National Public Safety Telecommunications Council Fourth Quarter Report, 2005

This Quarterly Report documents the activities of the National Public Safety Telecommunications Council (NPSTC), its Governing Board, Committees, and Working Groups for the Fourth Quarter, 2005.

Governing Board

During the fourth quarter, the NPSTC Governing Board held its quarterly meeting on November 10, 2005, in Los Angeles, California. The Governing Board welcomed NPSTC's newest liaison member, the National Telecommunications and Information Administration (NTIA), the President's principal adviser on telecommunications and information policy issues. NPSTC's Chair presented plaques of appreciation to the representatives of NPSTC's member and liaison organizations to the Governing Board and to the Chairs of NPSTC's four Committees—Interoperability, Spectrum, Technology, and Regional Planning Committees.

Following discussion at the Governing Board meeting of a proposed update to the Public Safety Wireless Advisory Committee (PSWAC) report, the Governing Board voted that it would plan to identify resources and funding to support a review and update of the PSWAC report.

During the quarter, in October, the Governing Board filed a comment letter with the Federal Communications Commission (FCC) on WT Docket 05-157—*FCC Report to Congress Required by Intelligence Reform and Prevention of Terrorism Act of 2004 Addressing Communications Needs of Public Safety,* and on WT Docket 96-86—*Development of Operational, Technical and Spectrum Requirements of Public Safety*. Both proceedings address the adequacy of the broadband capabilities of public safety agencies.

Executive Committee

During the fourth quarter, the Executive Committee (EC) and the Executive Director met in person and via teleconference to discuss NPSTC program planning and future meetings. In November, the EC held an Executive Committee session, and participated in the NPSTC Governing Board quarterly meeting and the Regional Planning Committee (RPC) Committee kickoff meeting. During the week in Los Angeles, the EC also participated in an intensive strategic planning meeting to direct the foundation and framework of NPSTC's planning cycle. The strategic plan establishes NPSTC's general direction, reflected in its mission, vision, values, and strategic goals, and informs the development of the annual program plan.

Other meetings during the quarter included October discussions with the National Institute of Justice (NIJ) regarding NPSTC's work with the RPCs and on the management of the Computer Assisted Pre-coordination and Resource Database System (CAPRAD), in Washington, D.C.; with Nextel in Reston, Virginia; and with NPSTC's Broadband Task Force, also in Washington, D.C. In November, the EC met with the Association of Public Safety Communications Officials – International (APCO) Board of Officers to resolve the Memorandum of Agreement between APCO and NPSTC.

Committee website membership has steadily grown since the new NPSTC structure has been introduced, more than tripling in size over the last year. There was continued growth since the third quarter.

Quarter	Interoperability	Spectrum Management	Technology	RPC
Jun-04	29	28	27	
Sep-04	42	38	39	
Dec-04	47	44	42	
Mar-05	61	58	56	
Jun-05	66	61	59	20
Sep-05	72	64	61	28
Dec-05	83	71	68	37

Spectrum Management Committee

The NPSTC Spectrum Management Committee currently oversees the activities of the following Working Groups: Broadband, Border Issues, 700 MHz Outreach, and VHF Rebanding.

800 MHz Reconfiguration

At the November Governing Board meeting, a brief report was provided regarding some changes to the cost classification of transitional costs and complaints about the guidance on incumbent labor rate reimbursements associated with 800 MHz rebanding. These have been revised to clarify issues; webinars to explain the changes are available on the Transition Administrator (TA's) website.

Broadband

There are now two remaining 4.9 and/or 5.9 GHz testbeds underway. One is in Colorado and will involve multi-agency operations. The other, sponsored by Pinellas County, Florida, will examine the joint use of 4.9 GHz and 5.9 GHz to communicate using a bridged 4.9-5.9 GHz self-healing mesh network. The Executive Director and EC met with the leadership of the Florida project and invited them to attend the November meeting, where they provided a comprehensive update on the Pinellas project. The EC also held a fruitful discussion about the direction and history of the project and the involvement of public safety.

The 4.9 GHz demonstration in Los Angeles County, California, to support public safety requirements and operations was completed in May. One of the goals of the demonstration was to test for potential interference from airborne video on ground systems. Traditionally airborne units transmit point-to-point back to an EOC. For the demonstration, one helicopter was outfitted with an omni transmitter and one with a steer able point-to-point antenna. As reported at the November meeting, in testing, the helicopter with the directional antenna had little effect on any of the ground systems using the same frequencies in the 4.9 GHz spectrum; however, all three 4.9 GHz ground systems were affected by the helicopter with the omni-directional antenna. The 4.9 GHz ground systems were disabled 100 percent of the time when the helicopter airborne video systems were in close proximity.

On behalf of the Radio Advisory Board of Canada, the Chair moderated a technical panel at the October CANAPCO Conference in Vancouver British Columbia. The Broadband Chair send out a brief Request for Information (RFI) to several vendors asking for information related to broadband 700 MHz deployments by public safety.

Earlier, at the June NPSTC meetings, this Working Group initiated efforts to examine broadband applications. Several vendors provided well-received presentations on these issues. The Working Group will attempt to develop a national applications matrix, using RPC Region 8's as a template, and soliciting input from surveys. This will provide guidelines for application Quality of Service (QoS) in a future NPSTC-developed broadband deployment guidelines document, and may feed into future revisions of the SAFECOM SoR. There was no dedicated technical activity toward this objective over the August period, but this focus continued at the November meetings.

After participation at the last several TR-8.8 meetings the Broadband Chair had drafted a letter to TR-8.8 from NPSTC and forwarded it to the Spectrum Management Committee Chair for review and dissemination to the EC. A response was received at the end of the month from the Telecommunications Industry Association (TIA). This request has had significant positive impact within TR-8.8, and is leading to the formation of an APCO Project 25 Interface Committee (APIC) Task Group.

During the fourth quarter, members of the NPSTC 700 MHz Broadband Task Force met with both Motorola and the FCC in October to discuss the issues related to 700 MHZ broadband spectrum needs. At the Governing Board meeting, there was vigorous discussion and adoption of action items on data issues in the 4.9 GHz and 700 MHz bands, including a 4.9 GHz standard, a 700 MHz wideband data standard, and broadband data in the 700 MHz band.

4.9 GHz Standard

Initiated during Committee Day by a request from TIA, there was discussion on the issue of an interim 4.9 GHz standard. Public safety has no experience with broadband data applications or with data interoperability, but many agencies want variety applications that require broadband data speeds. TIA suggested that it can quickly produce a TIA standard that covers most of public safety needs that will be based on one of two Commercial off the Shelf (COTS) standards. It would not address all security issues and it would not be called a public safety standard, but would be labeled as a TIA standard. A complete standard that addresses all public safety requirements will take longer to develop and future requirements are not all known at this time. TIA will continue to work on this standard regardless of NPSTC's decision.

TIA asked for guidance from NPSTC. The Governing Board voted to have the Spectrum Committee coordinate the drafting a letter to TIA, asking TIA to quickly develop a channel plan and to provide an analysis of the two leading COTS protocol contenders, describing the basic differences, what they do and do not do, and which might be backwards compatible. NPSTC will look at the recommendation to set aside 10 MHz for an interoperability channel, assemble information, and develop an educational program for users.

SAM Standard

The second issue the Governing Board addressed was whether or not to adopt an interoperability standard for wideband 700 MHz. NPTSC is on record supporting the adoption of the TIA 902 (SAM) standard for interoperability for 50 kHz interoperability channels. The standard would be required in all data radios that operate on wideband data channels. This would support Jurisdictional Area Networks (JAN) systems for interoperability and direct unit-to-unit (talk around) operations. The FCC embraces the American National Standards Institute (ANSI)-type standards if adopting a standard in its rules. The TIA process meets that requirement. Data Radio has proposed that NPSTC support a data technology that is in the public domain, but not an ANSI standard. The NCC recommended adopting the 902 TIA standard, which meets ANSI requirements, for all data radios. The FCC has asked NPSTC to provide comments on the issue of how to promote broadband applications in the 700 MHz band.

The Governing Board voted to file ex parte comments with the FCC stating that NPSTC recognizes a need in public safety for broadband channels and that the FCC should examine the current band structure and alternatives that would promote this goal. This would include analyzing whether the wideband channels and the reserve channels in the middle of the band can be restructured to provide expanded broadband capability to public safety. NPSTC recommends that the FCC issue a Further Notice of Proposed Rulemaking (FNPRM) to assess the benefits of the current structure and any potential for allowing broadband operations in what is now wideband spectrum. There are at least two caveats—any examination must protect voice channels and that any restructuring of the band do not address public safety's needs for additional spectrum. For this reason, NPSTC is asking the FCC to delay adoption of a standard until more information is gathered.

700 Broadband

Finally, the Governing Board addressed the issues surrounding 700 broadband. Public safety users increasingly want JAN mobile data systems that will support applications requiring speeds that only broadband data can support. In the long term, NPTSC will continue to seek more spectrum for this need; however, the chance of quickly acquiring any additional spectrum below 1 GHz is low. The current allocation at 700 MHz can support some broadband channels. There appears to be no support to change the narrowband channel plan to support broadband data channels; therefore, any changes to the current channel plan must protect narrowband channels from interference. Restructuring the channel plan must support all public safety needs for wideband and broadband if changes are made. The regions will plan the use of this band. Careful planning can allow better utilization of wideband and broadband data channels. Urban versus rural needs and the question of whether or not enough channels can be created to support public safety systems in a given area must be considered.

The question the Spectrum Committee asked NPSTC to consider is: Should NPSTC support an FCC Further Notice of Proposed Rulemaking (FNPRM) to address broadband in the current wideband 700 MHz channels? The Governing Board voted to ask the Spectrum Committee to examine the issues at stake in any FNPRM.

700 MHz Outreach

During the fourth quarter, the Senate adopted its Budget Bill on November 3, 2005, which included a provision for an April 7, 2009, date-certain clearing, and also provides $1 billion in funding for public safety, with the potential for more if auction proceeds exceed $10 billion, and $3 billion to help purchase digital to analog set-top boxes for over-air viewers. The House adopted its companion Budget Bill on November 18, with a December 31, 2008, date-certain clearing, which provides $500 million in funding for public safety and $990 million to help purchase digital to analog set-top boxes. To win 700 TV clearing, the House and Senate differences on the overall budget bills must be resolved in conference, the House and Senate must then approve the resulting revised Budget Bill, and the President must sign the budget legislation. There has also been positive movement in the area of digital capability of TV sets. The Governing Board approved advocating advanced dates (ET Docket 05-24) and the FCC's decision on June 9 advanced the date for 25-36" TV sets to March 1, 2006, and for TV sets 24" and under to March 1, 2007.

The Board approved comments for submission to Industry Canada (IC) and offered follow-up technical participation regarding Canada 700 MHz and Channels 63/68 for public safety. The Governing Board requested a white paper to address the 60-69 LPTV Incumbency issue and to educate the RPCs and state licensees. The white paper was finalized, approved, and placed on the NPSTC website. On the issue of 700 MH station ID and secondary fixed operations rules, the Board approved advocating changes in 700 rules to make them compatible with 800 rules. NPSTC filed comments May 2; the FCC issued a blanket waiver on October 21 to allow a digital base station ID at 700 MHz.

Regarding the issue of additional spectrum and reports to Congress by December 17, 2005, NPSTC filed comments with APCO with the FCC, reaffirming the need for more public safety spectrum.

Regarding the issue of 700 MHz wideband reserve and the 2+2 guardband, the Governing Board formed a task force to study the issue, which is underway. The Task Force met with the FCC on October 25. Access Spectrum and Pegasus and others have filed white papers with the FCC in August and in November. As noted, public safety does not want to move the voice block, making if difficult to share a common position with Access Spectrum.

The 700 MHz Working Group has also continued developing an engineering study and TV shortspacing guidelines to assist with waiver development for early availability of 700 MHz spectrum to support public safety operations. There have been several commercial waiver requests granted by the FCC that allow commercial adjacent operations inside a TV grade-B contour. New York State filed a massive waiver for utilization of 64/69 in the New York City area.

Border Issues

In October, the Border Issues Working Group continued to work with the Radio Advisory Board of Canada (RABC) within the Joint Broadcast and Public Safety Working Group. This group is working with IC to develop the TV band sharing and interference protection rules for public safety and broadcast services.

The FCC and IC are also examining the current utilization of NPSPAC mutual aid channels for international interoperability. To date no such utilization has been identified by either side. This has a significant impact on the U.S./Canadian negotiations with respect to the 800 MHz rebanding process. There were scheduled follow-on meetings between these two countries on this issue in April 2005,but at this point, no information on the outcome of these meetings is available.

Border efforts in the Northeast are proceeding and both sides are working on both 700 and 800 with Canada. Work on 700 MHz has been finalized except for the TV bands and the interoperability channels will be completely harmonized. The State of New York is finishing a paper on all the international 800 rebanding issues in general, particularly border issues. In Region 2, where New York borders Canada, the ability to use the ITAC channels won't be affected by rebanding.

Efforts along the Southern border are not progressing as rapidly. Band planners in 800 MHz have developed a plan for rebanding in the San Diego area, a difficult area to structure, and NPSTC would like to encourage the State Department and FCC to facilitate the process. The Executive Director and EC have discussed this issue with the International Bureau representative at the Commission.. The Governing Board voted to submit comments to encourage the State Department and the FCC Chair to stimulate action on the Southern border.

VHF

NPSTC awaits FCC action relating to an ICOM a Petition for Rulemaking, requesting additional public safety spectrum at VHF (150 and 153-154 MHz).

Technology Committee

The NPSTC Technology Committee currently oversees the activities of the following Working Groups: NCC Recommendations, Narrowbanding Below 512 MHz, Amateur Radio Services and Broadband Over Powerline Technology, Voice over Internet Protocol, Security, Paging Technologies, and Surveying Equipment.

NCC Recommendations

There has been no action in the NCC Recommendations Working Group in the last two quarters as action items have been resolved, and the Committee will probably dissolve this Working Group.

Narrowbanding Below 512 MHz

The Working Group filed ex parte comments addressing the challenge of the 6.25 kHz migration and is awaiting FCC disposition.

Voice over Internet Protocol (VoIP)

During the quarter, the Chair of the VoIP Working Group was replaced. The new Chair will begin by developing a collaboration portal for VoIP and recruiting help to work on the user requirements document.

Amateur Radio Services/Broadband Over Powerline Technology

At the Governing Board meeting in November, the Working Group reported on a small testbed in San Diego. Prior to installation of the testbed, California sent engineers to do a scan of RF noise between 2 and 80 MHz; the engineers did another scan after they installed the system and noticed a significant difference in those two scans. The results suggested that the systems radiate, indicating a potential for interference.

Security

During this quarter, the Security Working Group announced its intention to draft a security approach to public safety communications security issues. The Chair intends to write a "want ad" in a search of a practitioner to provide knowledgeable operational input on security. NPSTC doesn't have the adequate resources in its Working Group to take on this effort, but it does have the ability to coordinate with other organizations (e.g., Global, TIA, IETF, IEEE, and Oasis) and help establish requirements.

700 Wideband Technology Working Group

The Working Group has collected data for the wideband spectrum management and deployment guidelines, and had been working with TIA TR-8.18 on the SAM and IOTA parameters. It was hoped that the draft guidelines would be completed by the June NPSTC meeting, with a draft pack soon afterward, but the schedule slipped into this quarter for the completion of the guidelines. Significant unresolved issues remain regarding broadband and wideband operations at 700 MHz, and this effort will likely be on hold until these issues are resolved.

Paging Technologies

The Paging Technologies Working Group continues to look at allocations or sharing in 900 MHz and awaits word on its FCC filing requesting that the FCC allow public safety to access 900 MHz for paging applications. The group is also working on material to help agencies understand what's available in digital, tone, and voice, and will plan to report at the next meeting.

Surveying Equipment

In the fourth quarter, the Working Group continues the process of assembling information on the use of 450 MHz for surveying equipment. The Chair has also developed a white paper, which is being reviewed by the RPC Committee.

Interoperability Committee

The NPSTC Interoperability Committee currently oversees the activities of the following Working Groups: Statewide Interoperability Executive Committee, Project MESA, Software Defined Radio, System Interconnect, and International Telecommunications Union.

During the fourth quarter, John Powell, Interoperability Committee Chair, was quoted in the following article, *Cisco Links Public Safety Networks,* which can be viewed at
http://today.reuters.com/business/newsArticle.aspx?type=technology&storyID=nN24126345

Statewide Interoperability Executive Committee (SIEC)

At the Governing Board meeting during this quarter, the SIEC Working Group Chair proposed that the group research a concept for designating the 24 12 ½ kHz voice channel pairs the FCC holds in reserve as disaster augmentation channel pairs. The Governing Board approved the concept of using the reserve channels for disaster augmentation channel pairs, will further develop the plan, and work to pursue appropriate regulatory action.

Project MESA

NPSTC was in attendance at the most recent meeting in Edinburgh, Scotland, held on October 25-28, where Interoperability Chair, John Powell, was elected into a leadership position on the Board. The Project MESA meeting was called eventful and included a strong call by the user community for industry to provide proposals to meet the requirements developed. There is the possibility, depending on the level of manufacturer proposals at the next meeting, that MESA could dissolve to a user's forum. If MESA dissolved in its current iteration, a joint U.S./European effort regarding standards would continue. The next meeting will be held in late March or early April 2006 in the United States.

Software Defined Radio

During the fourth quarter, John Powell, Chair, Interoperability Committee, was nominated to chair the Software Defined Radio (SDR) Forum Board of Directors and Fred Frantz, Chair, SDR Working Group, was nominated to represent large corporations on that Board.   The SDR Forum would like to host a teleconference to discuss the Public Safety RFI. There has been less public safety participation in recent months and the Working Group would like to increase membership.

System Interconnect

During the quarter, the Working Group received good feedback on the gateway device white paper from the Department of Homeland Security (DHS's) Interoperable Communications Technical Assistance Program (ICTAP) and others. The white paper will be placed on the server and sent out via the participant's listserv.

Regional Planning Committee (RPC) Committee

During the fourth quarter 2005, the RPC Committee held its first regional meeting for the West Coast RPCs in November. The RPC Committee has already made significant strides in developing contacts for each of the regions and has assigned Working Group membership assistance to verify the POCs from the FCC's RPC list.

The RPC Committee created three Working Groups in November.

- The RPC Funding Working Group will develop funding alternatives for supporting the RPCs through a grant process and to explore the APCO Foundation and other resources to provide specific funding sources to further support the work of the 55 RPC Committees.

- The RPC Common Nomenclature Group will work with the 55 RPC Regions to develop and promote support of the RPCs to adopt the common nomenclature concepts on a national level.

- The RPC Rebanding Support Working Group will develop a mechanism to bring together users within the same rebanding wave and phase level to promote a constructive exchange of information, and to investigate hosting a common database of contacts.

The RPC Committee filed the NPSTC response to the FCC WT Docket 02-55 recommending procedural steps for processing the applications related to spectrum that will be left over from the Nextel Rebanding with the FCC.