



Converging Communication

Alcatel-Lucent solutions revolutionize agency communication and collaboration.

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Truly interoperable communication systems eliminate the information delay that plagues emergency response during many natural and manmade disasters.

In January 2007, the Department of Homeland Security (DHS) released a report providing interoperability scorecards for 75 metropolitan areas in the United States.

Subject matter expert panels reviewed documentation from city regions on current communications plans, exercises and a self-assessment to produce consensus findings and recommendations. Each region will receive its scorecard from the department, which is using them to focus its technical assistance programs. The report is the first scientific measure conducted of tactical interoperability communications in local governments.

Overall, urban/metropolitan areas have come a long way in improving their tactical interoperable communications capabilities, the report said. Still, only six city regions earned the highest score.

The report defines tactical interoperability as the rapid provision of on-scene, incident-based, mission-critical voice communications among all first responder agencies — including emergency medical services, fire and law enforcement as appropriate for the incident. Tactical reliability relies on a converged network to enable tactical interoperability.

Converged networking solutions from Alcatel-Lucent equip first responders, emergency managers and others to truly collaborate using voice, video, photographs and data. Alcatel-Lucent delivers advanced IP-based, voice, data and video services through a single network backbone. These flexible, standards-based solutions are manageable, secure and cost-effective — and they offer the reliability of an “always on” utility.

Government agencies need reliable high-quality voice solutions. Video is becoming an essential tool for government through applications such as video conferencing and video surveillance. And network administrators demand versatile consolidated networks that allow data, voice and video to share a single, efficient infrastructure.

Alcatel-Lucent’s converged network model has the sophistication to deliver vital information securely and reliably, regardless of format. It also has the intelligence to give urgent and important messages priority over mundane network traffic. And the solution’s standards-based design

allows it to link to other networks in nearby jurisdictions, supporting regional emergency response efforts.

Speeding Response

Truly interoperable communication systems eliminate the information delay that plagues emergency response during many natural and manmade disasters. First responders find themselves en route to rescue sights, waiting for facts

Advanced Conferencing and Collaboration

Alcatel-Lucent’s new Land Mobile Radio Conferencing Collaboration (LMRCC) solution enables first responders to participate in conference calls, regardless of their communication devices. One participant could be holding a traditional telephone while another speaks into a VoIP unit and another uses a handheld radio. UHF, VHF, 700 MHz, 800 MHz, trunk radio, digital radio and numerous other formats all can interoperate with LMRCC technology.

LMRCC technology empowers governments to meld separate agencies into one cohesive team during a crisis. And when emergency personnel get vital information more quickly, they can respond faster to those in need.

LMRCC technology also offers local governments the potential to connect first responders with local health networks. The importance of including local hospitals in disaster response coordination efforts is frequently overlooked, but a strategic approach to directing victims to medical care is imperative. That connectivity could prove vital during a bioterror attack or other mass victim incident likely to rapidly overwhelm local hospitals with patients. Responders could better route patients to the appropriate health centers if they could directly connect to local health networks. The change could help ensure all victims get treated in a timely manner.

Funding Collaboration

Five DHS Homeland Security Grant Programs aim to help first responders use a collaborative approach to protecting citizens. Funding priorities — which focus on mitigating the dangers of radiological, chemical and biological weapons, as well as explosives — encourage interoperable communications. The following shows the funding totals for the grant programs in 2007:

State Homeland Security Program	\$509.3 million
Law Enforcement Terrorism Prevention Program	\$363.8 million
Urban Areas Security Initiative	\$746.9 million
Metropolitan Medical Response System	\$32.0 million
Citizen Corps Program	\$14.6 million

Source: The U.S. Department of Homeland Security

and instructions from dispatch centers. Alcatel-Lucent's IP-based solutions work with mobile radios to connect responders directly to the agencies producing the necessary data. The technology accelerates decision-making and empowers responders to devise more informed tactics.

These solutions deliver true interoperability, so firefighters communicate with police, medical staff and other vital first

responders to alert citizens to impending circumstances or the need to evacuate.

Expanding with Government's Needs

Alcatel-Lucent understands that most governments can't make drastic infrastructure changes to gain these new capabilities. Therefore, the company designs solutions that work

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responders using their own communications devices without waiting for the information they need to travel through back channels first.

Governments implementing Alcatel-Lucent solutions use a variety of teleconferencing services hosted on one integrated system. Office staff can instantly set up conference bridges to connect remote locations and launch four types of interactions: voice interaction, video interaction, data instant messaging and application sharing. An automated messaging feature can automatically dial participants based on a call list. For example, operators of public safety networks could use the technology as a reverse 911 notification





with existing network technology. Alcatel-Lucent also delivers networks that are flexible and can route extra bandwidth where it is needed on a moment's notice.

Continual additions of network elements and redesigns of network infrastructures involve budgets that don't exist in most local government agencies. Equally important, agencies can't afford the shutdowns of critical services that type of alteration requires. Alcatel-Lucent's network solutions allow agencies to expand their communications abilities while keeping normal services in operation.

Alcatel-Lucent solutions are scalable because any agency that can't quickly plan for and respond to future growth faces dire troubles. They also incorporate capabilities that help agencies include rural, bandwidth-starved regions into cutting-edge network deployments. For instance, Alcatel's micro-

wave network technology offers faster and more cost-efficient deployment than wireline or fiber optic. The technology empowers states and localities to quickly reach remote areas and maintain high system availability, even in rough terrain.

Failsafe

All aspects of Alcatel-Lucent network solutions are redundant, meaning a backup is always available if one element fails. The network is designed to adjust itself when a link failure occurs, using alternative paths to reroute that traffic.

Alcatel-Lucent converges all applications over an IP network, which has the necessary intelligence to recognize and manage different types of traffic with different priorities. The system gives vital applications preference without crippling lower priority functions. Older models require IT staffs to manually maintain and update circuit plans as the network grows. Instead, Alcatel-Lucent simplifies scaling of the network to support a growing number of users and types of services.

Secure Network

Finally, governments couldn't actualize the benefits of an interoperable network without the fierce security protections built into Alcatel-Lucent solutions.

Networks are a constant target of hackers and other hostile intruders. Alcatel-Lucent networks with high-level security intelligence detect and prevent unauthorized intrusion. These defense mechanisms also prevent eligible users from innocently presenting security threats.

As demands on government networks become more complex and the information they carry becomes more vital and sensitive, Alcatel-Lucent technology prepares agencies to respond quickly, competently and reliably. Ultimately these capabilities translate into more effective emergency response.



Alcatel-Lucent delivers complete, best-in-class communications solutions aligned with the most challenging mission imperatives of the government and tailored to the business needs. Alcatel-Lucent: serving those who serve the public in an always-on world.

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