Product Description

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Baggage Reconciliation Service

Product Identity

Order code:

Baggage Reconciliation Service

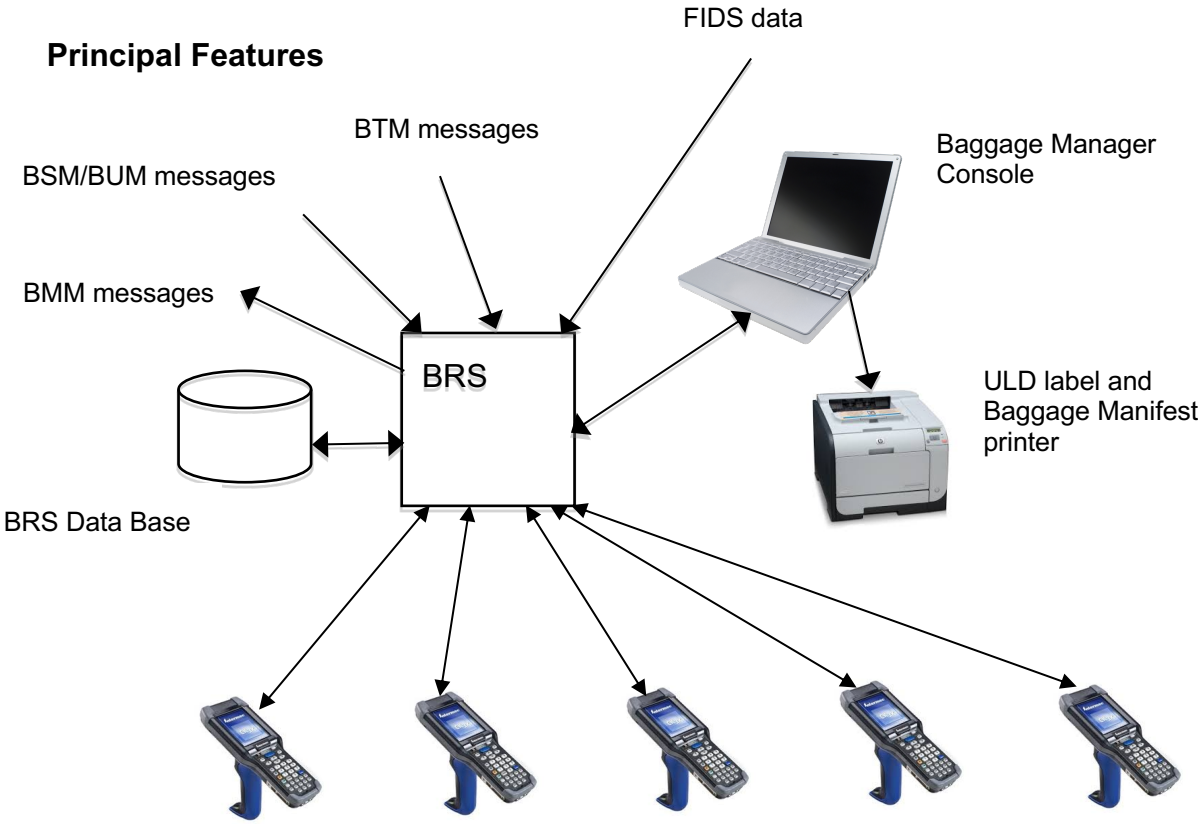
Outline Description

Baggage Reconciliation System as a service (BRS-service)

The Baggage Reconciliation System (BRS) provides positive reconciliation matching checked baggage with the correct flight to meet with today's security standards for international travel as defined by ICAO Annex 17 and it is supporting the IATA Resolution 753.
Baggage status is instructing the BRS system if it is ok to load or still awaiting further approval.
Baggage management can instruct the loaders on where to load certain baggage, so it can be easily located if needed.

The BRS system can be controlled by a GUI user interface, on the Baggage Management console as well as on the Hand Held terminals.

Principal Features



Baggage data is received from the airline DCS systems in the form of messages as defined in IATA RP1745, 1740, and 1800. These messages can be send to the BRS system via a type-b message link or via the Baggage message link.

The BRS system receives or retrieves all flight information from the FIDS system. Updates to the flight, like delays or gate changes will be updated in the BRS system accordingly.

Baggage Reconciliation can be performed on departing and arriving flights, and on multiple scan locations. The scan locations are pre-configured at the time of system setup and can be modified when needed.

Management

The baggage manager is responsible for the flight adjustments should there be any, and for the assignment of the sorting groups to ULD or specific trollies or arrival baggage belts.
Before opening the flight for baggage loading, the manager has to assign the loading strategy if it is different than the default ,"Security check" mode. After the baggage manager has done all the pre-flight tasks, he can set the flight ,"Open for loading".

Loading mode

Load All

In this mode all baggage is simply recorded as it is loaded and no check is performed. When the flight is completed, the baggage manifest can be printed and send to the airline if required. In this mode the BRS works as baggage recording system only.

Check Flight

In this mode, all baggage is matched against a received BSM. This mode is used if the DCS provides only limited information in the BSM, and no additional instructions for “No load” or “Ready to load” command.

Security check

This mode is the default loading mode and is used in normal circumstances. All loading and unloading or “Baggage Hold” instruction are been given via the DCS Baggage Messages. It is always possible for the Baggage Manager to instruct the system to offload a particular bag.

Standby baggage or any baggage that is not ready to be loaded should stay on the baggage carousel. The baggage agent will get a warning not to load such a bag into the ULD or trailer/trolley and a message what the reason for this rejection is.

In case a number of bags have to be transferred from one ULD to another to combine these baggage’s, the Baggage Manager can perform this action on its Baggage Management console and instruct the baggage loaders to physically mover or merge two ULD’s. The empty ULD can them be removed from the loading group.

ULD, Trolley, or Arrival belt # assignment

The baggage manager registers the available ULD or Trolley numbers in the BRS system, and assigns them to the flight and its designated loading group. The loading group can be per class or by destination, or any other criteria. Also the maximum number of bags for this ULD can be set.
For arrival flights, the designated baggage belt number or other specified location has to be assigned.

For ULD devices the manager can also print the ULD card. This card contains the flight data, the destination, the special load group, and the ULD number. The ULD card is in the format as defined by the IATA AHM420 specification.

The baggage manager has a total overview of the complete loading process of a flight. This includes:
- Number of baggage as reported by BSM messages
- Number of loaded bags per ULD or other loading unit
- Number of bags on “Not allowed to load” status
- Special baggage status for Un accompanied bags, Rush bags, and Crew bags

The baggage manager can monitor all baggage data as it is received by the BSM/BUM. A BSM can be received but still it is not authorizing the bag to be loaded due to its status. Or a BSM is received and later an unload message is received. Depending on the current position of the bag in the process, the manager can take appropriate action.

After the loading is completed the baggage manager can set the flight to “Ready or Loading completed” after which the Baggage Manifest can be printed. All bags for which a BSM has been received but not loaded into the ULD or trolley, a BNS message is send to the DCS system. After all administrative actions are completed; the flight can be set to “Departed”. The Baggage Manifest is saved on the server in PDF format, and messages are send back to the DCS if required. The stored Baggage Manifest contains an edition number that will increase every time the flight has been re-opened after it is previously set to “Ready” and the Baggage Manifest printed. A new edition of the Baggage Manifest will be stored when the flight is set to “Ready” again and the BNS and other messages are send to the DCS again.

The Baggage Manifest contains the following header items:
- Flight number
- Date
- Aircraft type
- Registration
- Time of printing of the manifest
- Edition number of the manifest

The header of the ULD section contains the following information:
- ULD number
- Loading group (class or transit or any other designator)
- Number of bags in this ULD

Below the ULD header is the list of baggage associated with this ULD and contains the following information:
- Baggage tag number
- Passenger name
- Baggage status
- Baggage notes (UNAC, RUSH, CREW, etc)

At the bottom of the manifest are the totals for this flight:
- Total number of loaded bags
- Total number of special note bags
- Total number of bags per loading group (class, transit, etc.)

- Signature of Baggage Manager or Load Master

Other reports can be created as and when required. Each report can be printed and also saved in PDF or excel format.
Baggage messages can be send to IATA type-b addresses or to e-mail addresses.

User management

Each user has to be defined in the BRS management system before he or she can make use of the BRS functions. User will have an authority level assigned and a list of airlines it can perform baggage loading for. With this feature each user is only getting access to the data and the functionality it is allowed to see, or to use.

The Baggage Manager has an overview of which Baggage Loader is working on which flight / ULD.

Baggage loader or agent

The Baggage Loader is performing the physical loading of the baggage into the ULD or other assigned unit like a trolley or cart.
The Baggage Loader has to log into the BRS system by entering its user name and password. Optionally this can be done by scanning its BRS badge with a barcoded username. The first action for the loader is to assign the flight he is going to work on. Then Baggage Loader has to scan the ULD barcode first, with which he opens the ULD for loading.

After this the Baggage Loader is ready to scan the baggage labels and loading the baggage into the ULD or other loading device. If a bag is not allowed to be loaded, or if the bag is not for the assigned flight, an alarm will sound and a red bar on the hand held terminal screen will flash, notifying the loader that this bag should not be loaded into this ULD. The error message will indicate the problem.

Reasons why a bag is could not be loaded are:

- Baggage number is not in the system and loading mode is not “Load all” (No BSM received)
- The BRS system has received a BSM DEL or a BUM message
- Flight is closed for loading
- Passenger is on standby and baggage is not authorized to be loaded
- Baggage already loaded (Duplicate number ?)
- No loading group or ULD assigned

As soon as the baggage loading is completed, or if the pre-assigned number of bags for this ULD is reached, the ULD has to be closed. This can be done automatically or by a command on the handheld terminal.

A ULD can not be closed if it contains a bag that has the status of “Not Allowed To load” (red labels). The baggage loader has to remove the “red” marked bag by switching to offload mode, scanning the marked baggage tag, and removing the baggage from the ULD.

The baggage loader has by default the list of “To be Loaded” baggage on its handheld terminal display. By a keyboard command the list of “Not Allowed to Load” baggage can be displayed.

By default the handheld terminal application is in baggage loading mode.
When an already loaded bag is getting marked as “Not Allowed To Load” by a BUM message or any other operator instruction, the baggage loader can switch to offload mode and load the list of to be offloaded bags into his handheld terminal. By searching the particular bag(s) in the ULD or aircraft compartment, the operator is getting a signal if the label number is matching a number of his list. He then has to remove the bag from the ULD or compartment. When all bags that have to be removed are identified, the flight is ready to be closed and the manifest to be printed.

As soon as a bag is loaded into the ULD or other device, a Baggage Processed Message (BPM) is send back to the DCS system if configured to do so.

Baggage scan location

Baggage information is loaded into the system as soon as at the check-in desk a baggage tag is issued. This is the initial entry point into the baggage journey.
The next step in the BRS process is the loading of the baggage into the ULD or onto the trolley. This is the first scan location.
Optionally a second scan of individual pieces of baggage or a whole ULD containing baggage can be scanned at the entry point into the aircraft.
On arrival the baggage can be scanned for delivery on the baggage belt, or in case of transfer baggage, the delivery to the baggage transfer area.
This is the final scan for the baggage belonging to a particular flight.

System hardware and software

The heart of the BRS system is the database server. This is located in a data warehouse, and has full redundancy, backup facility, power redundancy, fire extinguish system etc.
The BRS server manages the user access parameters like user name, password, authority level, etc. Each function of the BRS system can be controlled by this facility.

All baggage messages like BSM, BUM and BTM are received via a type-b message link. This can be a direct connection to this messaging network or via the airport baggage link provided by the CUTE provider. Travsys has the T-MEC software available to handle any messaging connection to the messaging link

The BRS handheld terminals are using a WIFI connection when at the baggage loading are. When out of reach of the WIFI network, it can switch over to a GPRS network. Or the handheld terminals are working only via the GPRS network. The GPRS network should have the possibility to access the BRS network.
The BRS handheld terminals have the possibility to scan 1D or 2D barcode formats.

The Baggage Manager's workstation can be any regular PC with the Windows 7 PRO or later version of the operating system. To print the baggage manifest any regular laser printer can be used, or a character printer with continuous paper feed. For the ULD label printing a standard A4 laser printer can be used.

Hardware and Software Prerequisites

- VPN link to the BRS server
- WIFI / GPRS link solution
- PC workstation for BRS Manager application with Windows 7 PRO or later
- Document printer (Laser printer for ULD cards)
- Hand Held barcode scanner devices. (Oysta, Datalogic DL-Axist,Zebra TC51 or TC56)

Standard Deliverables

- BRS Server service
- Hand Held scanner application
- BRS Management application

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