

News from Mobility and Logistics

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Siemens at inter airport Europe 2013 in Munich

Efficient and environmentally friendly solutions for airports are the central topics at this year's inter airport Europe, which will be taking place in Munich from October 8 to 11, 2013. Against this background, Siemens Mobility and Logistics is showcasing products, solutions and services that help to save energy, enable more flexible use of passenger and cargo capacity and boost overall throughput capacity. The focus is on the Self-Service Bag-drop/Check-in system, as well as the topic of airfreight and the optimization of passenger flow.

Airports and airlines are nowadays faced with increasing energy costs, more pressing environmental issues and fluctuating levels of capacity utilization. The aim is to provide improved customer service and low environmental impact at airports, coupled at the same time with good profitability figures for the operator. Efficient and well harmonized solutions for the airport infrastructure make a significant contribution to the optimization of resource usage and lower energy consumption figures.

Integrated baggage handling systems for efficient airport infrastructures

Siemens has implemented more than 300 logistics systems at airports across the world. The portfolio embraces bag-drop/check-in systems, identification and security systems, as well as transport and sorting systems, plus the appropriate IT systems. The conveyor systems, which are divided into belt conveyors and tray conveyors, may be a number of kilometers in length, and must transport, scan and identify several thousand items of baggage every day.

Baggage handling systems are a key component in the smooth running of airport infrastructure. Regardless of the size of the airport, Siemens' baggage handling systems are designed in such a way that they achieve high levels of availability coupled with high throughput rates. In addition they are

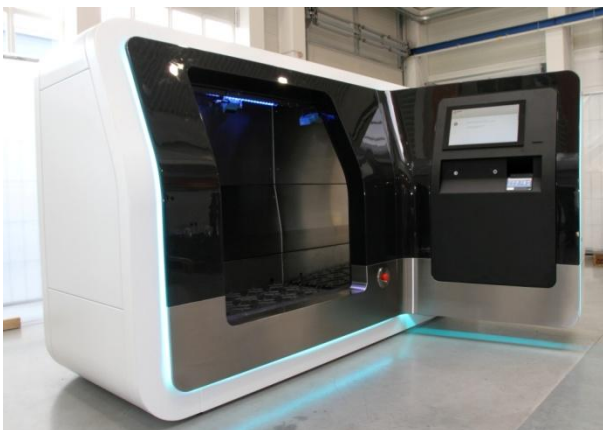
particularly energy-efficient: During periods where loads are low, unnecessary no-load operation in the baggage handling systems is avoided by means of intelligent control facilities, with subsystems coming on line only during peak times. The aim is to minimize plant lifecycle costs.

Baggage check-in of the future

For travelers, the situation at today's airports is not always free from stress. They frequently have to head for and wait at a number of check-in and baggage drop-off counters. Self-service solutions are already in place for checking-in at airports, but often there are still long lines waiting to hand in baggage at the drop-off counters. The solution lies in automating the bag-drop together with the check-in. This enables the entire check-in process – from seat selection and printout of the boarding pass to printing of the baggage label and, finally, the bag drop itself – to be completed at one station.

At inter airport Europe Siemens is showcasing the "one-stop"-version of this system. The modular solution includes several bag-drop variants, which can be adapted to meet the individual requirements of airports and airlines. The possibilities here include open and closed versions, as well as "one-" or "two-stop"-systems.

Combined with the certified software from Materna ips, the check-in process including bag-drop can take less than one minute. The advantage of the system is the intuitive user interface. Regardless of which airline passengers are flying with or the language they speak, a few clicks on the touch screen are all that's needed. The software can be easily integrated into the systems (DCS) of the individual airlines and corresponds to the CUSS (Common Use Self Service) standard used by the IATA (International Air Transport Association). This means that different airlines can use the same check-in equipment as provided and maintained by the airport. In future, Siemens and Materna ips will be offering this CUSS-based solution to airports in Europe, the Middle East and Asia.



Visitors can experience the check-in system with bag drop live at the Siemens stand 1260 in Hall B5

Baggage Warehouse for maximum convenience

The Baggage Warehouse offers the possibility of storing and withdrawing all kinds of baggage items fully automatically, until the respective flight is

called, just like in a distribution center. Transfer baggage is managed fully automatically, as in a high-bay warehouse. The system combines the advantages of fast, efficient individual transport with space-saving sorting. Bags are moved vertically by lifts and horizontally by shuttles. The Baggage Warehouse can accommodate many different items of baggage. It is constructed along modular lines and can be flexibly dimensioned. It is controlled by an intelligent IT system which knows the position of every individual tray in the high-bay store. The system is thus capable of channeling the right piece of baggage back into the conveyor system at the right time.

The Baggage Warehouse can also be used as an Early Bag Store (EBS). Instead of expensive storage and retrieval devices, it also uses the Lift&Run system that is considerably faster, cheaper and environmentally friendly than other solutions on the market. EBS systems are in use both at hub airports with large numbers of transfer passengers and at airports which offer their passengers the option of checking in early. The focus is on maximum convenience because the passengers should feel comfortable at the airport and be able to go for a meal or shop without being encumbered by baggage. A Baggage Warehouse with 6,500 storage possibilities is in service at the airport in Dubai, for example.



High-bay warehouse of the EBS system

Air freight: save more time and energy

Airports are currently experiencing a dramatic increase in air traffic, and an associated increase in the volume of air freight. The number of international standards is steadily increasing too. Mastering these challenges is an ambitious goal for airports, airlines and authorities. Siemens offers a broad range of products, solutions and services that help customers including aircraft dispatchers and logistics service providers to meet the growing requirements of today's airport operations.

Siemens has over 30 years of experience in the implementation of logistics projects for cargo terminals. Its international references include complete air cargo terminals, such as those in Dubai and Hong Kong, which are some of the largest of their kind in the world. Hardware and software products from Siemens not only increase efficiency and profitability, but also ensure the security and safety of air cargo systems. As one of the world's leading material transport suppliers, Siemens offers, from a single source, fully

integrated solutions for constructing cargo dispatching systems, which can be adapted flexibly and modularly to meet the customer's specific requirements. The Totally Integrated Automation (TIA) technology has long been a standard here, deployed to reduce engineering and commissioning times, as well as service costs. To cater for the transportation and storage of ULDs (Unit Load Device), which are employed to load baggage, cargo and mail onto wide-body aircraft, Siemens offers both stationary and mobile systems, including the software, designed to control material flows.

Customer Services: cutting costs and boosting efficiency

As a systems manufacturer, Siemens boasts a broad portfolio along the entire lifecycle: Vital components are overhauled, machine controllers and IT landscapes brought up to the state of the art, covering everything up to and including system expansion and performance enhancements. The retrofitting of controllers is so included.

Customers in more than 20 countries, based at over 30 airports, rely on Siemens' customer service: These include US airports such as Newark, Indianapolis and San Francisco, as well as European airports in Lisbon, Porto, Madrid, Palma de Mallorca, Rome, Milan and Munich. The airports in Dubai, Abu Dhabi and Beijing represent further international reference customers.

CapacityPlus for temporary airport terminals

With CapacityPlus, airport operators can increase their handling capacity in a cost-effective manner, ensuring the safe and speedy processing of additional passenger numbers, for example during major events such as the soccer World Cup or during the refurbishment of an existing terminal. For this purpose Siemens makes use of a specially developed terminal concept and layout, in order to realize the requisite functionality. The system is also suitable for use by low-cost carriers, enabling them to be able to respond rapidly and flexibly to fluctuating passenger numbers. CapacityPlus includes all the necessary functions and modules required for a fully equipped 'add-on' terminal, and meets the standards laid down by the IATA: arrivals area with baggage reclaim, departure area with check-in desks and baggage handling system, electronic control systems for a 100-percent baggage and passenger security checks. The offering is completed by waiting areas, sanitary facilities, power supply systems and the necessary facilities for police, customs and first aid, plus shops and restaurants.

Siemens has already installed CapacityPlus at a number of airports around the world, such as in Lisbon (Portugal) and in Doha (Qatar) or in Port Elizabeth and Bloemfontein (South Africa). These projects mainly involved major events and the accompanying increase in passenger numbers.

Siemens has only recently installed four turnkey CapacityPlus terminals in Angola for the airport operator ENANA. The objective was to boost the capacity of the four regional airports at Soyo, Dundo, Saurimo and Luena, as a means of improving the country's local infrastructure. Passengers are now benefiting from significantly greater convenience and can be processed more rapidly.

IT integration: more efficient airport operation with Siamos

More and more airport operators urgently need a complete overview of the increasingly complex check-in processes with their extreme division of labor, as well as knowing the causes of problems and exceptional situations. The different control and management systems normally only allow a limited view and supply isolated data. With the Siamos software suite, Siemens provides an integration platform which brings together, processes and visualizes operational airport data. Airport operators can continually analyze the entire operation in real time and take appropriate action to adapt it optimally and flexibly to their operational and commercial targets.

Information from all area of airport operation can be integrated via standardized interfaces. Siamos monitors all the main organizational units involved in airport operations, allowing the system to provide decision-making aids and forecasts. Systems handling energy management, building management or the control of arrival, departure and transfer areas can be covered too. Using an adaptive set of rules, Siamos makes suggestions on the basis of accumulated data to improve the management of operations, helping operators to take effective decisions. Linking the different but interacting processes can achieve overall optimization and thus boost operational efficiency.

The Siamos components "Airport Operation Database", "Process Integration Platform" and "Flight Information System" are currently being used at Münster-Osnabrück Airport.

The Siamos element Fids (Flight Information Display System) has recently been successfully installed at the airport in Shenyang, the hub of China Southern Airlines. Thanks to the Fids solution, all aircraft movements and passenger services - as displayed on more than 400 monitors - could be transferred smoothly from Terminal 2 to the newly constructed Terminal 3. The new terminal was opened on schedule at the beginning of September and in time for the "China National Sports Games" and could therefore cope easily with the increased number of passengers for this big event.

Furthermore, the Siamos IPM (Integrated Passenger Management) component is showcased on the stand at the fair. This smartphone app enables the airport operator to obtain anonymized data about passengers' usage of the airport infrastructure. In return, passengers using this app receive individually customized information about their journey. A pilot project is already underway at the airport in Vienna.

Airval: The airport-feeder train from Siemens

Airval is the fully automatic, driverless airport feeder train from Siemens. Depending on passenger numbers and the differing requirements of major airports, the Airval can be operated with up to six cars, enabling it to transport as many as 30,000 passengers per hour in each direction. The Val system is distinguished by short headways (less than one minute) and speeds of up to 80 kilometers per hour, as well as rapid acceleration phases and short braking phases. Green technologies such as energy recovery during braking significantly reduce energy consumption, making Airval particularly environmentally friendly.

Reliable and efficient security and drive technology

In the security technology field, Siemens Building Technologies is showcasing the management solution Siveillance ELS Vantage and the intelligent video monitoring system SitelQ, demonstrating how security can be reliably and efficiently guaranteed at a modern airport. The Siemens portfolio also includes energy-efficient drive solutions for cargo and baggage handling applications. Drives Technologies' digital drive products offer more efficient utilization of frequencies compared with similar systems. Around the world, more than 45,000 drives specially developed for BHS applications (G111D) are already in use.

Siemens is the only provider in the world boasting the expertise to equip an entire airport. The range spans everything from baggage and cargo handling systems, security systems for passengers and baggage, solutions for building and energy management, airfield lighting systems and road traffic management, through to IT and telecommunications solutions and the monitoring of service fleets, plus the project management for the integration of all these facilities. The portfolio is rounded off by operational and maintenance services across the lifecycle of an airport.

Dear Visitors,

We look forward to welcome you to stand 1260 in Hall B5 at the fair between October 8 and 11, 2013. For the topics of interest to you, we will gladly arrange meetings with appropriate contacts who are able to present our innovative airport solutions to you in person.

You can reach us by telephone or e-mail:

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We look forward to your visit!

These press photographs are available at:
<http://www.siemens.com/mobility-logistics-pictures/interairport2013>

You can find further Mobility and Logistics press material online at:
www.siemens.com/press/mobility-logistics/material

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