

Charlottesville Fire Department enhances interoperability with Nextel Dispatch Integration

Challenge

Shortly after the September 11 terrorist attacks, Charlottesville's Deputy Fire Chief, Charles Werner, met with his counterparts in nearby Albemarle County and at the University of Virginia to discuss how to improve the area's local emergency communications network. The Department needed to streamline communications with public safety agencies in Albemarle County and at the University, as well as with other local schools, transportation centers and medical facilities not just for emergency purposes but for administrative, logistical and non-mission critical matters also. The public safety network was at risk of becoming overwhelmed with non-emergency calls.

Using a \$6 million national demonstration grant from the Federal Emergency Management Agency (FEMA), the three agencies decided to implement a Sprint Nextel solution that would provide a backup to the community's existing public safety network.

Solution

With its portion of the grant money, the Charlottesville Fire Department initially purchased six Nextel i325 IS phones, which are placed in fire vehicles and used by battalion chiefs; 10 i730 phones for various department employees; and 15 BlackBerry devices, which are used by Fire Chief Werner and other city emergency contacts, such as the city manager and other department heads.

The Department also is integrating its Nextel service with a new Motorola 800 MHz public radio system that it is deploying. Through Nextel's Integrated Digital Enhanced Network (iDEN) technology, Nextel handset users have the benefits of both a cellular phone and a trunked radio system. Using Nextel Dispatch Integration the Fire Department has also integrated the Nextel handsets with the existing dispatch console. The interface allows users within the Fire Department to interact directly with each other or with the mission-critical systems so that the backup communications network and the public safety network work in parallel.

The Fire Department is presently using Nextel handsets to conduct regular daily business, instead of relying on the public safety network for these non-emergency calls, dramatically reducing the burden on the network. For example, with Nextel handsets, the fire marshal can rapidly respond to fire prevention agents' questions, speeding up the process of addressing building code violations.



The Charlottesville Fire Department serves not only the city of Charlottesville but the University of Virginia and portions of Albemarle County. While the City's population is only 40,000, the expanded scope of coverage means the Department serves a population four times that size. The Department is considered at the forefront of public safety communications. Recently, Fire Chief Werner was invited to speak on the subject of communications interoperability at the Federal Communication Commission's first public safety communications roundtable.

Recently, the Fire Department integrated their handsets to their Computer Aided Dispatch system for data communications. Text messages, such as dispatch notifications, can be sent from the CAD system directly to identified Nextel and other devices. In addition the Department added Nextel i325 IS handsets to each of the fire apparatus units and all Chief Officers are now using the i580 handsets. Both models were deemed more durable than the public safety radios and the i580s provide increased versatility with the additional camera feature which allows officers to capture and document specific events quickly while operating in the field.

Bottom Line

As a result of taking advantage of a range of interoperability solutions from Sprint, the Charlottesville Fire Department has achieved inter-agency interoperability and created a parallel communications network that can serve as a backup to their existing public safety network. Chief officers and senior staff at the 120-person fire department are able to stay in contact and quickly communicate, regardless of their location. In fact, Werner and the Charlottesville Fire Chief were recently in California when they learned, via their Nextel phone, about a two-alarm fire in their hometown on the east coast and were able to assist with logistics from 3,000 miles away.

Not only is Sprint providing the Charlottesville Fire Department staff with a way to communicate with other public safety agencies, it also ties together many other groups that may be impacted in the event of an emergency situation – for instance, medical centers, transportation agencies and schools in the Charlottesville area that also use Sprint Nextel services.

“This allows us to pull people into talk groups, when they’re already using their existing phone systems. Plus, people use Nextel every day and the secret to successful communications is providing something that everyone is familiar with,” Werner said.

Werner speculates that, although it is hard to quantify, he believes the Charlottesville Fire Department is saving money because much of the everyday, non-emergency communications is not tying up the public safety network. *“At some point it does matter how much traffic goes across the public safety network on a daily basis. That network is hard and costly to expand,”* he said.

“Public safety agencies need to realize their radio systems are subject to overloading and failure at some point. This comes to light particularly immediately after an emergency when there is an ‘avalanche’ of communications – that’s not the time to try to bolster your network. Every department should deploy some type of parallel communications solution, like Sprint Nextel, that assists with interoperability for both public safety and non-public safety groups.”

– Charles Werner, Deputy Fire Chief,
Charlottesville Fire Department