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OFFICERS (NASCIO) AND  
NASCIO REPRESENTATIVE TO THE PUBLIC SAFETY WIRELESS NETWORK  
PROGRAM

**HOUSE SUBCOMMITTEE ON NATIONAL SECURITY, EMERGING THREATS AND  
INTERNATIONAL RELATIONS AND HOUSE SUBCOMMITTEE ON  
TECHNOLOGY, INFORMATION POLICY, INTERGOVERNMENTAL RELATIONS  
AND THE CENSUS**  
HEARING ON FIRST RESPONDER INTEROPERABILITY  
NOVEMBER 6, 2003

Chairman Putnam, Chairman Shays and Members of the Subcommittees,

Thank you for inviting me to appear before you today, representing the National Association of State Chief Information Officers (NASCIO), to offer my perspective on the issue of public safety communications interoperability and how state CIOs can play a key role in achieving this elusive goal. NASCIO appreciates your attention to this important matter and willingness to get input from the individuals and organizations that have a direct stake in the outcome. We believe that success will come from building on existing intergovernmental partnerships to address the interoperability problem and looking for solutions that focus on collaboration and planning at the local, state and federal levels.

The tragic events of September 11, 2001 made us all painfully aware of the importance of public safety agencies and personnel being able to communicate during an emergency. Never was this more apparent than during the attack on the World Trade Center in New York City. As thousands of firefighters, police officers and emergency personnel rushed to the scene to aid victims and search for survivors, incident commanders were hearing warnings from helicopters circling above the scene that the towers were beginning to glow and dangerously close to collapse. Radio communications were a lifeline for the police officers who received word to evacuate the building – all but 60 police officers escaped with their lives. Tragically, hundreds of firefighters didn't receive that warning because they were using an incompatible radio communications system.

At the same time, a different picture emerged from the Pentagon. Federal, state and local emergency responders at the scene experienced little difficulty establishing interoperable communications during the initial response because they had developed and implemented a

mutual-aid interoperability plan. This plan was developed in response to the 1982 Air Florida plane crash in Washington, D.C. during which emergency personnel were unable to communicate with one another, hampering rescue efforts. As a result, most of the first responders at the Pentagon had common radio frequencies pre-programmed into their portable radio equipment. This regional planning produced successful policies and procedures for mutual-aid interoperability on 9/11.

### ***Importance of Communications Interoperability to the States***

The lack of communications interoperability between emergency responders is not a new problem. State and local officials have been dealing with this issue for a long time. The events of 9/11 merely raised the level of awareness around the country. Law enforcement officials, firefighters, EMS technicians, emergency management personnel, public utilities, hospitals, state highway workers, and other public health and safety entities have always needed to communicate with their peers from other agencies and jurisdictions. Even during “routine” incidents such as traffic accidents, chemical spills, and weather-related emergencies, these individuals must be able to communicate to coordinate an effective response. Sadly, emergency responders are often forced to send and receive instructions over multiple radios to reach units from different agencies and jurisdictions. In extreme cases, they must use runners to deliver hand-written notes. As a result, minutes are lost and lives and property are at risk.

How did we get in this situation? A combination of aging and incompatible equipment, limited and fragmented spectrum, poor planning and coordination, inadequate and stovepiped funding, and even human factors such as agencies’ natural reluctance to give up management and control of their systems have all contributed to the current state of affairs. And while there is no magic solution, there are a number of important steps that can be taken at the Federal, state and local level to overcome these barriers to communications interoperability.

### ***Technology and Standards***

One of the primary impediments to communications interoperability is the incompatibility of public safety communications systems and equipment. The need for open standards became increasingly clear in the 1980s as manufacturers began offering improvements to the functionality and efficiency of their analog radio systems. Better, more secure systems emerged, but each manufacturer used unique protocols to provide these enhancements. In response, a cooperative effort on the part of local, state and federal public safety users established interoperability standards for digital voice and data communications. Known as Project 25, this initiative relied on public safety mission critical requirements to drive the development of the standards. NASCIO supports the use of flexible and open architectures and encourages all public safety agencies to purchase equipment that conforms to these standards.

Michigan and Delaware were among the first states to implement standards-compliant systems designed to provide statewide interoperability. The Michigan Public Safety Communications System (MPSCS) now has more than 300 local, state and federal public safety agencies with approximately 10,000 radios on the system. In Delaware, their 800 MHz system provides statewide coverage for more than 7,000 local, state and Federal emergency responders. Future enhancements will enable greater communications interoperability with neighboring states.

### ***Spectrum Allocation***

The increased demand for wireless communications capabilities has made the usable radio spectrum a very limited natural resource and nearly all available frequencies have been allocated. The public safety community has access to a very small portion of this spectrum which results in congested radio traffic and increased interference. This severely limits the ability of emergency responders to communicate with one another and can jeopardize their safety. Further complicating the interoperability problem is the fact that these allocations are fragmented into many different bands of the radio spectrum. Recent FCC spectrum allocations for public safety use in the 700 MHz and 4.9 GHz range are a step in the right direction, but it could be many years before state and local governments can fully utilize the newly allocated spectrum.

NASCIO has published a white paper on public safety wireless communications interoperability that addresses the radio spectrum issue for public safety and specifically the allocation of additional spectrum in the 700 MHz band. Current law allows TV broadcasters to retain their existing analog channels through the end of 2006, or when at least 85 percent of households have access to digital television – whichever is later. The uncertainty over when, or if, this spectrum will be vacated has prevented many state and local governments from making plans or funding commitments to use the newly allocated spectrum. Many of the concerns discussed in the NASCIO white paper are addressed in H.R. 1425, the Homeland Emergency Response Operations (HERO) Act, which ensures that TV broadcasters transfer the spectrum for public safety use by December 31, 2006.

### ***Planning and Coordination***

Making interoperability a reality requires public safety agencies and jurisdictions to work together to develop common solutions and systems. NASCIO believes that state leadership is essential to developing a coordinated approach to achieving interoperability and improving the nation's public safety communications infrastructure. States should establish a foundation for collaboration and planning through statewide interoperability councils or similar governing bodies. A well-defined governance structure improves the process of any major project and such an entity should be authorized to make decisions about and oversee the implementation of interoperability initiatives. It can also be effective for enhancing communication and cooperation, establishing guidelines and policies, and reducing turf battles among agencies and jurisdictions. The public expects their lives and property to be protected by government – whether federal, state or local – without distinction as to who responds. Citizens also expect government to work efficiently with the private sector when necessary. To effectively respond to emergencies, government and industry must plan for interoperability from the outset.

In Kentucky, the 2003 General Assembly passed a bill creating the Kentucky Wireless Interoperability Executive Committee (KWIEC) to advise and make recommendations to the state chief information officer regarding strategic wireless initiatives to achieve public safety voice and data communications interoperability. KWIEC membership represents various state agencies including state police, emergency management, homeland security, transportation and natural resources along with local representation from city and county government, police, fire, 911 dispatch and EMS.

### ***Innovative Funding***

Public safety agencies have historically developed radio communications systems based on individual needs, and spending decisions were based on strategies that did not consider the need for interoperability. Traditional funding mechanisms have done little to discourage the development of stand-alone public safety communications systems, further exacerbating the problem. Upgrading or replacing these incompatible systems and equipment poses a significant funding challenge for most state and local jurisdictions. Estimates to replace the nation's public safety communications infrastructure with a fully interoperable one exceed \$18 billion. Many jurisdictions have proposed new systems to be shared by multiple agencies, yet the cost of these projects can exceed \$200 million and public safety must compete for scarce financial resources with other interests such as education, health care and transportation. Despite these costs, state and local governments must invest in new wireless communications systems and equipment. Officials at all levels of government should develop funding strategies and incentives that encourage greater local, state and Federal participation and cooperation in the development of shared or compatible systems.

A number of states have used innovative approaches to funding shared, statewide radio systems. For example, the South Dakota Legislature approved a bill during its 1999 session directing state agencies to integrate their existing radio functions and facilities into a single, cohesive network. Using a combination of federal grant funds, legislative appropriations and agency funding, the state developed a new system infrastructure and purchased mobile and portable radios for all state and local public safety users. And in Minnesota, the state transportation department financed half the cost of a new statewide communications infrastructure, partly through general obligation bonds and partly with monies from the state's highway fund. The other half of the capital costs came from a 911 surtax collected on all wired and wireline telephone lines.

### ***Infrastructure Requirements***

While funding for new standards-compliant communications equipment is essential, an often overlooked component of these system implementations is the underlying infrastructure that must be in place to support them. For example, new Federal grant funding has been made available for 42 counties in southeastern Kentucky to improve the effectiveness of law enforcement through the deployment of wireless technology equipment. However, no funding provision was made for infrastructure such as cell towers or satellites to support the new devices. Unless additional funding is secured, the state will have to come up with the necessary funding to build and maintain the infrastructure.

States are increasingly taking a lead role in establishing and maintaining public safety wireless communications systems to enable multiple agencies to communicate within and across departmental or jurisdictional boundaries. Open architecture and standards, expanded radio spectrum allocation, better planning and coordination, innovative funding approaches, and an understanding of the infrastructure requirements are all critical to achieving the goal of wireless communications interoperability.

### ***Role of the State CIO in Achieving Interoperability***

With an enterprise view of technology, state chief information officers have emerged as key members of their state's homeland security and first responder teams. Homeland security and

emergency preparedness and response are natural extensions of the state CIO's role, particularly as it relates to the communications infrastructure that supports public safety in the detection and response to threats and incidents.

As mentioned above, a key component of achieving public safety communications interoperability is effective planning and coordination. State CIOs are typically responsible for developing and maintaining the statewide communications infrastructure that supports multiple public agencies and institutions, and should be an integral part of any IT planning and coordination process. As skilled communicators, consensus builders and change managers, state CIOs are uniquely positioned to facilitate these collaborative planning efforts and provide a roadmap for all to follow. In addition to this facilitation role, CIOs can help establish and enforce a statewide wireless communications architecture and standards.

In my own experience in Kentucky, I have seen first hand how critical this compliance function is. My responsibilities as Commonwealth CIO include reviewing and overseeing large and integrated IT projects and systems for compliance with statewide strategies, policies and standards, including alignment with the Commonwealth's business goals. The CIO also prioritizes and approves capital planning IT items across the Commonwealth and chairs the Enterprise Architecture and Standards committee to ensure that IT systems are compatible. These authorities enable me to move the statewide enterprise toward integration and commonality, and to reap the benefits of increased efficiency, reduced redundancy, reduced costs and greater service to citizens.

#### ***States' Perspective on the Value and Role of the SAFECOM Program***

Over the past few years, NASCIO has worked closely with a number of federal wireless interoperability entities including the Public Safety Wireless Network (PSWN) – a jointly sponsored program of the U.S. Department of Justice and the U.S. Department of the Treasury – and the National Task Force on Interoperability (NTFI), a National Institute of Justice-sponsored coalition of 18 national associations representing state and local elected, appointed and public safety officials.

Since its inception in 1996, the PSWN program has provided states with access to a wealth of resources and solutions ranging from outreach and education strategies with stakeholders, to start-up assistance for state interoperability executive committees (SIECs), to support for statewide system planning and implementation efforts, to documenting and sharing best practices. In addition to directly supporting numerous state initiatives, PSWN's interactive web site, *Public Safety WINS: Wireless Interoperability National Strategy*, enables public safety officials to view policy and technical solutions and other resources related to managing interoperability challenges. The site provides an overview of interoperability within each state and describes local or regional activities and success stories. As the NASCIO representative on the PSWN Executive Committee, I can personally attest to the positive impact of the PSWN program on state public safety communications interoperability efforts.

Similarly, the recent NTFI collaboration initiative produced a number of instructive documents aimed at educating state and local policy makers on the topic of public safety communications interoperability. The final NTFI report, entitled *Why Can't We Talk?: Working Together to*

*Bridge the Communications Gap to Save Lives*, highlighted many of the success stories from around the country and relied extensively on PSWN program data and materials. Otto Doll, Chief Information Officer for the State of South Dakota, represented NASCIO on the task force and the development of South Dakota's statewide radio system was not only documented in the NTFI report, but is also identified as a "best practice" on Public Safety WINS.

An effective national public safety wireless communications program must provide leadership, technical guidance and funding support. At a recent PSWN Executive Committee meeting, we were briefed on the priorities of the SAFECOM program and the role of the PSWN program within the new SAFECOM construct. I was encouraged by the emphasis on developing a national interoperability strategy, providing a technical architecture for an integrated national system, coordinating all Federal interoperability grant programs, and creating a national training and technical assistance program to help fund demonstration projects and pilots.

States will benefit from a clearer definition of the components of the SAFECOM program and a better understanding of their role in developing an adaptable national public safety communications infrastructure. We urge SAFECOM officials to build on the strong foundation and relationships that have been established through the PSWN and NTFI initiatives and continue to reach out to the state and local officials through their various national organizations.

### **Conclusion**

In conclusion, Mr. Chairman, let me reiterate NASCIO's recommendations for achieving public safety communications interoperability. Congress should:

- Support the use of flexible and open architectures and encourage all public safety agencies to purchase systems and equipment that conform to national standards;
- Allocate sufficient radio spectrum for public safety use to reduce or eliminate congestion and interference from other public and commercial users;
- Encourage states to play a lead role in developing a coordinated approach to achieving interoperability by establishing statewide interoperability executive councils, or similar governing bodies, representing all stakeholders to make decisions about and oversee the implementation of strategic wireless initiatives;
- Ensure that all federal funding programs for first responder communications equipment is spent effectively and efficiently through the coordination of statewide or regional plans. In other words, support funding requests that work to achieve interoperability and reject those that do not include interoperable solutions; and
- Look to the state CIOs to help facilitate collaborative planning efforts at the state and national level and establish and enforce communications architectures and standards.

Every day the lives of American citizens and the public servants charged with keeping them safe are jeopardized as a result of problems associated with public safety wireless communications interoperability. Achieving interoperability requires solving a number of administrative and

technical issues including the need for increased funding, open standards and greater public safety spectrum allocation. The goal, however, remains simple – providing communications systems and equipment that will allow public safety responders to communicate and share information with other peer responders using the radio or mobile data terminal with which they are equipped. Accomplishing this goal will require better planning and coordination at the local, state and national levels. NASCIO stands ready to help lead the charge for improving the nation’s public safety communications infrastructure. Thank you.