

MAINTAINING CRITICAL CELLULAR COMMUNICATIONS

With a Wilson Cellular Signal Booster

BACKGROUND

Dan Busse is a communications support volunteer with the fire department in Eureka, Mo., near St. Louis. The department operates a Mobile Command Center (MCC), a specialized vehicle outfitted with computers and communications equipment that can drive to the scene of an incident and function as a communication and command post for first responders.

"Sometimes to demonstrate for other agencies the booster's effectiveness we have those in the MCC look at their cellular device, then we turn the booster off. They watch the signal go away and their reaction is, 'Hey, what happened?'"

"Many of the incidents the MCC responds to are search and rescue operations or fires," Busse said. "We rely on cellular communications in the field for both voice and data."

That's why ensuring reliable cellular signal for the MCC is a top priority for Busse. "More and more it's just assumed that even out in the field, we're going to have Internet access," he said. "It's increasingly important for situations like HazMat response and identification."

"The latest thing is the ability to push out compressed video from an incident scene. For example, if we were called to a train derailment, we could be asked to push video out from the scene to the railroad's war room so they could see what's happening as the situation develops."

PROBLEM

Hills and valleys are common features of the local terrain, and can cause cellular communications to be hit-and-miss. Another factor that can limit the department's cellular connectivity in the field is the MCC unit itself.

The command center's work area is inside what is essentially a large metal box. The metal walls block radio frequency signals, often leaving those working inside unable to access a useable cellular signal. This became apparent when the fire department participated in a multi-agency training exercise in Eureka.

"The National Guard was there and several federal agencies, along with a technician from (a major cellular carrier) to help with communications," Busse said. "But no one could make a call out from the MCC. We literally could see the cell tower up on a nearby hill. But there was no signal inside."

SOLUTION

Busse has for several years used a Wilson cellular signal booster in his personal vehicle. He discovered the devices by chance while working at a remote Boy Scout conservation project with a Nebraska man who does professional installation of cellular towers.

"He had a Wilson system in his truck," Busse recalled, "and I was fascinated by it. He told me boosters are very common where he comes from. It's the only way to keep customers happy with their cellular service as they drive across Nebraska."

"The booster has been a real problem solver."

To provide reliable signal to the MCC, Busse and the communication support volunteers installed a Wilson SOHO cellular booster, designed to boost the cell signal in a small area. The system detects signals outside the command center, amplifies them, and transmits them inside so those working there can make and receive voice calls as well as send and receive data.



RESULTS

The difference was obvious and immediate. "Now a lot of the time we have a better signal inside the MCC than you can get while standing outside," Busse said. "There have been several occasions when we worked in locations where no one could get a signal except when they were inside."

One of the signal booster's biggest benefits, Busse says, is that it works transparently for the first responders who use the command center. Many who benefit from the booster don't even know it's there.

"The MCC is a regional resource, so it frequently is driven to nearby counties to support other agencies with their operations. The great thing is there's no need for anyone to synch their cellular device to the booster. People who walk into the MCC for the first time don't need to log in to the booster. And we don't have to program anything so it works with this or that certain device. As long as there's a detectable signal to amplify, it just works."



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