SIERRA WIRELESS®

Utah Transit Authority Improves Operations and the Passenger Experience for 2 Million Residents

A Sierra Wireless® Public Transit Solution

CUSTOMER CRITICAL CHALLENGE

- Onboard computers provided information about schedules and routes, and buses featured an electronic fare payment system and passenger Wi-Fi. But as UTA began to deploy more sophisticated ITS technology, they needed to upgrade their mobile communications capabilities.

SOLUTION

- Over a 6 month period, UTA installed over 500 oMG Mobile Gateways in their fixed route transit fleet.

BENEFITS

- Passengers can pay fares with credit cards and validate bu passes on board, providing convenience and increasing operational efficiency.

- On-board systems for route, schedule and service information are updated in real time or in the bus yard.

- On express bus routes, the system provides firewalled Wi-Fi access for passengers.

- The oMG senses and selects the best available wireless network to ensure the greatest bandwidth, robust data reliability, and the most cost-effective delivery of wireless communications to the fleet.

UTA

BACKGROUND

The Utah Transit Authority (UTA) provides public transportation services in a 1,600-square mile service area known as the Wasatch Front. At the foot of the Wasatch mountain range, the Wasatch Front has an estimated 2 million residents - 80 percent of Utah's entire population.

UTA is a nationally-recognized leader in the use of technology to increase operational efficiency and improve passenger services. During the 2002 Olympic Games, UTA vehicles carried more than 4 million passengers and was declared a great success.

Business Challenge

UTA's approach to technology has always been to define their needs, and then to find or build the best solution. UTA had onboard computers in its transit vehicles that provided operators with information about schedules and routes. All buses feature an electronic fare payment system and express buses feature passenger Wi-Fi. As UTA began to deploy more sophisticated ITS technology across its fleet, they recognized the need to upgrade their mobile communications capabilities.

The UTA IT team began searching for a solution that would provide them with:

- **Constant communications with the bus to support fare collection methodology using highly reliable, secure mobile data communications.** Processing credit card transactions as passengers board requires virtually uninterrupted, secure data communications. Similarly, providing passengers with a satisfying Wi-Fi experience requires adequate bandwidth as vehicles traveled the 1,600-square mile service area.

- **The ability to connect multiple devices over a shared wireless network connection.** UTA wanted to provide connectivity to a variety of devices and systems. Using a separate wireless modem for each would be costly and inefficient.

- **Support for multiple networks.** UTA needed the flexibility to provide connectivity over commercial wireless networks while the vehicles were on their routes. However, while the buses were in the yards, they needed to send and receive data over garage-based Wi-Fi networks.

Sierrra Wireless Solution

UTA awarded a contract to AT&T for mobile communications services and the InMotion Solutions team for related communications equipment, including oMGs.

"We chose the InMotion Solution because it offered an end-to-end mobile wireless technology that was secure and manageable and able to work with any wireless network with policy management," said Clair Fiet, Chief Technology Officer for the Utah

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Transit Authority. "This one solution will enable us to improve operations and enhance the passenger experience in many ways."

Over a 6 month period, UTA installed over 500 oMGs in their fixed route transit fleet. "Our collaborative working relationship helped when we were trying to meet such an aggressive schedule. The InMotion Solutions team stepped up to the plate and worked closely with our team to ensure success. In the process, we identified product features and enhancements we needed, and the development team was open to changes and able to meet our needs."

The oMG creates a wired and wireless local area network on transit vehicles, providing reliable connectivity for a variety of onboard systems. For example, the oMG enables UTA passengers to pay fares with credit cards and validate bus passes, providing convenience for passengers and increasing operational efficiency. On-board systems for route, schedule and service information are updated in real time or in the bus yard. On express bus routes, the system also provides firewalled Wi-Fi access for passengers, who can use the Internet from laptops, PDAs or smartphones.

The oMG is able to sense and select the best available wireless network, and roam across a variety of networks, including commercial cellular, 3G, 700 MHz and municipal Wi-Fi. This means that while a vehicle is traveling on its route, it is connected using the most reliable network available. At UTA, vehicles utilize AT&T's HSPA networks while on their routes, and when they return to the yard, connect to UTA's Wi-Fi network. This multi-network feature ensures the greatest bandwidth, robust data reliability, and the most cost-effective delivery of wireless communications to the fleet.

The oMM gives UTA's IT team a high level of information and control over its wireless communications. The oMM receives and analyzes information from oMGs to provide headquarters staff with a virtual dashboard of information about networks, devices and vehicles in the field. It also enables UTA to monitor its network and diagnose communications problems as its fleet of buses travels throughout the Wasatch Front.

Results

"We have tried other mobile data solutions, but the InMotion Solution set it apart," Fiet said. "Early on, we were having trouble communicating in our bus yards and the team worked extensively with us to improve our network. Today we regard the group as a partner in our business."

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