NPSTC

NATIONAL PUBLIC SAFETY TELECOMMUNICATIONS COUNCIL

IWCE Public Safety Communications Stakeholders Forum
International Wireless Communications Expo (IWCE)

Friday, March 28, 2014 | 8:00 am – 12:00 pm PST

Las Vegas, NV

Welcome, Ralph Haller, NPSTC Chair

Ralph Haller, Chair, National Public Safety Telecommunications Council (NPSTC), called the meeting to order at 8:00 am, and welcomed meeting attendees. NPSTC has instituted a new feature allowing those on the phone to ask questions of the presenters. Participants on the phone can email attend@npstc.org and have their questions presented to the speakers. Mr. Haller thanked the IWCE staff for providing the room for the meeting. Following the roll call which established a quorum was present, Mr. Haller asked meeting attendees to introduce themselves.

Federal Partners Update

Department of Homeland Security (DHS), Dan Cotter, Director, Office for Interoperability and Compatibility (OIC): Mr. Cotter reported on recent activities at OIC. OIC will host the Video Quality in Public Safety (VQiPS) workshop in TX in May, when VQiPS will celebrate its 5-year anniversary. OIC issued their first Twitter chat via their wireless emergency alert group, with 200,000 people reached. They are also engaged with National Public Radio (NPR) on how to generate wireless messages to a wider community and have hosted a webinar on that issue. There is also research ongoing regarding alerts targeting and how to better focus alerts. OIC is hosting a series of webinars on the Virtual USA program, which is focused on information sharing.

Mr. Cotter said OIC is committed to the P25 Compliance Assessment Program (CAP) and intends to stay committed. There has been some confusion about support of the program perhaps due to the website being changed to the Lessons Learned Information Sharing (LLIS) website. OIC will also reconstitute the P25 Governance Board, and intends to also look at performance testing in response to requests from the user community.

DHS, Harlin McEwen reporting for Chris Essid, Deputy Director, Office of Emergency Communications (OEC): Chief McEwen reporting for Mr. Essid said OEC extended its thanks to the public safety community for their input into the comprehensive update of the National Emergency Communications Plan (NECP). OEC is working with the 56 states and territories on the first nationwide update of the Statewide Communications Interoperability Plans (SCIPs) to account for new technologies including broadband. OEC has hosted 35 workshops since 2013 and will provide them to all 56 states and territories by end of this year. They have created an e-SCIP online tool to make updates easier by pre-populating data and allowing for easier reporting and updates. Once the tool is fully developed and rolled out in April, it will provide a step-by-step process for the Statewide Interoperability Committees (SWICs) to prepare the SCIPs and begin the Annual Progress Report.

The FY 2014 SAFECOM grant guidance has been released. OEC works closely with SAFECOM to update the guidance to provide the most current information. SAFECOM guidance continues to evolve, stressing the need for SWICs and State Interoperability Executive Committees (SIEC). The guidance encourages grantees to participate in and prepare for Nationwide Public Safety Broadband Network (NPSBN). As in previous years, OEC developed the guidance with the participation of SWICs, focus groups, federal partners, and the Emergency Communications Preparedness Center (ECPC). The guidance is available on SAFECOM website at www.safecomprogram.gov/grant.html.

The Technical Assistance (TA) team has been active, scheduling workshops and training programs. The TA team also recently unveiled the Communications Assets and Mapping Tool (CASM) Next Gen, a dynamic new tool with a single integrated platform that manages assets, trained personnel, and TA history. The information will be useful for states as they gather information for First Responder Network Authority (FirstNet) state consultations.

Additionally, OEC is working to improve and make the Next Generation Priority Services—GETS (Government Emergency Telecommunication Service) and WPS (Wireless Priority Service)—IP based.

FirstNet, Kevin McGinnis FirstNet Public Safety Board Member: Chief McGinnis reported on recent activities of FirstNet, saying there is positive forward movement. The FirstNet has strong leadership and continues to add staff. Last week FirstNet released a strategic roadmap for the NPSBN and will release more details in the near term. Their website, www.FirstNet.gov went live last week, and includes a detailed description of the state consultation process. The next meeting will be in Boulder, CO, during the first week in June.

Public Safety Advisory Committee (PSAC), Harlin McEwen, Chair: The PSAC is beginning to be embraced as a proper advisory group. Chief McEwen said he was invited to his initial FirstNet board meeting in New York City a few weeks ago and was pleased to have an opportunity to provide the public safety viewpoint. The PSAC presented the Human Factors report to the Board, which should be on FirstNet website shortly. The report discusses how the new network may affect users as they begin to use it and how the users/operational issues may, in turn, affect the network. Chief McEwen referenced the very tragic deaths of two firefighters recently, noting that the new broadband network's data capability could have been of assistance in locating those first responders. Chief McEwen will be meeting with FirstNet's Bill D'Agostino in Washington, D.C., next week. The meeting will include governors, mayors, and city representatives where Chief McEwen will have an opportunity to explain the PSAC process. He, too, said is encouraged that the process is moving forward and speeding up.

Technology Discussion, Tom Sorley, Chair, Andrew Thiessen, Vice Chair

Public Safety Broadband Requirements, Andrew Thiessen, Chair: Mr. Thiessen reported on the most recent work of the Broadband Working Group (BBWG), which comprises multiple Task Groups and Sub Task Groups.

The Launch Statement of Requirements (SoR) Quantitative Task Group is reviewing the requirements of the Qualitative SoR and adding quantifying "numbers" to those requirements. From a number of discussions and review, the 11 Sub Task Groups developed consensus on which of the 487 requirements require quantification. From those recommendations, Mr. Thiessen will assign Task Groups to develop those numbers. He expects to merge some of the Sub Task Groups in the next stage of the process.

Chapter	Requirements
Network	56
Governance	8
SOP	39
User Services	92
Transport	47
System Design	40
User Equipment	9
Local Support	43
Migration & Evolutio	10
Security	104
Priority QOS	39
Total Requirements	487

Following the quantification effort, the BBWG will investigate prioritizing the remaining work. When FirstNet asked the BBWG to develop a Launch SoR, they also asked for SoRs for the years following, which will be broken out into the SoR Years 1-3, Qualitative; PS telephony and PS messaging (seeking to determine if public safety needs for telephony and messaging will be different from commercial needs); and the SoR Years 1-3 Quantitative. As other needs appear, the BBWG will add Sub Task Groups to investigate those needs.

Mr. Thiessen said the BBWG is making progress regarding the globalization of LTE standards. The 3rd Generation Partnership Project (3GPP) is working on Release 12. 3GPP will research the LTE equivalent of LMR. They did not include work on the concept of out of network coverage, but have included out of network communication [direct mode]. They are also working actively on requirement developments for the next 3GPP release, Release 13. FirstNet is directly engaged in two work items for Release 13, including mission critical Push-To-Talk (PTT) over Long Term Evolution (LTE). The Telecommunications Industry Association (TIA) and the TETRA Critical Communications Association (TCCA) are independently working on mission critical PTT over LTE. It is hoped TETRA requirements will be consistent with the other standards coming to 3GPP. There are partners in the United Kingdom (UK) who want to enable PTT by 2016. It is important to get all stakeholders involved. If the various efforts can be merged, then 3GPP can develop consensus on these standards. The BBWG is also beginning work on the architecture side in 3GPP SA WG2,[1] and are trying to create a normative work item started on mission critical PTT that may be able to drive work on PTT architecture.

Stu Overby, Spectrum Management, Vice Chair, asked if there is any progress on giving public safety spectrum in Europe. Mr. Thiessen said there are 27 regulators in Europe and it is difficult to convince them to give public safety a section of spectrum, although Germany supports the idea and the public safety community wants dedicated public safety broadband. In the UK, they are approaching commercial entities to provide public safety spectrum. Mr. Sorley asked if the MMES would be included in the BBWG's effort. Mr. Thiessen said the earlier Multi Media Emergency Services (MMES) work, done in 2012, will also be included in the BBWG eventually.

Pam Montanari, Co-Chair, Console LTE Task Group reported on their work, which focuses on users with wired devices, consoles, etc. The Task Group has developed use cases that will drive requirements, broken into three disciplines: EMS, fire, and law enforcement. They had a face-to-face meeting in

[1] SA WG2 Architecture is in charge of developing the Stage 2 of the 3GPP network. Based on the services requirements elaborated by SA WG1, SA WG2 identifies the main functions and entities of the network, how these entities are linked to each other and the information they exchange. The output of SA WG2 is used as input by the groups in charge of the definition of the precise format of messages in Stage 3 (Stage 2 for the Radio Access Network is under TSG RAN's responsibility). The group has a system-wide view, and decides on how new functions integrate with the existing network entities.

Boulder in February and developed 53 requirements. They are now refining them and putting them into a standard format. Where the requirements overlap between disciplines, they are considered overriding requirements. The next step will be to re-vet those refined requirements with a public safety group to ensure they are really what public safety needs. The Task Group often adds public safety users who have not been involved in the initial work to get fresh eyes on terminology and use cases, and, accordingly, they seek more volunteers for the review process. They would like to complete the work by the end of April.

Mr. Thiessen said the Public Safety Communications Research (PSCR) will hold its annual meeting in Boulder, CO, on June 3-5, 2014. Meeting details will follow.

Public Safety Grade (PSG) Report, David Buchanan, Task Group Chair: Mr. Buchanan discussed the background and need for a PSG report. Part of the development of the Qualitative and Quantitative SoRs, underlined the differences between commercial and public safety grade systems, leading to the need to define public safety grade. There is no simple dictionary definition of public safety grade. The PSG report is not a use document, but a definitional document. The process used to create the PSG report followed the standard NPSTC/BBWG process, beginning with the industry/public safety partnership, followed by review by another public safety group. Additionally, the Association of Public Safety Communications Officials – International (APCO's) Broadband Committee was simultaneously working on site hardening requirements. In an effort to avoid duplication, the APCO Site Hardening report, which describes what is needed to make a site public safety grade, was merged into the NPSTC PSG report.

The report assembled 454 best practices and requirements that address:

- Risk factors [That could take down a public safety system.]
- Environmental events, such as ice, hurricanes, wildland fires, etc.
- Service level agreements
- Reliability and resiliency [It does not define how FirstNet should accomplish this but what needs to be considered.]
- Coverage
- Push-to-talk (PTT)
- Applications [This includes detail and may become a standard.]
- Site hardening [This includes much detail and may eventually become a standard.]
- Installation [Of the site and including the best way to install equipment.]
- Operations and maintenance

Following approval by public safety review in the next week, Mr. Buchanan asked first that the Governing Board approve the report for submission to the PSAC and, from the PSAC, on to FirstNet. And, second, to send a request to APCO to seek American National Standards Institute (ANSI) standardization for the applications and site hardening sections.

Mr. Buchanan said the PSG report includes excellent material that is applicable to any agency seeking to set up an LMR system. Mr. Thiessen said his team is relying heavily on the PTT section of the PSG report to inform the work at 3GPP.

Radio Programming Compatibility Requirements (PCR) Demonstration, Pam Montanari, Working Group Co-Chair: Ms. Montanari reported on the work Radio PCR has accomplished and followed with a demonstration of how the program works. Three years ago, three police officers were killed in Florida, because one agency coming to the aid of another did not have the correct frequencies programmed into their radios. Because one switch was typed incorrectly into the radio, the radios did not interoperate. Under the leadership of Mr. Sorley and Ms. Montanari, NPSTC approved the creation of a Working Group within the Technology Committee to create an import/export tool to standardize programming information and to import and export P25 programming data. The spreadsheet includes a glossary with the different terminology manufacturers may use to refer to what are often the same fields. Last August at APCO, the Working Group did a successful radio test, communicating by using the spreadsheet to program different radios. The spreadsheet currently includes the participation of eight different manufacturers. The most important part of the process was to develop standards for the fields, populated by each of the participating manufacturers. Mandatory fields required to get a radio up and running were included, not buttons or displays, but only what is required to make a radio function.

Time and accuracy is of the essence when programming radios. One small error, particularly in trunked situations, can cause big problems. Even when a jurisdiction relies on one vendor's radios, there can be multiple models, which is quite complex for the Communications Unit Leader (COML) in an emergency. The goal has been to develop a tool to expedite the programming of information with great degree of accuracy. The software demonstrated today is at the beta stage but is quite functional already. This does not replace programming vendor specific software and does not replace the need for the COML/COMT to be intimately familiar with the radios and the programming. The spreadsheet reduces programming errors because it auto populates fields.

In the fall, the Working Group started another test round with 15 volunteers, including the Working Group, Coast Guard, and others from different levels of government. Eventually this tool could be integrated with OEC's CASM and/or be available online so responders could program radios before they get to the scene. The Working Group would also like to add screen shots of the radios eventually.

Discussion: Lt. John McIntosh, Association of Fish and Wildlife Agencies (AFWA), said he greatly appreciates this work. At the Seattle mud slide, first responders used mostly local channels, he said, suggesting the addition of the national interoperability channels to the spreadsheet would be valuable. These channels will be built into the spreadsheet at the discretion of the agency. The National Interoperability Field Operations Guide (NIFOG) will self populate, reducing the chance of error. Regarding security issues, Ms. Montanari said the spreadsheet allows pre-populated fields that could include proper authorized IDs programmed in as well. Mr. Thiessen said the spreadsheet is an excellent tool, suggesting it could be standardized and integrated into the COML program. David Eierman, Motorola Solutions, suggested the spreadsheet could become a technical bulletin rather than as a standard because standards are difficult to change. Chris Lougee, TIA, raised the issue of version control, asking if the Governing Board will be issuing revisions so the manufacturers know how to be responsive.

Ms. Montanari said the Working Group would like to release the spreadsheet soon so first responders can use it. Following Governing Board approval, the spreadsheet can be posted to the NPSTC website. Second steps will require a process for version control. NPSTC could work with OIC and OEC and add the tool as a resource on www.publicsafetytools.com website. The spreadsheet will need continued support from manufacturers. Mr. Sorley said NPSTC needs to choose a Standards Development Organization (SDO) to lock the basic dataset prior to standardization.

Motion and Vote: Aaron Kennard, National Sheriffs Association (NSA), moved to approve the PAM tool. Chief Leary seconded. Approved.

Motion and Vote: Chief McEwen moved to approve moving forward with the Programming and Management (PAM) tool. Paul Leary, Forestry Conservation Communications Association (FCCA), seconded. Approved.

Spectrum Management Discussion, David Buchanan, Chair, Stu Overby, Vice Chair

Indoor Location Notice of Proposed Rulemaking, Stu Overby: Mr. Overby reported on the FCC's Third Further Notice of Proposed Rulemaking on Wireless E911 Location Accuracy, published in the Federal Register in February 2014. Comments are due May 12, 2014; with Replies due June 11, 2014.

The FCC has proposed near- and long-term metrics for indoor location accuracy, adding a vertical axis:

- A 50-meter horizontal axis accuracy for 67 percent of 911 indoor calls within 2 years of rule adoption, increasing to 80 percent at 5 years.
- A 3-meter vertical axis accuracy for 67 percent of 911 indoor calls within 2 years of rule adoption, increasing to 80 percent at 5 years.

Comments are also sought on speed to generate location fix, reporting requirements, complaint process, etc. Chief McEwen said this is of great value to the public as well as to first responders. Mr. Thiessen added that FirstNet is already pursuing vertical location accuracy. Mr. Overby said Governing Board comments should include the value of potential applications for the public as well as first responders, support the vertical axis requirement, and encourage the FCC via industry to develop technology.

Motion and Vote: Mr. Brownlow moved to accept the filing recommendations of Mr. Overby. Lloyd Mitchell, National Association of State Foresters (NASF), seconded. Approved.

4.9 GHz National Plan Update, David Buchanan: Mr. Buchanan reported on discussions that have been held with those filing comments in opposition to the 4.9 GHz national plan NPSTC submitted to the FCC. NPSTC representatives met with Region 8 and New York City to discuss their issues. Mr. Buchanan said they may have misinterpreted aspects of the plan. They say they don't want to change legacy systems. The NPSTC plan does not suggest that and NPSTC will clarify there is no intent to do that. Another issue was a NPSTC recommendation that no more than 10 MHz be aggregated, but Mr. Buchanan said that is a regional decision. Mr. Overby said one of the concerns from those who have 4.9 plans, which number fewer than 10 nationwide, are afraid the national plan would supersede the local plan. NPSTC will clarify that issue in the ex parte filing.

700 MHz Substantial Service Filing, David Buchanan: Mr. Buchanan reminded the attendees that the deadline for state 700 MHz substantial service filings is in June. NPSTC has developed material, FAQs, spreadsheet, a sample letter, on how to make this filing, available on the web.

Interoperability Discussion, John Powell, Chair, and Pam Montanari, Vice Chair

Common Channel Naming, John Powell: Mr. Powell reported NPSTC is working in three areas: Identification of standardized channel names for 700 MHz interoperable air-to-ground frequencies; identification of channel names for additional 700 MHz interoperability frequencies [pending finalization by the FCC]; and creation of a best practices guide for naming state designated interoperability channels.) They are adding new proposed air-to-ground channels, following on the work in the State of Maryland, which is currently running on a waiver. The rulemaking should be issued in the near future.

The revised Channel Naming Guide will strip out references to pre-rebanding and pre-narrowbanding and remove references to 25 kHz channels below 512 MHz except for narrowbanded channels. Channels in 700 MHz will be added as well. The new de facto search and rescue channel used across the country will be included with a footnote that it is not an exclusive use channel for that purpose.

The Working Group is also addressing the naming of state-designated interoperability channels and debating whether it should be a standard or best practice. This is a completely different structure for naming. The channels are at the band edge of 700 MHz. Because 700 MHz is newer, naming is not restricted to an eight-character name, and can include a minimum of 10 characters, which might be the name of a state or region. In the Chicago area for example, there are three states in one region so they would use the region identifier. The addition of US would designate a national channel.

Motion and Vote: Sheriff Kennard moved that the Governing Board approve the three actions discussed above. Chief Leary seconded. Approved.

Border Issues, Barry Luke, reporting for Terry LaValley: Mr. Luke reported late breaking news from Brian Marenco, FCC, on the interpretation of the U.S./Canada 1951 treaty that will address three pending Commission briefs that should be released soon. These involve the formal acknowledgement of "portable radio" communications as being permissible in the 1951 treaty; the ability to place base stations on alternate borders to support interoperability; and the ability to place base stations on the alternate border to support local emergency operations. The FCC will issue a statement of intent on how the treaty will allow public safety to roam and sent (send?) the statement to Industry Canada (IC) for their review of the document.

U.S. and Canada representatives attended a Canada/U.S. (CANUS) meeting in Washington, D.C.; another meeting will be held in May in Ottawa. Mr. Luke thanked Mr. LaValley for his work on the East Coast and Chris Lombard for his work on the West Coast on border issues. The white paper on treaties documenting all issues and concerns from many meetings and CITIG seminars on cross border issues is in progress.

Mr. Powell introduced Claudio Lucente, Center for Security Science, who discussed the center's support to Canadian defense on broadband deployables. They are standing up a Working Group that will be

mostly concerned with use cases involving multiple deployables at a scene from different vendors, and what may happen in these cases. First they will document use cases, what kind of configurations are needed, how these deployables operate when they converge on a scene so they don't interfere with each other, and security. The Working Group would like to produce guidance on how deployables are used when they converge. They are defining objectives and are asking for volunteers through the Canadian Interoperability Technology Interest Group (CITIG) and NPSTC.

Ms. Ward asked how the information will be used. Mr. Lucente said because there is no FirstNet in Canada, the information will be held as a set of recommendations for a future entity that will be empowered as a licensee. Mr. Thiessen said he supports this work, adding that he is seeing interest in deployables in Europe as well. It was agreed that NPSTC should support this work through the Border Working Group.

Action Item: Mr. Powell will add the task to Border Working Group.

EMS Working Group, Paul Patrick, Chair: Mr. Patrick said the EMS group hosts 82 active participants, who meet by conference call on the first Monday of every month. The 2014 work plan has been approved. The Working Group is pleased to have coordinated EMS apps with the PSAC for FirstNet. In addition to investigating apps, the EMS Working Group is assisting other Working Groups by providing the EMS perspective, and also looking at trends in EMS as well as initiating outreach efforts. The meetings include an industry roundtable to keep the Working Group up to date. Chief McEwen added that Mr. Patrick, Mr. Sorley, and he are all members of the PSAC Executive Committee, which enhances the synergy of the work.

Federal Partners Update

Federal Communications Commission (FCC), Roberto Mussenden, Attorney – Advisor, Policy and, Licensing Division, Public Safety Homeland Security Bureau (PSHSB): Mr. Mussenden provided an update on recent FCC activities. He said the FCC has been heavily focused on 911, including lessons learned from the Derecho report and the rulemaking on indoor location accuracy.

He noted the deadline for 700 MHz state substantial service is approaching and said the Bureau appreciated NPSTC outreach and guidance to public safety, adding the FCC will be issuing guidance on the process as well. The vehicular repeaters item is being evaluated by the FCC now; the Bureau understands the need and issues. They are trying to move forward on T-Band issues, including decisions on the freeze. The Bureau is trying to determine a sensible approach to a complex issue. NPSTC's filing of a 4.9 GHz National Plan will be a Commission level item this year.

The Bureau recognizes there are various lingering issues regarding the 700 MHz narrowband item and understands that public safety operates in a different regulatory and budgetary timeframe than the commercial world. The 700 air-to-ground channels are part of the 700 MHz narrowband proceeding.

Mr. Mussenden thanked NPSTC for their outreach on narrowbanding, saying the outreach had great results. When the effort began there were 79,000 licenses, a number that has been reduced to 12,000, and those may be just paper licenses.

Rebanding is still on the table. Stage 1 is 99 percent complete, rebanding of the National Public Safety Planning Advisory Committee (NPSPAC) band is 93 percent done, and rebanding is 71 percent completed on the Canadian side. The Bureau is working on the Mexican border and negotiating rebanding agreements, which has become easier due to the experience gained in the rest of the country. As noted in the Border Issues Working Group, the Bureau is working with Canada to develop guidance on how to roam cross border.

Mr. Overby asked if the community will see a decision on the 6.25 kHz narrowband deadline at 700 MHz. Mr. Mussenden said that the document has left the drafters, but he does not know when the Commission will vote on it.

Adjourn Open Meeting

Motion and Vote: Mr. Brownlow moved to adjourn the open meeting. Paul Szoc, International Municipal Signal Association (IMSA), seconded. Approved.