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TESTIMONY
COMMITTEE ON GOVERNMENT REFORM
SUBCOMMITTEE ON NATIONAL SECURITY, EMERGING THREATS, AND
INTERNATIONAL RELATIONS
SUBCOMMITTEE ON TECHNOLOGY, INFORMATION POLICY,
INTERGOVERNMENTAL RELATIONS AND THE CENSUS
HON. CHRISTOPHER SHAYS, CONNECTICUT, CHAIRMAN
HON. ADAM PUTNAM, FLORIDA, CHAIRMAN
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Rayburn House Office Building, Room 2154

Good morning and thank you, Mr. Chairman and Members of the Subcommittee for the invitation to speak to you today. I appreciate your interest in SAFECOM and am grateful for this opportunity to address the important issue of public safety interoperable communications before you.

Public Safety Background

Inadequate and unreliable wireless communications have been an issue plaguing the local, tribal, State, and Federal public safety community for decades. By definition, communications interoperability refers to the ability of public safety agencies to talk across disciplines and jurisdictions via radio communications systems—to exchange voice, data and/or video with one another on demand, in real time, when needed. From the 1920's, when two-way radio communication began, spectrum was allocated as needed with little planning and no consideration of cross-jurisdictional interoperability. As observed in the National Task Force on Interoperability (NTFI) report released in February 2003, almost all public safety communications were originally confined to the low end of the frequency range. But as technology improved and increasing numbers of agencies began to set up radio communications systems, more radio spectrum was required and transmission at higher frequencies became both necessary and technologically possible. Hence, the Federal Communications Committee (FCC) assigned frequencies in different bands, offering a temporary solution for congestion and crowding. The result is that public safety currently operates in ten separate bands, which has contributed to the fragmentation that characterizes public safety spectrum today and the consequent lack of public safety interoperability. On-going problems related to interference, overcrowding, and proprietary solutions still hamper the most effective use of the limited and fragmented public safety spectrum.

Spectrum issues are not simply technical problems requiring engineering solutions. Policies surrounding the use of spectrum—a limited resource sought by competing

private and governmental interests—restrict public safety’s ability to use it more efficiently. For example, in 1997, Congress allocated 24 MHz of spectrum in the 700 MHz band specifically to public safety. Unfortunately, most of the 700 MHz spectrum allotted to public safety is blocked by television broadcasts on channels 63, 64, 68, and 69, especially in major metropolitan areas. These television stations are permitted to stay in the 700 MHz band until 85 percent of the households in their market areas have televisions capable of receiving digital television (DTV) signals. Currently only 14 percent of the current television sets in the U.S. are capable of receiving DTV signals. Despite allocation of this spectrum to public safety, no set date for the transfer of this spectrum has been established that would require existing users to vacate the 700 MHz band and – under current legislation – none can be set until 85% of the viewing audience in a coverage area is able to receive digital format broadcasts. The result is that public safety is unable to make use of this much-needed spectrum, on which lives may depend in daily public safety operations, and in the next disaster.

The fragmentation and limited availability of spectrum are just two of the many issues that make public safety communications interoperability difficult to achieve. Others, such as those cited in the NTFI report – including incompatible and aging equipment, limited and fragmented funding, limited and fragmented communications planning, limited equipment standards, and a lack of coordination and cooperation among public safety agencies – further reduce public safety’s ability to achieve interoperable communications.

SAFECOM Approach

The lack of public safety interoperability is clearly a long-standing, complex, and costly problem with many impediments to overcome. While several government programs have made great strides in addressing this issue, much of this work has been disconnected, fragmented, and often conflicting. In an effort to coordinate the various Federal initiatives, SAFECOM was established by the Office of Management and Budget (OMB) and approved by the President’s Management Council (PMC) as a high priority electronic government (E-Gov) initiative. The mission of SAFECOM is to enable public safety nationwide (across local, tribal, State, and Federal organizations) to improve public safety response through more effective and efficient interoperable communications. SAFECOM recognizes that before interoperability can occur, reliable, mission-critical, agency-specific communications capable of meeting day-to-day operational needs is a sine qua non. SAFECOM, accordingly, is addressing the intricately related issues of reliable day-to-day public safety communications as well as the more specialized issues related to communications interoperability.

Unlike many other E-Gov initiatives, the solution to the problems of public safety communications and communications interoperability—short of a major overhaul of how spectrum is allocated and managed in this country—is not a single, nor even a particular *set*, of discrete tasks. There are no simple solutions. Instead, the identification and orchestration of existing programs is required.

For SAFECOM to accomplish its mission, a systematic approach will be employed, and will include the following components:

- Identification of the problem, recognizing that it is a simple problem with many complex elements and no single solution.
- Collaboration with the leadership of the public safety community, especially at the local and State level, to gather comprehensive communications requirements in order to develop appropriate work packages. (This is essential since 90% of the public safety infrastructure is owned by State and/or local public safety entities.)
- Identification of current initiatives addressing interoperable communications issues and development of a coordination strategy to leverage existing work, while decreasing unnecessary duplication of efforts.
- Implementation of a strategy to develop short- and long-term projects addressing public safety communications and communications interoperability requirements.

By leveraging the knowledge and expertise of the public safety community, and by integrating other programs addressing this same issue, SAFECOM has already saved time and money in identifying the key issues, needs, and existing efforts. For example, by adopting a process already underway in the public safety community to develop a statement of requirements for interoperability, SAFECOM was able to release \$500,000 allocated for that effort to other purposes. The efforts of the Federal Emergency Management Agency (FEMA), in recognizing the key leaders for this issue in the public safety community, engaging them in a strategic dialogue, and establishing the governance structure for SAFECOM have provided an essential foundation for the program. It became clear, however, that to address many of the problems, a technical capability would be necessary to deal with issues such as spectrum, standards, and the development and incorporation of emerging communications technologies. As the Department of Homeland Security (DHS) stood up, the Science and Technology Directorate (S&T) became the obvious home for SAFECOM. At S&T, SAFECOM is building on FEMA's foundation work and developing strategies to address immediate public safety communication needs while creating a long-term migration strategy that will produce more spectrally efficient systems.

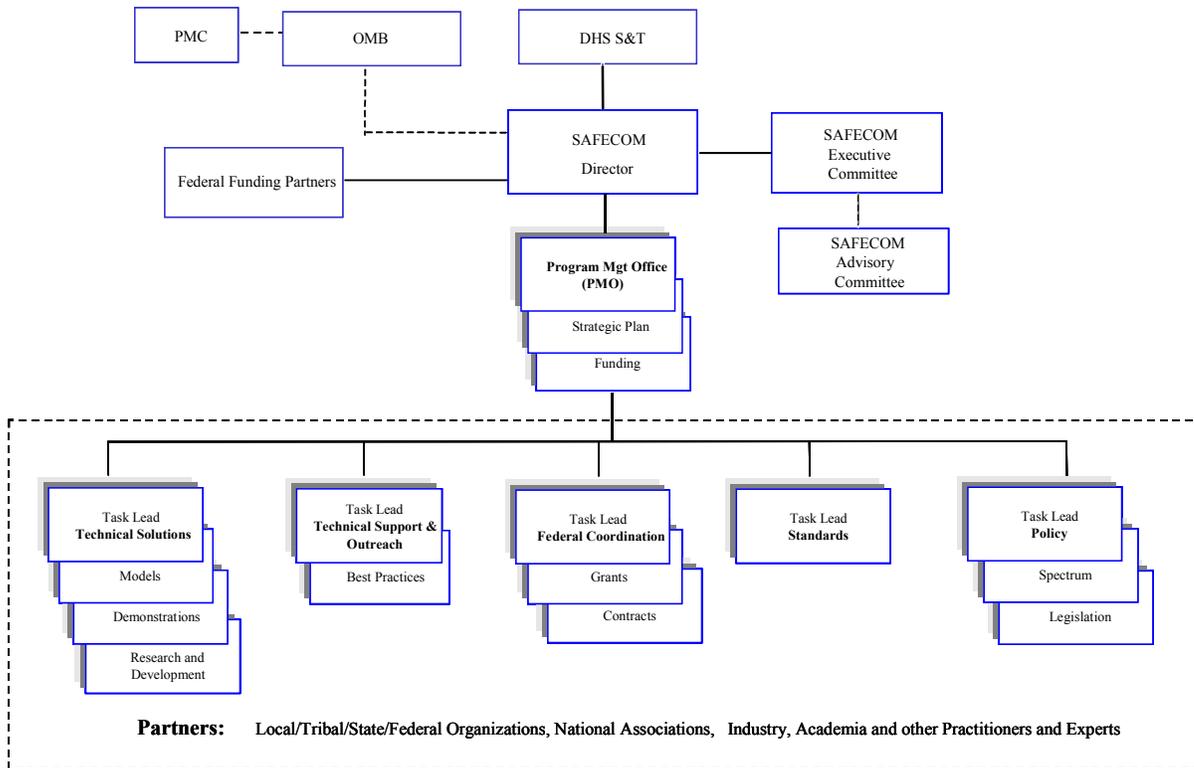
SAFECOM Governance

It is essential that a program which touches on systems managed by state and local public safety agencies be acceptable to those who rely on them. SAFECOM, therefore, has been designed as a program that works directly with public safety personnel, so that it is a genuinely *public safety practitioner driven program*, SAFECOM is working with existing Federal communications initiatives and key public safety stakeholders to address the need to develop better technologies and processes for the cross-jurisdictional and cross-disciplinary coordination of existing systems and future networks. The scope is

broad. The customer base includes over 44,000 local and State public safety agencies and organizations. Federal customers include over 100 agencies engaged in public safety disciplines such as law enforcement, firefighting, public health, and disaster recovery.

As a result, SAFECOM has developed a governance structure that incorporates these diverse stakeholders. Below is a chart representing SAFECOM’s governance structure followed by a list of organizations represented in its Executive Committee. SAFECOM is leveraging the collective knowledge and expertise of the leadership of the national public safety associations to ensure that the projects pursued are inline with the communication needs of public safety practitioners.

SAFECOM Governance Structure



SAFECOM Executive Committee Membership

Organization
Association for Public-Safety Communications Officials-International, Inc. (APCO)
Department of Homeland Security (DHS) Science & Technology (S&T)
DHS

Department of Justice (DOJ)
Federal Law Enforcement Wireless User Group (FLEWUG)
International Association of Chiefs of Police (IACP)
Major Cities Chiefs (MCC)
National Sheriffs' Association (NSA)
Major County Sheriffs' Association (MCSA)
International Association of Fire Chiefs (IAFC)
National Association of Counties (NACo)
National Governors Association (NGA)
National League of Cities (NLC)
Office of Management and Budget (OMB) (Ex-officio)
United States Conference of Mayors (USCM)
Public Safety At Large Representative

To serve its diverse customer base, SAFECOM is also uniquely situated to draw upon the experiences of other Federal programs engaged in public safety communications work in order to promote improved technologies, standards, and policies. For example, SAFECOM is currently working in partnership with the AGILE Program of the Office of Science and Technology of the Justice Department to create a comprehensive public safety communications Statement of Requirements. Additionally, SAFECOM and AGILE have partnered with the Office of Community Oriented Policing Services (COPS) and FEMA to develop a collaborative grants database that will assist funding agencies in deconflicting public safety communications grants. Another exemplary SAFECOM partnership is with the National Institute of Standards and Technology (NIST) Office of Law Enforcement Standards (OLES). Through this partnership, SAFECOM is supporting the testing of Project 25 radios for standard compliancy.

Long-term Initiatives

How do we solve the interoperability issue? The answer is not simple and there is no one-size-fits-all answer. An integrated solution will require a long-term coordinated effort between local, State and Federal stakeholders, coupled with a large capital investment and a willingness to embrace needed changes in policies. To begin to scope the framework for interoperable communications, SAFECOM identified four core focus areas in which to concentrate in order to achieve interoperability across the Nation.

- Develop a technical foundation.** The sheer size and diversity of the public safety community, coupled with the billions of dollars invested in existing communication systems, requires that SAFECOM create a framework from which to best pursue interoperability while retaining backwards compatibility with legacy systems. The technical foundation on which SAFECOM begins to develop a system-of-systems approach requires leveraging the ever-increasing changes in technology through increased research, development, and testing. SAFECOM will further work to define the requirements for interoperability and develop the

standards that will both guide industry as it creates solutions and guide localities and States as they purchase them. This will ensure that the technologies that provide the ultimate framework for interoperability are mainstream, scalable, and standards based. To this end, SAFECOM will evaluate and validate new technology concepts through mid-term demonstration projects in order to foster acceptance of them within the public safety sphere.

- **Provide policy recommendations.** Spectrum policy is an essential issue in the public safety communications arena. Unfortunately, local and State public safety representatives are frequently not included in spectrum policy decisions, despite their majority ownership of the communications infrastructure and their importance as providers of public and homeland security. SAFECOM will hence play a key role in representing the views of local and State stakeholders on spectrum issues within the Federal government. Recently, SAFECOM was appointed to the White House Spectrum Task Force to contribute such views and will help SAFECOM become more integrated in spectrum policy decisions. Through the recent creation of the Federal Coordination Council (Council), SAFECOM will continue to coordinate the policy efforts of various federal agencies on issues related to spectrum, grants, technical assistance, and a variety of other topics to further represent and promote the views and needs of State and local public safety.
- **Coordinate funding assistance.** To ensure that Federal money is efficiently spent and does not inadvertently create stovepiped systems at the local and State levels, SAFECOM will help the Federal government tie grant funding for public safety communications planning, equipment, training, and assistance to consensus grant guidance. This guidance will include standards and requirements to ensure that localities and States are taking into account broader interoperability needs and purchasing appropriate interoperable solutions. In addition, information about best practices, grant funding, and equipment purchases will be made available to the public safety community through a central repository.
- **Provide technical assistance.** Planning for, implementing, training on, and maintaining public safety communication systems are major tasks requiring resources many public safety agencies don't have. Hence many localities and States will need technical assistance to achieve the goal of interoperability. While there are various Federal efforts providing assistance to local and State agencies, SAFECOM will serve as a coordinator of these initiatives as it supports the development and promulgation of coordinated best practices (including ways to improve spectrum efficiency, guidance on effective governance structures, and ways to leverage mutual assistance agreements), handbooks and publications, and technical support methodology in the implementation of communications systems.

Short-term Initiatives

With these long-term goals in mind as part of an overall framework for interoperability, we have begun short-term initiatives that promote improved communications and interoperability by funding innovative demonstration projects, testing and evaluating equipment for interoperability, pursuing better spectrum management policies and technology, coordinating grant guidance across the federal government, and identifying and promoting best practices. At a strategic planning meeting on May 30th 2003, SAFECOM took the advice of its stakeholders and began work on five short-term initiatives. These efforts are in line with the broader long-term goals listed below, but provide shorter term results in the improvement of public safety communications and interoperability. Below is a listing of current and completed SAFECOM projects that highlight immediate ways to promote enhanced communication and interoperability.

- **Coordinate Funding Assistance**

In FY 2003, SAFECOM developed grant guidance in line with the needs of public safety for use by Federal programs funding public safety communications equipment to State and local agencies. COPS, FEMA, and the Office of Domestic Preparedness (ODP) incorporated this guidance into their public safety communications grants. This guidance marked the first coordinated approach to funding requirements. In further support of the coordinated grant process, SAFECOM organized and funded the peer review process for the joint grant solicitation from COPS and FEMA. SAFECOM also supported the NIST Summit on Interoperability that was the first step towards identifying all the Federal and national programs involved in public safety communications so that a broader coordination effort can continue.

SAFECOM, along with the AGILE Program, assisted FEMA and COPS in coordinating their grant administration processes by supporting the development of the beta version of a database clearinghouse on communication grants. This Grants Clearinghouse will help eliminate unnecessary duplication of funding and evaluation efforts; deconflict the application process; maximize the efficiency of limited funding and resources within the Federal agencies; track progress over time as to the amounts of funding, award recipients, and historical progress of interoperability goals; and begin data collection for eventual incorporation into lessons-learned documents.

In FY 2004, SAFECOM will continue supporting NIST's effort to identify Federal programs involved with public safety communications and create a catalogue of programs to enhance public safety's access to the program's resources. Additionally, SAFECOM will improve and incorporate its grant and funding guidance across all Federal-funding initiatives targeted at improving public safety communications, while releasing the public safety grant database to such agencies to begin data population.

- **Technology Development**

In FY 2003, SAFECOM will complete the initial draft of a Statement of Requirements (SoR) for public safety communications. This SoR is the first comprehensive document on the functional requirements for public safety communications, and will serve as SAFECOM's basis for its technology efforts. SAFECOM has also issued a Request For Information (RFI) to gather input from industry on current technologies available or under development to enhance interoperability. At the same time, information on current technologies is being collected through "vendor days" in which companies can present their ideas to SAFECOM staff. Through the RFI and vendor days, SAFECOM can ascertain what technologies and products exist so that the program can more specifically focus on promoting the acceptance of such technologies through demonstration projects.

SAFECOM has already begun supporting such demonstration projects by collaborating with the Department of Justice's (DOJ) 25 Cities Project. Through this collaboration, SAFECOM is assisting the State and local agencies in the predetermined 25 cities by funding interoperability solutions in these major metropolitan areas. SAFECOM's reach, however, extends across all geographic areas, as is exemplified in the funding of a demonstration project in the base of the Grand Canyon with the Havasupai Tribal Nation. With no communications infrastructure accessible, SAFECOM is supporting the use of technologies to improve the Tribe's communication capabilities. SAFECOM's reach also extends beyond land mobile radio systems, as it looks toward other forms of communication, including wireless data sharing. In this vein, SAFECOM supports the Capital Area Wireless Integrated Network (CapWIN) demonstration project that exhibits model governance structures and technology implementation for multi-disciplinary and multi-jurisdictional data sharing. Based on CapWIN's success to date, SAFECOM plans to promote the CapWIN model to other areas around the country as an example of how to incorporate new technologies into emergency communication systems. Such demonstration activities will continue in FY 2004 through the release of a Broad Agency Announcement (BAA) soliciting applications for public safety communications interoperability demonstration projects.

Upon the release of the completed SoR for public safety communications, SAFECOM will participate in the International Symposium on Advanced Radio Technologies (ISART). Participation in ISART affords SAFECOM the opportunity to help shape the direction in which the advanced radio technology research community is heading by providing the needs and requirements of public safety. SAFECOM also will draw upon ISART as a means to further define the direction that SAFECOM pursues in its research and development initiatives.

- **Policy Recommendations**

In addition to the demonstration projects and development of a research agenda, SAFECOM is concurrently serving in another, highly important role as the representative for State and local public safety on the White House's Spectrum

Policy Task Force. As the only representative for State and local needs, SAFECOM will continue to provide the Task Force with information and views from the State and local communities.

- **Technical Assistance**

And finally, in the near-term, SAFECOM is developing an interoperability information portal that will provide information to public safety agencies through an integrated, central site. This site will serve as a one-stop shop for public safety agencies. Specifically, the site will also include tools such as a “scorecard” that will be used to identify and track public safety’s progress on interoperable communications. Much of this type of education and outreach will leverage the work of the former Public Safety Wireless Network program, which has now been absorbed by SAFECOM.

Conclusion

The many obstacles facing public safety interoperability make it a complex problem with no one-size-fits-all or quick solution. Flexible and dynamic resolutions are necessary to combat the unique challenges presented by distinct localities and States. SAFECOM has made significant progress in achieving a number of its short-term goals and thus working towards its mission and establishing itself as the umbrella program within the Federal government coordinating with local, tribal, State, and Federal public safety agencies to improve public safety communication and interoperability, but much remains to be done. SAFECOM, with its partners, is working towards a world where lives and property are never lost unnecessarily because public safety agencies are unable to communicate.