

ATPCO

Baggage Web Service

Background

The airline industry has established a new IATA baggage resolution with rules specifically relating to interline itineraries, including codeshare and alliance carrier travel. These new rules replace the existing resolutions (300/301) set to expire on April 1, 2011. The new *Resolution 302* will require each airline to establish their own baggage rates and make this information available at all passenger touch-points, including at time of reservation and online, airport or kiosk check-in.

ATPCO has been designated by IATA and tasked by the industry to develop and deploy a comprehensive solution to support the industry requirement of a central repository for the collection and distribution of all airline baggage policies. ATPCO will enable airlines, distribution systems, pricing engines and operational system access to this critical data via any of the following manners:

- Traditional ATPCO structured fixed field subscriptions
- Paper publication
- Excel downloads (comma delimited files)

Baggage Web Service

In addition to the above distribution methods, ATPCO has been requested by our airline partners to develop and deploy a **Baggage Web Service** enabling internal operational systems access to real-time and definitive baggage information at time of passenger reservation and check-in. Our proposed Web Service facilitates the real-time electronic transmission of baggage offerings and applicable baggage allowance and/ or charges to carrier's reservation, operations and Departure Control Systems.

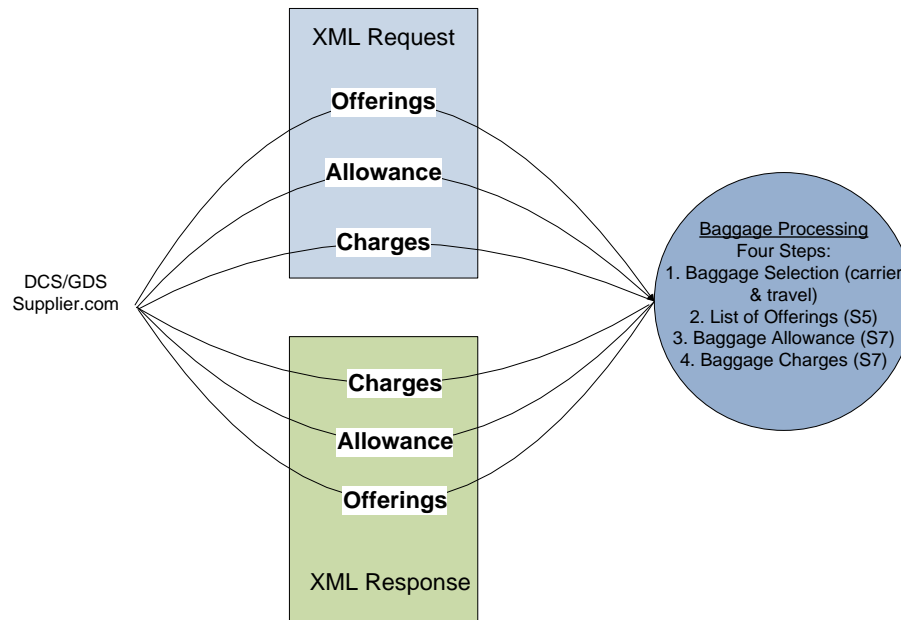
The proposed Baggage Web Service functionality will include:

- Identification of baggage travel and most significant carrier
- Baggage allowance detail
- Baggage charge detail

The Web Service will provide WSDL developer capabilities with SOAP Developer Documentation, supporting carriers' XML message development. A GUI for stand-alone use of the Baggage Web Service is also under consideration, allowing for a short to medium-term solution for customers while message development and workflow integration is ongoing.

Overview of Proposed Solution

The representation below illustrates the four primary steps of the proposed ATPCO solution.



Allowance and Charges Engine

The ATPCO Baggage Web Service will be made available via Internet connection. The Baggage Web Service solution will process the ATPCO S5 and S7 baggage allowance and charges records in accordance with the agreed upon data application and return the results from the calculation. Depending on the message requested, the following steps further define the calculation that will be performed.

Step One – Baggage Selection (Itinerary Analysis & Carrier Selection)

Itinerary Analysis: Process the passenger’s complete itinerary, identifying checked-portions, operating and marketing carriers for each sector, and direction of travel. This processing will occur at the initial step in the pricing for any of the three actions (offerings, allowances, or charges) unless the requesting party specifically provides the carrier or the portion of travel as part of the request message.

- Checked portion – Each portion of the passenger’s travel between where the passenger drops the bag off and retrieves it. This may entail one or more carriers and one or more sectors of travel.
- Direction of Travel – Determined by finding the furthest point on the journey from journey origin to where the passenger retrieves the bag. The distance to each point where the passenger retrieves checked items is measured from journey origin. From origin to the furthest point is outbound travel with the remaining travel considered the inbound travel.
- Determination of marketing and operating carrier for all sectors

Carrier Selection (Whose Rules Apply): Identification of whose rules apply is determined using the following criteria:

1. Application of US Department of Transportation Reservation
2. Resolution 302 operating carrier defers to marketing carrier
3. Resolution 302
4. No information for itinerary

Application of US Department of Transportation (DOT) Reservation involves:

- Travel where journey origin, destination and/or furthest intermediate stopover is a US point
- Baggage rule owner as the first most significant marketing carrier and the same carrier's rules apply throughout journey
- For calculation of charges, a single charge applies, irrespective of stopovers, in each direction for a total of up to two charges per itinerary (out/in)

Resolution 302 operating carrier defers to marketing carrier

- Baggage rule owner is found by determining the most significant operating carrier as defined by IATA Resolution 302 for each checked portion. Where it is determined the most significant operating carrier defers to the marketing carrier, the marketing carrier rules will apply for the entire checked portion.
- Allowance and Charges apply per checked portion

Resolution 302

- Baggage rule owner is the most significant operating carrier as defined by IATA Resolution 302 for each checked portion
- Allowance and Charges apply per checked portion

No Information for itinerary

- Proposal in development with IATA, airlines and systems to identify when the carrier found to be the rule owner does not provide automated data
 - At time of passenger pricing / ticketing
 - At time of passenger check-in

Step Two - Baggage Offered

For each baggage offering request message, the engine will find all baggage S5 records and return the baggage allowance and types that an airline offers as part of their service offering.

Step Three - Baggage Allowance

For each baggage allowance request message, the engine will determine the free baggage allowance that is applicable for the itinerary and airline. The results will return what is to be placed or reflected on the passenger's itinerary as well as supplemental information. The engine will calculate this based on all input criteria that can be applied and matched to the S7 data file, including passenger frequent traveler status, fare paid, and geography of travel.

For journeys subject to US DOT exceptions, the solution will determine the application of free baggage based on the journey and the same allowance will be applicable to the entire journey.

Step Four – Calculate Baggage Charges

For each baggage charges request message, the engine will determine the applicable baggage charges for the given or calculated itinerary, and airlines that are not included in the free baggage allowance. This calculation will require a review of all qualifying criteria provided in the request message, calculating checked portions, identifying which airline's baggage rules apply, and determining the free allowance and all excess (including overweight/oversize) charges.

For journeys falling under US DOT exceptions, the solution will use the outbound and inbound directions of travel (as determined in Step 1) as the portion taken to Optional Services to assess the excess/special item charge. Stopovers are not considered when assessing a charge.

Sample Baggage Scenarios

Practical application of the Baggage Web Service and associated calculation logic are depicted in the following five scenarios which will be supported by the ATPCO Baggage Web Service:

1. I require baggage allowance detail to advise passenger and include on ticket.
2. I know what is allowed, based upon information on ticket, but need a price quote based upon the baggage I am bringing.
3. There is no baggage information on my ticket. At check-in I need to know what is free and the charges for the excess items, based upon what I am checking and my itinerary.
4. I want to know whose rules apply, the catalog of all offered baggage services (i.e. what baggage can be checked) and the applicable charges.
5. I want to obtain a list or catalog of all offered baggage services (i.e. what baggage can be checked).

Operational Guidelines

This proposed ATPCO Baggage Web Service will be deployed as a real-time Internet service to support 24/7 access to critical baggage allowance and charges information. WSDL developer capabilities with SOAP Developer Documentation will be provided to support carriers' XML message development.

XML RQ / RS Message Structure

Three XML Request and Response messages have been defined to support this solution. These RQ/RS messages along with WSDL and sample XML files are available upon request for evaluation.