

Say What?

Lack of interoperability may mean trouble in crisis situations / By Jennifer Acosta

Interoperability. It sounds like an obscure bit of computer jargon, but in reality it's a term familiar these days to almost every county official who uses the airwaves to communicate. Referring to the ability of government agencies to communicate with each other via radio, interoperability has become a buzzword as quickly-evolving technologies make it harder and harder to set up communications between the different radio systems used by cities and counties within a particular region. A region's degree of interoperability, some say, could mean the difference between life and death in emergency situations. Those areas that lack interoperability could lose critical seconds if communications between first responders, such as EMS and fire personnel, had to be relayed through dispatchers or telephones. And in the post-9/11 United States, the need for better communications has become a priority.

"Acknowledged as the frontline of defense in the war on terrorism, public safety officials must have robust communications capabilities to achieve their fundamental missions," say the opening lines of a report on interoperability by the Texas Department of Public Safety. However, piecing together a compatible, statewide network of radios from a fragmented system will not be an easy task.

The different circumstances and needs of various localities have caused them to gravitate toward different radio systems over the years. Most rural areas use low-frequency VHF systems, which can travel long distances over mostly empty land, while metro areas use the high-frequency 800 MHz systems, which have more channels and less interference. The proliferation of radio-communications companies has also given birth to many proprietary technologies, so that two 800-MHz systems may not even be compatible. As a result,

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most counties and cities have systems that will only work within their own jurisdictions, making communication between localities slower and more time-consuming.

A lack of interoperability can be costly. The city of Houston uses an 800-MHz radio system that is incompatible with other radio systems in the region. Though the Houston-Galveston Area Council has managed to bring all of its 13 counties under one system (a \$28 million effort), Houston, Pasadena and other small cities in the region are still using another system. Since Harris County and Houston often work together on law enforcement cases and other efforts, many county and city personnel must have extra radio equipment with them — an unnecessary duplication of services.

"The Harris County DA's office runs with at least two radios in each car," said Larry Orr, managing director of the Harris County Regional Radio System. "One for Harris County, one for the city of Houston police department. If nothing else, if we were able to get the city (to join our network), it would reduce the cost of radios."

John Bales, director of Houston Mayor Lee Brown's office of public safety, said the city recently entered into a contract with a consulting firm to study Houston's wireless systems and explore the possibility of joining the region's radio system.

But while day-to-day communications are adequate (if a little inefficient) in most places, large-scale emergency situations could be a problem. Dan Scrivner, chairman of the Federal Communications Commission planning committee that is studying interoperability in central and northeast Texas, said his area's communication abilities would not be up to speed if an incident

occurred that required the involvement of many different state and federal agencies.

"For day-to-day situations, it's pretty good," said Scrivner, who is also manager of communications for the city of Dallas. "Most people that have the need to talk on a fairly regular basis have that in place...the problem you encounter is when you have response other than your local agencies. When you have out-of-area responses, you're going to run into difficulties."

Fort Bend County Sheriff Milton Wright agreed. While his county's agencies can communicate well with each other, they only have limited communication with Harris County and Houston. "Depending on the situation, if HPD ran a unit out to the county, our dispatcher

and their dispatcher would have to relay information," Wright said. He said this could slow down communication by 15 to 20 seconds — a lag that wouldn't be a problem under normal circumstances, but could be critical during a terrorist attack. However, the cost of setting up a better system would be "an enormous task," Wright said.

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In the wake of the Sept. 11 terrorist attacks, many counties took steps to improve their wireless systems, but their efforts fell short of total interoperability. John Sneed, director of the Williamson County Office of Emergency Management, said the county took "a major step" several years back when it, together with several cities within Williamson County, made a \$9 million upgrade to its radio system. The county's 400-MHz system was replaced by an 800-MHz system, which made it

possible for the county to communicate with neighboring cities.

"(Before the new system) EMS used the 400 (MHz) and all the different departments had their own VHF or UHF channels," Sneed said. "Everybody was on their own frequencies and it was much more difficult

to communicate with each other. A lot of the communications went through dispatch."

But despite the multimillion-dollar upgrade, communications between Williamson County's various localities are not perfect, and radio traffic outside of the county is still not possible without the help of dispatchers.

"The willingness for everyone to work together is here," Sneed said. "It's just — where do we come up with the funding?"

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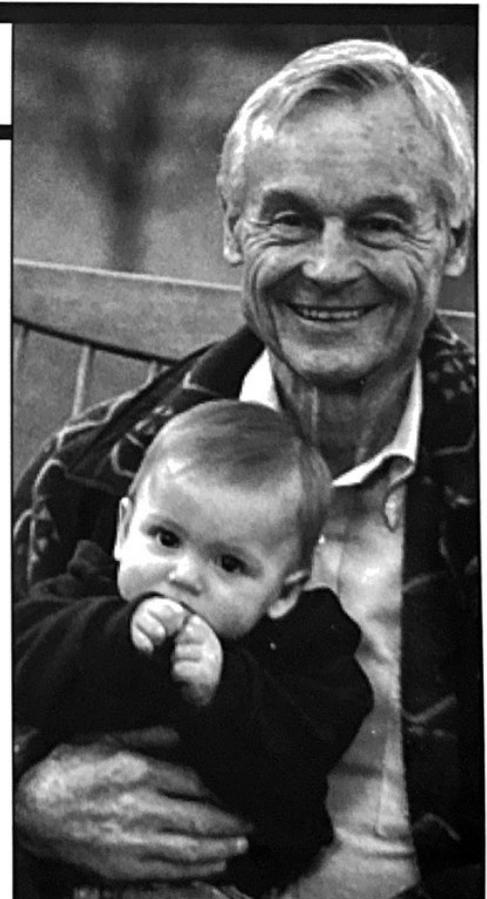


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And the funding is substantial. Robert Pletcher heads up the Interagency Radio Work Group (IRWG), a committee on interoperability with representation from local government associations as well as state agencies. Pletcher said putting all of Texas on one radio system would be so expensive that it's virtually impossible.

"To do the entire state of Texas, based on our estimates, in a uniform solution, and just replace the radios of the state agencies would run well over \$2 billion," Pletcher said. "We can't use the forklift approach."

Instead, Pletcher's proposed strategy would use a "phased procurement" approach, hooking up small regions at a time onto an infrastructure owned by the state.

"The way to do it is to go to the center of the state, identify a block of counties, and you convert everything in that area over to an integrated system," Pletcher said. "And then after you get it up and running and prove what you're buying is going to work, you add a ring of counties. In a few years, you're up to 70 or 80 percent of the counties."

If all goes according to plan, the first area to reap the benefits of the state's interoperability efforts would be the nine counties along the Interstate 35 corridor from Austin to Laredo (Webb, LaSalle, Frio, Atascosa, Medina, Bexar, Comal, Hays and Travis). Joe Peters, communications interoperability project manager for the Texas Sheriffs' Association, said this area is ideal because it's a microcosm of the entire state, from rural border counties to hilly green regions and metropolitan areas. The solutions developed for the I-35 corridor could be used elsewhere in Texas, Peters said.

"In Laredo, there's a tremendous problem with interference from Mexico on the VHF channel," Peters said. "We should be able to apply the same solution to Eagle Pass and Del Rio."

But the I-35 project cannot proceed without money from the federal government, and those funds aren't yet a sure thing. However, Pletcher said he was optimistic that funding would come through, most likely sometime in the 2004 fiscal year.

"It's been identified by the National Institute of Justice as one of the five best projects in the U.S., so there's a good chance," Pletcher said. "But anything with the federal government is real iffy."

Texas will have to compete with similar interoperability projects in other states for federal funding. It will also have to compete with federal agencies, many of whom lack interoperability as well. This competition for funds may have led to a lack of federal involvement on the IRWG. While representatives from the U.S. Marshals and the Bureau of Alcohol, Tobacco and Firearms occasionally attend IRWG meetings, the higher-ups in federal agencies have not expressed much interest in working with the state.

"Management's a different story," Pletcher said. "This is one of those issues where everyone's trying to get a piece of the pie and there's not enough pie to go around."

Once funding has been secured, Pletcher said he hopes to maintain good working relationships with cities and counties, whose feathers may get ruffled if interoperability mandates are handed down to them. To help soften the blow, Pletcher said the IRWG does not plan to specify

what type of radio system local governments must use, as long as it meets minimum, as-yet-undefined standards.

"What I've noted, and what we're trying not to do, is to dictate to counties what they should or shouldn't do," Pletcher said. "It's one thing to dictate when you're giving them money. Anytime we mandate standards without providing some type of assistance or support, those kinds of mandates are not well-received. We're trying to go backwards-compatible to the lowest denominator. But there's only so far I can go."

Unfortunately, Pletcher said, that means many of the poorest counties and rural volunteer fire departments — which operate on a minimum of funding — may have difficulty bringing their systems up to speed. Additional federal funds may be available in those situations, he added.

But in most counties, radio equipment can be tweaked to make it compatible with their neighbors' systems. Scrivner said technology is available to link radios together on an as-needed basis.

"We're looking at some fairly generic equipment that would link virtually any type of radio together, kind of on an ad-hoc basis," Scrivner said. "Some of these are transportable base units that take the audio from each radio and link it to the other radios. It's rather simple."

Scrivner said there are also more permanent solutions that utilize computer networks, but those are more expensive.

"We have to live with what the people have," Scrivner said. "Everybody in local government is strapped for money and there's no light at the end of the tunnel. No one is going to shift their systems just for interoperability."

To minimize costs for local governments, Peters said, the state should be responsible for purchasing the needed infrastructure of a radio system, while counties and cities would only need to purchase mobile data units and other equipment.

"Our belief is the state should own the infrastructure and backbone, and local police, fire and other units should all be able to utilize that system," Peters said. "Localities would only have to purchase equipment, not infrastructure. It would be a tremendous savings to local governments."

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Though cost is a major concern, Pletcher said worrying about money now would be putting the cart before the horse. Additional research should be done first, he said, so an accurate cost estimate can be devised.

"The proper process for doing something like this is to do an asset inventory," Pletcher said. "Find out what you have to tie together, what assets you can leverage and use, what (radio) towers we can share. We need to find out where we're at, then go out to people and do a needs analysis."

But for now, with the project on hold, county officials will continue to operate as they have always done — with a minimum of funding and a lot of creativity. Sheriff Wright said he feels sure that Fort Bend County could hold up in a crisis, despite its lack of total interoperability.

"It's probably not as big a problem as we perceive it," Wright said. "It does affect some of our work, but if and when something does occur, I can guarantee we'll take care of it." ★