



**Public Safety Advisory Committee (PSAC) to the First Responder Network Authority Meeting
September 11, 2013 (8:30 a.m. – 5:30 p.m. PDT)
San Diego Environmental Services Department, 9601 Ridgehaven Court, San Diego, CA
Meeting Summary**

Document Purpose

On September 11, 2013, the First Responder Network Authority (FirstNet) Public Safety Advisory Committee (PSAC) membership held its first daylong in-person meeting to:

- Discuss progress on PSAC activities
- Receive information and engage in discussions on:
 - The FirstNet organization's business planning, approved budget, and schedule
 - Technical briefings from FirstNet consultants regarding the Core Network, User Applications, Radio Access Network, and User Devices

There were 32 members of the PSAC in attendance at the meeting. (Please include names of participants)

This document provides a high-level summary of the meeting.

PSAC Activity Update

Chief Harlin McEwen, PSAC Chair, provided an update of current PSAC activities and discussed open action items. Specifically:

- The PSAC is organized under the Federal Advisory Committee Act as an exempt intergovernmental committee; therefore, each PSAC member is required to file a completed certification document showing eligibility to serve on such a committee.
- DHS Office of Emergency Communications (OEC) staff is compiling information gathered from the over the horizon/human factors template.
- Use case templates for law enforcement, fire, and EMS incidents will be available shortly to members for input.
- FirstNet factsheets have been completed, and a PSAC-specific factsheet is in development.
- An identity management concept paper was developed and will be distributed to members.
- A Homeland Security Information Network (HSIN) website was created as a PSAC repository and contains meeting notes and additional information only accessible to members of the PSAC and staff.
- Members are encouraged to identify available, no-cost meeting spaces for future PSAC in-person meetings.
- On September 5, the State, Territorial, Tribal, and Local (STTL) subcommittee conducted a teleconference call.

FirstNet Business Plan

Mr. Bill D'Agostino, FirstNet General Manager, discussed the FirstNet business planning, current activities, and operating plan for FY 2014. Highlights of the operating plan and the subsequent remarks by Mr. D'Agostino include:

- The focus for FY 2014 is to move the FirstNet mandate forward by:
 - **Beginning the Effort to Establish a Core network:** An expected expenditure of \$54M (of FirstNet's \$194M budget) is for development of the Core network; he stressed that significant testing and validation will occur prior to any capital expenditures.
 - **Conducting State and Tribal Outreach:** This is a major focus for the upcoming year. FirstNet is working to hire regional staff (in teams of three) that align to the existing FEMA regional structure. The FirstNet teams will serve as a liaison to public safety agencies, and will also serve as a point of contact on engineering, sales and service matters.



- **Delivering state plans, which trigger opt in and opt out decisions:** The technical plans will be unique to each state and will be built from the bottom up. FirstNet is working to define requirements regarding what it means to “opt in,” along with an accelerated process for those that are ready to work with FirstNet.
- FirstNet released several requests for information (RFI) and received responses from more than 130 stakeholders. (e.g., the partnering RFI had over 50 respondents)
- FirstNet completed a memorandum of understanding with the Public Safety Communications Research (PSCR) Program to be the lab for FirstNet.
- The strategy to address coverage where it is needed, including all metro areas and major highways and portable/transportable assets; however, this coverage would not include about 30 percent of the nation’s land area. The envisioned strategy is to fill in the areas not covered by terrestrial services by use of satellite services. The network would travel with the first responders to address the first response and subsequent network need. There is a need to inventory existing portable/transportable communications capabilities available at the local, state, and Federal levels.

FirstNet Technical Briefing

Technical Overview

Mr. Craig Farrill, FirstNet Board Member/Acting Chief Technical Officer, provided a FirstNet technical overview briefing. Highlights of his remarks include:

- The essential elements of the envisioned network include: communications, applications, services, and capabilities.
- FirstNet is bringing enormous amounts of capacity moving wireless data operations from very narrowband channels to large bandwidth capabilities.
- The Core Network is the brain and connects to the Radio Access Network (RAN), more commonly thought of as cells or base stations. Then, the effort will be to deploy the entire network across the nation and distribute devices only to public safety to enable access to the network and the provision of applications to access information.
- The network design team is working with some newly acquired, state-of-the-art tools for radio frequency (RF) engineering coverage predictions. The team is also working with OEC’s technical assistance branch to provide coverage workshops for each of the states and territories, and with Broadband Technology Opportunities Program (BTOP) grantees that signed spectrum leases with FirstNet regarding the network infrastructure and device design and capabilities requirements.
- No state is the same and there is not a one-size-fits-all model, as incidents are inherently local and the tools provided need to match local incident policies.
- Additional observations discussed included:
 - Very diverse needs and relationships exist with tribes and states
 - A continuing risk of terroristic incidents
 - Multifaceted responses heighten state’s concerns
 - First responders in many rural areas are underserved, and are the largest group in need of FirstNet’s envisioned services

Core Network

Mr. Marc Levante (FirstNet Consultant) continued the technical presentation discussing the elements of the Core network including discussing support of voice communications services, location services, and user-identity management. Highlights of Mr. Levante’s remarks include:

The various components that make up the Core network include the services layer, control mechanisms, the evolved packet core (EPC), transmission, and the data centers.

Research continues to potentially enable Mission Critical Voice (MCV) services over Long Term Evolution (LTE) networks; current research and documentation produced by the National Public Safety

Telecommunications Council (NPSTC) and the FCC includes many specifications to achieve MCV.

Commercial carriers appear to want to be able to provide mission critical voice eventually; and some



commercial suppliers have demonstrated proprietary solutions to certain aspects in very controlled environments.

Push-to-talk (PTT) over LTE and LTE interoperability with Land Mobile Radio (LMR) systems is progressing as the proof of concept is established, but how to standardize and leverage technology going forward has yet to be determined.

White papers and frequently asked questions on some hot topic items (e.g., MCV position, noncritical PTT, information regarding the continual funding of public safety LMR systems) will be developed in the future. FirstNet is looking for the best location-based services solutions in terms of ubiquity, functionality, and quick notifications regarding location; currently commercial carriers and services do not provide this type of capability.

User Applications

Mr. Peters Suh (FirstNet consultant) provided brief remarks regarding FirstNet's work with user applications, followed by a feedback session on the usability of applications by the public safety community. Highlights of Mr. Suh's remarks include:

The applications (apps) team continues to work closely with public safety representatives and associations to identify public safety oriented apps that are currently available in the public domain and are essentially being marketed by word of mouth.

FirstNet's work is embracing a non-proprietary position and embracing open standards in app development, and is cognizant that "one size does not fit all" especially when it comes to the usability of applications.

State Consultation Briefing

Mr. TJ Kennedy (FirstNet Deputy General Manager) provided a briefing about FirstNet's ongoing and upcoming state consultation efforts. Highlights of Mr. Kennedy's remarks include:

- FirstNet is actively engaged in trying to share as much information as possible and gather as much feedback as possible; this is essential to support building a network that is going to be used by public safety. The PSAC is a key part of this process.
- FirstNet continues to work through the information-sharing hurdles while pursuing its mandates to balance speed and urgency of deployment with necessary data gathering and analysis.
- Additional outreach planning is underway to support individual meetings with each state and territory.
- FirstNet will continue to push information out from the website and directly to the PSAC.

FirstNet Technical Briefings (continued)

Radio Network

Dr. Tony Chadney (FirstNet Consultant) provided a discussion regarding the work the FirstNet Technical Team is doing with regard to the RAN. Highlights of Dr. Chadney's remarks include:

- The NPSTC documents provide information regarding the coverage requirements for the public safety community; additional information and validation of these coverage requirements would be achieved through the State outreach program during the State and Local Implementation Grant Program (SLIGP) Phase 1.
- FirstNet has been building capacity/coverage planning tools to assess propagation of RF coverage using a tuned planning tool; it is critically important to have a planning tool that is accurate and there are different degrees of accuracy; FirstNet is now working to calibrate the coverage/capacity modeling tools.

User Devices

Mr. Dave Marutiak (FirstNet consultant) discussed the User Device and Ecosystems technical presentation and solicited feedback from the PSAC. Highlights of Mr. Marutiak's presentation included:

- The results of the RFI, which contained 400 specifications, had 55 respondents; the technical team is looking to share additional information with the PSAC and with BTOP grantees that are at the device



selection phase; the team is also looking for more flexibility for Band 14 standalone, multiplicity devices and is working with vendors and the FCC.

- The RFI yielded 13 responses for smartphones, nine of which were presented as confidential with most proposed devices either pre-production or prototypes; a substantial amount of work is still to be done in the smartphone and tablet category as this market category is nascent and devices are not really developed and available.
- Regarding the RFI responses for tablets, which are fixed component offerings with OEM aftermarket upgrades; there were 11 offerings, five of which were confidential and most of which were commercial offerings or military/defense repurposed, which potentially may not meet the right use case.
- Vendors offered 10 modem devices in a single form factor making it a versatile device for manufacturers; three chipset manufacturing companies exist with Qualcomm leading the pack; additionally, there is a known intermodulation issue between the Global Positioning System (GPS) band and Band 14 in the second harmonic that has the potential to interfere with the GPS band. Technical solutions are identified to address this interference issue
- The FCC is continuing to examine and compile FCC type acceptance regulations for Band 14 equipment, which affects engineering and manufacturer's progress in bringing Band 14 capable equipment to the marketplace.

Following the presentations, PSAC members engaged in a question and answer session with the presenters. The next in-person PSAC meeting is scheduled for the week of December 9, 2013.