

Come Together

Adam Stone | March 5, 2007

The word "interoperable" entered the popular vocabulary on Sept. 12, 2001. The awful day before revealed the shocking inability of New York City police, firefighters and other emergency personnel to talk to each other in times of crisis.

Things have changed since then.

San Diego, Calif., for example, is well on the way to crafting a communications system that reaches across multiple emergency agencies in multiple jurisdictions.

"It means that we can talk to each other irrespective of the crisis, which means that we can save time and save lives," said Jill Olen, deputy chief operating officer for Public Safety and Homeland Security in San Diego.

The U.S. Department of Homeland Security (DHS) recently recognized San Diego's work, naming the San Diego region one of the top four major urban areas in terms of disaster interoperability. City and county managers say careful technology planning has been the key to their success.

Officials from diverse cities, towns and unincorporated areas began laying the groundwork for this objective 10 years ago, according to Sue Levine, regional interoperable communications project manager at the San Diego State University Research Foundation.

"The people responsible for the area's response networks have been working cooperatively for a long time to provide the best level of interoperability," Levine said.

In May 1998, that planning led to the creation of a regional communications system uniting approximately 200 agencies on the same technology platform by implementing the same technology tools across a broad range of government entities.

"It shows that we take regionalization very seriously," said Ron Lane, director of San Diego County's Office of Emergency Services.

The emphasis was put on technological consistency, rather than complexity.

Throughout the region, virtually all emergency services communicate using 800 MHz Motorola equipment. Municipalities share a Motorola SmartZone wide-area trunked communication system. The system has been programmed to include "talk groups" of police, fire and other users, creating a seamless communications network among all participating jurisdictions.

"When any agency joins the system they purchase compatible radios so that they can utilize the towers and the infrastructure," Lane said. "This way, a dispatch agency can call any radio on the frequency."

Ironically the only jurisdiction not directly plugged into this shared space is San Diego itself.

"We have patches and Band-Aids on our systems," Olen said, "We have made it work, but we need to all be on a single system."

The problem stems from an untimely purchase. The city bought its 800 MHz radios four years ahead of the county, and while they are compatible on the street, officer to officer, county dispatchers can't reach police officers on their beat in the city. The Band-Aid has been to route calls through a city dispatch hub. This lets county dispatchers deliver messages to city emergency workers.

Upgrading Infrastructure

Planners needed a robust system, given the enormity of their task. San Diego County is roughly the size of Connecticut, with 65 separate fire districts just within the county, not counting the city or unincorporated areas.

"It could potentially be hundreds of agencies, depending on the severity of the incident," Olen said of the response to a crisis.

To ensure connections across the system, planners have looked beyond the radios themselves. In the wake of wildfires in 2003, for instance, the county spent \$20 million upgrading its towers and other communications infrastructure.

"One of the things we learned during that fire was that our system was quickly overwhelmed, especially when some of our repeaters and towers went down in the fire," Lane said. "We have focused on building redundancy and adding additional infrastructure to achieve that redundancy around the region."

The effort appears to be paying off.

In summer 2006, a fire broke out in the Cleveland National Forest, the southernmost national forest in California. Even with 1,000 firefighters on the scene, the county heard virtually no complaints about communications issues. By coincidence, DHS representatives were in town that same week to assess the communications situation.

Looking ahead, regional planners said they hope to maintain communications integrity as the area moves toward Project 25 (P25), a new suite of standards for digital radio communications that aims to help jurisdictions and agencies talk to one another more effectively.

The region will need to move approximately 29,000 radios to P25 before the new standard comes into play in 2012.

"Between now and then," Lane said, "we need to come up with a road map and a way forward."

As many government technologists know, technology is not the biggest hurdle.

Radio replacements will cost \$100,000 and while a potential \$1 billion nationwide grant from the DHS may support that effort, the budget still is going to be tight.

"There certainly is going to be a challenge in funding an upgrade of this magnitude," Lane said.

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