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WEB SMART 50

An Oregon Trailblazer

A Wi-Fi network for first responders

About a year ago, the 14,000 residents of rural Hermiston in eastern Oregon faced a frightening scenario: Nearly four thousand tons of mustard, sarin, and other nerve gases were going to be incinerated just outside of town. Since the Cold War, this remote farming community has been home to one-quarter of the nation's chemical weapons, stored in concrete igloos at the nearby Umatilla Chemical Depot. The Pentagon decided to start destroying those munitions in 2004. Local officials knew they needed to put together a fail-safe emergency plan and stand ready to evacuate the area. But there was one problem: The community had no reliable communications network to call in its 200 would-be rescue workers.

That's when Fred Ziari stepped in. The local entrepreneur, who runs an Internet access provider called EZ Wireless LLC, volunteered to fund and build a wireless network for the three counties around Hermiston. By using Wi-Fi, the same inexpensive wireless broadband technology that people have in their homes, Ziari built a communications network that covers 700 square miles, for about \$5 million. It's one of the largest Wi-Fi networks in the U.S. And increasingly businesses, not just local police and volunteer firefighters, are using it. "If we didn't have chemicals in our community, we wouldn't have the Wi-Fi network," says Casey Beard, director of the Morrow County Chemical Stockpile Emergency Preparedness Program. "We're considered fly-over country."

Wi-Fi has become popular as a way to connect computers, printers, and other devices within a 100-foot radius in homes, offices, and Starbucks coffee houses. Now the technology is being juiced up for wider-scale projects, including those run by cities and counties. That has stirred up opposition from cable and phone companies in places like Philadelphia. But in Hermiston, as in many rural areas, there is no private-sector provider of broadband service. So, Ziari's project faced few of the usual speed bumps. Today the network serves as an example of how Wi-Fi can bring high-speed Internet service to remote corners of the country at relatively low cost. "If it can be done here, it can be done everywhere," says Ziari.

Local police, firefighters, hospital workers, and port officials are the primary beneficiaries of the new technology. These first responders pay Ziari fees of \$2,500 to \$180,000 a year for access to the network, security applications, and personnel training. With a \$1 million grant from the Defense Dept., the three local counties built a cutting-edge emergency response system. Using the network, they can call in first responders, many of them farmers and ranchers who live in the surrounding countryside. Each emergency worker is equipped with a laptop with an antenna that connects that person to the network. In the event of a chemical explosion or spill, that would allow central command to give them up-to-the-minute images and data on the path, speed, and composition of, say, a chemical plume. They could also track rescuers in real time.

Nabbed by the Network

Even before Hurricanes Katrina and Rita highlighted problems with evacuations, county officials in eastern Oregon were deploying the wireless network as part of a plan to ensure Hermiston area residents could evacuate in less than two hours. Wi-Fi cameras mounted at 24 critical intersections can monitor traffic. To redirect traffic at a moment's notice, emergency workers can reset traffic signals, trigger drop-arm barricades to block off-ramps to

thoroughfares, and communicate with drivers via electronic message boards -- all tied in to and directed via the Web. "This group's evacuation plan is 10 years ahead of everyone else's," says Dan Coulombe, Hermiston's police chief.

The network offers benefits for local businesses. Farmer Bob Hale, one of the SUBWAY sandwich chain's largest suppliers of red onions, is testing the use of Wi-Fi to monitor crops. Hale takes a laptop into the field to access aerial photos loaded onto his farm's intranet and pinpoint problems with his irrigation systems. Collecting real-time data on soil moisture, fertilizer levels, and pest infestations on his 40,000-acre property helps him ensure that his plants thrive. "Vegetables are temperamental," he says. "When something needs to be done, it needs to be done now, not this afternoon and certainly not tomorrow."

Local police, meantime, aren't waiting for catastrophes to use the network. They shuttle data constantly between headquarters and the field, getting reports from police in patrol cars even as they zoom down the highway. That boosts time on the beat. On Oct. 11, Hermiston police officer Leonard Stokoe was parked in his car outside a Wal-Mart () store, writing up a report about a burglary at the post office over the weekend to send in wirelessly, when he noticed a gray Pontiac Grand Am (). That morning, he had received a call that just such a car had been stolen locally. He arrested the three passengers and discovered \$25,000 worth of checks stolen from the post office. "When we're able to write our police reports out in the community, we can still keep an eye out for bad guys," he says.

Speedy arrests are only one of the many uses of Oregon's Wi-Fi network. Says entrepreneur Ziari: "Like water or electricity, this technology should be available everywhere."

By Catherine Yang

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