National Public Safety Telecommunications Council (NPSTC)
Full NPSTC Meeting by Teleconference
January 21, 2016

Welcome and Opening, Doug Aiken, NPSTC Vice Chair. Doug Aiken, Vice Chair, National Public Safety Telecommunications Council (NPSTC), called the meeting to order at 1:00 pm ET. Participants were asked to send a record of their attendance to attend@npstc.org. He welcomed new representatives to the Governing Board.

- Association of Fish and Wildlife Agencies (AFWA): Ted Leinhard is the new alternate representative.
- International Association of Chiefs of Police (IACP): Eddie Reyes is moving from alternate to primary. Thomas Roche will be the new IACP alternate.
- National Association of State Technology Directors (NASTD): Charlie Sasser is moving from alternate to primary. Nick Cadena will be the new NASTD alternate.
- National Association of State Foresters (NASF): The new primary in Anton Damm. Joe Schaefer will serve as the NASF alternate.
- National Sheriffs Association (NSA): The new primary is Paul Fitzgerald. Aaron Kennard will become the NSA alternate.

Federal Partners Update
Department of Homeland Security (DHS), Office for Interoperability and Compatibility, John Merrill, Director. Mr. Merrill discussed a recent live demo on the Internet of Things (IoT) capabilities and the capacity to improve first responders' situational awareness during emergencies. The scenario, built by Chris Johnson, Huntsville, AL, featured a chlorine spill to demonstrate how sensors could facilitate emergency response. The Department of Homeland Security Science and Technology Directorate (S&T) launched the Incident Management Information Sharing (IMIS) pilot to harness the capabilities of Internet of Things (IoT).

S&T is working with the Integrated Justice Information Systems (IJIS) Institute and the Open Geospatial Consortium (OGC) to investigate, develop, and test candidate architectures, components, and relevant standards using lightweight sensors and to develop new or enhanced open standards or profiles for interfacing with these sensors. The IoT pilot project is designed to explore technologies and standards for integrating and exchanging data from a variety of sensor types, including physiological monitors, vehicle geospatial position trackers, mobile video cameras, laser rangefinders, and others.

A scenario and several use cases have been developed to simulate an incident where fire, law enforcement, and emergency medical units would deploy, discover and integrate diverse sensors and platforms to gain situational awareness. The IMIS IoT pilot project is expected to produce initial specifications, profiles, best practices, and demonstration designs for connecting sensors and response information systems into an IoT network that is based upon open standards.

OIC continues to focus on its Next Generation First Responder (NGFR) APEX program. Mr. Merrill suggested those interested acquire a DHS account to keep up with various projects, updates, and after action reports on DHS-OIC projects.

Department of Homeland Security (DHS), Office of Emergency Communications (OEC), Chris Essid, Deputy Director. Dusty Rhodes reported for Mr. Essid on OEC projects. From a public safety feedback, OEC has identified areas where OEC can prioritize efforts for public safety including supporting strong governance, enhancing interoperability with DHS and across other federal agencies, establishing dedicated grant funding, and supporting urban areas in pre-event planning. OEC has developed a plan that is being reviewed to address each of these areas. The National Governors' Association (NGA) Policy Academy kicked off in January to develop best practices on governance structures. OEC, working with Chris Lewis, Department of Interior, provided recent support to the Common Channel Naming Working Group on access to the National Telecommunications and Information Administration (NTIA) regarding federal interoperability channels.
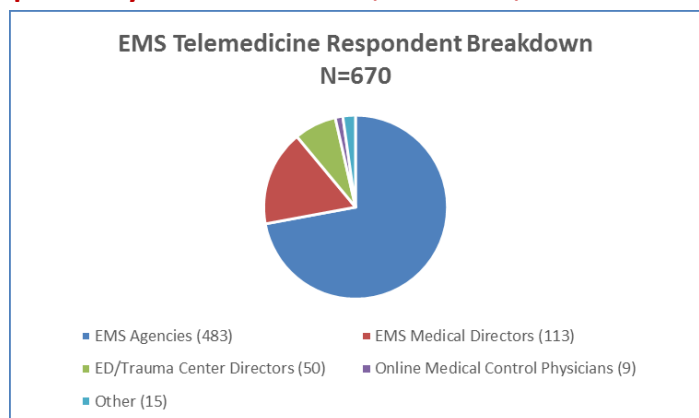
FirstNet NPSBN Development

FirstNet, Kevin McGinnis, FirstNet Public Safety Board Member. Chief McGinnis reported on a FirstNet milestone--the issuance of the FirstNet RFP seeking partners to build the National Public Safety Broadband Network (NPSBN). FirstNet continues to consult with public safety and will ensure the contract awardee delivers the best possible network for public safety. Important dates to remember: Questions on the RFP should be submitted by February 12; capability statements should be submitted by March 17; and RFP proposals are due on April 29. The FirstNet expects to make an award by November 1. There is a link to the RFP on the FirstNet homepage with an explanatory video.

FirstNet staff has visited every state and territory in its initial consultation efforts. Consultations were followed by an aggressive data search for state capacity and needs regarding data communications. Last month FirstNet sent its consultation package to all the states and territories.
The 2016 goals include expanding outreach and education, obtaining state and territory input, and preparing key decision makers for network deployment. The information gathered will be used to inform the state plans. Chief McGinnis noted the excellent work of the Public Safety Advisory Committee (PSAC) under the guidance of Chief Harlin McEwen. The PSAC completed its 2015 taskings which supported much of the FirstNet RFP. The PSAC has three new taskings in 2016: local control, identify management, and Public Safety Communications Research (PSCR) research and development.

Interoperability Committee, John Lenihan, Interoperability Committee Chair; Don Root, Vice Chair

Emergency Medical Services, Paul Patrick, Chair. Mr. Patrick provided some highlights of the EMS Telemedicine Questionnaire. The questionnaire includes various scenarios and perceived corresponding data needs such as video by a variety of EMS providers, doctors, and hospitals. The Working Group is completing its final report for Governing Board approval. The EMS Working Group met earlier in January for a meeting featuring Chief

EMS Telemedicine Respondent Breakdown
N=670

- EMS Agencies (483)
- EMS Medical Directors (113)
- ED/Trauma Center Directors (50)
- Online Medical Control Physicians (9)
- Other (15)

McGinnis discussing video for EMS as it relates to FirstNet.

Cross Border Working Group, Steve Mallory, Working Group Chair. The Cross Border Working Group developed an outreach report on best practices regarding cross border mobile and portable radio use based on recent agreement between the U.S. and Canada. Public safety is awaiting FCC and Canada action on licensing recommendations for cross border base station placement. The Working Group is updating progress on cross border frequency assignments, noting there has been significant improvement in this area since 2012. An emergency vehicle border crossing best practices document will be developed. Pre-vetting of first responders on both sides of the border works effectively. The Working Group has scheduled presentations to hear updates from the Border Interoperability Demonstration Project Grant (BIDP) agencies.

They are also reviewing a recent data sharing incident at the border. A U.S. citizen drove into Canada and roamed onto a Canadian cellular network and was threatening suicide. The Windsor, Ontario, police PSAP contacted the U.S. cell carrier and requested assistance. The U.S. cell carrier advised they could not release any account information or GPS data to a "non-U.S. authorized entity." The person needing assistance was located using other means. There are several parallel events that would impact public safety agencies on both sides of the border. The Working Group has asked selected U.S. and Canadian carriers about these data sharing prohibitions. The FCC also held a conference call with the Windsor, Ontario, PSAP to gather additional information.

Encryption on Interoperability Channels, Don Root. The need for better encryption management has been discussed at a recent SAFECOM meeting and DHS-OEC is finalizing a report on encryption. There are ongoing discussions about whether interoperability channels should be encrypted since federal agency users are required to use encryption. The Interoperability Committee is going to discuss this in greater detail and bring a report to the Governing Board at the March IWCE meeting. Previously, there has been a general consensus that encryption should not be used on interoperability channels.

Common Channel Naming ANSI Standards Update, Don Root. The final draft of the Association of Public Safety Communications Officials – International (APCO) American National Standards Institute (ANSI) Channel Naming Standard 2015 document is currently with APCO. APCO posted the document for a public comment period which ends on February 8. The Common Channel Naming Working Group also completed the best practice naming methodology recommendations for state mutual aid channels and is working on the document to accompany those recommendations.

VMED28 Use by Bureau of Land Management (BLM), Chris Lewis, Department of the Interior. Mr. Lewis reported the Department of Interior has secured secondary use authority from the NTIA and the FCC to use both VMED28 and VMED29 to communicate with local agencies during a medical emergency. The issue arose when a wildland fire management officer announced the BLM was assuming control of use of VMED28. These channels can be used to connect a life flight rescue with responders on the ground. Mr. Lewis affirmed the BLM has access to these channels, but not control. Chief McGinnis asked what would happen when a local hospital is using that channel. Mr. Root said originally VMED28 was allocated for hospital and ambulance communications in the 60s and is still used in some regions. Mr. Root said NPSTC would recommend the Statewide Interoperability Coordinators (SWICs) work to mitigate any potential conflicts.

Spectrum Management Committee, David Buchanan, Chair; Stu Overby, Vice Chair
Mr. Buchanan provided an update regarding ongoing issues currently being worked in the Spectrum Management Committee including the 4.9 GHz Further Notice of Proposed Rulemaking (FNRPM), the T-Band followup and report refresh, follow-up work on the 700 MHz incumbent relocation, and follow up work on the Project 25 CAP. The Committee is also monitoring LightSquared testing results, Cellular Power Flux Density, and spectrum and drafting assistance to the Unmanned Aircraft Systems (UAS) and Robotics Working Group.

Federal Communications Commission (FCC) Public Safety Answering Point Architecture Task Force, Bob Brown, NPSTC Representative. Mr. Brown was unable to make the call**.** Mr. Luke reported the FCC Task Force will have a public meeting on January 29 to approve the final report, which is a merger of the three individual working group reports. Chief Aiken noted the Governing Board, APCO, and NENA have received the Task Force paper for FCC approval. The FCC is considering additional work for the Task Force following the completion of this report.

Federal Communications Commission (FCC) Filings, Stu Overby. Mr. Overby reported on NPSTC filings in 2015. There were 24 filings, most to the FCC but several to the FirstNet. This is double the number of filings done in previous years. There has been progress on NPSTC's discussions with LightSquared. Work continues on the T-Band report update. There have been two new filings since the November meeting: On December 9, NPSTC filed Comments to the FCC on the 700 MHz Incumbent Relocation, and on December 31, NPSTC filed Comments to the FCC re the AT&T Waiver Requests in Tennessee and Kentucky.

Federal Partners Update Continued
Federal Communications Commission (FCC), David Furth, Deputy Bureau Chief, Policy and Licensing Division, Public Safety Homeland Security Bureau (PSHSB). Mr. Furth reported on recent activities at the FCC. The issue of 4.9 GHz proceeding is a high priority item at the Bureau, which they had hoped to circulate at the end of the year. The Bureau will issue the Further Notice of Proposed Rulemaking (FNPRM) soon.

The Bureau has provided an update on new procedures with Canada related to cross border communications and roaming. A year ago the FCC and Industry Canada (IC) signed a statement of intent, available on the FCC website, updating the roaming processes from the 1952 agreement. The statement updates the provisions to remove barriers and the need to issue permits for cross border roaming with handheld mobile and portable units. This was released in 2014; the Bureau is now working on a Public Notice (PN) in coordination with the State Department and IC to provide guidance to public safety agencies on that revised agreement. Mr. Furth expects it to go out in early spring.

There is work ongoing to streamline the use of interoperability channels between federal and non-federal entities. Non-federal entities may seek access to federal interoperability channels and vice versa. In 2014, Bureau staff began working with NTIA staff to reduce regulatory barriers that were impeding interoperability. Re federal access to non-federal frequencies, NTIA has approved changes in its federal user manual to allow access provided the federal user has approval from the licensee. This will not require FCC coordination. The FCC has not made rules changes to put this process into effect because this action does not conflict with current FCC rules. Regarding non-federal access to federal channels,

the FCC has agreed to streamline procedures to allow the SWICs to coordinate non-federal access in each state, eliminating the need for concurrence letters by individuals. The SWICs will develop a MOU to establish rules for federal access. NTIA is developing model language for the SWICs. The Bureau will issue a PN to announce changes. There is consensus that these are major advances in support of interoperability.

The Bureau recently circulated an Order for Commission consideration on the National Public Safety Planning Advisory Committee (NPSPAC) Notice of Proposed Rulemaking (NPRM) that proposed all digital equipment comply with Emission Mask H when operating in 800 MHz band NPSPAC channels and that all mobile and portable radios be capable of FM analog operation on UHF, VHF, and 800 MHz mutual aid channels.

Clarifications and technical corrections to the vehicular repeaters Order adopted in August 2015 were issued in December, with final rules published on January 15, 2016. The Order is effective after 60 days. The Bureau will issue a PN on when it will accept applications using the coordination guidelines submitted by the Land Mobile Communications Council (LMCC). Regarding issues relating to FirstNet, the Bureau is proposing rules for addressing state opt out requests and will act on FirstNet's request for action on the 700 MHz narrowband incumbents and the grant program to support relocation for those incumbents.

Technology and Broadband Committee, Tom Sorley, Committee Chair; Andy Thiessen, Vice Chair, Michael Britt, Vice Chair

Public Safety Communications Research (PSCR), Dereck Orr, Division Chief. Mr. Orr updated the group on recent PSCR activities. The FCC auctions for AWS3 raised enough money to transfer funds to NTIA and an additional $2 million to PSCR. PSCR has continued to add staff including a senior prize architect to create and execute various prize competitions. There is also an open standing grant program through the National Institute of Standards and Technology (NIST) allowing PSCR to accept grant applications in any of their research focuses. PSCR has been facilitating focused conversations on mission critical voice communications with FirstNet, NPSTC, and the PSAC which will continue to occur beginning in March. Mr. Orr said the PSCR analytics roadmap report is being written now with an analytics roadmap meeting in May.

PSCR will attend IWCE and is offering registration for time slots to discuss particular subject areas the PSCR covers during IWCE. The June PSCR conference will be June 7-9 in San Diego, CA, at the Hardrock Hotel. PSCR has sent invitations to NPSTC's Governing Board, the PSAC, and FirstNet. Reserve rooms as soon as possible.

Broadband Working Groups Update, Michael Britt. The LMR to LTE Broadband Working Group has already has met twice and the Emerging Broadband Technologies will host their kick-off meeting next week. The Unmanned Aircraft Systems (UAS) and Robotics Working Group will meet on February 10. Many new individuals have signed up for these Working Groups and the Committee is excited about these new projects.

Motion and Vote: Charlie Sasser, NASTD, moved to confirm Michael Britt as the Chair of the new Unmanned Aircraft Systems (UAS) and Robotics Working Groups. Lloyd Mitchell, Forestry Conservation Communications Association (FCCA), seconded the motion. Approved.

3rd Generation Partnership Project (3GPP) Standards Update, Andy Thiessen. Mr. Thiessen discussed 3GPP updates. The initial gap analysis on LTE's ability to meet public safety requirements found direct mode capability and efficient group communications were of most importance for mission critical push-to-talk (PTT). Release 12 focused all efforts on completing direct mode communications. LTE now has proximity services, which allow devices to communicate directly absent infrastructure. Public safety was also a priority in Release 13 which focused on the standardization of mission critical push-to-talk (PTT) over LTE service. Three SDOs, the Open Mobile Alliance (OMA), European Telecommunications Standards Institute (ETSI), and 3GPP all collaborated on this work. Work on Release 13 is still ongoing.

Work in 3GPP occurs in three stages beginning with requirements; architectural issues from a systems design perspective; followed by protocol design, which includes security and remaining issues. SA6 is focused on the application architecture of public safety applications. They had reached stage 2 by December 2015, with work continuing on stage 3 of mission critical PTT. Mr. Thiessen expects this work to complete by March 2016. The governments of South Korea and the United Kingdom are putting pressure on 3GPP to complete this work for them to deploy mission critical PTT.

Release 14 will standardize a number of aspects that would be applicable for mission critical needs beyond PTT such as group management, location identification, identity management, configuration management, and areas that would apply to video and data and any mission critical applications. 3GPP is looking for those things that occur in common, "common core services capability," allowing public safety to use one type of capability for all services, talk, video, and text. In release 14, 3GPP is standardizing all dimensions of mission critical video capability including video from vehicles, fixed locations, and on responders.

The French government is leading an effort in mission critical data. SA6 will be meeting in Japan in several weeks. SA6 is also ensuring public safety has a stake in 5G, including what it really means and the potential for overhauling radio access technology (RAN) and the evolved packet core (EPC).

Topical Presentation
LightSquared, Jeff Carlisle, Executive Vice President for Regulatory Affairs and Public Policy. Mr. Carlisle briefed the group on current issues with LightSquared. In December 2015, the company emerged from bankruptcy. They have reached settlements with Garmin on terrestrial communications. LightSquared has asked the FCC to apply power conditions agreed to as conditions of their license. LightSquared appreciates NPSTC's involvement and feedback on public safety needs. They continue to engage with NPSTC to learn from the public safety community how the company can use satellite services as public safety backup. LightSquared has a great deal of experience in integrating terrestrial and satellite communications. They have the "smart" program, which allows any satellite user with their equipment to talk to another with the same equipment. They have also have facilitated cross border communications.

New Business
Chief Aiken asked for volunteers to serve on the NPSTC Executive Task Force which needs a replacement member for Bill Brownlow who retired last year. The Task Force will be reviewing NPSTC's strategic plan in the spring. Paul Gilbert, American Association of State Highway and Transportation Officials (AASHTO), volunteered to serve.

Ms. Ward discussed the IWCE agenda which is very full this year. NPSTC will send a list of presentations to the Governing Board on where and when these presentations will occur including sessions on the EMS report, the T-Band, and broadband. Ms. Ward said IWCE has added many agenda items to Friday, which previously was more of an open day and now competes with the time set for the Governing Board meetings.

Adjourn
The meeting adjourned at 2:48 pm ET.