



Testimony of Mel Maier  
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Before the Subcommittee on Emergency Preparedness, Response, and Recovery  
Committee on Homeland Security  
United States House of Representatives  
"20 Years After 9/11: Examining Emergency Communications"  
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## **Introduction**

Good afternoon Chairwoman Demings, Ranking Member Cammack, and members of the subcommittee. I am Mel Maier, a Captain in the Oakland County, Michigan Sheriffs Office. Currently, I am the Commander of the Emergency Communications & Operations Division. As Commander, I am responsible for overseeing our radio and 911 emergency communications and manage our Operations Center. I have been a sworn law enforcement officer for more than 31 years and have significant experience with and insight into emergency communications technology and policy challenges.

I am pleased to testify before your subcommittee to discuss the current state of emergency communications. I intend to offer my own firsthand knowledge of the current state of emergency communications and considerations for future progress. The Sheriff of Oakland County, Michael J. Bouchard, is a member of the Major County Sheriffs of America (MCSA) and I offer my comments today on behalf of other members represented by that Association. Truly, the issues we face here in Oakland County are similar to those faced by Sheriff's offices and our colleagues in public safety agencies across the country.

The tragedy of September 11, 2001 revealed fundamental problems with communication systems used by our nation's first responders. These issues ranged from the lack of a dedicated broadband network for public safety communications to issues with interoperability and communication between radio networks and 911 systems. 20 years later, significant progress has been made to address these shortcomings. However, much more needs to be done to meet the needs and expectations of the American people in the 21<sup>st</sup> century. Thank you for the opportunity to share my perspective on these critical issues.

## **Radio Communications**

Since 9/11 more advanced radio features and usage policies have improved resiliency and system capacity and led to more and better coordination between first responders. The ability to communicate and coordinate via radio networks is essential no matter the type of incident we are responding to, whether it is a highway crash, an active shooter, a wildfire, a hurricane, or a terrorist attack. APCO Project 25 standards and the P25 CAP program have improved interoperability. Specific features such as advanced trunking, dedicated event talk groups and both encrypted and clear channels for Law Enforcement, Fire, Emergency Medical Service, and Emergency Management have improved how we use the radio technology. Funding from the Department of Homeland Security's Urban Area Security Initiative Program (UASI), dedicated to interoperability, has been pivotal in providing resources to improve infrastructure and field responder devices. In addition, tabletop and field-based exercises have been effective in identifying gaps between communication systems and in establishing better operational policies.

However, barriers to radio communications technology growth and interoperability still exist. Vendor solutions often introduce new features and (at times mandatory) upgrades to P25 systems

that impede or defeat any interoperability gains. There is still a lack of coordination and interoperability among agency communication systems and varying levels of system maturity including the continued reliance upon legacy proprietary systems. Increasing costs and decreased federal investments have made support for radio communications harder to maintain.

Additional federal funding would be helpful in improving overall radio communications capabilities, and in helping agencies implement technology that can bridge different communications networks. Public safety grade networks have become increasingly popular targets for cyber-attacks, and sustainment of these systems will require more ongoing costs to support cybersecurity protections. Systems need to advance to be able to share voice and data to increase first responder situational awareness. We should also consider adopting standardized encryption key management features to better support interoperability among first responder agencies. Additional grant opportunities and stronger grant conditions, accountability, and compliance programs for vendors might help provide the incentives needed to improve interoperability.

### **9-1-1 and Next Generation 9-1-1**

Our nation's 9-1-1 systems are critical infrastructure relied upon nationwide every day by citizens seeking assistance in a variety of life-or-death situations. Since 9/11, new 9-1-1 technology called Next Generation 9-1-1 (NG-9-1-1) has been developed to address long standing issues with our legacy 9-1-1 systems. This technology offers improvements to a wide range of issues that affect emergency response times and capabilities.

Many of the 9-1-1 networks across the United States have not kept up with advances in communications technology and, in large part, are based upon technology dating back to the 1960's. Legacy 9-1-1 systems are built on old copper landline systems and Public Safety Answering Points (PSAP) are often not able to accept and process texts, images, videos and other modern data formats. Additionally, 9-1-1 systems have become popular targets of ransomware and denial of service cyber-attacks by malign actors. These cyber events have taken entire 9-1-1 systems offline, threatening emergency response times and risking public safety.

Jurisdictions across the nation have begun to transition to Next Generation 9-1-1 systems to match capabilities first responders are receiving from FirstNet. NG-9-1-1 systems can acquire and integrate additional information useful to handling 9-1-1- requests, like photos, videos and location data and support sharing information related to 9-1-1 requests for emergency assistance among emergency communications centers and emergency response providers.

However, without Federal funding, many jurisdictions will not be able to transition to this new technology. This will create a patchwork of "haves" and "have nots" creating sub-optimal responses and uneven capabilities throughout the United States. Some 9-1-1 centers will achieve NG 9-1-1 while others, especially those in rural areas, will not have the means.

As a founding member of the Public Safety Next Generation 9-1-1 Coalition, the Major County Sheriffs of America, together with the International Association of Chiefs of Police, International

Association of Fire Chiefs, Major Cities Chiefs Association, Metropolitan Fire Chiefs Association, National Association of State EMS Officials, and National Sheriffs' Association is advocating for a one-time commitment of \$15 billion in Federal grant funding to support a nationwide transition to NG-9-1-1. MCSA strongly believes this once in a generation investment will allow the successful deployment of NG-9-1-1 nationwide, improve emergency response, and save lives.

### **FirstNet—Nationwide Public Safety Broadband Network**

The 9/11 Commission Report recommended establishing an interoperable nationwide broadband network dedicated solely to first responders. The public safety community, encouraged by the 9/11 Commission report, worked together to advocate for Congress to pass legislation establishing a reliable, dedicated, and nationwide high-speed network solely for first responders. In 2012, Congress passed the Middle-Class Tax Relief and Jobs Creation Act which allocated \$7 billion and 20 megahertz of broadband spectrum to establish a network for the nation's first responders. It also established the FirstNet Authority, an independent entity, within the Department of Commerce, to ensure the buildout, operation, and maintenance of that network.

Today, public safety utilizes FirstNet to support a wide variety of emergency incidents, including hurricanes, wildfires, search and rescue missions, and many other small and large multi-jurisdictional responses. Since the network's creation, coverage and capacity have consistently improved. Public safety agency costs have been reduced. Deployable communications assets have been dedicated to FirstNet users across the nation. The FirstNet Authority is looking further ahead toward 5G connectivity for public safety. It is also working to facilitate Land Mobile Radio (LMR) to LTE interfaces to provide complementary services when field responders need extended network coverage. Overall, the nationwide deployment of Band 14 for public safety is moving at a rapid pace.

The success of FirstNet ultimately depends on continued investment in the development of reliable coverage and capacity throughout the United States. FirstNet should continue to ensure the security of public safety data and ensure secure information exchange. FirstNet should continue to engage and consult directly with public safety and support the Public Safety Advisory Committee and look for opportunities to reduce costs to public safety. FirstNet should also continue to develop direct-mode mission critical push-to-talk to provide first responders reliable voice communications using the network and prioritize FirstNet core development.

### **Integrated Public Alert & Warning Systems**

The Integrated Public Alert & Warning System (IPAWS) from FEMA has simplified the public notification system and improved the ability to quickly reach more of the public. IPAWS provides the public with information related to immediate safety issues, information related to recovery efforts, and links and direction to gain additional assistance or information. The system also supports multiple languages, which is critical when serving diverse populations. During the

COVID-19 pandemic, we utilized IPAWS to provide information on health orders and recommendations, as well as testing and vaccination information. We have also utilized IPAWS to successfully engage the community on missing and wanted person alerts through Amber and Silver Alerts.

There are many opportunities to upgrade the national emergency alerting system. Current IPAWS systems do not work on older cellular devices. IPAWS should continue to better integrate and leverage IP based systems including integration into Next Generation 9-1-1 systems, to provide messages outbound and inbound to Emergency Communications Centers over a secure and reliable network.

Thank you for the opportunity to address you today and I welcome any questions you may have.