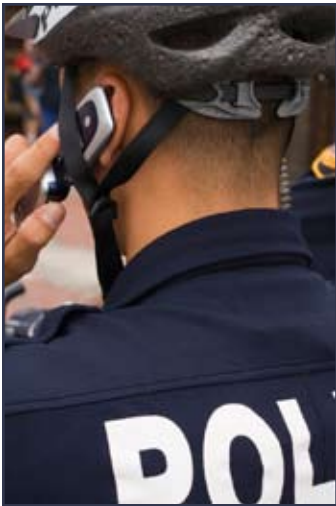


# WILSON ELECTRONICS & CRITICAL COMMUNICATIONS



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## Introduction

When Cory Pulsipher began working in law enforcement over 20 years ago in Washington County, Utah, the main channel of communication for police and sheriffs was the two-way radio. Because of the area's mountainous terrain, there were numerous "dead" spots - remote locations outside of signal range where officers could not communicate with central dispatch or call for backup.

Cellular telephones have changed communication significantly for law enforcement officers like Pulsipher. Today, Washington County Sheriff's routinely rely on cell phones for critical communications and everyday operations. Like many professionals, Pulsipher is hard to find in his office. "I have to be mobile with my job," he said. "So it just makes sense for my phone to be mobile as well."

But even with cellular communications, there are still areas where it is difficult to pick up a signal for law enforcement officers working in Washington County. Weak signals and dropped calls, while frustrating for the average cell phone user, can easily be perilous for police, fire and rescue workers.

An effective means of improving cellular communications for police and other emergency services personnel is to use products that enhance cellular service. Many law enforcement agencies use Wilson Electronics amplifiers and antennas to extend service into remote locations, to improve the quality of voice and data communications, and to reduce the number of dropped calls for critical communication.

## Search and Rescue

Members of both the Washington County Sheriff's Office and the Washington County Search and Rescue Team worked tirelessly throughout a recent Saturday night to rescue two stranded hikers. Bob Hatter and Suzanne Lawrence were lost on Canaan Mountain (near Zion National Park) for several hours before rescuers were able to bring them to safety.

Jeff Bailey with the Washington County Sheriff's Office said, "We knew they were low on water and

we would need to get to them soon." The search and rescue team brought their mobile command center to a valley that is known to most local cell phone users as a "no service" area. The command center is equipped with Wilson antennas and amplifiers that improve cellular communications. With this equipment they were able to establish and maintain communication with the lost hikers.



Rich Caulfield, a member of the Washington County Search and Rescue Team, said that because of the precarious terrain and the time of night, the crew was forced to wait until sunrise to make it to the lost hikers. "We remained in contact with the hikers by cell phone throughout the night to make sure they were doing alright," he said.

Staying in touch with rescue workers via cell phone made all the difference for Hatter and Lawrence. Knowing that someone was coming to rescue them was enough to keep them going. "We were just so relieved to see the rescuers coming up the mountain towards us," Hatter said. "You have no idea the gratitude you feel, until you are in a situation like this."

## Mobile Data Communications Systems

Increasingly, law enforcement officers are using mobile data communications systems that provide real-time data management and reporting to police in squad cars in the field. Typically, patrol officers use laptop computer systems to receive dispatch assignments, search records for criminal histories, verify license plates, and enter incident reports and traffic citations.

Using wireless air cards to receive and transmit cellular signals, these laptop computers can help police and sheriffs perform better and to make better use of their time in the field. When they can't get a clear connection, however, using the mobile data communications systems can be frustrating and time-consuming.



The St. Louis Metropolitan Police Department has approximately 270 Wilson Electronics cellular enhancing systems in vehicles and one in-building system. Dan Kreynest, the Mobile Systems Administrator for the department said, "when we upgraded the patrol fleet over a year ago we promised our officers better data throughput and more stable wireless connections, but we didn't deliver on that promise completely until we installed the amplifiers and antennas."

As part of a comprehensive study to improve cellular performance for his department, Kreynest documented the signal strength at 300 locations throughout St. Louis and found that even with a reliable carrier and quality hardware, the city has dead zones and weak signal areas. "The way our patrol fleet rotates throughout the city, it just made sense to install the amplifiers and antennas in all of the vehicles," said Kreynest.

In a more rural area, Kevin Fuhr, Chief of Police in Rathdrum, Idaho, noticed that although his department had installed the mobile data communications systems in squad cars, many officers were still coming into the office to file reports. "We just didn't have the cellular coverage in some areas of our town, and officers were losing their connection while they were writing reports," said Fuhr. "Lost connections meant lost reports."

After hearing about Wilson Electronics products from another police chief, Fuhr had antennas installed in the squad cars. "They really improve the range and the reliability of the connection," he said.

Without the dropped calls, the mobile data communications systems in Rathdrum's squad cars are performing better for officers and allowing

them to communicate from their vehicles out in the field. "For me that is the biggest issue," said Fuhr. "I want officers to be visible and available out in the community, and the antennas allow that to happen."

Kreynest from St. Louis pointed out that maintaining good cellular connections and keeping the mobile data communications systems connected is also part of working with the "newer breed of police officer." Younger officers, he said, expect to have computer systems installed and cellular systems performing "because it is simply what they are used to."

Moreover, the laptops have become as important a communications and safety tool as the police radio. "Pulling someone over is one of the most dangerous things an officer has to do on a daily basis," said Kreynest. "With a good signal and a good laptop they can run the license plates and get immediate information – prior arrests, traffic violations, outstanding warrants, etc., on who and what they might be dealing with in the car they have stopped." Kreynest said that makes a positive difference for the safety of police officers in St. Louis every day.

#### Law Enforcement Buildings

In addition to the challenges faced by officers working in the field, those working inside police stations and law enforcement office buildings have issues that affect their ability to get and maintain reliable cellular signals. In St. Louis, for example, Kreynest configures his mobile units in a steel-lined room that once housed a test firing range. "It had minimal signal reception before we installed the amplifier and antenna," he said. "Now it has five bars all the time."

Steel and concrete buildings are not unusual in law enforcement, but in the county sheriff's offices that are located in the same buildings as the county jails, for example, extra steel reinforcements are even more common because of the security requirements. In buildings like this, Wilson equipment can make all the difference.

The office adjacent to the Purgatory Jail in Washington County, Utah, where Cory Pulsipher has worked for many years, is equipped with amplifiers and antennas that boost cellular performance for virtually everyone who works there. "We didn't realize how spoiled we were until we built the new building," said Pulsipher, referring to a new office building nearby that will house the sheriff's offices along with the Utah Highway Patrol and the Adult Probation Officers in the region. "Toward the end of construction it was clear how much weaker the signal was and how different the cellular performance was in the new building," he said. "We are getting the Wilson equipment installed now because we don't want to operate without it."



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