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It's a fact: Few local government agencies have the capability to quickly share information directly with one another when lives and property are at risk. **Ed Daley, Winchester, Virginia.** Read article

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Wireless Interoperability: A Key Element of Public Safety

Ed Daley

Popular television shows and movies portray public safety officials as seamlessly coordinated in their communication and response efforts. The reality is different. When public safety agencies do communicate with each other, the information generally is shared through communications centers and involves radio operators shuffling messages back and forth between agencies, using commercial cellular services, or even sending runners.

Measures such as these demonstrate the urgent need for public safety officials to enhance interoperability, or emergency incident responders' ability to communicate directly with and transmit data to other emergency service personnel through mobile radios. Perhaps, not all local government administrators are familiar with wireless interoperability, but it represents a concept we all need to understand.

What Does "Tech-Enabled" Mean?

In the past, local and state public safety agencies functioned independently of each other, with little need for coordination. When a field officer found it necessary to communicate with personnel from other agencies, it could be done through a dispatcher, who would relay information between them.

Today, however, coordination between agencies' is critical. The era of agencies' being able to handle incidents independently of neighboring jurisdictions is over. Agencies must coordinate their responses, and their field officers must be able to communicate directly. This wireless interoperability is necessary during routine responses that take place every day as well as when mission-critical emergencies occur.

During such local catastrophes as a terrorist attack or a major traffic accident, multiple agencies—including state and local police, firefighters, and emergency medical personal—respond. Unfortunately, few if any of these agencies have the capability to quickly share information directly with one another when lives and property are at risk.

This wave of shootings demonstrated that emergency incidents often require a response from a number of local government departments and frequently involve more than one jurisdiction.

Last fall, during the sniper incidents in Virginia, Maryland, and Washington, D.C., a morning shooting took place in Virginia. Personnel at the command center in Montgomery County, Maryland, had reason to believe that the sniper intended to strike again that same evening, in which jurisdiction was uncertain. Citizens throughout and beyond the Washington metropolitan area were nervous, and all were looking for a vehicle of the same specific description.

Communities quickly reviewed their response plans and considered how public safety agencies could coordinate road closures and a search for the vehicle. The highest-priority issue revolved around notifying all personnel from a number of agencies of any incident and of the incident's location. Law enforcement supervisors wanted to be able to seal off an incident area if a sniper shooting occurred in their jurisdiction. They suggested that officers be assigned to respond to various designated highways, instead of having all personnel respond to the incident scene. The key to this proposal would be instant notification of all personnel that a shooting had occurred and at what location.

A police department leader in Frederick County, Virginia, identified the problem. His officers could use mobile radios to communicate with each other and with the jurisdiction's emergency communications center (ECC). They could not, however, communicate directly with the other agencies involved in the field. Personnel were faced with the prospect of having to contact their ECC to relay messages to other ECCs, which would in turn have to notify field personnel from the second agency.

This wave of shootings demonstrated that emergency incidents often require a response from a number of local government departments and frequently involve more than one jurisdiction. Too often, field personnel from these state, local, and volunteer agencies cannot communicate with each other directly through mobile radios. Radio equipment can be incompatible, limiting the ability of emergency service personnel to make a coordinated response to a critical incident.

When federal agencies are involved, the need to communicate directly is magnified because of added types of equipment brought into play. Critical time is lost when field personnel are forced to relay messages through one or more ECCs to speak with other field personnel in an effort to coordinate responses.

National Public Safety Wireless Interoperability Forum

In October 2001, the National Institute of Justice cosponsored a National Public Safety Wireless Interoperability Forum, which was attended by some 150 elected and appointed officials and public safety representatives from all levels of government. ICMA and other national organizations composed of state and local government

leaders and public safety officials participated and learned about wireless interoperability problems.

Held in Washington, D.C., one month after the September 11, 2001, terrorist attacks, the forum generated great concern for the inability of field personnel from public safety departments and emergency first responders to communicate with each other directly by mobile radio at critical times.

The incidents discussed ranged from local accidents to such larger events as the Oklahoma City bombing and the Columbine shootings. Participants learned—from recent surveys of existing equipment used by public safety agencies, and the equipment's capacities—that the cost to achieve wireless interoperability on a national basis would exceed $18 billion.

Task Force and Its Mission

It was clear to forum participants that the existing lack of wireless interoperability was unacceptable in this era of rapid communications, multiagency response, and terrorist activities.

Communication gaps identified at the World Trade Center by emergency first responders needed to be addressed. Recognizing that all levels of government must cooperate to address this challenge, 18 national associations representing state and local elected, appointed, and public safety officials formed the National Task Force on Interoperability (NTFI), consisting of 56 members.

The National Institute of Justice offered support through meeting facilitation, outreach, and logistics. An executive committee was formed to provide leadership and organization before the first task force meeting in April 2002. The missions of the task force were to inform state and local government leaders of the benefits of interoperability and of the policy issues that had to be overcome, and to encourage partnerships among public policymakers to address interoperability issues in a more comprehensive way.

Why Can't We Communicate?

NTFI developed an outreach/education program that can be used by national associations and task force members to bring these critical issues to the attention of state and local government leaders and the public. First, it formed three work groups, to deal with issues involving: 1) spectrum, 2) resources, and 3) governance.

Spectrum is a term for the usable radio frequencies allocated to the land mobile-radio systems of public safety communications. Functioning like an interstate highway, spectrum transmits electronic signals. Almost all public safety agencies use wireless radios as their primary communications mechanism; without spectrum, these radios would be useless.

Public safety agencies were all initially assigned radio frequencies at the low end of the range. But because the growing number of agencies were assigned frequencies on an individual basis without regard for a comprehensive plan, these channels now are found on a variety of bands: high, low, very high, ultra-high, television-sharing, 700 megahertz, and 800 megahertz.

The spectrum work group of NTFI examined the availability of spectrum for public

safety agencies and the way in which it is allocated. It also reviewed spectrum regulations, commercial services spectrum, and other issues.

Over a period of several decades, the Federal Communications Commission has assigned public safety agencies radio frequencies in 10 separate bands. This has enabled more agencies to obtain a radio frequency, but it also has created the fragmentation that exists today. The spectrum bands allocated to public safety units within a region or state can affect public safety interoperability, as can the funding and deployment decisions made by public policy decisionmakers.

Local agencies had tended to favor the purchase and maintenance of communications equipment with independent frequencies because this practice grants them greater autonomy and because the cost of upgrading equipment to make it compatible with other local and state agencies is significantly higher than that of using an independent frequency. This situation, too, can hamper interoperability.

The resources work group reviewed funding alternatives and sources. It investigated how the use of existing funds can be made more efficient through collaborative procurement. Savings can be achieved through local agencies' working together or through state purchasing contracts. Emergency communications systems can be shared by two or more agencies, instead of each insisting upon remaining autonomous and not interoperable.

Local agencies must develop a joint, comprehensive financing strategy instead of continuing to make piecemeal purchases that worsen the problem. A number of such long-term financing alternatives as lease/purchase, municipal bonds, and special taxes are available to communities that recognize the necessity of wireless interoperability. The federal government and the states can encourage interoperability by providing incentive funding through grants and low-interest financing.

The governance work group of NTFI looked at the governance structures then in effect for public safety and communications organizations to evaluate how successful agencies had been in achieving communications interoperability. Clearly, an effective governance structure is the foundation of a successful interoperability strategy. State and local governments need to create areawide, multiagency bodies and grant them adequate powers to ensure that decisions concerning emergency communications are made in the best interest of wireless interoperability.

The public's need for effective and timely emergency response communications must take precedence over the turf issues and political interests of individual agencies. Multiagency boards can be formed by state directive or by local agreement. But they must have the authority to develop and implement an effective interoperability strategy. Regional agencies, which coordinate the purchases of compatible communications equipment and the resources to make these purchases, are key factors in a successful interoperability program.

Overall, the NTFI work groups met four times in Washington and held numerous conference calls and chat-room exchanges. A final task-force report entitled Why Can't We Talk? Interoperability—Working Together to Bridge the Communications Gap to Save Lives: A Guide for Public Officials, accompanied by a brochure and supplemental resources, was released at a press conference on February 6, 2003.

This report includes recommendations for all levels of government to enhance interoperability and to help ensure that emergency service personnel can properly communicate with one another in order to coordinate their responses. Members of

NTFI also called on Congress to use the proceeds from the auction of public airway spectrum licenses to set up a permanent public-interest trust fund that would award grants promoting interoperability efforts.

Why Can't We Talk makes recommendations on spectrum needs, funding, and cooperation among all levels of government. Here are some of the major findings:

- Five key reasons why public safety agencies can't communicate are that 1) a great deal of wireless equipment is aging and incompatible; 2) funding for new equipment has been limited and fragmented; 3) planning for emergency communications systems has been done from a short-term, fragmented, and limited-funding perspective; 4) state and local public agencies and governing bodies have failed to develop service programs on a cooperative and coordinated basis; and 5) overview of the assignment of radio spectrum to public safety agencies has been limited and uncoordinated.
- To achieve interoperability in your community, determine the types of emergencies, such as traffic accidents, that occur and who responds; which agencies need to talk to one another daily; who should be in communication in the first eight hours of an emergency; and who will need to be added to this initial group if the emergency surpasses the eight-hour period.
- Developing tips on how to communicate can help achieve interoperability: devise a plan for improving interoperability that includes goals and objectives; outline the problems or needs to be addressed; identify potential partners; propose a detailed budget; outline a marketing strategy; and include an operational plan that addresses how the project will be funded.
- As funding strategies, use shared systems that will automatically reduce the shared costs for agencies; exploit existing infrastructures; and obtain pricing information from other governmental units that have already contracted with prospective vendors.

The recent loss of the space shuttle Columbia required emergency responders from a number of federal, state, and local agencies to coordinate their recovery efforts. Again, some personnel could not communicate with others in the field. Information and decisions had to be relayed through a large number of communications centers, and field operatives couldn't just talk to each other directly. This incident has reminded us once again that emergency response is a multifaceted local issue involving multiple agencies that are severely hamstrung when they lack wireless interoperability.

So What's It to You?

Why should local government officials concern themselves with the challenges presented by the interoperability issue? The answer is quite simple: these problems affect the safety of all citizens and government officials. Many separate communications systems, owned by different government and volunteer emergency-response agencies continue to procure whatever communications systems work well with their own equipment and procedures, regardless of their ability (or inability) to communicate with other agencies.

For More Information
Copies of the National Task Force on Interoperability materials can be found on the Web site at http://www.agileprogram.org/ntfi. For additional information, contact David Hess, DOJ, Office of Justice Programs, at 202/305-0779 or 202/305-0703; e-mail, hessd@ojp.usdoj.gov. Or contact Roberta Lesh at ICMA, 202/962-3575; e-mail, rlesh@icma.org

There are many different ways for public safety entities to fund their communications needs without having to coordinate their purchases with the other agencies they work with during emergencies. Some of the funding options require wireless interoperability with other agencies. Others do not. In numerous cases, even subunits of the same state or local government cannot communicate or transmit data directly, thanks to a lack of wireless interoperability. Local government managers and

administrators need to conduct an audit of their agencies' wireless communications equipment to ensure interoperability. They must then determine the ability of their field personnel to communicate and transmit data to other agencies that are likely to participate with them, and the need to communicate with these entities during emergency incidents.

The NTFI report recommends that local officials convene a meeting of all stakeholders to assess the current interoperability status of their wireless communications equipment and to develop a plan for upgrading that equipment to achieve complete interoperability. Lives may be lost otherwise.

The bottom line is that law enforcement professionals and their counterpart first responders may find their emergency efforts at cross-purposes. And this kind of failure can actually deepen tragedies.

Task Force Participants

The National Task Force on Interoperability (NTFI) included representatives of the following 18 national associations:

- Association of Public Safety Communications Officials (APCO)

- International Association of Chiefs of Police (IACP)
- International Association of Fire Chiefs (IAFC)
- International City/County Management Association (ICMA)
- Major Cities Chiefs (MCC)
- Major County Sheriffs' Association (MCSA)
- United States Conference of Mayors (USCM)
- National Association of Counties (NACo)
- National League of Cities (NLC)
- National Association of State Chief Information Officers (NASCIO)
- National Association of State Telecommunications Directors (NASTD)
- National Conference of State Legislatures (NCSL)
- National Criminal Justice Association (NCJA)
- National Emergency Management Association (NEMA)
- National Governors Association (NGA)
- National Public Safety Telecommunications Council (NPSTC)
- National Sheriffs' Association (NSA)
- Council of State Governments (CSG)

Ed Daley, city manager of Winchester, Virginia, and Roberta Lesh, director of police programs at the International City/County Management Association, Washington, D.C., represented ICMA on the task force.

Ed Daley is city manager of Winchester, Virginia (ecd@ci.winchester.va.us).
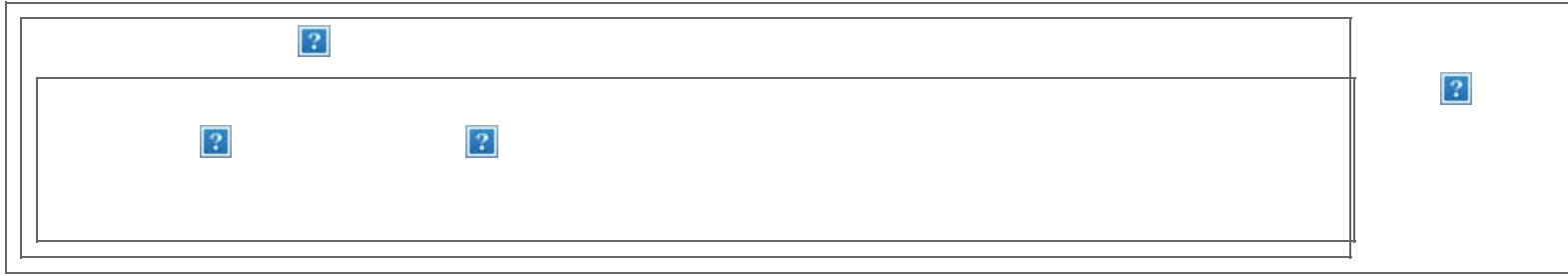
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Profile: Malin Breaks the Mold

One Year Later, the Davenport City Administrator Is Still a Leader on the Move

Craig Malin is city administrator of [Davenport, Iowa](#)

Photo by Brian Barkley.

Think of a ship at sea aimlessly wandering because, after tossing the captain overboard, none of the crew know how to work the rudder. This is analogous to the situation of Davenport, Iowa, after parting company with its previous city administrator in 2000.

Determined to bring much-needed accountability and order to city hall, then-Mayor Phil Yerington established a search committee to attract and recruit a city administrator for Davenport. In retrospect, the search committee did a noble job in unanimously recommending Craig Malin for the daunting position.

From the start, Malin proved worthy, negotiating an employment contract that provided enough monetary incentive to merit the kind of effort necessary to steer

Davenport in a progressive direction. (Malin's annual salary is $121,800.) Malin's first day as Davenport's city administrator was August 28, 2001.

One year later [when this story was written], is Malin earning his keep? The answer seems to be yes. "The city has 12 goals, and we've made progress on most of them, some more than others," Malin said. "For instance, the siting of the new west branch library has been approved, along with an implementation schedule. Environmental enforcement is almost fully up to speed. We've added two more inspectors, including making an operational change that provides the inspectors with designated areas of oversight. This will improve accountability, communication, and control.

"As for the third top priority, the city is improving and repairing streets and sewers at twice the historic rate, which is significant progress." While the "historic rate" is substantially lower compared with neighboring cities, doubling it at least brings Davenport respectably nearer to the rest of the Quad Cities. Therefore, it certainly counts.

"We are about 30 to 40 percent complete with the public-input process relative to the city-owned land at 53rd and Eastern," Malin said. "We've had numerous stakeholders' meetings; a hands-on public charrette, where citizens expressed their design preferences, and we sent out 1,000 random surveys regarding the project. To date, over 200 have been returned, and the results are very positive."

He is referring to survey results that showed 70 percent of the respondents "very supportive" or "supportive" of development that is "more compact (homes and other structures closer together), with fewer roads and utilities and significant land conservation." Sixty percent of the respondents also preferred development that would feature a variety of housing types to appeal to a range of age, economic, and social groups (first-time buyers, young families, singles, the elderly, etc.). Only 27 percent of the respondents supported the type of development typically found in the Quad Cities, where homes and structures are farther apart, necessitating more roads and utilities and limiting land conservation, parks, and open spaces.

"The community's preference for a new type of development means something different and exciting for Davenport residents that will hopefully contribute to improving and enhancing Davenport's quality of life, which is another citywide goal," Malin continued. "The fact that the citizens participated from the genesis of this process means that some sort of formula for development can be established that reflects the community's philosophy on what development should be.

"The council has approved a plan to improve John O'Donnell Stadium, so we will have the best baseball facility in the Midwest as a result. We are also working on improving our city gateways. We have beautification of the gateways in this year's capital improvement budget, meaning landscaping, signage, and resolution of some of the environmental issues," he said.

"Government efficiency is another goal. There has been a clear transition from the traditional status quo to an openness to change amongst the city staff. It has been an interesting challenge, and I am heartened by the staff's responsiveness and willingness to make this transition. On my business cards are three words: 'open,' 'agile,' and 'purposeful.' To lead an organization of this size, I think it is essential that we are receptive to new ideas, and not defensive.

"One of the first orders of business was to provide our green sheets on the Web for the community's consideration. We are also working on broadcasting all the

significant meetings, such as the historic preservation and plan and zoning commission's and the zoning board of adjustment's meetings, to name a few, by the end of the year. We are also analyzing other programming for our public-access television. I want people to tune in: 'Here's what's happening. Try and keep up with it!'"

One of Malin's more pressing challenges is to uniformly bring city hall up to speed technologically. In an organization as large as the city of Davenport, the expense is enormous because successful implementation requires an in-depth understanding of all the different municipal functions, their relationships to one another, and how it all should effectively interact with the community. Davenport is definitely trailing behind other municipalities in terms of technological capability, and Malin acknowledges that this needs to be remedied to bring about his vision for Davenport as the most dynamically progressive and desirable place to live in Iowa, if not in the Midwest.

Is Malin's vision lofty? You bet it is. He thinks big, then bigger. His energy and enthusiasm are contagious. Through it all, he laughs a lot and doesn't take himself too seriously. Amazingly, he appears to be having fun at this job. Perhaps, it is his sense of humor and supreme confidence in his own ability that make him constitutionally ideal for his position. He answers his own phone much of the time and has an open-door policy, advocating empowerment versus controlling or micromanaging his staff.

One of the imperatives established for the incoming Malin was to bring accountability to department heads. Prior to Malin's arrival, there was virtually none. There were no annual evaluations because there were no established criteria for measuring job performance. Additionally, the city council had the only authority to fire department heads. Because the city administrator did not have this authority, it severely restricted supervision. Department heads had only to enlist the favor of four councilmembers to secure their jobs.

The ordinance was finally changed as a means of attracting a higher-caliber candidate for city administrator. Malin has implemented a "21 core competencies" performance evaluation for all department heads. The methodology involves each employee's evaluating him- or herself, and the result is compared with the same evaluation by his or her peers and superiors. This method provides an extensive format and relevant context in which to explore each position from several perspectives and is comprehensive enough to give clear direction for each position.

Malin also wrote comprehensive job descriptions, including deliverables for each position, by which performance can be evaluated. Arguably, this achievement is his most notable for his first year, especially because he executed it with very few, if any, casualties. Malin appears to have the respect and support, and certainly the cooperation, of city department heads.

"The average city employee has been here 16 years," Malin noted. "I am proud of the work ethic here and of the depth of resources this longevity provides. While there is a tendency to become set in ways, given substantial challenges for innovation, these people are up to it."

The other important distinction where Malin is concerned is his understanding of and commitment to Davenport's citizens as the customers. Malin genuinely advocates a governing system of openness. He takes a no-frills approach that has at its core a refreshing honesty. Integrity is actually named within the 21 core competencies each employee must demonstrate.

Malin believes that, at a minimum, the public deserves the truth, which necessarily includes availability of information. Changing city hall's dynamic of exclusiveness to one of inclusiveness is a monumental shift, not only in the mindsets of those who govern but also in the renewed possibilities for Davenport's future. Malin's ability to initiate systemic change, enough so that it is actually perceptible in such a short time, is a great testimony to his leadership.

"We must operate in the public trust, which means we do things in an open, agile, and purposeful manner to accomplish this," Malin said. "If we do this, even if people don't agree with something the city is doing, they will almost always respect it if it is done openly. If we are to become the best place to live in Iowa, we must be relentless in maintaining an open responsiveness to the community and to each other."

Kathleen McCarthy, Staff Reporter, *River Cities' Reader*, **Davenport, Iowa.**

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