Coordination & Partnerships

Awareness Guide

Homeland Security

Today, emergency incidents increasingly require a high level of multi-agency and multifunctional emergency response. Acts of domestic terrorism, civil disturbance, youth violence, and natural disasters demonstrate the need for local, tribal, state, and Federal emergency response providers to better coordinate their efforts. In many instances, responding to such incidents is a new experience for everyone involved. Imagine the potential on-scene confusion when a police or fire department responds to a mass casualty incident such as a train derailment or a commercial airline crash. Typically, local agencies are the first responders to these incidents, and state and Federal resources are called in to assist, as necessary. Any problems in response are compounded if emergency personnel have limited radio and data communications. The risk of losing lives and property grows in direct correlation with the sometimes substantial time spent establishing on-scene or behind-the-scenes interoperable communications.

Often, inadequate technology becomes the scapegoat for these problems. Although wireless technology solutions are becoming widely available to emergency response agencies to assist in facilitating communications interoperability, technology is not always the issue. The lack of coordination and partnerships among government leaders and emergency response officials in planning for and implementing emergency response land mobile radio (LMR) systems is a much more significant challenge.

To assess and further justify coordinated approaches, partnerships, and information sharing, the Department of Homeland Security (DHS) initiated the National

Interoperability Baseline Survey to better understand the current levels of coordination and partnership among local, tribal, state, and Federal entities nationwide. DHS is assessing interoperability based on the Interoperability Continuum, which identifies five "critical success factors" for planning and achieving interoperability solutions. These elements are Governance, Standard Operating Procedures (SOPs), Technology, Training and Exercises, and Usage. They are the basis for enabling successful emergency response communications systems.

What Is the Problem?

The problems associated with the lack of coordination and partnerships in the emergency response community cross all jurisdictional boundaries. For example, some law enforcement activities, such as narcotics investigations, generally require participation by local, state, and Federal agencies. These situations require agencies to work together to ensure that information exchange, whether by voice or data communications, is available to assist the critical missions of emergency responders. However, several key issues challenge successful coordination and use of partnerships. These include "turf issues" concerning the management and control of radio systems, the lack of shared priorities for interoperability, and limited sharing of interoperability solutions within the emergency response community.

Jurisdictional boundaries and unique missions often create perceived barriers that hinder cooperation and collaboration in situations where they are necessary. Historically, individual communications managers and technical radio specialists were solely responsible for providing agency communications. They developed a sense of ownership that created "turf issues," which sometimes interfere with efforts to foster interoperability through shared systems. Stovepipe systems that served the mission of a single agency or jurisdiction were developed without considering future interoperability requirements, but the changing mission of the emergency response community and the scarcity of emergency response

Lives and property are at risk because law enforcement, fire, and emergency medical personnel cannot always share vital information via radio when responding to emergencies.

resources demands coordinated system planning. Unfortunately, these efforts are sometimes hindered by management's perception that it will lose control of radio system development and operations. Coordination and partnerships are difficult to develop. The result is often stop-gap measures that attempt to address specific interoperability requirements.

Raising the priority of the communications interoperability issue with senior government executives is difficult. Decision makers and the organizations that influence them do not sufficiently grasp the importance of and need for interoperability. Often, it takes natural or man-made disasters to bring the issue to the forefront. Elected and appointed officials are routinely faced with prioritizing issues affecting their jurisdiction. Without sufficient knowledge of the importance of communications interoperability, critical coordination and partnerships may never evolve at this level. Some associations of government officials and emergency response executives are working to raise awareness of the idea that multi-jurisdictional interoperability must be a high priority. An important step would be to encourage relevant associations to continue to develop clear positions on interoperability and to highlight its importance at meetings and conferences.

Finally, information sharing and best practices for interoperability are not established or available at all levels of government. Although emergency response agencies have found "on-the-spot" solutions to deal with the lack of communications interoperability on scene, they generally do not have the strategies or financial resources to establish forums to regularly address interoperability issues. Typically, agencies at all government levels rely on after-action reports and lessons learned to prepare for future emergencies. Without established forums or other means to share and incorporate local, tribal, state, and Federal communications needs, efforts to develop coordinated approaches and best practices are often overlooked.

Stovepipe systems serve the mission of a single agency or jurisdiction at the expense of interoperability.
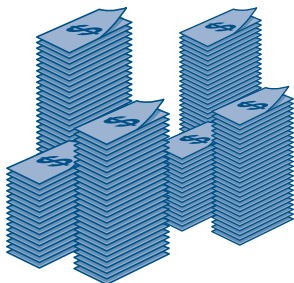
What Has Been Done?

In the past, emergency response agencies have addressed interoperability on an individual basis. More recently, local, tribal, state, and Federal agencies have realized they cannot do it alone. Officials at all levels of government are now acting to increase coordination and partnerships for improved, multi-jurisdictional voice and data interoperability. Encouragingly, many state and local agencies are exploring partnerships to develop shared systems. Shared systems have many benefits, including lower costs, widespread interoperability, community interaction, and shared management and control. One common approach is to work toward regional or statewide interoperable wireless systems for emergency response. These provide multi-jurisdictional coverage for local, tribal, state, and even Federal agencies. States that work closely with local and regional agencies through a bottom-up approach can establish membership agreements and fee-for-service arrangements as incentives to attract local subscribers to such systems.

At local levels of government, shared wireless communications systems are becoming increasingly common and fiscally necessary. Local agencies often find success in shared system development by obtaining community support. This results in increased awareness by local government leaders and in partnering with other local government bodies to share land or facilities for tower sites. These shared systems often branch out to neighboring jurisdictions and become robust, regional communications systems.

States have also identified the need to have senior-level leadership and sponsorship for interoperability efforts to break down barriers caused by the lack of coordination and partnerships. Some states have established or are establishing executive committees for this purpose. These committees, often created with the endorsement of the state's chief executive or through legislation, provide an outstanding venue for interoperability planning and policy development. These forums have been established from scratch or by enhancing the role of an existing committee.

Along with fulfilling their coordination role, they help leaders stay informed and engaged about efforts in multi-jurisdictional interoperability. Indeed, governance is critical to the success of interoperability planning, as the Interoperability Continuum attests.

In 1998, the Federal Communications Commission (FCC) allocated 124 megahertz (MHz) of 700 MHz band spectrum for use by emergency response agencies. The FCC has designated approximately 10 percent (12.6 MHz) of the spectrum for nationwide interoperable communications. In addition, the FCC determined that each state had the option to administer 12.4 MHz of this 700 MHz band spectrum.This important action allows states to coordinate wireless systems planning efforts throughout their state and the Nation. It also will ensure that all emergency response agencies are able to operate within the same channel band. Moreover, the Digital Television Transition and Public Safety Act of 12005 requires television stations to complete the transition out of the 700 MHz band spectrum by February 17, 12 009, after which the band will be released for emergency responder use.

The spectrum allocation in the 700 MHz band has also enabled the FCC to foster coordination and partnerships. The National Public Safety Telecommunications Council (NPSTC) was formed in 1997 to assist with the wireless communications needs of local, tribal, state, and Federal emergency response agencies. In addition, NPSTC has assumed the responsibilities of the former Public Safety National Coordination Committee (NCC). NPSTC develops and makes recommendations to the appropriate governmental bodies on issues and policies relating to emergency response communications. Greater interoperability and coordination among affected agencies is thus promoted.This effort includes support for planning committees that are creating regional plans for the 700 MHz band spectrum.These plans promote interoperable communications within and among states, which aids in achieving nationwide interoperability.

In 120012, Oregon's governor created the Statewide Interoperability Executive Council through an executive order.The Council is composed of 17 voting members representing the state legislative assembly and various state and local emergency response agencies. Its purpose is to provide policy-level direction for planning, designing, and implementing guidelines, best practices, and standard approaches to address the state's emergency response communications interoperability.

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Further, the Department of Homeland Security (DHS) developed the National Incident Management System (NIMS). It provides a standardized, nationwide template to enable local, tribal, state, and Federal governments and non-governmental organizations to effectively coordinate to prepare for, prevent, respond to, and recover from incidents of any size. The goal of this unified incident structure is to eliminate the inconsistencies in response among various agencies during an emergency.

In addition, DHS continues to raise awareness of the issues of interoperability, coordination, and how to shape best practices with the emergency response community. The following guidance documents have been developed on planning and executing interoperability solutions among local, tribal, state, and Federal agencies:

- Interoperability Continuum. Illustrates how progress in communications interoperability can be measured at the local level by examining five key elements. To achieve both short- and long-term goals, these elements are best addressed in a concurrent, coordinated approach.

- Statewide Communications Interoperability Planning (SCIP) Methodology. Describes a step-by-step process for developing a statewide strategic plan for enhancing communications interoperability across multiple emergency response organizations. The methodology identifies 10 phases and describes in detail the critical tasks and key considerations for each phase.

- Statement of Requirements (SoR). Defines future requirements for crucial voice and data communications in day-to-day, task force, and mutual aid operations. The SoR serves as a first step toward establishing base-level communications and interoperability standards for all emergency response agencies.

Officials at all levels of government are now taking action to increase coordination and partnerships and improve multi-jurisdictional interoperability.

Through these and other resources, best practices for the emergency response community help to promote coordination and partnerships across all levels of government.

What Remains To Be Done?

Although emergency response leaders have begun to address many challenges, much remains unfinished. It is vital that information about the benefits of coordinated communications and partnerships flow through all levels of government. Continued support for and active participation in outreach activities—through publications and pilot projects—is a proven measure that raises awareness about interoperability. To improve interoperable communications, the emergency response community, as well as senior leaders at all levels of government, should follow the guidance in the Interoperability Continuum, the SCIP Methodology, and the SoR.

Local, tribal, state, and Federal agencies should form working groups or executive committees to coordinate activities on interoperability and other, broader communications requirements. Government leaders can work with these groups to provide leadership by issuing executive orders, when necessary, or by making policy changes. Such groups are also a potential resource for states applying for Federal grants that require evidence of coordination and partnerships among state and local bodies across jurisdictions. Such efforts may result in a spirit of cooperation and exchange that breaks down barriers to communications interoperability.

Further, associations that represent elected and appointed officials and emergency response executives should increase their efforts to foster interoperability. These organizations can develop policy statements that highlight the priority of this topic to their member agencies' leadership. They can also issue formal resolutions that announce their organizational commitment to address interoperability and to dedicate resources to meet key challenges, including coordination and partnerships.

Finally, the emergency response community must be more willing to work together on solving interoperability challenges. Improving communications interoperability requires a willingness to collaborate, despite jurisdictional boundaries or political barriers. The emergency response

In 12006, the Commonwealth of Kentucky's Office of Homeland Security developed a Kentucky Statewide Strategic Plan for Communications and Interoperability. The plan identifies three near-term initiatives and one long-term initiative, all interrelated, that are essential to successful interoperability in Kentucky. The strategic plan identifies a number of elements required to achieve these near- and long-term initiatives. One of the elements is establishing an Interoperability Program Office that can communicate and build relationships with the statewide emergency response community. Kentucky's emergency responders have identified the lack of outreach as a serious deficiency. Thus, a priority of the Interoperability Program Office is to regularly perform outreach functions to promote coordination and partnerships among members of the emergency response community and across all jurisdictional boundaries.

community should continually participate in efforts to foster such cooperation. Emergency response officials should regularly remind their lawmakers and senior officials that interoperability is a critical public issue and that many agencies, at all levels of government, have been successful in enhancing their working relationships to improve interoperability. Senior leaders should evaluate the current condition of emergency response communications and interoperability within their jurisdiction, region, or state and, where possible, bring together area leaders to address deficiencies.

Why Does It Matter?

Public safety affects us all. Our emergency response personnel must have reliable communications regardless of the type of emergency. In some cases, technical solutions provide the needed interoperability. However, in many situations, the lack of coordination and partnerships has impeded the ability to communicate effectively. The emergency response community has already identified the issue of coordination and partnerships as its greatest challenge in achieving communications interoperability. Elected and appointed officials, senior government executives, and communications managers must foster and support effective interoperability initiatives to address this challenge. The failure to do so will cost lives and property, and affect the quality of life within communities across the Nation.

For Additional Information

1. Interoperability Continuum
2. Public Safety and Wireless Communications Funding Awareness Guide
3. Public Safety and Wireless Communications Interoperability Guide
4. Public Safety Radio Spectrum: A Vital Resource for Saving Lives and Protecting Property
5. Public Safety Wireless Communications Security Awareness Guide
6. Public Safety Wireless Communications Standards Awareness Guide
7. SAFECOM Statewide Communications Interoperability Planning Methodology
8. Statement of Requirements (SoR)
9. For more information on emergency response communications, please visit: http://www.safecomprogram.gov

The SAFECOM program absorbed the Public Safety Wireless Network and its initiatives in 2004. The Office for Interoperability and Compatibility's com-munications portfolio is currently comprised of the research, development, testing, evaluation, and standards aspects of the SAFECOM and Disaster Management programs.

OFFICE FOR INTEROPERABILITY AND COMPATIBILITY

Defining the Problem
Emergency responders—police officers, fire personnel, emergency medical services—need to share vital voice and data information across disciplines and jurisdictions to successfully respond to day-to-day incidents and large-scale emergencies. Unfortunately, for decades, inadequate and unreliable communications have compromised their ability to perform mission-critical duties. Responders often have difficulty communicating when adjacent agencies are assigned to different radio bands, use incompatible proprietary systems and infrastructure, and lack adequate standard operating procedures and effective multi-jurisdictional, multi-disciplinary governance structures.

OIC Background
The Department of Homeland Security (DHS) established the Office for Interoperability and Compatibility (OIC) in 2004 to strengthen and integrate interoperability and com patibility efforts in order to improve local, tribal, state, and Federal emergency response and preparedness. Managed by the Science and Technology Directorate, OIC is assisting in the coordination of interoperability efforts across DHS. OIC programs and initiatives address critical interoperability and compatibility issues. Priority areas include communi cations, equipment, and training.

OIC Programs
OIC programs address both voice and data interoperability. OIC is creating the capacity for increased levels of interoperability by developing tools, best practices, and method ologies that emergency response agencies can put into effect immediately. OIC is also improving incident response and recovery by developing tools and messaging standards that help emergency responders manage incidents and exchange information in real time.

Practitioner-Driven Approach
OIC is committed to working in partnership with local, tribal, state, and Federal officials in order to serve critical emergency response needs. OIC's programs are unique in that they advocate a "bottom-up" approach. The programs' practitioner-driven governance structures gain from the valuable input of the emergency response community and from local, tribal, state, and Federal policy makers and leaders.

Long-Term Goals
- Strengthen and integrate homeland security activities related to research and develop ment, testing and evaluation, standards, technical assistance, training, and grant fund ing that pertain to interoperability.
- Provide a single resource for information about and assistance with interoperability and compatibility issues.
- Reduce unnecessary duplication in emergency response programs and unneeded spending on interoperability issues.
- Identify and promote interoperability and compatibility best practices in the emer gency response arena.

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