



Aircraft Ground Handling, On-Time Flights

BEST Process Control and Optimization for Airline and Airport Hubs

Both airlines and airports need to take advantage of every opportunity to ensure that flights are on time. With BEST, Siemens IT Solutions and Services offers airlines and airports the most efficient way to optimize their use of resources. This IT solution was developed and functionally augmented over a period of six years in cooperation with Lufthansa German Airlines, which continues to use BEST in its daily operations. BEST provides for efficient control, integration, coordination and optimization of all ground handling processes. It substantially increases capacity and on-time performance – particularly important in this era of ever-increasing air traffic as a result of rising demand in the passenger and cargo segments. BEST helps you meet the rising cost sensitivity generated by increasing competition between airlines and between airports. It also helps you provide better service to ever more demanding passengers who are unwilling to accept delays and restrictions in their travel plans due to technical or procedural problems.

Your requirements

- You want to gain more scheduling flexibility by optimizing all relevant processes.
- You want to minimize additional costs of aircraft, ground and airport services while improving passenger acceptance.
- You want to use computer-aided forecasting and decision-finding tools without impairing your service quality.
- You want to see complete and consistent information about all hub events at all times based on a variety of concurrent data sources.

Services

- Manage continental and intercontinental flights with a variety of different ground handling procedures
- Optimize passenger connections with other airlines
- Minimize the cost of delays and time consumption of resources

Customers

- Accommodate business travelers unwilling to tolerate delays and traveling on long-distance flights with multiple connections.
- Maintain customers convenience in spite of aircraft changes.

Market

- Hub-and-spoke is an internationally widespread concept for extending service and to concentrate flights on large airports.

Your benefits

BEST provides:

- An overview of all hub events at all times, generated from data streams from different airline and/or airport IT systems.
- Transmission of hub controllers messages and requests for flight and ground resources.
- Flight schedule data and the ability to make changes to flight ground handling in order to manage (potential) delays.
- Take the requirements of aircraft types, airlines, airports and on-duty resources into account.
- A uniform and consistent source of data that is accessible for all parties involved.

BEST's solution components

Siemens IT Solutions and Services offers BEST as a software license of Lufthansa German Airlines.

- **Event View** monitors all inbound, ground handling and outbound aircraft activities that fall within a hub controller's responsibility. Creating an overview of the total traffic at a hub, the program provides a view of aircraft turnarounds. The controller sees a very detailed picture or a more general view, as required. Controllers can identify the need for and initiate ground handling activities and changes.

BEST compares the current data with ground handling process models. The hub controller uses this information and dispatches the appropriate ground handling resources to best meet the schedule.

- **Resource View** extracts the ground handling service events in accordance with the day's schedule. The planned ground processes are coordinated as per the service levels required from ground handling providers, i.e. bus drivers, caterers and ramp agents. Hub Control can execute changes on short notice, depending on time and availability.
- **Passenger View** monitors passenger streams between aircraft and monitors

transfer connections and passenger services. Cancellations and rebookings can be carried out, crews informed, short connection transportation facilities ordered, etc.

The passenger view leads to:

- **Baggage management (BMS)**, which follows the movement of each passenger's baggage from plane to plane and from airport to airport.
- **Catering View (COOL)** orders the meals booked in advance and requests short-notice deliveries of (special) meals when passengers' flight connections change.
- **Boarding Support (TKG)** displays flight information on public display boards as well as on handhelds/PDAs to guide VIP passengers to the gate or to other services.

BEST system architecture

BEST is a client-server application that runs on the Sun Solaris operating system with an Oracle database. The server houses the database and offers system-wide services. It runs either in a cluster or as a single system with a cold stand-by. Distributed, partially redundant services managed by a broker service ensure scalability and performance. Each change in requested data automatically updates this data in all logged-in services and clients. BEST adequately processes up to 100 incoming messages per minute. Redundant data storage and a high-availability concept ensure that BEST can run 24/7. The clients include various front-end-applications to meet different user requirements. Clients range from high-performance SUN Solaris workstations with multiple monitors using Java Fat Client for Hub Controllers to JAVA Server Pages on PDAs and HTML for help and administration using a standard Web browser on MS Windows PCs.

Our services

Siemens provides airports and airlines with hardware and software components for BEST, as well as with related consulting, IT design and implementation (incl. interfaces to legacy applications), operation and maintenance services and solutions.

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Siemens AG

Siemens IT Solutions and Services
Otto-Hahn-Ring 6
81739 Munich, Germany
Global Info Desk
Tel.: +49-1805-444713
it-solutions@siemens.com

www.siemens.com/it-solutions