



NATIONAL PUBLIC SAFETY TELECOMMUNICATIONS COUNCIL

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**National Public Safety Telecommunications Council  
Committee and Governing Board Meetings  
September 15-17, 2008  
Seattle, Washington**

**Monday, September 15, 2008**

**Opening Remarks, Ralph Haller, Chair, NPSTC**

Ralph Haller, Chair, NPSTC, welcomed NPSTC's Governing Board and Participants to the quarterly Governing Board meeting, held on September 15-17, in Seattle, Washington. Mr. Haller welcomed special guests Tom Black, Public Safety Canada; Cuong Luu and Karyna Drake, Office of Interoperability and Compatibility (OIC), Department of Homeland Security (DHS); Charles Hoffman, Disaster Emergency Communications Division, Federal Emergency Management Agency (FEMA); Brian Carney, Regional Emergency Communications Coordination (RECC) Working Group, FEMA; and, reporting on the teleconference bridge on September 17, Jeff Cohen, Senior Legal Counsel to the Bureau Chief, Public Safety and Homeland Security Bureau, Federal Communications Commission (FCC).

Since the last meeting, two Governing Board representatives were recognized for their achievements on behalf of public safety telecommunications. Mr. Haller announced that Chief Harlin McEwen, International Association of Chiefs of Police (IACP), received the IJIS Institute Robert P. Shumate National Public Safety and Justice Contributor to Excellence Award, an award presented to the person who has made the most valuable contribution to justice and public safety information sharing during the past year. Chief McEwen was also honored by the International Association of Fire Chiefs (IAFC) Presidential Award, presented in recognition of his dedication to public safety communications and his phenomenal leadership while working on the public safety broadband initiative. Charles Werner, Governing Board alternate for the IAFC, received an award from *Fire Chief* magazine as annual "Fire Chief of the Year," an award honoring his dedication and leadership in fire and emergency services.

Following the roll call, Mr. Haller called for a motion to approve the agenda. Paul Leary, Forestry Conservation Communications Association (FCCA), moved to approve the agenda, and George Carbonell, American Association of State Highway and Transportation Officials (AASHTO) seconded. The minutes of the June Governing Board meeting were approved by electronic vote in the interim time between meetings. The NPSTC Governing Board was pleased to welcome 13 first-time attendees to the September meeting and 24 attendees participating on the conference bridge over the 3 days.

**Regulatory Update, John Logan, NPSTC Regulatory Advisor**

700 MHz: Mr. Logan reported that the most significant issue pending at the FCC is the 700 MHz proceedings regarding the D Block auction. He said Chairman Martin appears to have placed this on the agenda for the September 25 meeting of the FCC. Issues to be considered include whether the network will be regional or national, the structure of the Public Safety Broadband Licensee (PSBL), and the narrowband relocation. The consensus is that there will be a very short comment and reply period.

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American Association of State Highway and Transportation Officials | American Radio Relay League | Association of Fish and Wildlife Agencies | Association of Public-Safety Communications Officials – International | Forestry Conservation Communications Association | International Association of Chiefs of Police | International Association of Emergency Managers | International Association of Fire Chiefs | International Municipal Signal Association | National Association of State Chief Information Officers | National Association of State Emergency Medical Services Officials | National Association of State Foresters | National Association of State Technology Directors | National Sheriffs' Association

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Part 90: Mr. Logan reported that about a year ago, there was a discussion of restructuring some of the Part 90 Miscellaneous Amendments that included VHF paging capability, access to public safety channels by private transit and toll roads, and frequency coordination matters. Clarification of the 4.9 GHz rules bears further discussion and study. M/A-COM's position is that clearly defined power limits provide better guidance than seeking to describe permitted or restricted use in the 4.9 GHz band.

Low Power Auxiliary Stations: The FCC has issued a Notice of Proposed Rulemaking (NPRM) on low power auxiliary stations operating in 698-806 MHz. Comments on WT Dockets 08-166 and 187 are due October 3. The NPRM addresses prohibiting the manufacture, import, sale, offer for sale, or shipment of devices that operate as low power auxiliary stations.

### **Federal Emergency Management Agency (FEMA) Disaster Emergency Communications Division, Charles Hoffman, Chief, DEC Programs**

Mr. Hoffman reported on FEMA's new Disaster Emergency Communications (DEC) Division that will provide tactical disaster emergency communications capabilities that includes overall responsibility for deploying, installing, operating, maintaining, and protecting telecommunications and operations assets; ensuring continuity of disaster emergency communications through FEMA Regional fixed facilities positioned throughout the nation; and supporting the disaster emergency communications needs of state and local governments.

There are 15 ESF functions that are all assigned different functions in emergency response. ESF-2 covers emergency communications. Under the new Joint Field Office (JFO) organization, DEC reports directly to the Operations Chief. Mr. Hoffman emphasized that communications will, as always, continue to be managed and operated on the local level; FEMA's role will be to support recovery, with more emphasis on tactical assistance. Formerly FEMA assistance focused on infrastructure.

Under the DEC structure, the Communications Restoration Group will be responsible for infrastructure restoration, helping the commercial infrastructure get access to their sites, for example. The Tactical Communications Group is responsible for communications command and control, acquisition, coordination and interoperability requirement in an incident. In addition to DHS/FEMA personnel, the FCC and the National Telecommunications and Information Administration (NTIA) will provide spectrum manager and communications specialists for assignment within the division. Tactical Communications to the field is broken down into these four areas of responsibility:

The Communications Interoperability Unit is responsible for the development, deployment, and maintenance of wireless system solutions. The Unit is also responsible for the establishment of a Communications Command Center and for providing interoperability. The Wireless Communications Unit, managed by FCC or NTIA personnel, is responsible for spectrum management liaison support to include: assistance in submitting frequency assignment requests, requests for Special Temporary Authority and waivers, and resolving frequency interference issues.

The Communications Operations and Coordination Unit is responsible for communications requirements and coordination, which involves receiving, validating, prioritizing, tracking, and assigning field requests for communications services. The coordination function involves maintaining operational awareness of all available federal resources and capabilities, including those deployed by DHS components through liaison with other government entities. The Communications Planning Unit is responsible for the communications resources management process. Specific responsibilities include monitoring and tracking current and anticipated communications procurement requirements and actions, as well as expenditures.

At the federal level, the DEC program comprises two branches and the regional offices. Within the Communications Integration Branch, the DEC Program Section, headed by Mr. Hoffman, manages internal and external FEMA customer and partner relationships, provides program and project management for all DEC projects and program initiatives, compiles and disseminates best practices for the DEC Division and FEMA, supports standards development, and builds the DEC Program recognition nationally. There are four sections within this branch: The Policy and Planning Section establishes policies, procedures, and plans to ensure that the DEC Division is prepared to respond and well integrated during response. The Section works to build DEC policies that describe the scope and methods for providing DEC capabilities alongside partners and to customers.

The Architecture and Engineering (AE) Section provides technical influence and oversight for FEMA's DEC capability to include fixed, transportable, and mobile equipment and systems. Building on appropriate standards recommended in the National Emergency Communications Plan (NECP) and standards bodies, the AE Section establishes FEMA DEC technical standards to build equipment standardization and system interoperability among the technical components of FEMA's DEC capability within and outside the FEMA DEC Division.

The Regional Emergency Communications Coordination Working Groups (RECCWG) National Coordinator provides headquarter-level guidance, and strategic and planning support to the 10 RECCWGs and regional DEC planning and support staff. The RECCWG National Coordinator coordinates DEC program activities with the FEMA Regional Administrators and federal organizational elements in the regions. The Coordinator oversees execution of DEC planning processes and technical support at the regional level and interfaces with other federal agencies that have emergency communications roles in the regions (e.g., OEC, NCS). The RECCWG Coordinator also disseminates national-level DEC plans and procedures, manages the headquarters RECCWG budget distribution, and serves as an advocate for RECCWG activities at the national level.

On the other side of the organization, the Tactical Emergency Communications Branch houses the Mobile Emergency Response Support (MERS) Units, managing and deploying the five MERS assets that FEMA has.

Lance Valcour, Canadian Interoperability Technology Interest Group (CITIG), noted that disasters don't respect borders and asked for comments on coordination of these types of events across the border. FEMA's primary mission is disaster recovery, but they are working in collaboration with OEC and the Federal Partnership for Interoperable Communications (FPIC). John Johnson, Regional Planning Committee (RPC) Region 39, said that FEMA has added an Emergency Support Function (ESF) 2 course individual study program to its website, but he suggested that some of the course material is focused on the federal side and may conflict with some state and local issues.

### **FEMA Regional Emergency Communications Coordination Working Group (RECCWG), Brian Carney, FEMA**

Mr. Carney reported on the RECC Working Group program, developed by Congress post-Katrina to make sure information flows before, during, and after a disaster or crisis. Before arriving at the NPSTC meeting, Mr. Carney was in Louisiana during the Hurricane Gustav evacuation. The effective response today is due in large part to interoperable communications that have been developed since Katrina, he said, quoting Louisiana's Director of Emergency Management who said the "evacuation was a road paved with outstanding communications."

The RECCWG is responsible for finding ways to effectively coordinate multijurisdictional, multi-agency emergency communications networks for use during natural disasters, acts of terrorism, and other man-made disasters through the expanded use of emergency management and public safety

communications mutual aid agreements. The RECC Working Group will coordinate with diverse communicators, including state interoperable communications councils/committees, ham radio operators, local broadcasters, and cable operators.

The RECC was established under Title XVIII legislation that requires membership from non-federal and federal representatives. Non-federal reps need to include state officials, local government officials, including sheriffs, state and local police departments, local fire departments, public safety answering points, state and local emergency managers, homeland security directors, or representatives of State Administrative Agencies, and other emergency response providers as appropriate. Federal representatives from FEMA, the FCC, and other federal departments and agencies with responsibility for coordinating interoperable emergency communications with or providing emergency support services to state, local, and tribal governments. Deciding who to include at the local level on the RECCs can be a problem as it may be perceived as a federal effort to dictate who is on the RECCs.

Marilyn Ward, NPSTC Executive Director, asked whether representatives are selected at the local level or if the state chooses representatives. Ms. Ward, who formerly managed ESF 2 response in Orange County (Florida), said that locally trained ESF 2s at the county level are not represented at the state level on groups like this. Mr. Carney is currently guided by state representatives, but noted that the effort is only 9 weeks old. He said in initial meetings discussions have centered around how to bring local representatives to be part of the working group. Aaron Kennard, National Sheriffs' Association (NSA), suggested that it would be more valuable for the RECCs to approach the local elected public safety representatives for their suggestions and not rely on the states. Chief Leary also noted his concern that FEMA may be missing the fish and wildlife agencies who do the work, such as ESF 2-trained personnel handling wildland fires, from participation in groups like the RECCs. He also suggested that the National Guard be added to the list of state representatives.

Don Root, Chair, Regional and Broadband Liaison Committee, said the National Coordination Committee (NCC) was initiated 9 years ago to investigate the issue of interoperability. He strongly suggested that the broad cross representation for state groups developed by that organization could be mirrored. Mr. Carney said the legislation is open to regional and local interpretation such as the involvement of the forest service, and noted that this input is important and valuable to ensure the right people are at the table. Chief McEwen said that when the law was first passed, the President of IACP, the Executive Director, and Chief McEwen met with FEMA's David Paulison and DHS's Michael Chertoff to discuss their concerns regarding the lack of national coordination to coordinate regional efforts. If a region has a plan that is not consistent with the neighboring region, there will be a problem. Mr. Carney said he does recognize the need to provide coordination across the regions.

Ms. Ward said that NPSTC's secure database, the National Interoperability Information eXchange (NIIX), is available for posting and sharing documents, with Region 4 already using the workspace. As a liaison with FEMA, NPSTC will disseminate information about the RECCs.

The legislation also describes how each RECC WG should coordinate its activities with the private sectors, including communications equipment manufacturers and vendors (including broadband data service providers), local exchange carriers, local broadcast media, wireless carriers, satellite communications services, cable operators, hospitals, public utility services., emergency evacuation transit services, ambulance services, ham and amateur radio operators, and representatives from other private sector entities and nongovernmental organizations as the Regional Administrator determines appropriate

FEMA proposes that the RECCs serve as a coordination point for federal interaction with the local and state organizations. Eventually it is envisioned that all federal agencies would coordinate through the RECC. The RECC activities are currently not funded, but in the process of being stood up. FEMA

headquarters has converted ten employees to regional positions and submitted a budget that will be required for national and regional support. One of the first requirements of the RECCs is a report on its regional progress in meeting goals and milestones outlined in the NECP within 60 days of the Plan's release on July 31, 2008.

John Powell, Chair, Interoperability Committee, and past Chair of the California State Interoperability Executive Committee (SIEC), said that states have quarterly SIEC meetings that assemble the local participants and suggested coordinating with the RECCs at those meetings to accommodate the lack of time and travel funding many local agencies have. Mr. Johnson said Tennessee was unable to attend the Region 4 training because there was not adequate notice for travel approval, but agreed with Mr. Powell that many of the group attend numerous meetings. Mr. Carney said the RECCs will be able to provide some travel funding for attending meetings.

Doug Aiken, Vice Chair, NPSTC, asked how NPSTC can assist the RECCs and maintain contact in the future. Mr. Hoffman and Mr. Carney encourage continued contact through email and/or phone calls. Sheriff Kennard suggested that Mr. Carney and Mr. Hoffman advise FEMA that the FEMA programs would like input from NPSTC regarding directions and the provision of potential participants on the local level. Mr. Hoffman said he will provide a list of regional DECs to NPSTC when it is complete.

Mr. Haller asked if the Interoperability Committee should develop a formal liaison with the RECCs. Mr. Powell reported that NPSTC's effort to coordinate with the DEC and RECC program will occur within the ESF 2 Working Group, and will revise its mission to reflect the additional charge to the group.

#### **Spectrum Management Committee, David Buchanan, Chair, and Stu Overby, Vice Chair**

#### **Public Safety Canada, Tom Black, Senior Policy Analyst**

Mr. Black discussed Canada's Voice Communications Plan, which has followed the United States model, with the help of the CITIG. Canada's population is mostly located on the border; the "Great White North" has 41 percent of the land mass but .03 percent of the population.

The Canadian first responder community has identified voice interoperability as the single most important capability required by first responders and emergency response teams. As in the U.S., interoperability is a major strategic and operational challenge in Canada. In 2003, Industry Canada (IC) commissioned a Public Safety Radio Communications Project report, known as the L'Abbe/Poirier Report that describes key interoperability issues facing Canadian public safety officials with respect to voice communications. The issues include a lack of cohesive strategic planning and policy development in relation to spectrum resource requirements, standards and funding; a lack of liaison and coordination (federal leadership); a lack of a single voice representing the public safety community; and compatible standards and technologies. Canada now has a single voice representing public safety, the CITIG. The plan is to create a voice communications plan or national strategy/roadmap for voice and data communications interoperability issues. The vision is that emergency response personnel will be able to communicate as needed, on demand, and, as authorized at all levels of government across all disciplines.

Public Safety Canada (PSC), created in December 2003, is responsible for ensuring the safety and security of Canadians. PSC believes the implementation of the voice communications plan will support the public safety mandates of enhancing public safety and security. Possible technological solutions for consideration include:

- Create a common frequency band (spectrum): The International Telecommunication Union (ITU) recommends regional harmonized bands. IC proposes a common public safety UHF spectrum supported by PSC.
- Define a common protocol using open standards, allowing a move away from stand alone proprietary systems to a interoperable “system of systems” concept. Open standards are currently being developed by APCO P-25 in North America, and TETRA in Europe. Canada will follow North America in the choice of a standard.
- Use a reconfigurable radio such as Software Defined Radio (SDR).

PSC has asked IC to identify dead spaces along the Canada/U.S. border and what would be required to set up a 700 MHz infrastructure for public safety all along the border. Other discussions have focused on U.S./Canada sharing of infrastructure on the border; for example, by placing repeaters on each other’s towers. PSC will work with CITIG to create a forum/working group to create consultation papers on a strategy. The workshop will be held this October with participants from across Canada and across the first responder community. The resulting draft will be presented for further consultation at the Second National CITIG conference this December. From that, PSC will develop a governance strategy for consideration that would involve the appropriate federal, provincial, and territorial representatives.

### **Mobile Satellite Ventures SMART Zones, Jim Corry, Vice President, Government Solutions**

Mr. Corry described the potential of the public/private partnership utilizing mobile satellite technology to create an interoperable system. The MSV Satellite Mutual Aid Radio Talkgroups (SMART) system is already in use by 911 centers, firefighters, and law enforcement. MSV has joined with three federal agencies, eight state and local agencies, and the Central United States Earthquake Consortium (CUSEC) to form overlapping satellite mutual aid radio talk groups. The SMART talk groups enable critical and interoperable communications at all levels of public safety agencies, are each managed and monitored 24/7 by federal, state, or local government agencies, and are free.

The satellite technology provides both telephone service and satellite two-way radio service with push-to-talk (one to one or one to many) capability that supports up to 16 talk groups with up to 10,000 users per talk group. The system is not a portable device, but must be installed in a vehicle or building in a box with a battery. The system is compatible with most products on the market.

In response to discussions about a nationwide mutual aid interoperable talk group with the Department of Justice (DOJ’s) Wireless Management Office, Mr. Corry rewrote the company’s billing software to allow for the creation what is now called SMART. J-SMART, the Justice talk group comprising 1,000 units in 350 agencies for public safety users, was followed by development of SMART-T [Tactical] for public safety. NPHST-1 is pending approval at the Centers for Disease Control and Prevention, will be a talk group for public health and medical facilities. In the future, the National Communications System (NCS) will stand up NS/ES-G, I & E talk groups for national security and emergency preparedness.

Regional SMART talk groups across the nation operate according to a five-page Standard Operating Procedure (SOP), with a designated SMART talk group manager in one of the states located in that particular region. For example, in New England, NESMART is managed by the Connecticut State Police and comprises Connecticut, Delaware, Massachusetts, Maine, New Hampshire, New York, New Jersey, Pennsylvania, Rhode Island, and Vermont (pending). MSV is in the process of developing Border SMART talk groups in three regions of both Mexico and Canada.

### **470-512 MHz Working Group, Dave Eierman**

Dave Eierman, Motorola, presented on the work undertaken on the revision of Part 90, Subpart L, TV/Land Mobile Radio (LMR) spacing rules for digital television. As reported at the June Governing Board meeting, the TV/LMR rules were written for analog television. The Working Group intends to draft a petition to the FCC to formalize what is accomplished currently through waivers to expand the area of LMR base operations, allowing base stations to operate outside the 50-mile limit radius.

When the DTV spacing rules were rewritten and the resort of analog versus digital was done, much shorter spacing rules were used. If the original 50 dB spacing tables were used for LMR with the shorter spacing, power levels would have to be reduced from levels used now. Because the DTV rules have been rewritten, the LMR rules must now be changed accordingly, moving from 50 dB to 40 dB. New York City successfully changed to 40 dB 20 years ago. To view Mr. Eierman's presentation, visit NPSTC's Meetings page.

Mr. Haller noted that a possible second transition to clear channels 2-6 for public safety could become an issue for NPSTC's future consideration after the initial DTV transition.

### **700 MHz Advocacy Working Group, Stu Overby, Chair**

Mr. Overby reported on the two main issues facing this Working Group—the 700 MHz NPRM and the Order regarding low power broadcast auxiliary operations, such as wireless microphones, at 700 MHz. The Working Group sent a letter to the FCC requesting that action be taken to address wireless mics and similar devices. The FCC released a joint Order and NPRM effective August 21 that immediately freezes filing of new low power broadcast auxiliary license applications in Part 74 for operation in 698-806 MHz after February 17, 2009; freezes grants of equipment authorization of low power auxiliary station devices that would operate in 700 MHz; and withholds action on pending low power broadcast auxiliary license or equipment authorization applications at 700 MHz, pending the outcome of the proceeding. The NPRM is consistent with what NPSTC requested.

The FCC also seeks comment on the Public Interest Spectrum Coalition (PISC) proposal, including establishing a wireless mic band at 2 GHz. Mr. Overby recommended that NPSTC not provide comments on the PISC proposal.

### **800 MHz Reconfiguration Working Group, David Buchanan, Chair**

Mr. Buchanan reported that all of the regions in the first three waves of rebanding are in some stage of implementation. Agencies on the Canadian border expect to have frequency assignments to the Business/Industrial users by the end of this month, enabling them to move out of the band, and public safety to move down from the National Public Safety Planning Advisory Committee (NPSPAC) channels. The next step is to move the agencies operating in the public safety pool channels from where NPSPAC allocation will be. The TA expects to get frequency assignments out by the end of the year. Mr. Buchanan has set up meetings to explain the band plans with the states of Washington, Michigan, and Ohio, and upcoming meetings with the state of New York.

Bob Gurss, Association of Public Safety Communications Officials – International (APCO), reported that Nextel was to vacate channels in the interleaved section of the band in June, but appealed. The FCC rejected the appeal with the result that the first 20 channels in interleaved spectrum will be vacated and made available for new public safety licenses. The FCC will likely send out a notice in October announcing the availability of a database prior to issuing a further PN on the newly available channels.

### **Airborne Video Working Group, Don Root, Chair**

Mr. Root briefed on the mission of the Airborne Video Working Group, which is to address strategies and spectrum availability for public safety airborne-to-ground video operations. In many of the urban

areas, spectrum for video from helicopters or light aircraft platforms is shared with the broadcasters. When there are incidents such as the recent train crash in Los Angeles, with many broadcast helicopters doing video downlinking and trucks on the ground, each taking up one of those 10 or 12 pairs in the 2.4 GHz band and the channels in the 6 GHz band, it does not leave much spectrum for public safety incident command to review video away from the incident.

First action items include defining the issue, including any partial solutions in use and shortfalls to public safety requirements; determine solution options; and develop recommendations.

### **Border Issues Working Group, George Carbonell, Chair**

Mr. Carbonell provided a preliminary summary of current issues on the northern border. Limited information is transmitted between the FCC and IC for coordination; the Working Group is examining how it can facilitate the process. IC does not have pools or blocks in each band; public safety, government, and business/industrial are intermixed channel by channel. IC has a more conservative VHF/UHF interference protection policy than the FCC. Some of the information applicants need to apply the interference policy is not available.

The Working Group is standing up two task forces, the Northern Border Task Force, chaired by Terry LaValley, and the Southern Border Task Force, chaired by Don Root. Each Task Force will focus on 1) Operability, i.e., improving cross-border coordination and spectrum access; and 2) Interoperability, i.e., steps to enhance cross-border communications among public safety agencies when needed. Each Task Force will develop a presentation/white paper for Governing Board approval and NPSTC use that will include:

- Summary of current issues with cross-border coordination process and spectrum access.
- Recommendations to improve coordination/spectrum access, in both the near- and long-term.
- Recommendations to help enable cross-border interoperability, in both near- and long-term.
- An external Action Plan—what NPSTC believes various government agencies would need to do to implement recommendations.
- An internal Action Plan—what NPSTC needs to do, who has responsibility, and the target deadline for each action.
- Points of influence to maximize chance of success.
- Outreach plan to gain support within public safety community.

Mr. Carbonell said the Working Group will host another breakfast meeting in Baltimore and hopes that Mr. Valcour and Rick Finn, CITIG, attend. On a practical note, Mr. Haller said that after the last meeting, the frequency coordinators met with Jennifer Wharram from IC and learned that IC's system does not accommodate attachments so if an interference study was completed, IC did not receive it. He suggested that applicants send a separate email to Tracy Simmons who would forward it to IC.

### **Wireless Alerting Working Group, Jim Weichman, Chair**

Mr. Weichman reported that the mission group of the Wireless Alerting Working Group was officially approved at the last meeting. Short-term goals are to develop educational materials on the alerting and notification issues; assess spectrum bands of interest; meet with the FCC to discuss potential spectrum availability; and seek support for recommended solutions.

Two-way paging offers new capabilities not available previously, including all the benefits of one-way paging, plus message status acknowledgement to the dispatcher that indicates the status of a message received, read, or reply. It has Over the Air (OTAR) programming, security—128 bit AES encryption—and low latency. Two-way paging enhances interoperability. For example, if the device shares interoperability with another ReFLex terminal, when the device leaves one coverage area and reappears

in the coverage area of the roaming partner over the Internet, the device will continue to receive messages as if it was in its home network and the user needs to do nothing to accomplish this. With two-way paging, network capacity is greatly improved in a manner similar to a trunked system by breaking up the network into regions. As capacity grows, additional channels can be added to increase capacity. Two-way paging uses FCC Part 24 narrowband PCS frequencies. There are three MHz total—one is for receive at 901-902 and one is for transmit at the 930-931 and 940-941 bands.

In July 2008, Mr. Weichman, Mr. Logan, and others from NPSTC met with the FCC to discuss this underused spectrum and the benefits for public safety, encouraging the FCC to audit the band for utilization by the commercial carriers. It was a positive meeting. The Working Group has developed a draft band plan asking for eight nationwide control channels. With additional spectrum for capacity, public safety could build out those channels and develop interoperability policies across the nation. The spectrum could be managed by the RPCs or through individual licensing. USA Mobility, one of the two nationwide paging providers, does not agree with NPSTC's position and has submitted letters to the FCC stating that public safety should use commercial alerting rather than build out private systems. Mr. Weichman will plan a demonstration of Richmond's paging system at the NPSTC meeting in Baltimore.

### **New Items for Governing Board Approval**

**Action Item:** Develop comments for the October 3 filing on 700 MHz certification of microphones and alert broadcast auxiliary equipment vendors. Sheriff Kennard so moved; Lloyd Mitchell, National Association of State Foresters (NASF), seconded. Approved.

**Action Item:** Approve mission and projects of Airborne Video Working Group. Mr. Carbonell so moved, Sheriff Kennard seconded. Approved.

### **New Business**

AM Stations: Mr. Haller provided an update on the FCC Docket protecting AM broadcast stations from nearby towers. If an agency wanted to place a tower within a certain distance of an AM broadcast station, it would have to provide computer modeling testing to determine if there would be an effect on the broadcast station. The Land Mobile Communications Council (LMCC) submitted comments basically simplifying the process, which were rejected by the FCC because of inadequate notice. A further notice will be forthcoming and LMCC will file comments. Mr. Haller proposed that NPSTC file supporting comments.

**Action Item:** Track the progress of this issue and docket.

Media Flow Transmitter: Mr. Root reported that Ray Grimes, Orange County, California, discovered an application for a new media flow transmitter, Quaalcom's video distribution to wireless devices that operates in channel 55 in the lower D Block. An intermodulation analysis indicates that this would interfere with the GPS pass band. There is a media flow transmitter that has caused similar issues in San Diego. Mr. Buchanan said this is an awareness issue for now.

SAI Proposal: Mr. Overby reviewed a 700/800 MHz proposal from Spectrum Acquisitions, Inc. (SAI), which is seeking public safety endorsement of their proposal. Mr. Overby provided a basic overview of SAI's proposal.

- SAI proposes a sequence of joint 700 MHz and 800 MHz actions.
- Sprint/Nextel returns all its 800 licenses to FCC and pays the Public Safety Spectrum Trust (PSST) the portion of the \$2.5 billion not yet spent on rebanding.
- FCC relieves Sprint/Nextel of rebanding obligations; Sprint/Nextel keeps its 1.9 GHz spectrum.

- FCC modifies the 800 band plan, adding a 3+3 MHz public safety block at 816-819/861-864 taken from the ESMR block per SAI, a 5 MHz gain.
- Public safety returns 3+3 MHz at 700 that would be added to the D Block.
- FCC auctions the 8+8 MHz D block to designated entities for commercial broadband wireless.
- Congress amends the Act to direct auction proceeds from D block spectrum and any available 800 ESMR licenses auctioned to PSST to fund the broadband network.
- The remaining public safety 9+9 at 700 supports broadband, wideband, and voice interoperability.

Mr. Overby observed that 800 MHz rebanding would still need to be completed because the SAI plan shows NPSPAC systems at 806 MHz. To ensure the acquisition of additional 800 MHz spectrum before giving up 700 MHz, a new 800 MHz Rulemaking would need to be decided before any 700 MHz changes could occur. The plan appears to require that 50 or so narrowband systems implemented at 700 be moved to 800. If 700 narrowband is not moved, only 3+3 MHz would be left for public safety broadband, spectrum that must also support guardband.

SAI claims that its plan can achieve FCC policy goals more quickly and less expensively, but action at 700 is essentially stalled while 800 rulemaking takes place; it does not relieve the need to complete 800 rebanding and responsibility would be reassigned; it either adds cost /time to move narrowband 700 systems to 800 or it reduces public safety broadband spectrum to 3+3 MHz.

**Action Item:** Chris Fischer, APCO, moved that NPSTC not endorse the SAI plan; IAFC seconded the motion. Approved. Mr. Haller will write a letter to SAI stating NPSTC's intention. SAI comments were filed in response to the FCC's 2nd NPRM on 700 MHz. It was agreed that if the comments appear again in response to the 3rd NPRM, then NPSTC should comment. Mr. Gursu agreed with that assessment.

CITIG Meeting: Mr. Valcour said that CITIG's next meeting will be held on December 7, 2008, in Toronto, where they will be discussing cross border issues. He invited NPSTC Participants to attend the meeting.

### **Tuesday, September 16, 2008**

#### **Technology Committee, Tom Sorley, Chair, and Andy Thiessen, Vice Chair**

##### **Amateur Radio Working Group, Tom Abernethy, Chair, and Dennis Dura, Vice Chair**

Mr. Abernethy reported that the Amateur Radio Working Group will present its white paper, which covers the beneficial interface between the amateur radio community and public safety, and addresses technical and operational issues, at the November meeting and encourages NPSTC Participant feedback. Following the recent death of valued NPSTC Participant, Gil Lineberry, who provided much insight on the white paper, Mr. Abernethy has sought the help of **Al Sines** to provide operational input into the development of the paper. Ham radio testing will again be offered in Baltimore at the November meeting.

##### **In-Building Working Group, Stu Overby, Chair, and Jack Daniel, Vice Chair**

Mr. Overby reported on the status of the Best Practices for In-Tunnel Communications, requested as an addendum to the original In-Building Best Practices White Paper. Eight companies are assisting Mr. Overby and Mr. Daniel in the development of the paper, which comprises chapters on the following issues:

- Basic system components for in-tunnel coverage.
- Types of tunnel systems.

- Understanding the spectrum environment.
- System design considerations and tradeoffs.
- Signal distribution methods and tradeoffs.
- Coverage testing and the limitations of testing in tunnels, ensuring reliability.
- Maintenance.

The next steps will be to assemble the complete draft, review and edit the draft within the Technology Committee, distribute it to the Governing Board for review and approval, and place it on NPSTC's website. The Working Group will plan outreach efforts such as participation on panels and articles in 2009. Mr. Haller said the FCC developed Part 15 Rules 20 years ago for in-tunnel radio so that signal is not lost in tunnels, suggesting that the Working Group research that information as well.

### **Technology Education Working Group, Steve Devine, Chair, and Robert Shapiro, Vice Chair**

Mr. Devine, reporting by teleconference, said the Working Group is in the final stages of review for the five initial products the group has produced, which will ultimately be placed on the technical education website. The first deliverables cover the following topics:

- A timeline and history of 700 MHz proceedings over the last 10 years.
- A white paper on 4.9 GHz-5.9 GHz potential network testbed and Intelligent Transportation System (ITS) integration issues in Pinellas County, Florida.
- A slide presentation on Next Generation 911 issues, impact to public safety, and implementation concerns/opportunities.
- An educational product for the non-technical user on LMR 101.
- An online tutorial on the FCC's Electronic Comment Filing System (ECFS).

Kevin McGinnis, National Association of State Emergency Medical Services Officials (NASEMSO), asked Mr. Devine if the Technology Education Working Group plans to address the communications component of the National Unified Goal (NUG) for Traffic Incident Management (TIM). Mr. Devine said he, Mr. Shapiro, and Mr. McGinnis should teleconference on the specifics of what the education component and direction on this issue should include.

Mr. Thiessen said that NPSTC Participants should forward suggested topics for inclusion in the technical education website to Mr. Devine.

### **Broadband Working Group, Andy Thiessen, Chair, and Joe Ross, Vice Chair**

Mr. Thiessen reported that the next focus of the Working Group continues to be the development of device requirements for 700 MHz broadband. They are drafting a letter for the Governing Board to send to the PSST that will request the specific information the PSST would like to see in the document. This, of course, depends on the direction the FCC takes in its NPRM to be issued September 25, 2008.

Regarding 4.9 GHz activities, the original P34 standards were written before the 700 MHz broadband was a possibility; given that, the APCO Project 25 Interface Committee (APIC) Broadband Task Group intends to host a user meeting to look at device requirements and move the analysis process forward. The P34 User Needs Committee will convene a meeting of users to review the requirements document and make any changes they deem necessary.

### **New Business**

VoIP: Mr. Thiessen reported that during the week preceding this meeting, DJ Atkinson, Institute for Telecommunication Sciences (ITS), National Telecommunications and Information Administration

(NTIA), led the Voice over Internet Protocol (VoIP) Plugfest. It was decided that the current bridging systems interface implementation profile is very near completion. The next steps for the VoIP Working Group is to decide which interface they will review next, and to develop a compliance assessment program for VoIP.

P25 Compliance Assessment Program (CAP): The application for the P25 CAP was issued 3 weeks ago. There was a 2- week period for lab applications. It appears that the P25 CAP will be a very successful program.

TETRA and P25 Comparison: After the last meeting, the Technology Committee was tasked with developing a white paper that provided an objective comparison of these standards. The target audience for this effort will be the practitioner community so the effort will be led by Mr. Devine and the Technology Education Working Group. To do this effectively it cannot be adversarial and it must be as clean an apples-to-apples comparison as possible. Mr. Thiessen asked that participants from public safety and manufacturers should contact himself, Mr. Devine, Bob Shapiro, or Tom Sorley. No experts are needed; the most important contribution is what public safety would like to see compared.

The effort will begin with a table of contents on topics to be addressed in a white paper, followed by the development of some scenarios where the two technologies might be deployed. Each standard works differently and the comparison must be sensitive to context. For example, the P25 team would select a scenario as would the TETRA team. Then each team would provide information on the deployment of their technology and develop an action item list for the other. The 'virtual' communities for coverage solutions to swap might include a rural and urban community for each team to highlight their solutions and then in the other's chosen virtual community. Mr. Devine solicited 25 FAQs on the two standards from participants at two levels, the decision maker level and another at a more technical level.

Chief McEwen commented that this is a valuable exercise, but because TETRA is not available in the U.S., he wondered why NPSTC should devote resources to the effort. Mr. Powell said the impact of the comparison is important in light of huge efforts to get P25 and TETRA adopted in places where they don't exist in other areas of the world. The comparison would provide an opportunity to raise interest in P25 in other parts of the world, which may reduce the cost of P25 in the U.S. Mr. Thiessen said he is sensitive to returns on effort and committing resources if the public safety community does not see value in it. Chief McEwen said that Mr. Powell made a good point in favor of the comparison.

Chief McEwen made a motion for the Working Group to move forward in a limited manner at this time because it would be helpful to better understand the technologies in a primer or simple chart describing the technologies with this foundation. Based on the first brush efforts, the Governing Board can decide whether to move forward with the effort and to what depth. Chief Leary seconded the motion. Approved.

### **Interoperability Committee, John Powell, Chair**

#### **Statewide Interoperability Executive Committee (SIEC) Working Group, Don Root, Chair**

Mr. Root reported that the Working Group is working to validate the 56 different state groups that are undertaking state interoperability coordination, to ascertain that they are receiving information, and to learn if they are focused on 700 MHz, or following the NCC model of coordination across the bands.

#### **EMS Working Group, Kevin McGinnis, Chair**

Mr. McGinnis reported that the Working Group is in the process of writing, editing, and reviewing a white paper on potential technologies with implications for bandwidth that might be used in the medical field in the future. NASEMSO has issued a Guide to Information/Communications Technology for EMS

Officials. The document was written at a high level for state and local for users not familiar with communications information, but the five-page document has additional embedded files that provide more specific, technical information. Visit [www.nasemso.org](http://www.nasemso.org), go to the Projects Tab, Communications Technology, to review the document.

The organization COMCARE, which formerly offered a discussion forum for the discussions of emergency medical associations, no longer provides that forum. Mr. McGinnis would like the NPSTC EMS Working Group to become a similar forum in the future and hopes to enhance the development of this forum through vetting the white paper on technologies.

#### **ESF2 Working Group, Don Root, Chair**

Mr. Powell reported that NPSTC's effort to coordinate with FEMA's DEC and RECC programs will occur in this Working Group. Mr. Haller suggested that the Working Group revise its mission to reflect the additional charge to the group.

#### **Project MESA Working Group, John Powell, Chair**

Mr. Powell said there is much renewed activity in Project MESA, a joint North American/European effort to identify standards for broadband that is non-band specific, managed by the Telecommunications Industry Association (TIA ) in the U.S. and European Telecommunications Standards Institute (ETSI) in Europe. NPSTC is monitoring the effort currently, but not directly involved due to the cost of travel.

Ms. Ward asked about the projected timeline for completion of Project MESA. Mr. Powell believes it will continue for some time. There have been no spectrum assignments. It will be driven from the European side although the leading companies involved are in the U.S. Although in fall 2007 the effort appeared to flag, Mr. Powell said there is a lot of activity currently.

#### **Interoperability Channel Naming Working Group, Don Root, Chair**

Mr. Root reported that the Working Group is waiting for feedback from the FCC on its request for redesignation of some of the 700 MHz calling channels as potential travel channels. One of the principal members of the group, Brent Finster, has retired from the California Fire Service, to become a 911 manager in the Cayman Islands. Mr. Root hopes he will be able to continue his participation in the group.

#### **Software Defined Radio Working Group, John Powell, Chair**

Mr. Powell introduced a comprehensive discussion of software defined radio (SDR).

#### **National Institute of Justice (NIJ) Public Safety Cognitive Radio Project, Peter Tenhula, Shared Spectrum Company (SSC), and Nancy Jesuale, NetCity Inc.**

Mr. Tenhula and Ms. Jesuale briefed on SSC's cognitive radio technology and the NIJ CommTech Project. SSC, founded by a former Defense Advanced Research Projects Agency (DARPA) program manager, built the first deployable cognitive radio system. Ms. Jessuale created NetCity in 2001 to assist local governments with advanced communications technology planning and deployment. Her role in the project is to bring practitioner viewpoints to the project, and is seeking feedback from the user community.

The prototype hardware units have been field tested and are on the market. The units work through policy-based command and control software, utilizing dynamic spectrum access (DSA), accessing holes where spectrum is available, through algorithm and spectrum rule development. The radio has

been selected for the NTIA/FCC Spectrum Sharing Testbed. The project objectives are to do the following.

- Address short- and long-term spectrum access problems that detract from core missions.
- Focus on concerns about cognitive radio technologies (e.g., interference, device integrity, security, authentication, unproven and untested technology).
- Gather and develop communications, command, and control requirements.
- Design system for varied communications needs and applications (e.g., airborne surveillance; mobile voice, data, video).
- Show how end-to-end, multi-band cognitive radio systems can be tailored, safely managed, and effectively controlled while experiencing benefits of dynamic spectrum and bandwidth access.
- Enable use for day-to-day activities and in rapid response to a threat, disaster, or catastrophe.

SSC's dynamic spectrum access system meets a wide variety of communications needs through a Cognitive Radio Access Management (CRAM) sub-system that provides the ability to securely write and disseminate policies to cognitive radios. Building trust in the system is critical. Regulators need assurance that devices access permitted spectrum only and behave according to the rules; operators need assurance that they configure devices properly to make the most efficient use of spectrum and network resources; and users need assurance that their systems are not harmed. The benefits of CR include:

- Flexibility: High-level policies apply to multiple devices.
- Configuration ease: Modify any configuration, setting, or rule; devices automatically adapt.
- Autonomy: Devices autonomously balance resources and optimize network as permitted by policies.
- Assurance: Policies from multiple stakeholders are enforced locally on every device.
- Transparency: High-level specifications verified by theorem-proving systems for correctness at any time.
- Ease of policy authoring: Declarative language creates a policy abstracting low-level requirements.
- Secure policy management and distribution: Control of policies and monitor device's behavior.

Ms. Jessuale discussed how the National Incident Management System (NIMS) and Incident Command System (ICS) can guide policy development. Incidents happen, grow, develop, and resolve. Multiple jurisdictions and national, state, and local resources may be involved. DSA radio systems can create tactical and operational networks on-the-fly through which incident commanders can control radio resources such as spectrum, capability, and applications. As IC begins managing response resources, CR will activate/receive new policies related to each user's role in the incident.

Ms. Ward acknowledged the support NPSTC Participants and NPSTC's funders has provided to support the unique needs of this public safety in SDR and CR development, which initially began with a military focus.

Cost Model Workbook Hierarchy: Fred Frantz, reporting by teleconference, discussed the Cost Model Workbook Hierarchy, a detailed spread sheet, made up of all the different cost components organized within a hierarchical structure. When SDR Forum's Public Safety Special Interest Group (PS-SIG) reviewed the critical issues required to move CR into the marketplace, the issue of cost to public safety topped the list. The workbook is a comprehensive tool for public safety to examine cost tradeoffs in purchasing SDR and CR systems. It takes a life cycle approach, which includes costs such as equipment and installation, training, governance, operations and maintenance, system testing, system management, and other contingencies. Within each category, specific cost breakdowns are displayed.

For example, within the equipment category, costs breakdowns include centers, sites, terminals, data backbone/backhaul, in-building coverage, and even sales tax on equipment.

SDR Forum is not set up to maintain this kind of product and is seeking feedback as to whether NPSTC would want to review the tool and place it on the NPSTC website to provide value to the field. SDR Forum is in its own process of review and approval, which should be complete by the November Governing Board meeting. Mr. Powell said the Interoperability Committee will present this to the Governing Board in November.

### **Harris Corporation Unity XG, Dan Sullivan/Paul Kiley**

Mr. Sullivan briefed on multiband and SDR platforms for public safety. Harris Corporation's background is in providing an integrated solution to the military with its one radio, one battery product. Harris evolved to a networked solution, the basis behind the Joint Tactical Radio System (JTRS), which utilizes a software defined platform with multiband technology. In February 2008, Harris released a federal user multiband radio, covering the spectrum from 30 MHz to 512 MHz.

Harris has developed a SDR multiband radio to meet the needs of overlapping missions and jurisdictions in the public safety market that operates in 136-174 MHz, 380-520 MHz, and 762-870 MHz. It is fully compliant with APCO P25 and designed for P25 Phase 2 with SW-only upgrade. The Harris RF-1033M Portable LMR radio is currently available; demos of the Unity™XG-100 Multiband radio are occurring now, with product availability in 2009. The benefits of SDR for LMR include:

- Flexible design (soft keys, user configuration).
- Standard interfaces which allows porting of features between products and vendors, and reduced cost of product development.
- Reduced cost of upgrading communications.
- Segmented architecture improves opportunities for code re-use.
- Provide a pathway to future technologies such as cognitive radio.
- Improved battery life and reduced heat emissions via software control of radio components and CPU usage.

Sheriff Kennard asked how training is provided. During field trials, Harris provides on-site training on programming the radio to an agency's communications unit. Chief McEwen also noted that a communications leader will have responsibility for programming the radio not the deputy at the incident. Chief Aiken asked if there is research and development targeted at making antennas more efficient in coordinating with the multiband radios. Multiband antennas are a design focus for Harris. Mr. Johnson asked if the radio will scan between trunked systems. Mr. Sullivan said that it will, but it will not scan the proprietary systems out today.

### **Thales Communications, Inc, Steve Nichols**

Mr. Nichols briefed on the Liberty™ Multi-Band Land Mobile Radio, which provides full coverage in all public safety bands: 136-174 MHz, 380-520 MHz, and 763-869 MHz. Thales has over 150,000 SDR multiband radios now deployed in the U.S. and the world, mostly by the military.

The challenges in developing public safety multiband portables begin with size, weight, and power. The radio basics such as range, audio clarity, and battery life must be met. Also required: the ability to scan multiple bands; fast synthesizer lock and radio operating at specifications quickly during scan and channel change; fast radio boot up, radio specification performance across all bands; a single antenna

covering multiple bands, and at a price similar to single band public safety radios. Multiband SDR for public safety includes the following benefits:

- It is the perfect cache radio for natural disasters and terrorist events
- They can be preprogrammed for mutual aid channels in all bands with NPSTC common channel nomenclature
- They can be programmed on the scene from the front panel or PC
- Cloned radio to radio

Multiband SDR allows the user to take full advantage of the best propagation for the application, to bridge established P25 trunked systems and adjacent conventional systems, and to connect directly. Multiband SDR radios have the same level of security and control as single band radios, including security password control for radio operation and keypad channel programming, zone by zone password protection for PC overwrites, and P25 OTAR encrypted key delivery. Potential concerns surrounding use of multiband SDR include limiting access of unwanted users, protecting sensitive voice/data transmissions, rapid deployment and programming, user familiarity with radio for catastrophic events where end users have little experience with radios, and the interoperability impact of non-access to proprietary systems.

Thales is working with DHS on its multiband radio pilot project, which seeks to test multi-agency everyday use in a shared environment using multiple frequency bands, mutual aid in a single environment, pre-planned deployment to a regional incident, and multiband radio use in a cache situation. The comprehensive final report will include an operational requirements document for the use and deployment of multiband portable radios, guidelines for the use of the radio's features in the four operational scenarios investigated, and a comparison of multiband radio usage with other current methods of achieving interoperability, including measurements of the effort required to set up and operate the equipment

## **New Business**

OIC Update: Karyna Drake, Program Manager, OIC, reported that DHS's Science and Technology (S&T) Directorate awarded a contract to Thales Corporation to demonstrate a multi-band radio. As part of the project, DHS is initiating pilot programs across the nation; one of the sites being considered is Seattle, Washington, and DHS seeks emergency responders who are interested in participating in this program. Seattle and international partners in the area are of particular interest in light of the upcoming Olympics. Mr. Valcour said Canada would be interested in participating in such a project, noting that CITIG has an MOU with Dr. David Boyd, S&T.

OEC Update: Mr. Powell said that OEC sent out a state review of Statewide Communications Interoperability Plans (SCIPs) identifying gaps and requesting that the states review the material. OEC also asked the states to identify up to five technical assistance requests from the Interoperable Communications Technical Assistance Program (ICTAP) program for the next fiscal year. Forty-three of the 56 states responded by the due date, 7 asked for extension, 2 do not need assistance, and 4 have done nothing yet. OEC was pleased with the responses and the level of detail the states provided. ICTAP now offers a technology assistance catalog. Some states have requested technical assistance in developing a narrowbanding plan for the entire state.

COML Training: NPSTC has played a large role in publicizing and providing comprehensive information on Communications Unit Leader (COML) training offered by OEC. Almost 60 students received training at the Kansas City APCO conference. Information on upcoming classes and

prerequisites is available on the NPSTC website; click on the COML button on the home page. Ms. Fischer noted that APCO and NENA have been working on the dispatch side of the equation, and have developed response teams, the Telecommunicator Emergency Response Taskforce (TERT), with FEMA. The program has created a network that allows 911 teams to access resources outside of their states during an overwhelming incident.

SDR: Mr. Powell attended the SDR Forum meeting in Boston, Massachusetts, last week. He noted that over the 8 years NPSTC has participated in SDR Forum, the manufacturers have participated in the PS-SIG to learn what public safety required in the design and function of SDR equipment and responded to those needs. Mr. Powell discussed a procurement tool, an Excel spreadsheet with many options to ascertain the cost of SDR, ranging from a high level to very specific responses on the total cost of ownership. The tool will be available on the NPSTC website.

#### Ad Hoc Report on State Spending of Public Safety Interoperable Communications (PSIC) Funds:

- Tennessee: Mr. Johnson reported that Tennessee received \$17 million, directing \$13 million to build out the Tennessee Valley and Regional Trunked System, a nine-county region, with three nuclear plants. Four counties in north Georgia will be participating in this system as well as the city of Knoxville. Governance has been put in place through MOUs, managed by the city of Chattanooga. Tennessee has set aside dollars for COML training, which is eagerly anticipated. He also noted that grant dollars did not pay for programming radios and suggested that future grants cover programming as an allowable expense.
- Delaware: Richard Reynolds, National Association of State Technology Directors (NASTD), said with Delaware's \$8 million, the state issued a Request for Proposal (RFP) for a 700 MHz system to overlay its existing 800 MHz trunked radio system. With the \$600,000 required by the PSIC grants to be set aside for disaster recovery, the state will also buy three pull around systems.
- Colorado: Mr. Powell said Colorado is spending PSIC money on the next upgrade of the statewide P25 800 MHz system with much money going to subscriber equipment. Systems on the I-70 corridor and Denver are on a M/A-COM system which will eventually migrate to P25, so there are many dual mode subscribers in area. A large part of the grant funds will be devoted to training. Communications worked well during the Democratic convention, demonstrating that training and planning paid off.
- Wyoming, Montana, and South Dakota all have statewide P25, VHF trunking systems. Mr. Powell said Montana has been working with Canada on cross-border communications between agencies, particularly in rural areas.
- Texas: Ron Mayworm, Vice Chair, Regional and Broadband Liaison Committee, said that Texas with 254 counties, has a little of everything on all frequency plans. The PSIC grant is administered by the State Administrative Agency (SAA), part of the State Homeland Security office. Money is funneled through councils of government (COGs) made up of groups of counties making planning more manageable. At this level, needs were developed and funneled up to the statewide planning process. After the state and UASI funds, the state has \$33.4 million to go to 24 COGs; some are upgrading to P25, buying VHF trunked systems, purchasing subscriber equipment, with all looking to network into the 'system of systems' concept.
- California: Mr. Root said California received \$94 million from the PSIC grants. When DHS made the award, they predetermined that Los Angeles and San Francisco, Tier 1 Urban Areas, would have

pre-designated funding amounts, \$22 to LA, and \$14 to San Francisco. The state's 58 counties were divided into 4 planning areas based on the geography and topology that affects RF activities. For example, San Diego RF impacts Santa Barbara due to the "salt water coax," which carries signals across the water 200 miles away. Similarly San Francisco activities can wipe out Sacramento and Stockton. Southern California received a little less than \$45 million. LA wants to develop a regional trunked radio system to cover the 44 incorporated cities in the county and city of LA. LA County predominantly operates in the UHF band, LAPD in the UHF band, while LA fire operates in 800 MHz conventional. They are in the process of developing a governance structure and developing a technical RFP with their PSIC funds. San Diego is using its \$6 million to provide basic trunked radio system operability training to its users and the city's radio users on how to use mutual aid radio systems outside of the city.

### **Outreach Committee Meeting, Bill Brownlow, Chair, and Charley Bryson, Vice Chair**

Reporting for Bill Brownlow, Mr. Bryson reported that NPSTC participated on panels and in booth outreach at four conferences, IWCE, NENA, APCO, and IAFC. NPSTC can provide resources for presentations, such as the NPSTC Technical CD. Mr. Abernethy serves as the Volunteer Coordination Chair and welcomes more active NPSTC Participant involvement. A number of NPSTC Participants provided their valuable expertise at the NPSTC booth at APCO's conference in Kansas City, Missouri. This year 125 articles have been written by or about NPSTC members. NPSTC has had almost 1,400,000 website hits in 2008 to date. NPSTC will also be issuing a new electronic NPSTC Regulatory Update and the first NPSTC Tech Brief, on digital interference on the fireground was issued in July.

Mr. Bryson reported that Committee Chair, Mr. Brownlow has requested that NPSTC do a quarantine and isolation scenario tabletop exercise at the November 2008 meeting. He is looking for one Governing Board volunteer to serve as a proctor and four additional participants.

### **NIIX Update, Matt McCreary**

Mr. McCreary reported on the growth of NIIX and on the expansion of the site for additional public safety uses. Originally developed for statewide planning, the secure warehouse for storing and collaborating on documents is open to any public safety users. The site is totally secure, provides online file storage with no limit, 24/7 support, and no spam. NIIX started with 21 users and has grown to 1,014 in 1 year. There are 90 coordinators, 70 communities, and 665 documents uploaded currently.

### **Regional and Broadband Committee, Don Root, Chair, and Ron Mayworm, Vice Chair**

#### **700 MHz Narrowband Relocation Working Group, Don Root, Chair**

Mr. Root reported that the Working Group continues to research the costs for agencies affected by the relocation required by the changes in the 700 MHz band plan.

#### **700 MHz Itinerant Channel Naming Working Group, John Powell, Chair, and Charley Bryson, Vice Chair**

Mr. Powell said the Working Group has had discussions and is planning to set up some teleconferences to discuss the issues now that the DHS deadlines for SCIP feedback has passed.

### **District Chair Reports**

Northeast Region: Maribel Martinez-Bradwell, Support Office, reported that all contact lists for this region have been updated.

Gulf Coast: Mr. Johnson reported that Alabama has submitted its 700 MHz plan for comment; Georgia has issued its plan to adjoining states for comments and Arkansas will be filing soon. Mississippi has appointed an interim chair and it is hoped that he will become the permanent chair. All contact lists for this region have been updated.

Ms. Ward said the District Chairs have not participated in the last few Governing Board meetings and suggested reconfiguring their participation. Mr. Root said the National Regional Planning Council (NRPC) is creating a governance structure to respond to reporting requirements. Ms. Ward suggested that one point of contact could make a report on behalf of the NRPC. Chief McEwen added that it is important to get the RPC input and for the RPCs to hear what is going on at the national level and report it back to their regions.

### **National Planning Assistance and Coordination (NPAC) Working Group, Ron Mayworm, Chair, and Bette Rinehart, Vice Chair**

Mr. Mayworm reported that the Working Group has developed its mission statement and objectives below and circulated it among the district chairs for their sign off.

**Mission:** The goal of this Working Group is to assist regional planners in the ongoing operations of their regions. The focus will be on prompt notification to regional planners of issues affecting their operations, reviewing and updating the NCC regional planning documents, and providing an interregional dispute resolution process.

**Objectives:** To periodically review the NCC documents, updating and disseminating them as necessary and appropriate, and to provide the interregional dispute resolution process that is called for in many 700 MHz regional plans.

The Working Group has also developed a Dispute Resolution Process and reviewed the documents of NPAC organization. Bette Rinehart has worked diligently to update the NCC Recommendations, which Mr. Mayworm is editing now. A draft will be ready for the November Governing Board meeting.

### **Public Safety Spectrum Trust (PSST), Harlin McEwen, Chair, PSST**

Chief McEwen provided a summary of the activities surrounding the 700 MHz nationwide public safety broadband network. The FCC will meet on September 25 to consider the 3rd FNPRM. A tentative schedule of past and projected activity on this issue follows. Question marks indicate a tentative date.

- September 4, 2008—FCC Chairman circulated to the Commissioners a draft 3rd FNPRM.
- September 18, 2008—Sunshine Period for 3rd FNPRM begins, prohibiting outside contacts with FCC, including the PSST.
- September 25, 2008—FCC meeting to consider 3rd FNPRM.
- October 1, 2008 (?)—3rd FNPRM published in Federal Register.
- October 15, 2008 (?)—Comments due 14 days after publication, but could change to 30 days.
- October 22, 2008 (?)—Reply comments due 7 days after comments, but could change to 15 days.
- December 2008 (?)—FCC 3rd Report and Order.
- April-June 2009 (?)—D Block Auction.

The PSST has heard that it will continue to hold the nationwide Public Safety Broadband License and that the board makeup will not be changed with the exception that the National Emergency Management Association (NEMA) will be replaced by another organization. NEMA has not named a representative to the Board during this past year. The PSST will be required to hold meetings open to the public. The PSST Board already has a task force developing a policy for the Board to conduct open meetings. The PSST will include conflict of interest language to ensure that Cyren Call, its business advisor, can't be both an advisor to the PSST as well as a bidder. The PSST already has such an agreement with Cyren.

Additionally the PSST must separate the position of Chairman and CEO. This has always been the intention of the PSST Board once there is funding to hire a CEO. It is the understanding that the FCC proposes capping the spectrum lease payment at \$5 million. The PSST will object that this cap may be too low until it is fully decided how many private partners (D Block Licensees) it may be facing and what the roles and responsibilities for the PSST/PSBL will be. The PSST would be prohibited from acting as a Mobile Virtual Network Operator (MVNO). The PSST has already abandoned any thoughts of this. The FCC proposes a more limited role for the PSST/PSBL. The PSST is concerned it may give D Block Licensee(s) too much control over public safety spectrum.

Regarding the auction, the PSST understands that there will be a simultaneous D Block Auction that will either be structured as a single nationwide license, with the technology to be determined by the winner, or 58 regional licenses using either LTE or WiMax technology. The 58 regions will be based on the 700 MHz Regional Planning Areas plus Gulf of Mexico, Guam, the Northern Mariana Islands, and American Samoa.

The winning scenario will be based on coverage first, revenue second. If there is no interest in nationwide license, 50 percent of the regional licenses must be sold to result in a successful auction. Roaming would be mandated under a regional structure to ensure interoperability. It is understood that there will be initial minimum bid prices, but no reserve price that must be met. The proposed \$750 million nationwide minimum would supposedly be broken down by regions to equal the nationwide minimum. Once 50 percent of the nationwide minimum, \$375 million, or 50 percent of the population threshold is reached, the pricing of the unsold licenses will continue to drop until sold.

#### Build-Out Requirements

- Coverage: 98% population coverage for the most densely populated areas; 94% population coverage for the moderately dense license areas, and 90% population coverage for the least dense license areas.
- Not clear the exact methodology for determining which licenses fall into each category.
- Build-out/License term extended from 10 years to 15 years.
- New rules would specify baseline hardening requirements, but no details at this point.

#### Miscellaneous Issues

- Proposes a \$48.50 monthly fee cap for public safety users.
- Not clear yet how 700 MHz narrowband relocation will be treated.

Mr. Gurss reported that FCC Public Safety and Homeland Security Bureau Chief Derek Poarch testified that the minimum bid for each region will be established based on population density of the region. Mr. Root suggested that the review and response to the NRPM be divided with the Spectrum Committee

addressing the technical spectrum issues involved and the R&B Committee working with the RPCs to provide regional input.

Chief Leary moved that Mr. Buchanan lead the effort of managing resources and assigning tasks to the various Committees in the response to the NPRM. Mr. Carbonell seconded. Approved.

### **Regulatory Update, Bette Rinehart**

Ms. Rinehart reported on the following issues.

800 MHz Rebanding: The Sprint Nextel deadline to vacate interleaved channels has been extended again. The FCC will preview the “Nextel-vacated-spectrum” database. Ms. Rinehart said to expect a Public Notice on NPSPAC Plan modifications.

Broadcast Auxiliary NPRM: The FCC has released an NPRM proposing to prohibit low power broadcast auxiliary operations in 700 MHz, which covers wireless microphones, cue and control, camera signal synchronization, but does not cover low power TV stations. The FCC would no longer permit licensing or manufacture of such equipment at 700 MHz; applications for licenses and equipment certification will be frozen; and pending applications are on hold. Comments are due October 3; replies will be due on October 20.

3rd NPRM: The 3rd NPRM in the D Block Docket is due to be released at the next FCC Commissioner’s meeting on September 25. The NPRM will include specific proposals, on which comment will be sought. As noted above, the comment period will be abbreviated, so be ready to review and comment. Comments are expected to be due in 14 days, with replies due within 7 days.

Regional Plan Update: There are 18 plans pending. Louisiana (Region 18) and W. New York (Region 55) filed plans since last meeting. No additional plans have been approved.

### **NRPC Update, Richard Reynolds, Vice Chair, NRPC**

Mr. Reynolds reported on the recent activities of the NRPC. The mission of the NRPC states that the NRPC is a national community of 55 Regional Planning Committees (RPCs), whose affiliation is linked to states and U.S. territories. Their mission is to serve all public safety communications users through spectrum planning and management services for their spectrum needs.

NRPC has a website at [WWW.NRPC.US](http://WWW.NRPC.US) and has developed a brochure to describe the organization, how it is structured, and how it works. NRPC is able to provide funding support for both 700 and 800 MHz, and is planning joint training workshops for 700 and 800 MHz. The next training will be CAPRAD Training, offered on November 27-29 in North Carolina. NRPC holds monthly conference calls for all RPCs. NRPC has three active committees—Training, CAPRAD, and Technical/Writing, which are tracking FCC publications to provide timely responses if necessary. NRPC looks forward to working with all organizations and appreciates the support that it has received from everyone.

Ms. Martinez-Bradwell asked if the monthly meetings posted minutes on the website. Mr. Reynolds said they are not yet posted as the website is fairly new. Ms. Ward said they could also be posted to NPSTC’s website if the NRPC would like to do so. From the teleconference bridge, Alan Bull, Chair, NRPC, who is recovering from a life-threatening illness, thanked NPSTC participants for their wishes for his speedy recovery.

### **New Items for Governing Board Approval**

## Status of Previous Action Items

**Action Item:** Approve the mission statement and objectives for the NPAC Working Group. Mr. Carbonell so moved; Mr. Mitchell seconded. Mr. Haller suggested changing the wording of 'goal' to 'mission.' Approved as amended.

**Action Item:** Approve the NPAC Dispute Resolution Process document. Chief Leary so moved; Chief Aiken seconded. Approved.

**Action Item:** Approve the mission and charter for the Itinerant Channel Naming Working Group to address the sets of nationwide low power itinerant channels at the edge of the 700 MHz narrowband allotment and work with the NRPC to develop a methodology. Sheriff Kennard so moved; Chief McEwen seconded. Approved.

**Action Item:** Approve the mission and charter for the 700 MHz Relocation Working Group. Ensure the FCC's Second Report & Order of August 2007 to relocate public safety operations in 700 MHz Spectrum is accomplished; create opportunities for RPCs to obtain support as they work through relocation and provide a process for dispute resolution. Chief Aiken so moved, Mr. Caldwell seconded. Approved.

**New Business:** Mr. Johnson reported that the FedEx organization approached public safety in Tennessee. FedEx has a 800 MHz system that they no longer use often and they would like to reform that spectrum to public safety for the purpose of public safety disaster management, probably to be used in the travel channels. Mr. Johnson asked for feedback on this proposal and suggestions on how Tennessee might respond. Mr. Haller said that it was an interesting proposal and that FedEx would be allowed to share that business channel with public safety. He suggested that the Spectrum Committee might research these possibilities for sharing. Mr. Carbonell moved to ask the Spectrum Committee to research the possibilities or sharing this spectrum; Chief Leary seconded. Approved.

## Governing Board General Business

### FCC Update, Jeff Cohen, Senior Legal Counsel to the Bureau Chief, Public Safety and Homeland Security Bureau, FCC

Mr. Cohen updated NPSTC Governing Board on the following issues:

**700 MHz:** The Commission circulated the 3rd NPRM on September 4, slated to be voted on September 25. The Chairman's proposals currently include the following details: Retain a public/private partnership with more certainty on the obligations, lower the reserve price, ease the build out requirements, and retain the PSST, with some restrictions to ensure more transparency and guard against conflicts of interest. The auction will occur on a national or regional basis of 58 regions [55 RPCs and U.S. possessions and territories, and would permit simultaneous bidding on a nationwide license and on two sets of regional licenses, one set based on WiMax and one on LTE. To ensure interoperability, roaming would be required for public safety users. The effective reserve price would be lowered to \$750 million for the nationwide license, for the regional license, it would be an aggregate of \$750 million, broken down by regions on a pro rata basis per region.

If there is not a nationwide bid, any set of regional licenses bid on must cover at least 50 percent of the population; when that occurs, the prices on remaining regions would drop. The auction determination would be driven by coverage and not by revenue. Build out requirements change from 99.3 percent of the population over 10 years to 90 percent in rural areas and 98 percent in urban areas by 15 years.

The PSST meetings would be required to be open to the public; they would be unable to operate as a MVNO and there is a \$5 million cap for the lease payment to the D Block licensee. The proposal requires more detailed technical requirements and a minimum mandatory term sheet—a list of the specifics that would be part of a Network Sharing Agreement, leaving less to the negotiation process. It is proposed that public safety would pay \$48.50 per customer to the D Block licensee, based on a survey of five companies offering data services at General Services Administration (GSA) schedule rates. It is expected that there will be 14 days for comment, and 7 days for reply. According to that timetable, final rules would be developed by the end of the year, with an auction by the middle of next year. Mr. Cohen said that Chief Poarch had added some minimum standards on interoperability, throughput, quality of service, and hardening that would allow public safety to designate up to 30 percent of the sites as critical, which would trigger obligations, including 8 hours of battery backup and 48 hours of generator backup.

911: Regarding the issue of location accuracy, the court in D.C. issued a stay of the Commission's order from last September. The FCC has received proposals from APCO, NENA, and wireless carriers that are under consideration at Commission now. The Commission is reviewing comments for fraudulent 911 Notice of Inquiry call released in April. The emergency backup power requirement is also on hold as the court in D.C. is holding its decision pending FCC submission of rules to Office of Management and Budget (OMB).

Commercial Mobile Alerting System: The Commission released an Order in August addressing the carrier election process and customer notification. Most of the major carriers said they would participate with the exception of SouthernLINC.

Hurricane Response: The FCC has also been busy with Hurricane Ike. In a hurricane, the Commission's role is to mobilize a hurricane task force available 24/7, reaching out to wireline and wireless carriers, broadcasters, PSAPs, hospitals, etc. The Commission coordinates with FEMA's JFO on needs such as requests for fuel as generators run out. The FCC also activated the Disaster Information Reporting System, which is a voluntary, confidential reporting system that wireless, wireline, cable operators, etc. can use to report the status of their networks during crises. The FCC was impressed with the level of participation that provided important information. The Commission also granted many requests for temporary relief to operate on networks in hurricane-affected areas.

Discussion: Mr. Root asked if the 700 narrowband relocation cap and timing is addressed in the 3rd NPRM. Mr. Cohen said it is addressed, but could not comment specifically. Mr. Root also asked for the status of the rulemaking requesting the "cleanup" of the interoperability channels in 700 MHz. The Commission has reviewed the entire record and no one is opposed to initiating a rulemaking proceeding. The next step is to address the rulemaking as other 700 issues are resolved. Mr. Overby thanked Mr. Cohen for his role in working so quickly with the Commission on the wireless mic issue. Mr. Cohen said he appreciated NPSTC's input on this issue.

### **Position Description Review**

This item was pulled from the Consent Agenda at the last meeting because a position description of the roles of the Chair, Vice Chairs, and Chair Emeritus was not included. A copy of the NPSTC Charter and Position Descriptions was provided to the Governing Board and the following resolution was proposed for adoption.

Proposed Resolution: The suggested resolution is to include the following: *The Chair(s) must be an employee of a public safety or public service organization. However, this requirement may be waived by the Governing Board if the individual has retired from a public safety-related position, or they deem*

*the person eligible to hold the position. The Vice Chair(s) shall be elected at the spring meeting of alternating years for 2-year terms. If only one Vice Chair is elected the term shall not be concurrent with the term of the NPSTC Chair. These offices will be allowed continuing term limits, except if the officer resigns and/or the Governing Board by majority vote determines otherwise.*

Sheriff Kennard moved to approve the above resolution of the position description, Chief McEwen seconded.

Chief Leary said that representation should be up to the membership of the organization represented on the Governing Board. Chief McEwen did not agree with Chief Leary's interpretation and said the resolution refers to Governing Board officers. Mr. Mitchell objected to the waiver language above, stating that this is a public safety organization and the officers should reflect that. Jason Barbour, NENA, asked if this language addresses the case where a retired public safety person currently working as a vendor would seek to be Chair. Chief McEwen asked if the Governing Board wants to interfere with an organization's right to choose their representative, noting that if NPSTC had vendors sitting at the table, it would change the complexion of the organization.

Ms. Ward said the intent of the language is to give the Governing Board the flexibility to decide particular cases, based on the specific circumstances. Mr. Haller said he believed the language attempts to address the situation where a person has such high qualifications and the basic background to allow the Governing Board the discretion of choice. Sheriff Kennard re-worded his motion to remove the following language: *However, this requirement may be waived by the Governing Board if the individual has retired from a public safety-related position, or they deem the person eligible to hold the position.*

Mr. Haller suggested that language be included stating that to be Chair, one must be a member of Governing Board. Ms. Ward said that NPSTC's Charter addresses the issue: *Only current voting members (not alternates) on the Governing Board may serve as the NPSTC Chair. Once the NPSTC Chair takes his/her position, he/she is no longer affiliated as the primary voter for that association and does not have voting privileges. The association will need to designate a new officially designated primary representative.*

Following this discussion, Sheriff Kennard withdrew his motion; Chief McEwen withdrew his second. Mr. Reynolds moved to reword the resolution to include the above discussion to develop a true position description. Mr. Carbonell seconded. Approved. Ms. Ward said the Support Office will reword the position description and re-submit it to the Governing Board

## **Adjournment**

The next Governing Board Meeting will be held at the BWI Airport Marriott on November 18-19, 2008. In discussion, the Governing Board asked instead to investigate the option of meeting Wednesday and Thursday November 19-20. Because arrangements have already been made for the Baltimore meeting, Mr. Haller recommended that the dates remain as planned.

Chief Leary voted to adjourn the meeting; Ms. Fischer seconded. Approved. Mr. Haller thanked the Governing Board, NPSTC Participants, and the Support Office for their participation and hard work, and adjourned the meeting.