The member organizations of the National Public Safety Telecommunications Council are grateful to the Department of Homeland Security’s Science and Technology Directorate, Office for Interoperability and Compatibility (OIC) and the National Protection and Programs Directorate, Office of Emergency Communications (OEC) Points of view or opinions expressed are those of the originators and do not necessarily represent the official position or policies of the U.S. Department of Homeland Security.
Welcome

Ralph Haller, NPSTC Governing Board Chair

NPSTC is a federation of organizations whose mission is to improve public safety communications and interoperability through collaborative leadership.
NPSTC Mission Statement and Objective

• The National Public Safety Telecommunications Council is a federation of public safety organizations whose mission is to improve public safety communications and interoperability through collaborative leadership.

• NPSTC pursues the role of resource and advocate for public safety organizations in the United States on matters relating to public safety telecommunications.
NPSTC Committee Structure

NPSTC Organization Chart

For your convenience, all listed organizations or groups are hyperlinked to their respective site pages.

- **Liaison Organizations**
  - FCC, FEMA, FPIC, NTIA, OEC, OIC, PSCE, SAFECOM Program, US DOI, US DOJ, University of Melbourne CDMPS

- **Governing Board Organizations**
  - AASHTO, ARRL, AFWA, APCO, FCCA, IACP, IAEM, IAFC, IMSA, NASCIO, NASEMDO, NASF, NASTD, NCSWIC, NENA, NSA

- **Associate Organizations**
  - CITIG, UTC

- **Affiliate Organizations**
  - ATIS, OMA, PTIG, TCCA, TIA

- **Outreach Support**
- **Executive Task Force**
  - Interoperability Committee
  - Spectrum Management Committee
  - Technology & Broadband Committee
Today’s Panel

• Ralph Haller, NPSTC Chair and Panel Moderator

• Chris Kindelspire, Chair, LMR LTE Integration and Interoperability Working Group Chair

• John Lenihan, Interoperability Committee Chair

• Don Root, Spectrum Management Committee Chair

• Barry Luke, Deputy Executive Director
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Chris Kindelspire, Chair
LMR LTE Integration and Interoperability Working Group
LMR LTE Integration and Interoperability
Working Group

• Published a comprehensive report on public safety requirements for LMR LTE interoperability.
• Currently finalizing a report providing policy recommendations for the management of MCPTT User IDs.
  • The identity of first responders is handled differently in MCPTT than in LMR or with current Push to Talk over Cellular systems.
• There are three data fields in a User Profile that track identity:
  • MCPTT User ID: Unique ID associated with a first responder, always available in the device
  • MCPTT Alias ID: Free text/unstructured data for use by the agency, is not unique
  • MCPTT Functional Alias: Designed for dynamic data flow to show the first responder’s current function (e.g. “incident commander”, “operational section chief”, “evacuation officer”, etc.)
LMR LTE Integration and Interoperability Working Group

- MCPTT Identity Data should identify a public safety user when:
  - They use PTT to call for help.
  - They press their Emergency Call Button.
  - When a sensor connected to their MCPTT device detects an emergency and calls for help on their behalf.
  - When they are communicating with their home agency.
  - When they are responding mutual aid/automatic aid to assist an adjoining agency.
  - When they are an itinerant user outside their local area.
Public Safety Internet of Things (IoT) Working Group

- Finalized a set of technical presentations on IoT and public safety IoT.
- Finalizing review of use cases which illustrate public safety use of IoT systems by law enforcement, fire, EMS and secondary responders; including interaction and data sharing with Smart Buildings.
- Highlighting common themes among the use cases; including the need for data validity, data standardization, cyber security, management and consolidation of data streams.
- This fall, will start work on an education and outreach document that will raise awareness of critical issues for public safety agencies as they consider adoption of IoT solutions.
UAS and Robotics Working Group

• Completed a second report, “Using UAS for Communications Support” which includes a supplemental document titled “UAS Communications Spectrum and Technology Considerations”
  – Approved by the Governing Board on May 30, 2018.

• Heard presentation from Texas A&M on deployment of their UAV and robotic systems to support multiple disaster events around the world.
  – All presentation are on the NPSTC You Tube channel.
UAS and Robotics Working Group (cont.)

• Shifting focus from UAS to examine public safety use of robotics systems.
  – This focus includes current civilian, commercial, industrial, governmental and military applications.

• Moved to quarterly meetings.
  – Next meeting will be on October 10\textsuperscript{th} at 12:00 p.m. ET.
Broadband Emerging Technologies Working Group

- Continuing to organize presentations on broadband technologies of interest to public safety:
  - **March**: NPSBN Policy Round Table
  - **April**: West Safety presentation on 911 Location Services and recent trials of Google’s new Emergency Location System.
  - **May**: Orion Labs presentation on advances in voice access systems including the use of “bots” to allow first responders to query data bases.
Broadband Emerging Technologies Working Group (cont.)

• Continuing to organize presentations on broadband technologies of interest to public safety:
  - **June**: Texas A&M University presentation on research designed to assess cognitive overload to first responders from too much data.
  - **July**: Harris County TX presentation on management of the applications ecosystem.
  - **August**: NPSBN Policy Round Table Discussion.
Radio PCR Working Group

- PAM Tool normalizes the disparate data fields used by manufacturers in their programming software.
- Conducting final review of PAM Tool Version 7.
  - Fully compliant with current version of NIFOG.
  - Some edits to table names for better clarity.
  - Additional information in the Instructions Tab.
- TIA is currently working on a data interchange standard to allow vendor software to export and import basic radio programming information.
Video Technology Advisor Group (VTAG)

- Meeting quarterly to discuss video technology and analytics.
- Scheduling presentations on emerging capabilities to support public safety agencies.
- Supporting the DHS Science and Technology Directorate with their Video Quality in Public Safety (VQiPS) initiative.
- Reviewing presentations from the VQiPS annual conference for lessons learned.
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Interoperability Committee

John Lenihan, Chair
Interoperability Committee

- Monitoring work in the TIA/ATIS Joint Working Group to study how mission critical public safety LTE devices will interoperate with LMR systems.
- Assisting OEC with input on the new National Emergency Communications Plan (NECP).
- Monitoring the work of the DHS S&T P25 Compliance Assessment Program (CAP).
EMS Working Group

- Joint Working Group of NPSTC and NASEMSO.
- Received several technical presentations throughout the year on a wide range of EMS communications issues.
- Published a report on Mobile Personal Emergency Response Systems (mPERS) and the impact to EMS from these sensor based alarms.
EMS Working Group (cont.)

- Finalizing report recommending that EMS agencies evaluate their procedures regarding notification to hospitals during transport of patients with time sensitive medical emergencies (e.g. heart attack, trauma, stroke, sepsis).
  - Examines policy, training, and technology areas for both EMS agencies and hospitals.
Radio Interoperability Best Practices

• Studying after-action reports to identify best practices and opportunities for improvement that should be shared with all public safety agencies.

• Recently published a master Radio Interoperability Best Practices report which includes recommendations on 13 individual public safety communications areas in addition to providing information on how agencies can achieve incremental progress.

• Continuing to monitor for additional best practice opportunities.
Radio Interoperability Best Practices

Completed Best Practices

- BP #1 – Nationwide Interoperability Channel Naming and Usage
- BP #2 – Interoperability Systems Change Management Practices
- BP #3 – Training and Proficiency in the Management and Usage of Interoperability Equipment and Systems
- BP #4 – Interoperability Relationships
- BP #5 – Infrastructure Management
- BP #6 – Channel Assignment Based on Infrastructure Coverage
- BP #7 – Interoperability Resources – After Action Reviews
- BP #8 – Radio Device Management
- BP #9 – Deployment for Interoperability Resources
- BP #10 – Communications Span of Control
- BP #11 – Managing Encryption for Interoperability Resources
- BP #12 – Radio Channel Assignment and Use Within High Risk Incident Environments
- BP #13 – Interoperability Resource Information Storage and Access
Cross Border Working Group

• Cross Border 911 Data Sharing Report
  - Provides guidance to PSAPs along the U.S. Canadian border on how to access customer account and location data that resides with a commercial carrier in the other country.
    • Also provides guidance for the management of calls which did not trigger a 911 call.
  - Final draft will be submitted to the Governing Board for approval in September.

• Monitoring DHS Cross Border CAUSE Experiments for lessons learned and identification of communications gaps.
Common Channel Naming

• Completing report that examines public safety interoperability issues with LTE Mission Critical Push to Talk

• Initial conclusions:
  – Interoperability will be managed at the state, regional and local level.
  – There will not be an LTE equivalent of 8CALL90, VCALL10, etc.
  – Interoperability talkgroups can be automatically pushed to first responder devices based on their location and changes in geography.
Common Channel Naming (cont.)

- Initial conclusions: (continued)
  - Dynamic talkgroups can be created “on the fly” to provide additional interoperability at the scene of large scale incidents.
  - There are several issues that will require regional and statewide collaboration (e.g., who creates the talkgroups, what PSAPs monitor them).
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Public Safety Spectrum is Being Targeted

- T-Band
- 4.9 GHz
- 6 GHz
Public Safety Spectrum is Being Targeted

- Section 6103 of P.L 112-96 requires FCC to begin auctioning public safety T-Band spectrum by February 2021 and clear public safety within 2 years of auction close.

- In December 2017, NPSTC formed T-Band Coalition.

- As a result of Coalition actions, H.R. 5085 was introduced February 2018 and S.3347 was introduced August 2018 to repeal Section 6103.

- Status: As of 8/3/2018, H.R. 5085 has 19 co-sponsors in the House; S. 3347 has 4 co-sponsors in the Senate.

T-Band (470-512 MHz) spectrum is allocated for public safety and industrial/business use in 11 top urban areas.
Public Safety Spectrum is Being Targeted

- FCC issued Sixth Further NPRM on 4.9 GHz in March 2018, claiming band is underutilized.
- NPRM proposes some rule changes NPSTC previously recommended.
- However, some FCC Commissioners expressed interest in reallocating and auctioning the band.
- NPSTC filed comments July 6 to set record straight on usage and importance of band to public safety
- NPSTC will file reply comments Aug 6
Public Safety Spectrum is Being Targeted

- Public safety, CII and commercial users share the 6 GHz band
- The band is heavily used for fixed microwave links.
- Tech companies are promoting sharing the band for unlicensed WiFi.
- NPSTC set forth need to protect public safety operations.
- FCC Chairman advised plans for NPRM on band sharing for this fall.
How To Connect With NPSTC

Barry Luke, Deputy Executive Director

NPSTC is a federation of organizations whose mission is to improve public safety communications and interoperability through collaborative leadership.
• NIIX
  - A free centralized, secure warehouse to store and share National Repository and community documents.
  - A website with tools to allow easy collaboration, communication, and sharing of information within communities.
  - Locally controlled.
Social Media Outreach

• Outreach and Distribution
  - Constant Contact
  - NPSTC Website
  - NPSTC Blog
  - Linked-In
  - Facebook
  - Twitter
  - Coordinate with industry and member publications
  - Broadband Directory
NPSTC Reports

- Reports located on NPSTC website, www.npstc.org
  - Radio Interoperability Best Practices
  - EMS Response to Sensor Based Alarms
  - Broadband Data Implications for EMS
  - T Band Report Update
  - 4.9 GHz National Plan Recommendations
  - UAS Communications
  - Public Safety LMR LTE Interoperability Report

Recently Published Reports

- Interoperability
  - EMS WG Sensor Based Alarms (December 11, 2017)
  - Radio Interoperability Best Practices Reports (multiple)
  - NPSTC/NASPAO Broadband Data Implications for RuralEMS (May 17, 2017)
  - Ten Reasons You Need to Be Engaged with FirstNet (September 13, 2016)
  - Cross Border One Pager (August 4, 2016)
  - Interstate Channel Naming Practice (June 13, 2016)
  - EMS Teleradiology Report (March 5, 2016)
  - Cross Border Communications: Barriers, Opportunities, and Solutions for Border Area Emergency Responders (March 11, 2016)

- Spectrum Management
  - T-Band Update Report (May 31, 2019)
  - NPSTC 4.9 GHz National Plan Recommendations (October 2013)
  - NPSTC T-Band Report (March 2013)
  - Best Practices for In-Building Communications (November 2007)

- Technology and Broadband
  - Using UAS for Communications Support (May 30, 2019)
  - UAS Communications Spectrum and Technology Considerations (May 18, 2018)
  - NPSTC Public Safety LMR LTE Interoperability Report (January 8, 2019)
  - Guidelines for Creating a UAS Program (April 16, 2017)
  - NIST Video Networks in Public Safety (VAPS) Final Report (NIST IERM, January 2017)
  - FirstNet Local Web Status Page Report (December 2, 2016)
NPSTC Participation Sign Up

"NPSTC is a federation of organizations whose mission is to improve public safety communications and interoperability through collaborative leadership"

In the News...

NPSTC Files Comprehensive Comments to FCC on 4.9 GHz Band
July 10, 2018

APCO Seeks Comments on Draft Public Safety Grade Site Hardening Requirements Standard
June 29, 2018
Questions (…..and answers)

Ralph Haller, Moderator
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Thank You!

Stop by our Booth # 656 on the Exhibit Floor

Next Governing Board Meeting via Teleconference:

Thursday, September 6, 2018
1:00 PM Eastern Time Zone