

VoIP IN ACTION

Semi-Rural Fire District Becomes Haven for Technological Revolution

By Tyler Bleszinski



Battalion Chief Rob Goodyear is “technical-ly” old school. He has been a firefighter for 27 years and he remembers the days when the fire chief would labor at a typewriter drafting an important memo, then pin it on the bulletin board and pray that the crew would read it. Now, with the help of Quest - a technology consulting and management firm - he finds himself part of an innovative fire department that those in the tech-world would refer to as “early-adopters.”

Moraga and Orinda are two small cities in the San Francisco-Oakland Bay Area. On July 1, 1997, the Moraga and Orinda fire department districts merged in part, to bring an advanced life support system (paramedics) to both communities. However the merger also brought together two different and antiquated phone systems. Part of the problem after the merger was that Orinda was functioning its three stations on one phone system and Moraga was working its two stations on another phone system. Each original district also had its own administration facility.

It’s popular to say necessity is the mother of invention, but Moraga-Orinda is the true-to-life example. What they’re doing now with their phone system is becoming the model for fire districts all around them. It’s made large fire departments like San Francisco stand up and take notice. Moraga-Orinda decided to install a VoIP system to connect all of



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Moraga-Orinda Fire District Engineer Paramedic Ken Consiglio uses the radio during a recent incident. The department recently installed a Voice over Internet Protocol (VoIP) system to interconnect their stations and provide better responsiveness to public inquiries.

their stations in a way that they hadn’t been before, which would make them one of the most publicly accessible fire departments in the state, if not the entire country.

“Our value is to our customers, who are the 34,000 people in our district,” Goodyear said. “We exist because of them, we serve them. We are a service organization and ultimately that’s how we view ourselves. It would be ludicrous to not be accessible to our customers.”

“Our old phone system was 15 years old and people had to call in on a different number to leave a voicemail,” Goodyear added. “Say a firefighter wanted to reach another firefighter at a different station. If he called the wrong station, then he wouldn’t be able to reach

him by transferring because the phone system didn’t have the ability to transfer outside of the individual stations. We may have been in the same fire department district, but we might as well been on another planet.”

The Moraga-Orinda Fire Department came to a realization. They were in desperate need of a serious upgrade, which brought them to VoIP. Voice Over Internet Protocol or VoIP is one of the latest and greatest technologies bringing voice and data together in a way never even dreamed about by Alexander Graham Bell. They sought out the help of a technology consulting and management firm with expertise in telecommunications to help them implement the changes in their phone system. They found Quest.

The company had a strong portfolio of expertise and a reputable history of working with school districts and other government entities, including the California Office of Emergency Services. Unlike many Bay Area technology companies that have folded, Quest is also financially solid and has been around for 20 years.

Quest agreed to help the fire department roll out a Cisco VoIP system. VoIP offers many advantages, but in the case of Moraga-Orinda, it meant several key improvements in communication with the public the department serves. Some of the changes included:

- Better access to fire district
- Automated attendant for after hours and ability to get transferred to a specific person through three digit extension dialing
- Faster responses to messages
- Open email to community
- Caller ID to recognize callers

“The advantages of IP telephony is that it takes voice and makes it look like a data packet, so you can do so much more than with the analog systems of the past,” said Jim Stengle, project manager for Moraga-Orinda with Quest. “Everything also becomes centralized in one location.”

Stengle added that everyone in the district now has voicemail and email. A far cry from the days of posting memos on the bulletin board and hoping everyone looks at them.

Implementation

Quest worked extensively to help implement the VoIP system over the 2001 Christmas-New Year’s break since that is typically a slow time for the district.

“What was difficult about making the decision to get it installed was that it required a real commitment, because we had to shut down our entire network to do it,” Goodyear said. “But it was a relatively painless process that took about three days to complete. After that, it took about two weeks to configure the system



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Moraga-Orinda Fire District Communications specialist Bob Williams on duty in the district's mobile communications van. Communicating between stations and being more accessible to public needs has been the focus of the agency's upgrade to VoIP technology.

and work all the details out. Quest did a magnificent job and our operations were not disrupted.”

VoIP thus far remains an internal communication system for the fire department. Station alerting data for dispatches comes from Contra Costa County Fire, which provides Moraga-Orinda Fire’s dispatching. This is conducted via a 56kb line to the hub at Station 45 and then out through the T-1 infrastructure to the individual stations. “Our system incorporates a link to Contra Costa County Fire’s OPX system through each of the station routers and then out on an analog signal,” said Goodyear. “This link goes directly to their switch and into their system so each station can talk to the dispatch center.”

The new VoIP system allows all of the Moraga-Orinda Fire Department employees to be reached through a single point of access, whether by voicemail, e-mail, or fax. “If someone in the public leaves a voicemail for a firefighter, now it becomes an electronic message in his/her email inbox,” Stengle said. “It’s called Cisco Unity Messaging and it ties Microsoft Outlook with voicemail and email.”

“This is an important feature because many firefighters check email more often than voicemail,” Goodyear added. “It really enhances our ability to communicate quickly and effectively. This is truly state-of-the-art equipment.”

Along with that “state-of-the-art” tag, one can deduce that it may have carried a heavy price tag. But according to Bob

Williams, communications specialist for Moraga-Orinda, it has been completely worthwhile.

“Although this was not an inexpensive system to put in, the results justify the cost,” Williams said. “In 5 to 10 years, traditional PBX systems will not be supported, but these systems will. We’ve got cutting edge technology and we’re also the first that I know of to have this type of system.”

Another significant advantage to VoIP compared to their old systems is the ease of getting new lines or extensions put in.

“I just added two new phones into the system,” Williams said. “All I needed to do was plug the phones into the CAT-5 jack, boot up, log on, and configure it through the computer. It took no more than 10-15 minutes to do it whereas before we used to have to call someone out to do it.”

And the customer’s reaction to the new system?

“All of the feedback I’ve received has been positive,” Goodyear said. “All of us here have areas of responsibilities when it comes to serving the public and our fellow firefighters. With this new system, it makes it much more streamlined to address those areas of responsibility.”

Not to mention it’s nice to be the first kid on the block with a new toy.

“We were going to need a new system any way, so why not move towards the future?” Goodyear said. “And for goodness sake, instantaneous communication is what the world is doing now. Why should we be any different?”

Goodyear lets his old school mentality slip when replying to the question about the advances in firefighting technology, “You know, firefighting itself hasn’t changed that much over the years. You still have to put the white stuff on the red stuff. And I don’t see that changing much no matter what new technologies come about.” ■

Tyler Bleszinski works as a freelance writer and has been a reporter for the Orange County Register and the San Gabriel Valley Tribune.