

Airport Cologne/Bonn GmbH



*first integrated
Baggage Recon-
ciliation inGer-
many*

When Cologne/Bonn Airport built Terminal 2, Vanderlande Industries was commissioned with installation of a baggage conveyor and sorting system. As sub-contractor, PSI Logistics supplied the host computer level, the network and the chute displays with an autonomous bus system for connection of the so-called traffic light (red/yellow/green) scanner for handling the baggage reconciliation system.

The system is designed for 24/7 operation. It currently sorts up to 3,000 items of baggage per hour at peak times for 51 destination chutes. The early baggage store integrated into the baggage conveyor and sorting system has a capacity of around 200 items of baggage,

thus facilitating smooth check-in on the evening before travel.

Brief and implementation

The main task to be accomplished consisted of guaranteeing a high level of availability during 24/7 operation. This was achieved using a SUN Microsystems HA cluster in conjunction with customised software by PSI Logistics. In addition, peripheral components such as the chute displays and the traffic light scanners were connected as redundant.

Items of baggage checked in at the counters in the island check-in areas are fed automatically to the sorting destinations in accordance with the parameters entered by the agent, after undergoing a

100% check by the host computer. The host sorting computer receives the requisite information from the connected systems.

- The host computer receives details of the baggage to be despatched from the check-in airlines through a central redundant SITA interface (Cubes/MDS).
- Data on the relevant departures is transmitted through a flight plan management system (FPMS) interface.
- The host computer transmits the results from the X-ray inspection stages to the Federal Border Police system for matching passengers and baggage.

Allocation of the final sorting destinations by the officials is supported by an information dialogue from the host computer, particularly by displaying the allocation as a Gantt chart. Special workstation functions such as so-called „no-read processing“ enable the operators to handle special cases easily.

For reasons of security, all items of baggage at Cologne/Bonn Airport are only released for loading when the passengers board, on request by the airline in question. This is guaranteed by the traffic light scanners specially designed for PSI Logistics. If the green LED lights when the items of baggage are scanned (possible at all 51 destination chutes), the baggage may be loaded. If the red LED lights, loading is prohibited.

Configuration

The high availability system (HA cluster), consisting of two SUN Microsystems Enterprise 450 systems, guarantees smooth operation 24/7, even in the event of failure of one of the two Enterprise 450 systems. The chute displays and traffic light scanners are connected through a redundant CAN bus system with two data concentrators working autonomously.

The data is held in an Oracle database on the external Raid systems. This guarantees the availability of all current data on the other system, should one system fail.

Client applications running under Windows NT are used at the workstations.

The conveyor control systems and connected third-party systems are linked through TCP/IP telegram interfaces.

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