



Köln Bonn Airport halves downtime and improves staff satisfaction

Located in one of the most densely populated regions in Europe, Köln Bonn Airport is one of Germany's largest commercial airports and home to Fed Ex's main hub for central and eastern Europe. The management team at Köln Bonn Airport have worked with SCHAD since 2009, following the selection of EXTEND7000 as a mobile SCADA system, to allow continuous, 'anywhere-anytime' monitoring and remote control of the technical processes controlling the facility's highly automated baggage handling systems.

At the airport, materials handling is controlled by 13 Siemens Simatic S7- 400 Programmable Logic Controllers (PLCs). These send 7,290 alerts including alarms, warnings, statistical data and operating notifications, to the InTouch Wonderware SCADA system. Prior to implementing EXTEND7000, stationary control room staff would monitor for irregularities and manually forward notifications to the responsible service staff.

7 days for live monitoring across the entire airport

Now, after integrating EXTEND7000, which took a week from start to finish, technical engineers and control staff receive real time notifications of system performance issues if a problem occurs anywhere inside or outside the security areas within the airport facility. Alerts are sent to the right member of the team directly onto a standard BlackBerry mobile device.

Secure mobile SCADA means 'anywhere-anytime' control

EXTEND7000 uses existing Wi-Fi or GPRS infrastructure thereby providing a low cost, functionally rich mobile control and monitoring solution. The system works by granting secure remote access to the automated baggage handling conveyors, which allow system controls to be monitored 100% of the time from any location. In addition, depending on their level of authorisation, engineers can gain remote access to automated control systems to investigate system performance issues, potentially fix problems on the spot or check for parts availability online.

"Service staff satisfaction has improved because important tasks could be fulfilled with less unnecessary walking and fewer operational disruptions. The overall performance of the baggage handling systems has increased, workflows have been improved and the time spent on unpopular tasks reduced," says Ralf Weifenbach, head of technical systems at Köln Bonn Airport.

Downtime cut by 50% through faster, better communication

Since the integration of EXTEND7000 into maintenance workflows, unplanned downtime of baggage handling systems has been significantly reduced. This is because communicating with the control room in case of failure notifications is no longer necessary. Information relating to baggage handling system faults is transferred directly to mobile devices used by the appropriate service personnel.



Köln Bonn Airport



Benefits

- Low 'LBI' – 'leave behind index'
- Faults raised with correct personnel immediately
- 50% less downtime each month
- Better human resource utilisation
- Increased efficiency and staff morale
- Lower operating costs

"Downtime of single components has reduced by 90 hours per month using the new system which equates to a reduction of almost 50%."

Ralf Weifenbach
Head of Technical Systems
Köln Bonn Airport



Detailed failure information, including pending and unacknowledged notifications, can be obtained anywhere at any time, reducing the need for walkways and security checks. The baggage handling control room is no longer staffed around the clock and will most likely be turned off for good in the near future.

Calculated success – low LBI means more profits

Köln Bonn Airport has calculated that EXTEND7000 saves up to 90 hours of unplanned downtime caused by system failure each month, which equates to a 50% reduction and lower 'LBI' – 'leave behind index'.

This result is derived as follows: there are an estimated 100 notifications per shift, 20% are relevant for EXTEND7000 = 20 relevant notifications per shift. This amounts to 1800 notifications per month (3x daily shifts x 30 days). Each notification saves 3 minutes of downtime = 5400 minutes or 90 hours saved in downtime per month.

How does EXTEND7000 work?

EXTEND7000 is a mobile application which routes information between the central automated / maintenance systems and mobile devices. It applies additional logic to the users, user groups, user rights, message filters, escalation schemes, and team workflows.

Alerts and notifications, which appear in a random way on the visualisations in the control room, can be prioritised in accordance to severity and urgency and be allocated to the right engineers according to the existing workload and their availability all in real time on their BlackBerry device whilst they are on the shop floor.



SCHAD GmbH was founded in 2007 by Christian Schad, with the aim of developing a global standard for the mobile operation, control and maintenance of automated systems using an ordinary mobile device.

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**Vodafone Application
Award Winner 2010**

Best machine to machine solution

**BlackBerry Innovation
Award Winner 2010 and 2009**

Transforming enterprise business performance

RIM Finalist

Wireless Leadership Awards 2008