



Wilson Electronics Case Study

Utility – Real-time situational data for first responders

EXECUTIVE SUMMARY

- Utility provides an installed hardware-plus-hosted software solution for first responder vehicles.
- The Utility solution relies on the cellular network for communications.
- To overcome potential communications problems caused by weak cellular signal, Utility partnered with Wilson Electronics.
- Wilson's market-leading cellular signal boosters assure that Utility customers in the field maintain communications with dispatch and command centers.
- The Utility/Wilson collaboration helps customers reduce response time and save operating costs.

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BACKGROUND

Utility (www.Utility.com) is a hardware and software communications provider. The company manufactures the Rocket line of mobile communications appliances that are installed in first responder vehicles - police cars, ambulances, fire trucks – and public utility service vehicles. The devices provide real-time broadband communications in the field where mission critical operations are happening.

"Time is critical to first responders," said Utility chairman Bob McKeeman. "Our customer Ft. Myers (Florida) Fire Department found after they implemented our technology that their average response time dropped by about 60 seconds. And while that may not seem like a lot of time saved, for a fire department 60 seconds could be the difference between life and death for a citizen in an emergency. So it absolutely makes a mission critical difference for our customers and for the citizens they serve."

In combination with Utility's hosted software, the devices provide a map-based, real time view of what's actually happening in the field during an emergency. McKeeman explains that the company's solution grew out of an experience of Allegheny Power, a multi-state electric power provider.

"Several years ago our customer Allegheny Power had a dispatcher sitting at a desk with four or five monitors in front of them that showed work management, crew scheduling,

outage management and inventory management data. They also had a Rand McNally road map on the desk in front of them. This dispatcher was mentally trying to pull together all this information while talking on a voice radio to between 20 and 50 field crews that were working to repair an outage.

"That's what we do with our map-based software and the vehicle wireless router. We put all this field data together in one map view of what's going on across the enterprise."



CHALLENGE

Utility's solution relies on cellular networks for exchange of data between field crews and their communications center. Not only do Utility devices report GPS position, but also real-time vehicle telemetry and RFID information.

"This allows our customers to know exactly which personnel and equipment are in and around a vehicle in the field," McKeeman said. "At the dispatch center of an electric utility company, they know whether their people on the scene have the required skills, training, and experience, as well as the proper equipment and necessary replacement parts to do the work safely and efficiently."

However if the cellular signal in the field is weak or unreliable, the Utility device may not be able to transmit collected data to the communications center. This can happen in rural areas that may have spotty coverage due to distant cell towers or terrain features that block signals.

But unreliable signals can also plague first responders in urban areas. Concentrations of large concrete-and-steel buildings can create an "urban canyon" effect that blocks cellular signals. Of course during a service outage nearby cell towers may not be operational, forcing cellular devices to detect and use weaker signals from more distant towers.

For Utility and its customers a strong, reliable cellular signal is critical.

SOLUTION

To prevent unreliable signals from being the weak link in their communication system Utility partnered with Wilson Electronics, the market leading manufacturer of cellular signal boosters. Laine Matthews, Director of Business Development for Wilson, explains how the two companies work together to serve first responders.

"Wilson manufactures cellular signal boosters that provide a stronger cellular signal in areas where the signal is weak or unusable. Since 2004, Utility has integrated Wilson boosters into their systems mounted in vehicles to ensure a strong, reliable cellular connection for their communications devices. There's great synergy – the Utility devices collect critical data as the vehicle and personnel respond to the emergency call, and the Wilson boosters provide a strong, reliable cellular connection so all that valuable data can be delivered to the Communications Center in real time."

"One of our major Northeastern utility customers equipped with Rockets went down to New Orleans to help restore services in the aftermath of Hurricane Katrina. Even though cellular coverage in the city was nonexistent, those vehicles with Wilson boosters working in downtown New Orleans still had communications coverage because they were able to reach cell towers across Lake Pontchartrain."

RESULTS

"One of our major Northeastern utility customers equipped with Rockets went down to New Orleans to help restore services in the aftermath of Hurricane Katrina. Even though cellular coverage in the city was nonexistent, those vehicles with Wilson boosters working in downtown New Orleans still had communications coverage because they were able to reach cell towers across Lake Pontchartrain that were still operating. In times of crisis or natural disaster you may have to reach a cell tower 20 miles away, rather than the normal 3 to 5 mile radius that a cell tower serves."

The Utility/Wilson collaboration was recognized with a Value Chain Award at the 2011 Connected World Conference in Chicago. Utility received the "M2M in Action Award" for the company's innovative hardware/software solution for first responders. Wilson was honored with a related "Technology Enabler Award."



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