrivalAirport LocationCode="AYT"/>
          <OperatingAirline FlightNumber="XY3214"/>
        </ConnectingTransport>
      </TransferOrigin>
      <TransferDestination>
        <Hotel HotelCode="AYT4321"/>
      </TransferDestination>
    </TransferLeg>
  </TransferInfoType>
</TPA_Extensions>
```

Once the OTA_HotelResModifyRQ has been processed our system will reply with an OTA_HotelResModifyRS which, just like the OTA_HotelResRS, will include a `<Success/>` element if the modification has been accepted:

```
<OTA_HotelResModifyRS xmlns="http://www.opentravel.org/OTA/2003/05"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.opentravel.org/OTA/2003/05
    C:\OTASPE~1\2005a\OTA2005A_XML\OTA_HotelResRS.xsd" Version="0.1" EchoToken="54589">
  <Success/>
  <HotelResModifies>
    <HotelResModify>
      <ResGlobalInfo>
        <HotelReservationID>
          <!-- internal, client, or both reservation IDs identify the booking -->
          <HotelReservationID ResID_Value="02377548" ResID_SourceContext="AxisData"/>
          <HotelReservationID ResID_Value="282143" ResID_SourceContext="Client"/>
        </HotelReservationID>
      </ResGlobalInfo>
    </HotelResModify>
  </HotelResModifies>
</OTA_HotelResModifyRS>
```

An OTA_HotelResModifyRS without the `<Success/>` element will contain an `<Error>` tag indicating the reason why the modification was rejected:

```
<OTA_HotelResModifyRS xmlns="http://www.opentravel.org/OTA/2003/05"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.opentravel.org/OTA/2003/05
    C:\OTASPE~1\2005a\OTA2005A_XML\OTA_HotelResRS.xsd" Version="0.1" EchoToken="54589">
  <Errors>
```

```
<Error Type="3" Code="520"/>
<!-- Booking not changed - data received differs from stored data -->
</Errors>
</OTA_HotelResModifyRS>
```

OTA error **520 Booking not changed - data received differs from stored data** will be returned if a part of the booking which is not allowed to be modified through this message differs from the original booking.

the logical check of booking reference, lead-pax first name, lead-pax last-name, ClientID and HotelCode must be consistent with the original reservation and cannot be changed.

9.6 OTA_GroundResRQ/RS

Available Q1/2013

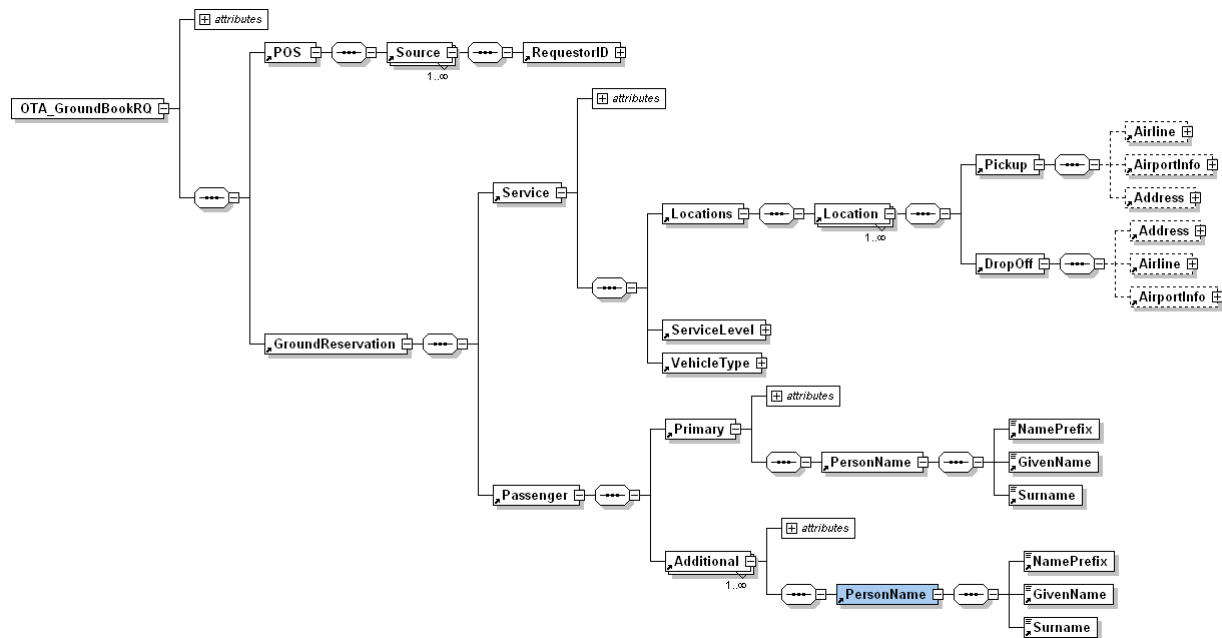
The submission of a transfer as part of the hotel reservation has been existing functionality for many years. This TPA extension in the OTA_HotelResRQ will remain without including the transfer price in the total amount of the booking.

The OTA_Groundxxx messages are designed to calculate the transfer cost in real-time.

9.6.1 OTA_GroundResRQ

Transfer services are defined in **<Service>** element. Pax details are specified in the **<Passenger>** section.

Typical OTA_GroundBookRQ structure:



Typical example of a Bus transfer service for 3 pax from airport to Hotel and Hotel to airport

```
<OTA_GroundBookRQ xmlns="http://www.opentravel.org/OTA/2003/05" Version="2012.1" EchoToken="1234" ResStatus="Commit">
  <POS>
    <Source>
      <RequestorID ID="1234" ID_Context="OTS" Type="22"/>
    </Source>
    <Source>
      <RequestorID ID="abcdef" ID_Context="Client" Type="16"/>
    </Source>
  </POS>
  <GroundReservation>
    <Service MaximumPassengers="4" DisabilityVehicleInd="false">
      <Locations>
        <Location>
          <Pickup>
            <Airline FlightNumber="1234" Code="AB" FlightDateTime="2009-07-08T14:00:00"/>
            <AirportInfo>
              <Arrival CodeContext="IATA" LocationCode="PMI"/>
            </AirportInfo>
          </Pickup>
          <DropOff>
            <Address>
              <LocationType Code="10" UniqueId="AMTSES0000"/>
            </Address>
          </DropOff>
        </Location>
        <Location>
          <Pickup>
            <Address>
              <LocationType Code="10" UniqueId="AMTSES0000"/>
            </Address>
          </Pickup>
          <DropOff>
            <Address>
              <LocationType Code="10" UniqueId="AMTSES0000"/>
            </Address>
          </DropOff>
        </Location>
      </Locations>
    </Service>
    <Passenger>
      <Primary>
        <PersonName>
          <NamePrefix>
            <GivenName>
              <Surname>
            </Surname>
          </GivenName>
          </NamePrefix>
        </PersonName>
      </Primary>
      <Additional>
        <PersonName>
          <NamePrefix>
            <GivenName>
              <Surname>
            </Surname>
          </GivenName>
          </NamePrefix>
        </PersonName>
      </Additional>
    </Passenger>
  </GroundReservation>
</OTA_GroundBookRQ>
```

```

18T10:00:00"/>
    <Airline FlightNumber="1234" Code="AB" FlightDateTime="2009-07-
    <AirportInfo>
        <Arrival CodeContext="IATA" LocationCode="PMI"/>
    </AirportInfo>
    </DropOff>
    </Location>
</Locations>
<ServiceLevel Code="TRANSFER"/>
<VehicleType Code="20" Description="Private Taxi"/>
</Service>
<Passenger>
    <Primary RPH="1">
        <PersonName>
            <NamePrefix>Mr</NamePrefix>
            <GivenName>TIBETA</GivenName>
            <Surname>LEISUREA</Surname>
        </PersonName>
    </Primary>
    <Additional RPH="2">
        <PersonName>
            <NamePrefix>Mr</NamePrefix>
            <GivenName>TIBETA</GivenName>
            <Surname>LEISUREA</Surname>
        </PersonName>
    </Additional>
    <Additional RPH="3" Age="5">
        <PersonName>
            <NamePrefix>Mr</NamePrefix>
            <GivenName>TIBETA</GivenName>
            <Surname>LEISUREA</Surname>
        </PersonName>
    </Additional>
</Passenger>
</GroundReservation>
</OTA_GroundBookRQ>

```

9.6.2 OTA_GroundResRQ Booking request / quote request

The OTA_GroundResRQ can also be used to make an inquiry whether a particular reservation is possible, requesting the availability and total price for the booking. The quote is requested the same way as OTA_HotelResRQ, using ResStatus attribute with "Quote" value. The behavior is similar to OTA_HotelResRQ, no actual booking is requested, just the confirmation of the price and availability.

The definite booking request is sent using ResStatus with value "Commit". If accepted by the reservation system this is a binding commitment with possible penalties in the case of cancellations or modifications. The booking request is the exact same message as the quote request and technically the exact same modules are used, where in case of a booking the transaction is committed, whereas in the "quote" the transaction is rolled-back.

```

<OTA_GroundBookRQ xmlns="http://www.opentravel.org/OTA/2003/05" Version="2012.1" EchoToken="1234" ResStatus="Quote">

```

9.6.3 Booking details

Every transfer service requested is expressed as a `<Location>` element. This section contains the pickup and dropoff details needed for the transfer service and must contain:

- OTS Hotel code in Address/Name section for any Hotel pickup/dropoff
- Flight and airport information for airport pickup/dropoff: Flight number, flight company, complete date and time and airport

```

<Pickup>
  <Address>
    <LocationType Code="10" UniqueId="AMTSES0000"/>
  </Address>
</Pickup>
<DropOff>
  <Airline FlightNumber="2415" Code="AB" FlightDateTime="2009-07-18T14:00:00"/>
  <AirportInfo>
    <Arrival CodeContext="IATA" LocationCode="PMI"/>
  </AirportInfo>
</DropOff>

```

In the Passenger details section, Pax name and age must be indicated. Age is important to determine the applicable rate. The detail available at reservation time depends on the booking source: **age at the time of arrival or full birth date.**

```

<Primary RPH="1" Age="30">

```

Passenger's details should be specified per assigned service, but if a RPH is assigned to them, they can be reused in another ground reservation within the same message without specifying the details again. Primary passenger is considered the leading pax of the reservation.

```

...
<Passengers>
  <Primary RPH="1" Age="30">
    <PersonName>
      <NamePrefix>Mr</NamePrefix>
      <GivenName>TEST</GivenName>
      <Surname>TEST</Surname>
    </PersonName>
  </Primary>
  <Additional RPH="2" Age="5">
    <PersonName>
      <NamePrefix>Mr</NamePrefix>
      <GivenName>TEST</GivenName>
      <Surname>TEST</Surname>
    </PersonName>
  </Additional>
</Passengers>
...
<Passengers>
  <Primary RPH="1"/>
  <Additional RPH="2"/>
</Passengers>

```

9.6.4 Partner reference

The partner reference is an mandatory element for obvious reasons regarding voucher numbers. But also to enable:

- Implementation of the cancel/RS with partner references
- Avoid double bookings (if a partner tries to make two bookings with the same partner reference, the system will respond „booking already exists“.
- This reference must be printed on the voucher

Client reference is specified in the POS section with a new `<Source>` element. The reference must use the OTA UIT code (Unique Id Type) value 16 (Reference).

```
<Source>
  <RequestorID ID="123456" ID_Context="Client" Type="16"/>
</Source>
```

9.6.5 OTA_GroundResRS

The Quote response message will confirm the availability of the service and the final cost of the service in the `<ServiceCharge>` section, the Commit will do the final booking as well.

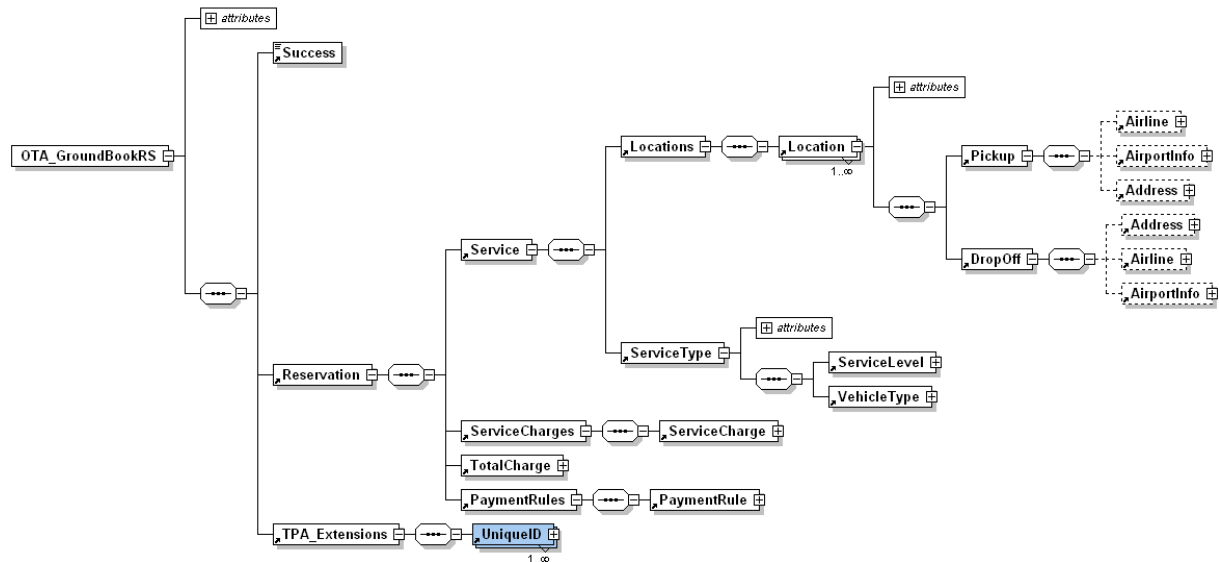
If the booking is not possible or if there was an error processing the request an OTA_GroundResRS with no `<Success/>` element is sent and the error message will detail the problem that occurred in `<Errors/>`

Typical OTA_GroundBookRS structure:

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Examples

```
<OTA_GroundBookRS xmlns="http://www.opentravel.org/OTA/2003/05" Version="2012.1" EchoToken="1234" ResStatus="Committed">
  <Success>
    <Reservation>
      <Service>
        <Locations>
          <Location RPH="1">
            <Pickup>
              <Airline FlightNumber="1234" Code="AB" FlightDateTime="2009-07-
08T14:00:00"/>
              <AirportInfo>
                <Arrival CodeContext="IATA" LocationCode="PMI"/>
              </AirportInfo>
            </Pickup>
            <DropOff>
              <Address>
                <LocationType Code="10" UniqueId="AMTSES0000"/>
              </Address>
            </DropOff>
          </Location>
          <Location RPH="2">
            <Pickup>
              <Address>
                <LocationType Code="10" UniqueId="AMTSES0000"/>
              </Address>
            </Pickup>
            <DropOff>
              <Airline FlightNumber="1234" Code="AB" FlightDateTime="2009-07-
18T10:00:00"/>
              <AirportInfo>
                <Arrival CodeContext="IATA" LocationCode="PMI"/>
              </AirportInfo>
            </DropOff>
          </Location>
        </Locations>
        <ServiceType MaximumPassengers="4" DisabilityVehicleInd="false">
```

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```

        <ServiceLevel Code="TRANSFER"/>
        <VehicleType Code="20" Description="Private Taxi"/>
    </ServiceType>
</Service>
<ServiceCharges>
    <ServiceCharge Purpose="35" Amount="20" Currencycode="EUR"/>
</ServiceCharges>
<TotalCharge CurrencyCode="EUR" RateTotalAmount="20"/>
<PaymentRules>
    <PaymentRule RuleType="1" Percent="100" OffSetTimeUnit="Days" OffsetUnitMultiplier="5"
DateTime="2009-07-08T00:00:00"/>
</PaymentRules>
</Reservation>
<TPA_Extensions>
    <UniqueID ID="abcdef" ID_Context="Client" Type="16"/>
    <UniqueID ID="123456" ID_Context="Internal" Type="36"/>
    <UniqueID ID="1" ID_Context="Internal" Type="37"/>
    <UniqueID ID="2" ID_Context="Internal" Type="37"/>
</TPA_Extensions>
</OTA_GroundBookRS>

```

9.6.6 Partner and Axisdata references

Client reference number and Axisdata internal reference numbers can be found in `<TPA_Extensions>` section. The client reference will use the OTA UIT code (Unique Id Type) value 16 (Reference), as a global with no hierarchy reference. Axisdata internal references will have a 2 level hierarchy references. Master reference will use the OTA UIT code (Unique Id Type) value 36 (Parent reference), each service within the booking will have an independent reference using OTA UIT code (Unique Id Type) value 37 (Childreference). Child references correspond to the RPH code of the `<Location>` element, in case RPH is not provided in the OTA_GroundBookRQ, references will be automatically generated using an auto incremental integer value.

Both client and internal references can be used for cancellation process, but Client value should be used for any other communications (printed vouchers, accountancy, etc).

9.6.7 Calculation and cancellation rules

For each OTA_GroundResRQ (both of the type “quote” and the type “commit”) the cancellation policy is included in the OTA_GroundResRS. For details see [the appropriate section](#) in “storing price and availability in the partner system”.

The prices shown in the `<TotalCharge>` section are final and will be the ones considered for accountancy.

Full cancellations can be performed using both axisdata or partner reference, to perform a partial cancellation, specific child reference should be used.

9.7 OTA_CancelRQ/RS

To cancel a reservation the requestor sends an OTA_CancelRQ with a CancelType of **Commit** to AxisData. The booking reference no. of the booking to be cancelled is specified in the ID attribute of the <UniqueID> tag. Either the client's booking reference no. or the AxisData internal booking reference no. can be used.

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- Commit - definitive cancellation request -->
<OTA_CancelRQ xmlns="http://www.opentravel.org/OTA/2003/05" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.opentravel.org/OTA/2003/05
\\Srvaxipmi050\AXISPMI\Navitravel\Desarrollo\Documentacion\NEWBUS~1\Docs\OTA2005A\_OTA2005A_XML\OTA_CancelRQ.xsd" Version="0.1" EchoToken="5923005" CancelType="Commit">
  <POS>
    <Source>
      <RequestorID Type="22" ID="TEST" ID_Context="AxisData"/>
    </Source>
  </POS>
  <UniqueID Type="14" ID="BBAKRO_200610031553" ID_Context="Client"/>
</OTA_CancelRQ>
```

AxisData then responds with an OTA_CancelRS with a Status of **Committed** to confirm the cancellation. All relevant booking reference nos. (client and AxisData) are shown.

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- Committed - Cancellation confirmation -->
<OTA_CancelRS xmlns="http://www.opentravel.org/OTA/2003/05" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" Status="Committed" Target="Production" Version="2005" xsi:type="OTA_CancelRS">
  <Success/>
  <UniqueID Type="14" ID_Context="Internal" ID="20061003154321-98243"/>
  <UniqueID Type="14" ID_Context="Client" ID="BBAKRO_200610031553"/>
  <CancelInfoRS>
    <CancelRules>
      <CancelRule CancelByDate="2011-05-02T18:27:41.000+02:00" Amount="0.000" CurrencyCode="EUR"/>
    </CancelRules>
  </CancelInfoRS>
</OTA_CancelRS>
```

The element CancelByDate = "2011-05-02T18:27:41.000+02:00" specifies the exact date and time the booking was cancelled in our systems, for partners records.

9.7.1 Cancellation Quote Request

Before sending a final CancelRQ the requestor may want to inquire about cancel penalties with a CancelType of **Quote**.

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- Quote - Request Cancellation Rules -->
<OTA_CancelRQ xmlns="http://www.opentravel.org/OTA/2003/05" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://www.opentravel.org/OTA/2003/05
\\Srvaxipmi050\AXISPMI\Navitravel\Desarrollo\Documentacion\NEWBUS~1\Docs\OTA2005A\_OTA2005A_XML\OTA_CancelRQ.xsd" Version="0.1" EchoToken="5923005" CancelType="Quote">
```

```
<POS>
  <Source>
    <RequestorID Type="22" ID="TEST" ID_Context="AxisData"/>
  </Source>
</POS>
<UniqueID Type="14" ID="BBAKRO_200610031553" ID_Context="Client"/>
</OTA_CancelRQ>
```

AxisData responds by sending a CancelRS with a Status of **Pending** which includes penalty information for cancelling the reservation by dates:

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- Pending - returns cancellation penalty rules by date, without cancelling -->
<OTA_CancelRS xmlns="http://www.opentravel.org/OTA/2003/05" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" Status="Pending" Target="Production" Version="2005" xsi:type="OTA_CancelRS">
  <Success/>
  <UniqueID Type="14" ID_Context="Internal" ID="20061003154321-98243"/>
  <UniqueID Type="14" ID_Context="Client" ID="BBAKRO_200610031553"/>
  <CancelInfoRS>
    <CancelRules>
      <CancelRule Amount="0.000" CurrencyCode="EUR"/>
    </CancelRules>
  </CancelInfoRS>
</OTA_CancelRS>
```

9.7.1 OTA_ReadRQ/RS

Partners can query our system, obtaining the reservation information stored in our system by using the OTA_ReadRQ, using the partner reference. The response is a detailed OTA_ResRetrieve, which holds the hotel reservations in a similar way as OTA_HotelResRQ. If a transfer is included in the booking, this information is provided. Transfer-Only bookings can also be requested, although in case of an original transfer-only booking with GIATA code, this code is not reflected in the response.

This section describes how booking information can be transmitted to the Client using a pull method and a choice can be made to use a two step approach: execute a search and retrieve booking details (both actions use same message, with different parameters). In any case, response will be the message OTA_ResRetrieveRS, depending on the type of request it will contain a list of booking references that fit in the specified criteria (search) or the booking details.

9.7.1.1 Search bookings

Search is enabled by setting to true the `ReturnListIndicator="true"` in the message header. A part from that flag, search criterion has to be provided. This criterion allows filtering by standard fields like: ChainCode, ChainName, HotelCode or HotelName; and also by dates, there is an attribute (`DateType`) that indicates the type: ArrivalDate, CreateDate, DepartureDate OR LastUpdateDate. In this service there are also defined other region criterions, as OTA_ReadRQ definition doesn't provide a standard way of filtering by region codes, they will be defined as TPA Extensions, using OTA

standard type *HotelSearchCriterionType* (specified in *OTA_HotelCommonTypes.xsd*), as an enumeration of RefPoints. This will allow defining filtering by Country, Airport, Destination, Region or Resort¹.

The external provider should build a request for obtaining bookings for its hotels than have changed since last search (i.e. using *DateType*="LastUpdateDate")

This is an example of an *OTA_ReadRQ*:

```
<OTA_ReadRQ xmlns="http://www.opentravel.org/OTA/2003/05" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
Version="2008.1" ReturnListIndicator="true">
  <POS>
    <Source>
      <RequestorID Type="22" ID="PTEST" ID_Context="OTS"/>
    </Source>
  </POS>
  <ReadRequests>
    <HotelReadRequest ChainCode="CH_CODE" ChainName="Chain Name" HotelCode="HT_CODE"
HotelName="Hotel Name">
      <SelectionCriteria Start="2020-06-21" DateType="LastUpdateDate"/>
      <TPA_Extensions>
        <Criterion>
          <RefPoint CodeContext="Country" Name="Spain"/>
          <RefPoint CodeContext="Airport" Name="AGP"/>
          <RefPoint CodeContext="Destination" Name="Andalucia"/>
          <RefPoint CodeContext="Region" Name="Costa del Sol"/>
          <RefPoint CodeContext="Resort" Name="Malaga"/>
        </Criterion>
      </TPA_Extensions>
    </HotelReadRequest>
  </ReadRequests>
</OTA_ReadRQ>
```

SelectionCriteria also allows parameters like *End* or *ResStatus*.

Response will be the list of bookings that fit the specified criteria. The list will contain the minimum set of properties that identifies a booking; these properties are the booking reference (internal reference and client reference) and the booking status:

```
<OTA_ResRetrieveRS xmlns="http://www.opentravel.org/OTA/2003/05" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
Version="2008.1">
  <Success/>
  <ReservationsList>
    <HotelReservation ResStatus="Reserved">
      <UniqueID Type="14" ID="12345" ID_Context="Internal"/>
      <UniqueID Type="14" ID="test-001" ID_Context="Client">
        <CompanyName Code="TEST"/>
      </UniqueID>
    </HotelReservation>
    <HotelReservation ResStatus="Reserved">
      <UniqueID Type="14" ID="12346" ID_Context="Internal"/>
      <UniqueID Type="14" ID="test-002" ID_Context="Client">
        <CompanyName Code="TEST"/>
      </UniqueID>
    </HotelReservation>
    <HotelReservation ResStatus="Cancelled">
      <UniqueID Type="14" ID="12347" ID_Context="Internal"/>
      <UniqueID Type="14" ID="test-003" ID_Context="Client">
        <CompanyName Code="TEST"/>
      </UniqueID>
    </HotelReservation>
  </ReservationsList>
</OTA_ResRetrieveRS>
```

¹ See Appendix 1

```

        <CompanyName Code="TEST"/>
    </UniqueID>
</HotelReservation>
<HotelReservation ResStatus="Reserved">
    <UniqueID Type="14" ID="12348" ID_Context="Internal"/>
    <UniqueID Type="14" ID="test-004" ID_Context="Client">
        <CompanyName Code="TEST"/>
    </UniqueID>
</HotelReservation>
</ReservationsList>
</OTA_ResRetrieveRS>

```

The previous example shows that the service has returned 4 bookings, one of them is cancelled. All four bookings belong to same Client (TEST); client code is specified in the **CompanyName** element, as child of the UniqueID element.

Simple list

The most straight forward approach would be to periodically check and match bookings, omitting search criteria. The expected list must not exceed 1.000 bookings to avoid time-out problems.

```

<OTA_ReadRQ xmlns="http://www.opentravel.org/OTA/2003/05" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" Version="2008.1" ReturnListIndicator="true">
    <POS>
        <Source>
            <RequestorID Type="22" ID="TEST" ID_Context="OTS"/>
        </Source>
    </POS>
    <ReadRequests>
        <HotelReadRequest>
            <SelectionCriteria Start="2012-06-21" DateType="LastUpdateDate"/>
        </HotelReadRequest>
    </ReadRequests>
</OTA_ReadRQ>

```

9.7.1.2 Retrieve booking details

After obtaining the list of booking references, the external provider will request the booking details using same message (OTA_ReadRQ) with the **ReturnListIndicator="false"** disabled and specifying the booking reference in the **<UniqueID>** element. It may also specify a search criterion; in this case, the service will return a limited number of booking details (in order to avoid creating a huge message that could collapse the system). Pagination will be deployed in later implementations.

Attribute **PrimaryLangID** in the request is used to select the desired language in which any description in the response is written (room or board description). By default (or in case the specified language is not available), description will be returned in English:

```

<OTA_ReadRQ xmlns="http://www.opentravel.org/OTA/2003/05" Version="2008.1" ReturnListIndicator="false"
PrimaryLangID="EN">
    <POS>
        <Source>
            <RequestorID Type="44" ID="PTEST" ID_Context="OTS"/>
        </Source>
    </POS>

```

```

</POS>
<UniqueID Type="14" ID="test-004" ID_Context="Client"/>
</OTA_ReadRQ>

```

Response will contain a HotelReservation with all details belonging to booking *test-004*. Each RoomStay will also contain the ContractingAgency, this information is added to the response as part of a TPA_Extension (there is no valid field in the OTA definition):

```

<OTA_ResRetrieveRS Version = "2008.1" xmlns = "http://www.opentravel.org/OTA/2003/05" xmlns:ns2 =
"http://www.opentravel.org/OTA/2003/05/tpa">
  <Success/>
  <ReservationsList>
    <HotelReservation CreateDateTime = "2012-10-18T10:52:18" ResStatus = "Reserved">
      <POS>
        <Source>
          <RequestorID Type = "22" ID = "TEST" ID_Context = "OTS">
            <CompanyName Code = "TEST" CompanyShortName = "TO ShortName"/>
          </RequestorID>
        </Source>
      </POS>
      <UniqueID Type = "14" ID = "12348" ID_Context = "Internal"/>
      <UniqueID Type = "14" ID = "test-004" ID_Context = "Client"/>
      <RoomStays>
        <RoomStay IndexNumber = "1">
          <RoomTypes>
            <RoomType RoomTypeCode = "RMSDDB0000">
              <RoomDescription>
                <Text Language = "EN">Room_Standard/Double</Text>
              </RoomDescription>
            </RoomType>
          </RoomTypes>
          <RoomRates>
            <RoomRate RoomTypeCode = "RMSDDB0000">
              <Features>
                <Feature>
                  <Description>
                    <Text>BB</Text>
                    <Text Language = "EN">Breakfast</Text>
                  </Description>
                </Feature>
              </Features>
            </RoomRate>
          </RoomRates>
          <TimeSpan Start = "2013-05-20" End = "2013-05-27"/>
          <Total CurrencyCode = "EUR" AmountAfterTax = "511.68"/>
          <BasicPropertyInfo HotelName = "Torviscas Playa" HotelCode = "AMTSES0FG0"/>
          <TPA_Extensions>
            <POS>
              <Source>
                <RequestorID Type = "4" ID = "CATEST" ID_Context = "OTS">
                  <CompanyName Code = "CATEST" CompanyShortName = "ContractAgency ShortName"/>
                </RequestorID>
              </Source>
            </POS>
          </TPA_Extensions>
          <ResGuestRPHs>
            <ResGuestRPH RPH = "0"/>
            <ResGuestRPH RPH = "1"/>
          </ResGuestRPHs>
        </RoomStay>
      </RoomStays>
    </HotelReservation>
  </ReservationsList>
</OTA_ResRetrieveRS>

```

```

        <ServiceRPHs>
          <ServiceRPH RPH = "1"/>
        </ServiceRPHs>
      </RoomStay>
    </RoomStays>
  </Services>
  <Service ServiceRPH = "1" ServiceInventoryCode = "BB"/>
</Services>
<ResGuests>
  <ResGuest ResGuestRPH = "0" AgeQualifyingCode = "10">
    <Profiles>
      <ProfileInfo>
        <Profile>
          <Customer BirthDate = "1973-05-19">
            <PersonName>
              <GivenName>test</GivenName>
              <Surname>test</Surname>
            </PersonName>
          </Customer>
        </Profile>
      </ProfileInfo>
    </Profiles>
    <GuestCounts>
      <GuestCount Age = "40"/>
    </GuestCounts>
  </ResGuest>
  <ResGuest ResGuestRPH = "1" AgeQualifyingCode = "10">
    <Profiles>
      <ProfileInfo>
        <Profile>
          <Customer BirthDate = "1973-05-19">
            <PersonName>
              <GivenName>test</GivenName>
              <Surname>test</Surname>
            </PersonName>
          </Customer>
        </Profile>
      </ProfileInfo>
    </Profiles>
    <GuestCounts>
      <GuestCount Age = "40"/>
    </GuestCounts>
  </ResGuest>
</ResGuests>
<ResGlobalInfo>
  <CancelPenalties/>
  <Total CurrencyCode = "EUR" AmountAfterTax = "511.68"/>
</ResGlobalInfo>
<TPA_Extensions>
  <RateDetails>
    <Totals>
      <Total AmountAfterTax = "511.68" CurrencyCode = "EUR" CurrencyType = "Cost" Override = "false"
TotalType = "Cost"/>
    </Totals>
  </RateDetails>
  <ns1:BookingStatus ReservationStatusType = "Reserved" xsi:type = "ns1:BookingStatus" xmlns:ns1 =
"http://www.opentravel.org/OTA/2003/05/tpa" xmlns:xsi = "http://www.w3.org/2001/XMLSchema-instance"/>
</TPA_Extensions>
</HotelReservation>
</ReservationsList>
</OTA_ResRetrieveRS>

```


10 Examples and testcases

In this section the testcases and examples are explained, following the documentation and an increasing complexity. The acceptance test results must be confirmed for searches based on:

- correct display of our search results from our search module, quote and book (transactional)
- correct display of customer search based on the upload of the notifications, quote and book (notification based)

The following results can be used for implementation of notifications and searches. Calculations for occupancy and stays can be confirmed by quotes. Test results must be listed in a test report for evaluation of go-live.

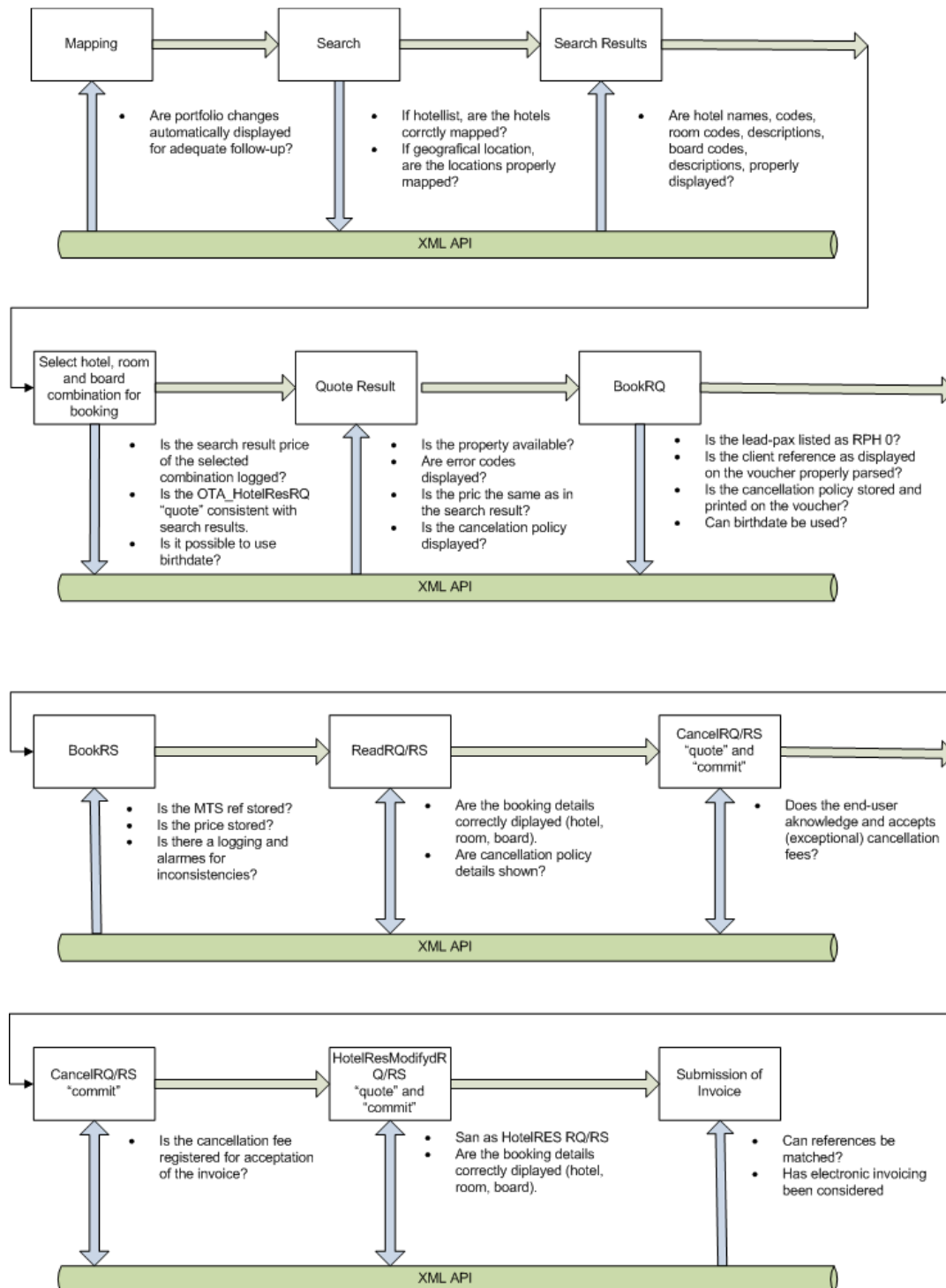
The documentation includes the .pdf of the “Accommodation Rates” to check your testcases for searches, loading of stock and rates and the final quote/book value.

The following diagram displays an example of logical approach to testing the interface, where for the notification based model, the test will still include the correct display of the search results, although the responsibility and system are in the client's remit.

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10.1 Transactional model

Testing of the transactional model, does not require calculation as no details are held by the partner. Testing can be limited to checking *price consistency* in the booking process from start to end. Assuming MTS systems are error-free, an inconsistency in price or availability, must be originating from one of the price determining concepts to have changed. For example: the search results list a “double economy room”, but when a quote is sent to our systems the “double standard room” is requested, because both are mapped to the same partner room code.

The below testcases for the notification based model would be a minimum set-set to register the execution of the search, display the search results, log the prices returned and for each of them execute a quote and a booking. By cancelling all bookings and displaying the adequate cancellation cost from the “cancel-quote” and registering the cancellation fee from the “cancel-commit”, also this aspect can be fully tested.

10.2 Notification based model

All tests should be executed for various stays, occupancies etc..

10.2.1 No results searches

- Search for Country Russia
- Search for 7 adults in one room

10.2.2 Hotel, Room, Board & Price consistency in entire process

- Ensure search, quote, book and cancel with the corresponding codes.
- Ensure codes and prices are logged
- Decide on rounding
- Decide on search vs quote differences configurable allowance rules
- For example:

10.2.3 Client Integration test hotel 10 – code AAUTO1BCW [TC1]

This is a simple per person prices test case, standard room with additional adults -30% and children free, superior room with children at 50%. Board upgrades with similar discounts. No offers. Room occupancy 2-3 pax, 0-1 chd.

- 2 adults, 3 adults, 2 adults + 1 child, 2 adults + 1 infant, 2 adults plus a1 child and 1 infant
- Test occupancies not allowed, boards not available, etc.

2 adults, 16-4-2014 to 23-4-2014

Client Integration test hotel 10

AAUTO1BCW/ Spain / Canarian Islands / Gran Canaria / Bandama

RMSDDB0000/Room_Standard/Double

BB/Bed and Breakfast

350,00

RMSDDB0000/Room_Standard/Double

HB/Half Board

560,00

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RMSP000000/Room_Superior	BB/Bed and Breakfast	490,00
RMSP000000/Room_Superior	HB/Half Board	700,00

10.2.4 Client integration test hotel 11 – code AAUTO1BD4 [TC2]

This is a simple per room prices test case, standard apartment and superior apartment. No additional room charges for children or extra adults. Children are from 2 to 16 years old. Note board varying per season. Specified board upgrades for children with varying relation to adult board upgrade (cannot be converted to a %). No offers. Note AI supplement is cheaper than FB supplement.

2 adults, 16-4-2014 to 23-4-2014

Client Integration test hotel 11

AAUTO1BD4/ Spain / Canarian Islands / Gran Canaria / Vecindario

APSD000000/Apartment_Standard	HB/Half Board	350.00
APSD000000/Apartment_Standard	FB/Full Board	770.00
APSD000000/Apartment_Standard	AI/All Inclusive	560.00
APSP000000/Apartment_Superior	HB/Half Board	700.00
APSP000000/Apartment_Superior	FB/Full Board	1120.00
APSP000000/Apartment_Superior	AI/All Inclusive	910.00

10.2.5 Client integration test hotel 12 – code AAUTO1BDC [TC3]

This is a simple per person prices test case, but with weekend rates. RO base board and BB upgrade. For example Sunday 1-4-2014 is valorated at 25€ in RO, while weekdays are 10€:

2 adults, 1-4-2014, 7 nights

Client integration test hotel 12

AAUTO1BDC/Spain/Canarian Islands/Gran Canaria/Temisas

RMSD000000/Room_Standard	RO/Room Only	230.00
RMSD000000/Room_Standard	BB/Bed and Breakfast	440.00

10.2.6 Client integration test hotel 13 – code AAUTO1DBK* [TC4]

This is the first somewhat complicated case. There is one room, one board upgrade. Eastern BBQ on 20-4-2014. There is a 7x2 FSO1, but it only applies on room and board, not on extras. This FSO1 is combinable with the typical “Turbo Early Booking Offer” which consists of the percentage part in EBO1 and the fixed part per room and per week in DPO1. Note that the

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FSO1 is not applicable for stays of 14 days or longer. For the whole month of May 2014, there is a rate-update, with "offers not allowed".

2 adults, arr 1-5-2014, 7 nights

Client integration test hotel 13

AAUTO1BDK/Spain/Canarian Islands/Gran Canaria/San Agustin

RMSD000000/Room_Standard	BB/Bed and Breakfast	140.00
--------------------------	----------------------	--------

RMSD000000/Room_Standard	HB/Half Board	280.00
--------------------------	---------------	--------

10.2.7 Client integration test hotel 14 – code AAUTO1BDS and AAUTO1BDSC [TC5]

This is a simple contract which is available both as hotel alone and as a combination of both a hotel and rent-a-car. There is a different car supplement for low and high season, for different dates than the hotel seasonality.

Hotel only:

2 adults arr 1-5-2014, 7 nights

Client integration test hotel 14

AAUTO1BDS/Spain/Canarian Islands/Gran Canaria/Puerto Mogán

RMSD000000/Room_Standard	BB/Bed and Breakfast	350.00
--------------------------	----------------------	--------

Hotel and Car:

2 adults arr 1-5-2014, 7 nights

Client integration test hotel 14

AAUTO1BDS/Spain/Canarian Islands/Gran Canaria/Puerto Mogán

RMSD000000/Room_Standard	BB/Bed and Breakfast	585.00
--------------------------	----------------------	--------

10.2.8 Client integration test hotel 15 – code AAUTO1BE0 [TC6]

Apart from the standard room, this hotel offers room and treatment packages that are expressed in various room codes. The additional description has been added by the contractor to distinguish the packages included (free text).

RMSD000000, Room_Standard

RMSD000002, Room_Standard/SpaPackage, one standard spa treatment per day

RMSD000003, Room_Standard/ThalassoPackage, one Thalasso treatment per day

RMSD0000A2, Room_Standard/TypeA/SpaPackage, one special spa treatment per day

RMSD0000B2, Room_Standard/TypeB/SpaPackage, mix of 3 standard and 4 special spa treatments

The last room has a minimum stay of 7 nights.

2 adults, arr 1-6-2014, 7 nights

Client integration test hotel 15

AAUTO1BE0/Spain/Canarian Islands/Gran Canaria/Santa María de Guía

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RMSD000000/Room_Standard	BB/Bed and Breakfast	840.00
RMSD000000/Room_Standard	HB/Half Board	1190.00
RMSD000002/Room_Standard/SpaPackage	BB/Bed and Breakfast	1190.00
RMSD000003/Room_Standard/ThalassoPackage	BB/Bed and Breakfast	1190.00
RMSD0000B2/Room_Standard/TypeB/SpaPackage	BB/Bed and Breakfast	1330.00
RMSD000002/Room_Standard/SpaPackage	HB/Half Board	1540.00
RMSD000003/Room_Standard/ThalassoPackage	HB/Half Board	1540.00
RMSD0000B2/Room_Standard/TypeB/SpaPackage	HB/Half Board	1680.00
RMSD0000A2/Room_Standard/TypeA/SpaPackage	BB/Bed and Breakfast	1680.00
RMSD0000A2/Room_Standard/TypeA/SpaPackage	HB/Half Board	2030.00

10.2.9 Client integration test hotel 16 – code AAUTO1BE8 [TC7, TC8, TC9]

This hotel has a fairly simple contract, with 2 rolling Early Booking offers and various Free Stay offers. The FSO's vary by the day(s) to be reduced, whether they apply for arrival days, stay days or "arrival and departure within". All offers are combinable, with the purpose to combine them with the Rolling EB's. The FSO's and LSO are set-up in such a way that they are never valid for the same day. Stays for periods that include 2 consecutive offers should be the main focus of testing. Note that FSO1 only applies for stays up to 13 days and cannot be applied twice in a 14 night stay, while the others can. FSO6 gives one more free night for stays over 14 nights, note the min stay application condition.

2 adults, arr 1-4-2014, 7 nights		TC7
Client integration test hotel 16		
AAUTO1BE8/Spain/Canarian Islands/Gran Canaria/Tenteniguada		
RMSD000000/Room_Standard	BB/Bed and Breakfast	450.00
RMSD000000/Room_Standard	HB+	550.00
2 adults, arr 1-4-2014, 13 nights		TC8
Client integration test hotel 16		
AAUTO1BE8/Spain/Canarian Islands/Gran Canaria/Tenteniguada		
RMSD000000/Room_Standard	BB/Bed and Breakfast	990.00
RMSD000000/Room_Standard	HB+	1210.00
2 adults, arr 1-4-2014, 14 nights		TC9
Client integration test hotel 16		
AAUTO1BE8/Spain/Canarian Islands/Gran Canaria/Tenteniguada		
RMSD000000/Room_Standard	BB/Bed and Breakfast	720.00
RMSD000000/Room_Standard	HB+	880.00

10.2.10 Client Integration test hotel 1 – code AAUTO14TC [TC10-TC??]

This hotel has a standard room and an apartment as shown in the “Accommodation rates” .pdf, both with board base BB. Extensive NBC data has been entered in the factsheet. The apartment has a per unit price and no pax supplements, the standard room is per person and has some complexity in the supplements. The EBO's are only valid for the standard room and not combinable with the FSO's and LSO's. As the EBO's have a higher priority, the FSO's and LSO's cannot be applied until 13-12-2013 for the standard room. On the contrary, the EBO may never be applied to a booking for the apartment, but a combination of FSO and LSO is possible for longer stays than 21 days. No close-outs or stop-sales.

- [TC10] Search, quote & book for 2 adults, 1 child of 4 and 1 child of 9, RMSD000000, BB, arr. 5-4-2014 for 22 nights has a cost of 1694€ Only the EBO3 is applied. Note that the oldest child is taken as the first child, which is important for the cost calculation as the agebreak is 6 years old.
- [TC11] Same but with FB. Price is 2752,64€ -
- [TC12] Same but for the APSD000000. Both the FSO (3 times 7x2 = 6 free nights at the end of the stay – BB -> Price is €1440
- [TC13] Same but for the APSD000000. Both the FSO (3 times 7x2 = 6 free nights at the end of the stay – FB -> Price is €2240
- [TC14] Same for arrival in May and additionally the LSO of 10% will be applied - BB

Country: Spain From/To: 05.05.2012 27.05.2012 HotelName: hotel 1
 Destination: Canarian Islands Roomcode:
 Region: Gran Canaria Occupancy: 2 2 4 9 Stars:
 Resort: Maspalomas Room/Board: Apartment Bed & Breakfast Client: TEST Agentsine:

Results: hotels: 1, rooms: 1

Client Integration test hotel 1 ★★★★★
 AAUTO14TC/Spain/Canarian Islands/Gran Canaria/Maspalomas
 APSD000000/Apartment_Standard BB/Bed and Breakfast 1467.00

ResGuestRPH Code	Amount	Currency
1 Price	1467.00	EUR
ResGuestRPH	Code	StayDay
1 AA	1	109.00 EUR
1 LSO1	1	-10.90 EUR
1 AA	2	109.00 EUR
1 LSO1	2	-10.90 EUR

- [TC15] Same for arrival in May and additionally the LSO of 10% will be applied – HB [assume this is same problem as reported for AI – this test is ok if no children]

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Country: Spain From/To: 05.05.2012 27.05.2012 Hotelname: hotel 1
Destination: Canarian Islands Adults Children Age Roomcode:
Region: Gran Canaria Occupancy: 2 2 4 9 Stars:
Resort: Maspalomas Room/Board: Apartment Half Board Client: TEST Agentsine:

Results: hotels: 1, rooms: 1

Client Integration test hotel 1 ★★★★★
AAUTO14TC/Spain/Canarian Islands/Gran Canaria/Maspalomas
APSD000000/Apartment_Standard HB/Half Board 1899.00
1755.00 Book Close

ResGuestRPH Code	Amount	Currency			
1 Price	1611.00	EUR			
ResGuestRPH	Code	StayDay	Rate	Currency	Edition
1 AA	1	1	109.00	EUR	4.00
1 HB	1	1	10.00	EUR	3.00
1 LSO1	1	1	-11.90	EUR	1.00
1 AA	2	2	109.00	EUR	4.00
1 HB	2	2	10.00	EUR	3.00

- [TC16] The same test for a stay of 20 nights, BB

Country: Spain From/To: 05.05.2012 25.05.2012 Hotelname: hotel 1
Destination: Canarian Islands Adults Children Age Roomcode:
Region: Gran Canaria Occupancy: 2 2 4 9 Stars:
Resort: Maspalomas Room/Board: Apartment Bed & Breakfast Client: TEST Agentsine:

Results: hotels: 1, rooms: 1

Client Integration test hotel 1 ★★★★★
AAUTO14TC/Spain/Canarian Islands/Gran Canaria/Maspalomas
APSD000000/Apartment_Standard BB/Bed and Breakfast 1630.00
1630.00 Book Close

ResGuestRPH Code	Amount	Currency			
1 Price	1630.00	EUR			
ResGuestRPH	Code	StayDay	Rate	Currency	Edition
1 AA	1	1	109.00	EUR	4.00
1 AA	2	2	109.00	EUR	4.00
1 AA	3	3	109.00	EUR	4.00
1 AA	4	4	109.00	EUR	4.00
1 AA	5	5	109.00	EUR	4.00
1 AA	6	6	109.00	EUR	4.00
1 AA	7	7	109.00	EUR	4.00
1 AA	8	8	109.00	EUR	4.00
1 AA	9	9	109.00	EUR	4.00

- [TC17] The same test for a stay of 20 nights, FB – expect 2430
- [TC18] The same test for a stay of 6 nights. No offer for the Apartment, BB

Country: Spain From/To: 05.05.2012 11.05.2012 Hotelname: hotel 1
Destination: Canarian Islands Adults Children Age Roomcode:
Region: Gran Canaria Occupancy: 2 2 4 9 Stars:
Resort: Maspalomas Room/Board: Apartment Bed & Breakfast Client: TEST Agentsine:

Results: hotels: 1, rooms: 1

Client Integration test hotel 1 ★★★★★
AAUTO14TC/Spain/Canarian Islands/Gran Canaria/Maspalomas
APSD000000/Apartment_Standard BB/Bed and Breakfast 654.00
654.00 Book Close

ResGuestRPH Code	Amount	Currency			
1 Price	654.00	EUR			
ResGuestRPH	Code	StayDay	Rate	Currency	Edition
1 AA	1	1	109.00	EUR	4.00
1 AA	2	2	109.00	EUR	4.00
1 AA	3	3	109.00	EUR	4.00
1 AA	4	4	109.00	EUR	4.00
1 AA	5	5	109.00	EUR	4.00
1 AA	6	6	109.00	EUR	4.00

- [TC19] The same test for a stay of 6 nights. No offer for the Apartment, HB – expect 774
- [TC20] The same test for a stay of 6 nights. EB for the room, BB

Country: Spain From/To: 05.05.2012 11.05.2012 Hotelname: hotel 1
 Destination: Canarian Islands Adults Children Age Roomcode:
 Region: Gran Canaria Occupancy: 2 2 4 9 Stars:
 Resort: Maspalomas Room/Board: Double Bed & Breakfast Client: TEST Agentsine:

Results: hotels: 1, rooms: 1

Client Integration test hotel 1 ★★★★★
 AAUTO14TC/Spain/Canarian Islands/Gran Canaria/Maspalomas
 RMSD000000/Room_Standard BB/Bed and Breakfast 577.50 Book Close

ResGuestRPH Code	Amount	Currency			
1 Price	210.00	EUR			
ResGuestRPH	Code	StayDay	Rate	Currency	Edition
1 AA		1	50.00 EUR		3.00
1 EBO3		1	-15.00 EUR		1.00
1 AA		2	50.00 EUR		3.00
1 EBO3		2	-15.00 EUR		1.00
1 AA		3	50.00 EUR		3.00

- [TC21]The same test for a stay of 6 nights. EB for the room, FB – expect 866.22
- The same test, but with an additional infant of up to 1,99 yrs results to the same values
- The same test (22 nights) but for 2 adults, 1 child of 14, results to the price of 3 adults
- Any test for 2 adults and 3 children over 2 years old fails
- Any test for 1 adult fails
- Any test including 2 infants (up to 1,99 yo) fails
- Any test for SC, RO or AI board fails
- Any test for stays outside 01-04-2020 to 31-10-2020 fails
- Any test for a stay shorter than 5 days between 15/6 and 14/9 fails

10.2.11 Client Integration test hotel 2 - AAUTO14TK

This hotel has only one standard room, but it is contracted with BB and HB. BB is not available from 1-6-2014 to 31-8-2014. Offers and extras have very special „application to“ and only „applicable if“ conditions. In this hotel, Infants are counted in the PAX and 3 ADT and 1 CHD is not allowed. BBQ extra and offers that do not apply, that do not apply on extras or that only apply in combination with specific boards.

- Quote for 2 ADT and 2 CHD of 5 years old, RMSD000000, BB, arr 15-4-2014, for 10 nights. Price 772,50€. Adults pay 30€ pppn, the first child 15€ pppn, the second child 7,50€ pppn. EBO1 (applies on room+BB only!) of 10% applies, but not the the BBQ extra of 10€ ADT and 5€ CHD.
- Same, but now with board AI: Price is 1627,50€. ADT pays 40€ for the room and HB and 25€ for the AI upgrade. EBO1 allows a discount of 4€ and there is a fixed discount of 50€ on day 7. No BBQ supplement.
- Increase the stay to 22 days for both testcases above. The 50€ fixed discount applies multiple times and additionally the LSO1 will be applied.

10.2.12 Client Integration test hotel 3 - AAUTO14U8

This hotel has two rooms and some supplements and offers to test the „AppliesToIndicator“, which provides information on when a supplement or an offer may be applied and/or to which of the concepts room, board, extra,... Increasingly beneficial conditions exist, but may not always

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be applied. The apartment is price per unit and conclusively has no complications in the pax supplements. The hotel room does have these. Fixed supplements for boards and conditions for offers exist. The FSO5 is only applicable if BB is booked, the FSO6 is only applicable when FB is booked. When BB is booked, no FSO applies. Offers have the same priority, but that is irrelevant as the booking conditions cannot coincide. Both FSO's are not applicable to extras and are valid for stays from 7 to 13 days (not for 14 days).

2 adults, 1 chd of 5, 1 chd of 10, arr 1-4-2014, 14 nights

Client Integration test hotel 3

AAUTO14U8/Spain/Canarian Islands/Gran Canaria/Agate

APSD000000/Apartment_Standard	BB/Bed and Breakfast	420.00
APSD000000/Apartment_Standard	HB/Half Board	700.00
RMSD000000/Room_Standard	BB/Bed and Breakfast	840.00
APSD000000/Apartment_Standard	FB/Full Board	882.00
RMSD000000/Room_Standard	HB/Half Board	1120.00
RMSD000000/Room_Standard	FB/Full Board	1302.00

2 adults, 1 chd of 5 and 1 chd of 10, arr 9-4-2014, 7 nights BBQ not discounted with FSO for HB or FB (std room)

Client Integration test hotel 3

AAUTO14U8/Spain/Canarian Islands/Gran Canaria/Agate

RMSD000000/Room_Standard	FB/Full Board	505.00
RMSD000000/Room_Standard	HB/Half Board	522.00

Calculation for Standard Room with FB

Adults (2 x (20 room + 10 board) x 5 nights) + (2 x 20) BBQ	340
Chd1, age 10: ((50% of 20 room + 6€ board) x 5 nights) + (50% of 20) BBQ	90
chd2, age 5: ((50% of 20 room + 3€ board) x 5 nights) + (50% of 20) BBQ	75
total	505

Calculation for Standard Room with HB

Adults (2 x (20 room + 5 board) x 6 nights) + (2 x 20) BBQ	340
Chd1, age 10: ((50% of 20 room + 4€ board) x 6 nights) + (50% of 20) BBQ	94
Chd2, age 5: ((50% of 20 room + 3€ board) x 6 nights) + (50% of 20) BBQ	88
total	522

10.2.13 Client Integration testhotel 4 - AAUTO14U0

This hotel has two rooms and allows an occupancy including 1 ADT. The supplement for single use does only apply in case of a single adult occupancy and does not allow offers to be applied

upon. There is also a single-use with child supplement, but this supplement allows application of offers.

Infants count as pax, and the standard room has a min-billable pax of 1. All child and add pax supplements are fixed. Note that the second adult in the standard room should pay the extra and not the basic rate.

Rate-Update for Standard room in October to 10€ pppn – offers not allowed

Stop-Sale for standard room from 20-10-2014 to 30-10-2014

- Single use in Apartment (BB) – price is pupn: 1 to 8 April (7 nights) 102€
- Same but in Standard room – price is pppn, 30€ inge use supplement is applied: total price including EBO and DPO is 312€
- 2 ADT and 1 CHD of 5, 1 CHD of 14, standard room, FB, applying EBO and DPO for arrival 8-4-2012, stay 7 nights results to a price of 718€
- The same for October, when the rate-update is active results to 420€
- Any arrival for Mon-Thu fails

Appendix A TransferInfoType TPA Extension

```

<!-- AxisData TPA_Extension 2006-05-24 KBB -->
<xs:schema targetNamespace="http://www.opentravel.org/OTA/2003/05/tpa"
  xmlns:ns1="http://www.opentravel.org/OTA/2003/05" xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns="http://www.opentravel.org/OTA/2003/05/tpa" elementFormDefault="qualified" version="1.001" id="OTA2005A">
  <xs:import namespace="http://www.opentravel.org/OTA/2003/05" schemaLocation=".OTA_HotelCommonTypes.xsd"/>
  <xs:import namespace="http://www.opentravel.org/OTA/2003/05" schemaLocation=".OTA_HotelReservation.xsd"/>
  <xs:complexType name="TransferInfoType">
    <xs:sequence>
      <xs:element name="TransferLeg" type="TransferLegType" maxOccurs="unbounded">
        <xs:annotation>
          <xs:documentation>Transfer leg info</xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="TransferLocationType">
    <xs:choice>
      <xs:element name="ConnectingTransport" type="ns1:FlightSegmentBaseType">
        <xs:annotation>
          <xs:documentation>connecting transport location info</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="Hotel" type="ns1:BasicPropertyInfoType">
        <xs:annotation>
          <xs:documentation>hotel location info</xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:choice>
  </xs:complexType>
  <xs:complexType name="TransferLegType">
    <xs:sequence>
      <xs:element name="TransferOrigin" type="TransferLocationType">
        <xs:annotation>
          <xs:documentation>transfer origin</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="TransferDestination" type="TransferLocationType">
        <xs:annotation>
          <xs:documentation>transfer destination</xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:sequence>
    <xs:attribute name="Time" type="xs:dateTime" use="optional"/>
    <xs:attribute name="TransferMode" type="ns1:OTA_CodeType" use="optional">
      <xs:annotation>
        <xs:documentation xml:lang="en">Type of Transport - OTA TRP code table</xs:documentation>
      </xs:annotation>
    </xs:attribute>
  </xs:complexType>
</xs:schema>

```

Appendix B Hotel codes

The Hotel code is constructed of 3 elements. I.e. in AMTSES0FFG, A stands for "Accommodation", MTSES for the Incoming Agent (MTS Spain in this example) and 0FFG is a counter. The handling office for each hotel is included in the OTA_HotelDescriptiveInfo.

Appendix C Room codes

The RoomClassificationCode used in the OTA_HotelAvailRQ (Search) can be any of the "Type" values

Room Codes:

Room codes are assembled from various room characteristics: ex. RMSDDBSV00 using the code elements, with the number of positions marked between brackets:

Type(2)|Grade(2)|Base(2)|View(2)|Subtype(1)|Promo(1)

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AI+	All Inclusive + additional services
BB	Bed & Breakfast
DO	Dinner Only
FB	Full Board
FB+	Full Board + additional services
HB	Half Board
HB+	Half Board + additional services
LO	Lunch Only
RO	Room Only
SC	Self Catering

Appendix E Rating

Apartments	Rural	Hotels	Other
1 Key	1 Palm	1 Star	No Rating
2 Key	2 Palm	1,5 Star	TBD
3 Key	3 Palm	2 Star	
4 Key	4 Palm	2,5 Star	
5 Key	5 Palm	3 Star	
		3,5 Star	
		4 Star	
		4,5 Star	
		5 Star	
		5,5 Star	
		6 Star	
		7 Star	