

Danish railway system goes wireless with IBM



Overview

■ **The Challenge**

Danish State Railways (DSB) sought a way to streamline their onboard ticket-selling process and provide better communications with conductors and crews; they also wanted to build a wireless platform for the future

■ **The Solution**

IBM WebSphere® Everyplace™ Connection Manager, WebSphere Everyplace access

■ **The Benefits**

Helps save time and reduce the cost of selling tickets on trains; enables conductors and crew to now send and receive up-to-the-minute information on schedules, track conditions, weather, and repairs; provides passengers with realtime departure, arrival, gate and ticket information

Upgrading train travel

Danish State Railways (DSB) is an independent public corporation serving over 156 million passengers annually, with a staff of 8,400 employees. The company is currently upgrading its InterCity rail system with 332 new 4-car train sets, and 44 new double-decker cars for regional services, which is expected to increase passenger traffic by 25 percent. In order to remain their customers' preferred means of travel, DSB focuses on improving customer service and efficiency as well as saving time and costs.

On-line and on the move

Not surprisingly, many of DSB's employees, such as conductors and engineers, have jobs that require them to be mobile. In the past, information needed to perform their jobs, such as train assignments, schedules, rail conditions and repairs, were only available in printed reports. DSB requested an on-line, realtime solution to access a range of up-to-the-minute information for the benefit of both their customers and their internal operations. IBM responded with a wireless platform comprised of WebSphere Everyplace Access and WebSphere Everyplace Connection

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*Nils Feldthus
Development Manager
Danish State Railways (DSB)*

Manager. Now, DSB crews can access and update current data on the railway's central servers from handheld devices. In addition to improving response times, the new system gives DSB the opportunity to expand into direct, retail sales on the train.

The new wireless solution consists of IBM middleware on both central servers and wireless clients. Over 4,000 mobile employees are currently learning the new system.

Breaking down the IBM solution

IBM WebSphere Everyplace Access provides the software infrastructure to support the mobile applications. It supports both on-line (connected) and off-line (disconnected) transactions on handheld units, and provides necessary access to the DSB back-end system.

IBM WebSphere Everyplace Connection Manager provides a performance-optimized, mobile VPN. WebSphere Everyplace Connection Manager also provides seamless roaming across various wireless networks, a crucial factor in remaining connected while the trains are on the move.

A successful launch

Nils Feldthus, Development Manager at DSB, describes the new applications that provide schedule information, record passenger counts, and sell tickets using credit card billings. "We were looking for a mobile platform that would work off-line as well as on-line," he says. "We wanted to deliver current information to running trains. And since we were already a 'Java house', we wanted to develop this application using Java to handle the transactions".

Feldthus compares some of the applications to those used in the airline industry. "When a pilot is about to begin a flight, a flight plan is filed. Before landing, the arrival time is estimated and a flight attendant may give passengers information on connecting flights and gates. Our conductors will have two-way access to a variety of train, track and schedule information. Changes and updates can be immediately provided on a realtime basis to the crew and passengers.

"Previously we issued hand-written tickets and employed more people to process them. We are reducing expenses by simplifying and streamlining the ticket-selling process."

The new WebSphere system also allowed DSB to simplify their vendor relationships. According to Nils Feldthus, "Before this project we needed seven vendors. We like the idea of working with IBM because they streamlined our project with a database, Java machine, communications, portal, device management — a total solution."



**“Down the Track” —
potential new solutions**

DSB is looking at options for selling tickets through various new media—such as mobile phones and the Internet, as well as expanding into new areas. Says Feldthus, “If we provide a wireless infrastructure on the trains and at each station, we could offer a variety of commercial services to our passengers. We could also directly give them realtime train arrival and departure times. In the long term we hope to introduce Internet access and entertainment, such as news and short movies.”

For more information

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