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Gaps in communication

By Guy Ashley
CONTRA COSTA TIMES

If the airliner hijackings of Sept. 11, 2001, drove a dagger into the nation's heart, the news that followed was a splash of salt on its wound.

Soon after thousands of people died in the World Trade Center, investigators unearthed evidence that as many as 100 firefighters killed when the two towers crumbled might have survived had their emergency radios worked.

To most of us, the fatal shortcomings of basic equipment seem unimaginable.

But to those who keep up with such things, including the first responders on the front lines of emergencies throughout the East Bay, the radio breakdowns of Sept. 11, 2001, not only rang familiar, they hinted at the disastrous potential of communications failures that persist to this day.

"We have a patchwork of communications systems out there, and we do what we must to make it work," said Robert Maginnis, an assistant Alameda County sheriff. "But there are times where we're only one step above tin cans and string."

The Sept. 11 attacks were far from the first glaring example of a public safety communications breakdown amid large-scale disaster.

Nightmares still flare about the 1991 firestorm that swallowed neighborhoods in the Oakland and Berkeley hills. Firefighters from surrounding communities converged swiftly on the chaotic scene that October day, but were left to watch the inferno rage because they could not communicate with officials coordinating the response.

In the rubble wrought by the 1995 Oklahoma City bombing, radio breakdowns forced emergency workers to ferry handwritten notes to and from the ravaged Alfred T. Murrah Federal Building.

But those headline-grabbing ordeals are outnumbered by the all-too-ordinary instances where a quick-thinking East Bay police officer or firefighter must work around transmission blockages that leave them feeling that their safety, and their ability to protect the public, hangs by a thread.

"Knock on wood, it's never created a life-or-death situation," said Lt. Steve Pricco of the San Leandro police, whose officers cannot communicate directly with police in two adjacent cities because of incompatible radio systems.

"It's something all of us have had to work around for years ... and it's just a fact that it slows down our ability to coordinate a response" with neighboring police, Pricco said.

Surely, in the era of Homeland Security czars and their multicolored alert systems, of special commissions and congressional hearings, a fix must be at hand.

But a Times survey found otherwise. Interviews and a review of other evidence showed that emergency radio problems caused by incompatible technologies and overcrowded frequencies abound across the East Bay.

"We can literally be rolling side by side with a unit from another city and not be able to talk to them," said Livermore police Lt. Scott Trudeau. "It's not too difficult to imagine how crazy things could get with several agencies converging for one incident."

Experts pin the blame on a longstanding public-sector mindset that local needs take precedent over regional, and on radio manufacturers who routinely design their equipment with proprietary parts and software, so that incompatibility with systems designed by rival companies is commonplace.

Throughout the East Bay, the resulting incompatibilities make for illogical communication gulfs and a few strange bedfellows:

- Richmond police can't radio sheriff's deputies in their own county but can talk with Oakland and BART police via radio with little effort.
- Oakland police cannot speak directly on their radios with officers from their two biggest neighbors -- Berkeley and San Leandro. Berkeley police, meanwhile, can't speak directly with officers who operate within their city on the University of California campus.
- Nobody uses the same band of radio frequencies as the California Highway Patrol. Nobody, that is, except the East Bay Regional Park District.
- Walnut Creek, Pleasant Hill, Concord, Clayton, Pittsburg and Martinez police cannot radio firefighters in their cities. Neither can Pinole or Hercules police.
- BART police cannot radio city police departments anywhere along the Pittsburg-Bay Point line: Lamorinda, Walnut Creek, Pleasant Hill, Concord or Pittsburg.
- Oakland police and Alameda County sheriff's deputies mingle among rowdy fans while splitting security duties at Oakland Raiders games, but if the fun turns to mayhem, the two agencies cannot speak to each other on their portable radios.

- Ambulances cannot communicate directly with fire crews in Richmond. To receive updated information at the scene of an emergency, ambulances must instead talk through a dispatcher in a remote location.

Workers caught in the confusing web of incompatible communications systems have talked for years about a logical solution, an "interoperable" regional radio system that could be easily accessed by all of the East Bay's public safety and emergency services agencies.

Lately, there have been signs that the years of talk are finally being converted into action.

A new "working group" of Alameda and Contra Costa officials formed this year to address first responder communications problems. The group has hashed out a rough plan to pool Homeland Security funds due the East Bay for a down payment on a regional system, which could cost as much as \$75 million.

But such a system is at best several years away, thanks to a shortage of funds available to financially challenged local governments and the need for consensus among all agencies likely to participate.

Meanwhile, concerns persist about what police, firefighters and other first responders are working with today.

Public safety agencies, the backbone of any emergency response, are forced to work around plugs in the regional web of communications systems as officers chase vehicles fleeing into neighboring cities, or firefighters are called on to provide backup on a fast-moving fire.

The same problems hinder electronic links to ambulances. They hover with menacing potential over radio links to National Guard units that routinely are called upon to keep order in large-scale emergencies, as well as public works and water agencies whose contributions could prove pivotal in a fast-moving crisis.

"Having the communications linked is not a strength here," said Leslie Mueller, operations director for American Medical Response, the private ambulance company that serves Contra Costa and the majority of other California counties.

Clashing communications equipment forces stopgap measures that can be confusing. East Bay firefighters, for instance, frequently ride with multiple sets of radios in hope that one will serve them during a regional incident.

Communities stockpile portable radios to pass out to outside responders in case of a large-scale emergency, a sensible solution as long as everyone knows where to go to get one.

In a large-scale incident, Trudeau said, "You have to literally grab a representative from another agency and pair up with them so the two agencies can talk."

Other area police officers note that when the California Highway Patrol helicopter is dispatched to an East Bay search-and-rescue incident, it often must land first and pick up a representative

from a local police department.

That can be the only way crews on the ground can communicate with the helicopter, whose CHP radio is incompatible with that of most police agencies.

The most common way police and other first responders communicate when their radios don't mesh is through dispatchers: An officer in the street radios a request to a dispatcher, who feeds the message to a counterpart in another city, who radios the message to officers in that city.

The system sounds complicated on paper, but it is performed with impressive coordination on routine calls day to day.

But first responders are dogged by a nagging fear that the system could break down in a large-scale disaster as dispatchers are besieged by radio calls from first responders in the field and 911 calls from residents seeking help.

The most obvious solution now available to dispatchers is to direct first responders to turn their radios on to "tactical" channels available to most radio systems.

But because only a handful of tactical channels are available to local responders, they easily can become overwhelmed with chatter during a large-scale incident -- precisely what happened during the Oakland hills firestorm.

Agencies in Alameda and Contra Costa are taking another step to improve the systems they have. Both counties are installing new equipment that will "patch" signals from disparate radio systems together in emergencies.

The equipment, known as "black boxes," holds great potential in providing East Bay responders with a level of interagency communications capacity not previously available.

Again, though, the equipment has limitations.

Even with the "black boxes," one agency's radio equipment is only as good as the infrastructure that supports it, especially the transmission towers and "repeaters" required to transmit the messages of responders in the field.

If, for instance, an Oakland police officer is sent to Lawrence Livermore Laboratory to help in a large-scale incident, the officer's radio may not work, even with the "black boxes," because the radio will be so far away from the equipment that supports its signal.

Communications breakdowns that plagued first responders Sept. 11 have fueled the drive toward interoperability nationally and across the East Bay.

Experts have testified that the deaths of more than 100 firefighters who died in the south tower of the World Trade Center can be blamed in large part on incompatible radios, problems

that the 9/11 Commission said "will likely recur in any emergency of similar scale."

The bite of past natural disasters, and the East Bay's possible appeal as a terrorist target in the future, offer reasons enough for the region to find a solution to its decades-long problems with incompatible communications systems, officials said.

"The mistakes that were made on Sept. 11, we can prevent them now," said Assistant Chief Chris Suter of the San Ramon Valley Fire District. "We should be working together."

Such solutions will pay dividends day to day, as well as when the Big One hits.

Just ask the law enforcement officers who were on duty when an Oakland police officer was killed July 22 in a traffic accident in Castro Valley.

Officer William Seuis, 39, of Pleasanton died when the motorcycle he was riding was struck by a truck on Interstate 238.


Witnesses to the afternoon accident called 911 to report that the truck did not stop and continued onto eastbound Highway 580. The call went to the California Highway Patrol, whose officers eventually stopped the truck described by witnesses in Dublin, about 12 miles away.

Alameda County sheriff's officials say the truck probably would have been stopped a lot sooner if two deputies traveling on I-580 just in front of the truck had known about the downed officer.

But they never heard about it. The CHP broadcast did not transmit on their radios.

"We don't need the 9/11 Commission report to tell us interoperability is a major concern," Maginnis said.

Staff writers Karl Fischer, Nathaniel Hoffman and Judy Silber contributed to this story.



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TIMES WATCHDOG

Battle of the bandwidth pits TV, public safety

By **John Simerman**
CONTRA COSTA TIMES

Support your local police and firefighters: Turn in your rabbit ears and go digital.

In a high-stakes Washington battle over the airwaves, public safety agencies and TV broadcasters are sparring over a sliver of the ether that could help emergency workers communicate better in natural disasters, terrorist attacks and everyday crises.

Caught in the middle are a dwindling breed of TV viewers: those who pull signals from traditional antennas and tune in to channels from 62 to 69, the realm of home-shopping, religious, community TV and Spanish-language stations across the country.

Emergency officials in the Bay Area and other urban areas have long coveted that slice of radio spectrum, called the 700 MHz band, saying they desperately need it to relieve severe overcrowding.

The new real estate, they say, holds the promise of modern systems that could streamline the sharing of data among "first responders," and allow police, fire and other agencies across a region to communicate directly.

Seven years ago, Congress and the Federal Communications Commission ordered the broadcasters to clear out by the end of 2006 and operate those stations over the digital channels they have been granted.

They set the deadline only for areas where 85 percent of households receive digital TV. But the move to digital TV has been slower than expected. For the Bay Area and most population centers in the country, the 2006 deadline is pillow-soft.

Broadcasters are holding fast, and some of the largest and most profitable stations on those channels are owned by national networks such as Disney and Univision. In the meantime, public safety officials are growing frustrated by the delay.

"I've got to get the broadcasters off my channels," said Steve Overacker, Contra Costa County's telecommunications manager. "When we have an earthquake, are we going to be watching TV or watching whether police or the fire are going to show up to help get our lives back together?"

A study this year by Motorola found that just 75 TV stations, with an average of 3 percent of TV households tuning in weekly, are holding back a vast new wave of public safety improvements in places where more than half the nation's population live.

In the Bay Area, a handful of TV stations remain in those upper channels, including KTLN, a Novato-based Christian station and part of the Total Living Network.

Station manager Brian Avery said he didn't know how many viewers watch KTLN over rabbit ears but that its analog transmission from Mount Burdell plays another role: to ensure that the station is eligible under FCC rules requiring local cable companies to pick up some local stations.

Both sides agree that unless Congress or the FCC makes changes, broadcasters in most areas will keep control over the spectrum well past 2006. Lately, some members of Congress are moving to do just that, bolstered by a 9/11 Commission recommendation to make it happen.

One California congresswoman is pushing legislation that would make the 2006 deadline firm.

Rep. Jane Harman, D-El Segundo, noted that during Southern California wildfires last year, some emergency crews, unable to talk over radio, resorted to runners. Harman said the 1997 law created a loophole that few people saw coming.

"I think it's a no-brainer," said Harman. "We have state-of-the-art, interoperable communications on the battlefield in Iraq. Why don't we have it in our battlefields?"

But what about TV viewers who can't afford cable or satellite, or just don't want them?

Broadcasters say many low-income or minority viewers could lose out. Univision, for one, has argued that a tight deadline would disenfranchise a large segment of its Spanish-speaking viewers.

"As much as everybody would like to see this (digital) conversion, you've got lots of people out there who suddenly won't receive any of these signals," said Jeffrey Yorke, spokesman for the National Association of Broadcasters. "You're denying a huge portion of the audience."

The issue could carry political heft. One source close to the debate said some members of Congress want any change to include a "last-Granny rule," to protect anyone who loses their favorite TV signal.

Some are studying Berlin, Germany, which sped up the transition to digital TV by subsidizing converters for low-income viewers, allowing them to receive digital programs on their old sets.

"Grandmas vote, so there is that concern out there," said Bob Gurss, director of legal and government affairs for the Association of Public-Safety Communications Officials, International.

"I think the answer is either Grandma's going to have to get a new TV, which may not be a feasible response, or if Grandma doesn't want to get cable, we're probably going to look at buying her a converter box."

New radio spectrum is not a cure-all, safety officials caution. But not having it forces agencies to struggle with makeshift fixes.

"Spectrum can be a show-stopper," said Bill De Camp, a state telecommunications planner who is helping to plot uses for the 700 MHz band in Northern California.

One advantage to that particular swath: it neighbors frequencies already used by some public safety agencies; many of them wouldn't need new radio equipment. Another: the new spectrum could enable police, for example, to send and receive fingerprints and pictures in their patrol cars.

Some agencies point to the Amber Alert system. Now, officers in their patrol cars can't receive pictures of missing children who may be in immediate danger. With a wide band of spectrum and the right gear, officers could scan in the photos and send them to other cops.

The idea to shift those TV channels to public safety isn't new. It first came eight years ago, in a report by a federal committee that called for the change within five years. The report, ironically, was dated Sept. 11, 1996.

What public safety agencies want most is a hard deadline, so they can plan systems and decide how much to invest in upgrading their old ones, said Glen Nash, a senior telecommunications engineer with the state Department of General Services.

If communication lapses crop up again in a disaster or terrorist attack, the digital dilemma won't hold much water, he said.

"It's going to be real hard to tell the public we couldn't do it because they wouldn't buy a new TV set."