



Public Transportation Firm Enables Mobile Ticketing Application with SMS Service

BACKGROUND

Owned by the State, Swedish Rail SJ AB is the leading rail operator for public transportation in Sweden. A very popular mode of travel, SJ sells over 40 million tickets each year. The rail operator was looking for ways to improve customer service, while reducing cost in the ticket sales and distribution process.

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THOMAS MANN | HEAD OF DISTRIBUTION | SJ

CHALLENGE

Like airline passengers, generations of rail passengers in Sweden have purchased their tickets through travel agencies. But creating tickets requires special printing equipment and costly pre-printed paper that has to be transported to travel agencies by special carriers. To reduce operating expenses, airlines have eliminated pre-printed tickets and moved to e-Tickets. The widespread acceptance of e-Tickets convinced SJ that the time was right to adopt e-Ticketing for rail travel as well, enabling passengers to purchase tickets online and conveniently print them out at home or work.

Rail travel posed a unique challenge for on-line ticketing, however. Because ticket inspectors on the train might not always be connected to the database, SJ needed a way to validate tickets on the train. This is not an issue with the airlines as the airport kiosks provide a continuous connection to data. SJ resolved that issue by adding encoded information on the self-printed ticket relating to the passenger that could be rapidly verified using a handheld scanner.

On-line ticketing was a big step forward in passenger convenience and service. But SJ felt there was even more it could do to improve customer service through on-line ticketing.

SOLUTION

Widespread adoption and penetration of mobile short message service (SMS) throughout Sweden made it the ideal technology to mobilize the e-Ticket application. Passengers could buy online and conveniently redeem via their mobile handset with no need to print out and carry a physical ticket.

SJ developed the mobile ticketing application using SMS, which was chosen because it had a significantly higher penetration rate (90 percent of users in Sweden) than WAP (50 percent) and MMS (just 25 percent according to Swedish Post and Telecom Agency). As a widely adopted standard, SMS was also relatively easy and inexpensive to deploy. The application took just 12 months and 8 million SEK (\$1.1 million USD) to roll out.

The potential volume of tickets and revenue that would be processed by this application demanded reliable SMS delivery. Lost or inaccurate messages could create huge customer support issues and result in a bad customer experience.

To purchase a mobile ticket, a passenger visits the SJ website, selects the train journey, and fills out their personal details. They then select Mobile Phone Ticket for the delivery method. Twenty four hours before departure, the passenger receives an SMS requesting check-in. The passenger replies anytime before departure and subsequently receives a message displaying the ticket information. Because more than 160 characters are needed, mBlox supports concatenation of multiple SMS messages.

On the train, the passenger is asked by the ticket inspector to recall the message on their handset. A Mobile Compia M3+ handheld computer, already in use by onboard personnel, scans the 21-digit machine-readable ticket code displayed on the mobile handset to validate authenticity. Scanning takes just 100 milliseconds. The encrypted ticket code contains the train number, passenger type, departure and destination stations, seat number, and more. This prevents duplicates of unseated tickets from being used by more than one passenger on the same train.

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BENEFITS

Mobile ticketing has been a resounding success. “Less than two months after launch, e-Tickets reached 15 percent of all sales, and two-thirds of those were mobile phone tickets,” says Thomas Mann, head of distribution for SJ. “The mobile ticketing application has helped to improve customer satisfaction.” In addition, passengers no longer need to print out tickets, making them just a little more environmentally “green.”

SJ is delighted with its choice of mBlox for SMS delivery. “Reliability has been excellent. Furthermore, SMS messages are delivered by mBlox very quickly, enabling passengers to check-in right up to the time that the train departs,” says Thomas Mann. In addition, the scanning process is very fast, allowing inspectors to check all the tickets without adding more personnel.

By eliminating the expense of supporting printing equipment and special paper at travel agencies, SJ has been able to lower operating costs while improving customer satisfaction with the implementation of mobile ticketing.

Because SJ collects the mobile number of the passenger when they purchase a ticket, SJ could use that information in the future to notify passengers of travel delays or other alerts.

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