



- All sessions will take place in Westminster Ballrooms I, II, and III
 - Ad hoc and ancillary meetings to take place in Westminster Ballroom IV
- Presentations can be found at <http://www.pscr.gov/agenda.php>
- All sessions will include dedicated Q&A time.

Session 1a: PSCR 700 MHz Public Safety Broadband Demonstration Network Test Results

Speakers: Emil Olbrich, PSCR; Kameron Behnam, PSCR

Description: Since the fall of 2010 through the spring of 2013, PSCR has been working with their 70+ CRADA partners to develop and execute tests on 700 MHz Band 14 LTE. The test regime consisted of three phases of testing originally (only Phase 1 & 3 was officially executed). The culmination of Phase 3 testing has created the much-anticipated results from EPC and RAN interoperability testing (IOT), advanced drive testing and LTE ↔ LMR interference testing. We will also discuss many of the “unplanned tests” that were discovered along the way.

Session 1b: Network Planning vs. Real World Results—Demonstration Network Drive Testing

Speakers: Emil Olbrich, PSCR

Description: The use of high-resolution clutter information, advanced network planning models and tools allowed the PSCR team to create very detailed coverage maps of the Boulder test bed. Additionally, PSCR drove test the network hundreds of times, in different settings, with different vendors – how well does the prediction match the reality?

Session 2: Addressing Public Safety’s Most Pressing Issues

Moderator: Jeff Bratcher, PSCR

Panelists: Dereck Orr, PSCR; Steve Fletcher, NTIA; Admiral Ron Hewitt, DHS OEC; Bill D’Agostino, FirstNet; Dr. David Boyd, DHS OIC

Description: PSCR’s research and development priorities are in large part determined by communications gaps identified by the public safety community. PSCR’s practitioner-driven approach is focused on stakeholder input and collaboration. In order to facilitate such dialogue, this session will be informed by comments solicited by PSCR from conference participants. Panelists will address common questions and concerns, as well as general Q&A.

Session 3a: Nationwide Modeling and Simulation

Speakers: Nada Golmie, PSCR; Richard Rouil, PSCR; Camillo Gentile, PSCR

Description: This session is focused on the modeling and evaluation of LTE in support of the public safety communication requirements and the nationwide broadband network. Topics to be covered include: modeling assumptions such as user count and location; user applications and performance metrics such as coverage, throughput, and cell loads; performance trends for coverage; capacity; cell site count and load will be highlighted and discussed. Sample simulation results for select day-to-day and incident scenarios will also be presented.

Session 3b: PSCR 700 MHz Public Safety Broadband Demonstration Network Lessons Learned

Speakers: Emil Olbrich, PSCR; Dr. Robert Stafford, PSCR

Panelists: Samuel Gomez, PSCR; Jonathan Cook, PSCR; Christopher Redding, PSCR

Description: PSCR deployed the first 700MHz Band 14 LTE network nearly 3 years ago. Since that time PSCR now has the most comprehensive interoperability test lab in the world for LTE RAN and EPC. Implementing a new technology in a new band and integrating multiple vendors created many challenges for the PSCR test team. Learn how non-trivial network upgrades are, how much damage a squirrel can do and what we learned on the way.

Session 4: Traffic Flow Modeling

Moderator: Nada Golmie, PSCR

Panelists: Todd Early, Texas DPS; Andrew Seybold, Andrew Seybold, Inc; Robert Lopez, RCC Consulting; Tony Chadney, FirstNet Consultant

Description: This panel session is dedicated to discussing the assumptions and parameters needed to develop so-called “traffic models” to characterize public safety user applications. Since there are many public safety user applications (mission voice, mission video, data, message exchange, etc.) and operation scenarios (day-to-day, incident), there are many models to consider. Example traffic models documented by practitioners and the public safety community will be reviewed and discussed. In addition, the effects of traffic model parameters on the overall network performance will be highlighted.

Session 5: Public Safety Broadband Requirements

Moderator: Tom Sorley, City of Houston

Panelists: Andrew Thiessen, PSCR; Stephen Devine, Missouri DPS; John Contestabile, NPSTC; Pamela Montanari, NPSTC; Gordon Shipley, UK Home Office

Description: Public safety has been developing user requirements to help guide their use of communications for years. Recently, public safety has focused on broadband communications requirements given the recent developments with the creation of the First Responder Network Authority. This panel will provide details on the most recent requirements efforts, as well as provide a forecast for future requirements development efforts with the National Public Safety Telecommunications Council's Broadband Working Group.

Session 6: Public Safety Broadband Security

Presenter: Nelson Hastings, PSCR

Description: The Public Safety Communications Research (PSCR) program is establishing security research and testing efforts to support the public safety community. The goal of the efforts is to provide the public safety community with practical cyber security information to meet their current and future needs. To maximize the impact of the PSCR's efforts, the public safety community is asked to provide feedback to PSCR on areas of priority in order to focus the security research and testing efforts appropriately. This session will provide an overview of the initial PSCR security research and testing efforts in Long Term Evolution (LTE) standards development, secure application development, outreach to the public safety community, and examination of public safety requirements from a cyber security perspective. In addition, the presentation will include an overview of risk management frameworks for information system security and the influence of public safety requirements.

Session 7: FirstNet Public Safety Advisory Committee (PSAC)

Panelists: Harlin McEwen, PSAC Executive Committee; Chief Bill McCammon, PSAC EC; Paul Patrick, PSAC EC; Heather Hogsett, PSAC EC; Tom Sorley, PSAC EC

Description: The five members of the FirstNet Public Safety Advisory Committee (PSAC) Executive Committee (EC) will provide a brief overview of recent events related to the PSAC and provide time for PSCR Conference participants to ask questions relative to the PSAC.

Session 8: Public Safety Broadband Applications

Moderator: Jeff Bratcher

Panelists: Todd Early, Texas DPS; Jeff Cohen, APCO Int'l; Peters Suh, FirstNet Consultant

Description: This panel session is dedicated to discussing public safety specific broadband applications currently in use, and the future efforts to develop broadband applications specifically for public safety practitioners. Examples of applications currently in use within the Texas Public Safety LTE network will be shared, while APCO will discuss their recently announced Application Community "AppComm". Finally, the current efforts for the creation of FirstNet specific broadband applications approach will be described.

Session 9: NTIA State and Local Implementation Grant Program (SLIGP)

Panelists: Laura Pettus, NTIA; Mike Dame, NTIA

Description: The Department of Commerce's National Telecommunications and Information Administration (NTIA) is in the process of evaluating applications for the State and Local Implementation Grant Program (SLIGP). SLIGP is a formula-based, matching grant program to assist States, regional, tribal, and local jurisdictions to plan for and consult with the First Responder Network Authority (FirstNet) on the nationwide public safety broadband network.

Key grant activities include updating existing governance bodies and statewide communications interoperability plans (SCIPs), coordination with local and tribal governments, prioritization of rural engagement and coverage, education and outreach, and identification of potential network users.

This session will provide an overview of the SLIGP program, coordination activities with FirstNet, and the status of SLIGP grant awards.

Session 10: DHS Office of Emergency Communications (OEC) Stakeholder Technical Assistance

Speakers: Richard Reed, DHS; Brian Hobson, DHS; Keil Green, DHS Consultant; John Saboe, FirstNet Consultant

Description: The Office of Emergency Communications (OEC) within the Department of Homeland Security is the Nation's lead agency on coordinating emergency communications policy and support for public safety. Within the area of public safety broadband technology, OEC is engaged in a number of coordination activities including support for the DHS Secretary's participation on the FirstNet Board, facilitation of the FirstNet Public Safety Advisory Committee (PSAC), development of the NPSBN Cyber Infrastructure Risk Assessment, support for implementation of *Executive Order 13616 - Accelerating Broadband Infrastructure Deployment*, as well as direct technical assistance provided to State and local agencies at no charge.

In this presentation, OEC will focus on technical assistance support that is currently provided and planned on public safety broadband. Specifically, this will include tools and workshops designed to support States with their preparation for consultation with FirstNet. OEC will demonstrate and provide results from past TA deliveries on:

- **Mobile Data Survey Tool:** A web-based tool to collect information on current use of mobile data by public safety including providers, device type, cost, and applications. Over 800 agencies have submitted information to date.
 - **Frequency Mapping Tool:** Web-based reporting tool designed to display potential RAN sites based on frequency license data from the FCC.
 - **CASM NextGen:** OEC will be releasing an enhanced version of the Communications Asset Survey Mapping tool, which currently has data from over 48,000 agencies Nationwide. The expanded tool, to be released later this summer, is designed to allow collection of public safety broadband data on RAN sites and backhaul.
 - **Coverage Objectives Workshop:** One-day workshop designed to review GIS data collected by OEC to develop baseline coverage objectives based on public safety operational needs.
 - **FirstNet objectives:** Mr. Saboe will discuss FirstNet's initial views of SLIGP phase 1 and phase 2 data collection. He will review some of the critical information needed to start and to complete the state network plans as well as services the states might leverage as they prepare for SLIGP grant release and state consultations with FirstNet.
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Session 11: Public Safety Standards Development

Moderator: Andrew Thiessen, PSCR

Panelists: Peter Reed, FirstNet Consultant; Sheila Frankel, PSCR; Andrew Thiessen, PSCR

Description: Public safety has chosen 3GPP's Long Term Evolution (LTE) as their broadband technology of choice. With the creation of the First Responder Network Authority (FirstNet), FirstNet is now directly participating in the development of standards in 3GPP to ensure that LTE, and its future technology evolutions, can meet or exceed public safety's communications needs. This panel will provide details on the most recent standards development efforts, as well as provide information about the next steps in standards development for FirstNet.

Session 12: Global Public Safety LTE

Moderator: Andrew Thiessen, PSCR

Panelists: Dr. Barbara Held, BDBOS; Tony Gray, P3 Communications; Geoff Spring, APCO Australasia; Chief Michael Sullivan, CITIG

Description: In order to be successful in having selected a global technology (LTE) as the next generation public safety communications platform, public safety has to unite on a global level to demonstrate that there is a worldwide market for LTE products that meet public safety's needs, rather than a country-by-country approach. This panel will provide an opportunity for current global government initiatives for public safety LTE to speak about where each government is currently at, and the coordination necessary to ensure that public safety maintains a united, coordinated front when working to ensure that LTE meets public safety's needs.

Session 13: Local Control & Management

Moderator: Emil Olbrich

Panelists: Terry Schmidt, Cisco; Patrik Ringqvist, Ericsson; Kevin Jones, Samsung

Description: Public Safety has established the importance of "local control" and helped define what that means for them in a broadband network. Learn how jurisdictions can retain local control of their network operations and maintenance, LTE devices via enterprise services that are available in smartphones today, and applications and services. Learn how innovations such as, Bring Your Own Device (BYOD) have been gaining momentum in the commercial space and how they can be implemented for first responders.

Session 14: Deployable LTE

Moderator: Emil Olbrich

Panelists: Vinay Gupta, Polaris Networks; Bo Pyskir, Lemko; Doug Sharp, Oceus; Robert Andreas, Thales

Description: How can the LTE network be deployed in emergencies or for immediate tactical/emergency use? See and learn about mini-EPCs, small cells, LTE Direct, satellite backhaul and how they can all be used to supplement and provide LTE service for first responders. Also, learn how these deployable networks integrate into a nationwide scheme.
