

# Utah Transit Authority

## Customer Case Study

### Background

The Utah Transit Authority (UTA) provides public transportation services in a 1400-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.

Established in 1970, UTA operates a fleet of over 800 vehicles serving 130,000 passengers daily. During the 2002 Olympic Games, UTA vehicles carried more than 4 million passengers and was declared a great success. UTA is a nationally-recognized leader in the use of technology to increase operational efficiency and improve passenger services.

### The Challenge: To Improve Emergency Communications

UTA's approach to technology has always been to define their needs, and then to find or build the best solution. UTA has had onboard computers in its transit vehicles that provide 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.
- 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 1400-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.

### Solution

UTA awarded a contract to AT&T for mobile communications services, and to In Motion Technology for related communications equipment, including onBoard Mobile Gateways.

"We chose In Motion Technology because they 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 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 onBoard Mobile Gateways in their fixed route transit fleet. "Our collaborative working relationship helped when we were trying to meet such an aggressive schedule. In Motion 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 In Motion was open to changes and was able to meet our needs."

A vertical image on the right side of the page showing blurred light trails in various colors (red, green, yellow, white) against a dark background, suggesting a city at night or a fast-moving vehicle.

"Today we regard In Motion Technology as a partner in our business."

Clair Fiet  
Chief Technology Officer  
Utah Transit Authority

In Motion's onBoard Mobile Gateway creates a wired and wireless local area network on transit vehicles, providing reliable connectivity for a variety of onboard systems. For example, the Gateway will enable 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 will be 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 smart phones.

The onBoard Mobile Gateway 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.

In Motion's onBoard Mobility Manager gives UTA's IT team a high level of information and control over its wireless communications. The onBoard Mobility Manager receives and analyzes information from Gateways 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 In Motion's technology and team set it apart," Fiet said. "Early on, we were having trouble communicating in our bus yards and In Motion worked extensively with us to improve our network. Today we regard In Motion Technology as a partner in our business."



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