NPSTC

NATIONAL PUBLIC SAFETY TELECOMMUNICATIONS COUNCIL

National Public Safety Telecommunications Council
Second Quarter Report 2011

This Quarterly Report documents the activities of the National Public Safety Telecommunications Council (NPSTC) for the Second Quarter 2011. NPSTC is a federation of organizations whose mission is to improve public safety communications and interoperability through collaborative leadership.

Governing Board

During the Second Quarter 2011, NPSTC's quarterly Committee meeting was held in conjunction with a Cross Border Interoperability Forum, hosted by the Embassy of Canada in Washington, D.C. on May 16 and 17. The Forum included the Canadian participation of Industry Canada (IC), Defense R&D Canada (DRDC) Center for Security Science (CSC), Public Safety Canada (PSC), and the Department of Foreign Affairs and International Trade, and from the United States, the Department of Homeland Security (DHS), Department of State, and the Federal Communications Commission (FCC).

Filings on Regulatory Issues

On behalf of its member organizations, NPSTC made the following filings to the FCC in the Second Quarter 2011.

NPSTC submitted Comments in response to the Commission's Fourth Further Notice of Proposed Rulemaking (FNPRM), released January 26, 2011 (WT Docket No. 06-150, PS Docket No. 06-229, WP Docket No. 07-100). April 11, 2011. In the Fourth FNPRM, the Commission sought comment on the architecture and rules most appropriate to "further promote and enable nationwide interoperability among public safety broadband networks in the 700 MHz band." NPSTC supported a nationwide architecture with provisions for regional control, together with rules essential to nationwide interoperability. NPSTC cautioned against codifying too many detailed rules at this early stage of broadband deployment. Given the many detailed rules proposed, it is likely that a number of the rules would need to be modified based on additional deployment and operational experience yet to come. The multi-year process to do so could further delay the provision of broadband service to public safety.

NPSTC filed Reply Comments in the Matter of Innovation in the Broadcast Television Bands: Allocations, Channel Sharing and Improvements to VHF, ET Docket No. 10-235. April 25, 2011. NPSTC submitted Reply Comments in response to the Commission's Notice of Proposed

Rulemaking (NPRM) released November 30, 2010 in the above-captioned proceeding. In the NPRM, the Commission sought comment on repurposing a portion of the television broadcast spectrum for fixed and mobile wireless services, including mobile broadband. In its Reply Comments, NPSTC addressed the need to protect public safety's use within TV channels 14-20 as provisions for repurposing the TV spectrum unfolds. NPSTC opposed the Commission's proposal to expand the existing land mobile allocation at 470-512 MHz to a more generalized "flexible" mobile allocation.

NPSTC Submitted a Request for Clarification of Commission's TETRA Waiver. May 26, 2011. NPSTC submitted a Request for Clarification of the Commission's waiver of the rules to permit certification and use of TETRA equipment, subject to certain conditions, pending the outcome of this rulemaking proceeding. This request for clarification related only to operation on the 821-824/866-869 MHz band segment under the waiver.

NPSTC Submitted Comments on the TETRA NPRM. June 27, 2011. NPSTC submitted Comments in which NPSTC addressed issues surrounding interoperability and potential low site/high site interference.

NPSTC Committee Action Items

At the May 2011 meeting, the Governing Board made the following decisions.

- The Governing Board voted by acclamation to re-elect NPSTC's chair, Ralph Haller, for a 2-year period.
- The Governing Board approved Lucien Jones as Vice Chair of the ESF-2 Working Group.
- The Governing Board approved a new Radio Programming Compatibility Requirements Working Group under the Technology Committee with Pam Montanari to serve as Chair and Tom Sorley to Co-Chair.
- The Governing Board approved a request that NPSTC draft a letter to FM Approval asking them to state their intentions in writing to either honor the existing intrinsically safe standard or develop a LMR-specific standard.
- The Governing Board approved a revision of the NPSTC organization chart to make it more reflective of the work of the Committees.

Meeting Presentations

Presentations at the May 2011 Interoperability Forum and Committee meeting included the following.

Embassy Welcome, Jean-Philippe Linteau, Senior Trade Counselor: Mr. Linteau welcomed attendees from NPSTC and Canada to the Cross Border Interoperability Forum and NPSTC Committee Meeting and spoke on the importance of the U.S./Canada relationship.

Dr. Robert Griffin, Director, First Responder Programs, Office for Interoperability & Compatibility (OIC), Department of Homeland Security (DHS): Dr. Griffin said the public safety community sits at the confluence of several substantive but disparate streams of policy and technology. While

voice will remain the primary driver of communications, data, alerts and warnings, and sensor technology are rapidly moving into mainstream operations and planning.

Chris Essid, Director, Office of Emergency Communications (OEC), DHS: Mr. Essid reminded the audience that preparations for the tenth anniversary of 9/11 are already beginning and asked public safety to share accounts of the progress the nation has made at all levels in communications since that day in the areas of funding, personnel, equipment, and training to solve interoperability problems.

Keynote Address: State Department, Ambassador Philip Verveer, Deputy Assistant Secretary of State and U.S. Coordinator for International Communications and Information Policy: Ambassador Verveer's remarks addressed two things: Public safety's requirements for modern communications capabilities, and the nature of North American diplomatic cooperation in the use of radio frequencies. He reviewed the President's Wireless Innovation and Infrastructure Initiative, which has four key parts: Reallocating the D Block for public safety; $7 billion for construction of the network; coordination with rural build-out supported by a $5 billion investment; and $500 million for a Wireless Innovation Fund for R&D and technological development to tailor the network to meet public safety requirements, standards, and applications.

Public Safety Canada (PSC), Steve McDonald, on behalf of Serge Beaudoin, Director General, Emergency Management: Mr. McDonald, Chief of Interoperability Development Office, Public Safety Canada (PSC), said, PSC, less than 10 years old, supports public safety and emergency management. PSC has a number of initiatives ongoing, including work on 700 MHz. Canada will undertake its own Digital Television (DTV) transition later this year; a portion of the spectrum will become available for auction for commercial use next year. A portionis also being considered for public safety.

Policy Public Safety Spectrum Trust Update (PSST), Harlin McEwen, Chairman, PSST: Chief McEwen reviewed the history and expectations for the future proposed nationwide public safety interoperable wireless broadband network. The network will provide an opportunity to bring commercial technologies to the public safety community that will allow access to much needed data services.

Luncheon Speaker: James Arden Barnett, Jr. Rear Admiral (RET.), Chief, Public Safety and Homeland Security Bureau (PSHSB), Federal Communications Commission (FCC): Admiral Burnett discussed the status of the 800 MHz rebanding effort; 700 MHz, including the dual path of broadband and narrowband; and the VHF/UHF narrowbanding deadline.

Border-Related Issues. NPSTC's efforts to improve all public safety communications are commendable especially with regards to cross-border communications. He said his staff informed him that members of NPSTC have been a driving force in seeking to ensure that first responders along the Canadian border in all frequency bands are able to communicate with counterparts across the border; and roam across the border with their mobile and portable radio equipment during the normal course of duty.

700 MHz Broadband Update. Achieving a nationwide interoperable public safety broadband network is an important U.S. national priority and a longstanding goal of the Commission. It is also a high priority for NPSTC, its membership, and the Bureau's international partners.

Narrowbanding. The Bureau has been and will continue to reach out to public safety organizations such as NPSTC to help it assist licensees in completing this transition. "Our collaboration with NPSTC, which included a narrowbanding questionnaire sent to your members greatly assisted us in gauging the level of compliance. In addition, your members have generously provided time and energy when we have asked for your assistance in our outreach efforts on this very important topic," Admiral Barnett said.

Trade Presentations: Daniel Zaharychuk, Trade Commissioner, Information, Communications, and Technology, introduced representatives of six Canadian companies who provided information about their projects related to public safety telecommunications.

- Bell Canada, [BCE Nexxia] provides information and communications solutions for public safety through the design, building, and operation of critical infrastructure.
- Fixmo, Inc. advised that it provides secure end-to-end, life cycle management for enterprise mobile devices, managing over 600,000 mobile devices.
- In Motion Technology Inc. stated it has extensive public safety experience assisting agencies to connect and roam across any wireless network, with a focus on wireless and mobile hot spots.
- IXTROM Group Inc. specializes in software engineering and development of solutions for situational awareness.
- KDM Analytics Inc. is a security assurance company, focused on the interoperability of software systems.
- Solace Systems indicates its single platform can be shared for all middleware needs to accelerate information flow while reducing the cost and complexity of IT infrastructure.

Industry Canada, Jennifer Wharram, Manager, Mobile Engineering, Spectrum, Information Technologies and Telecommunications Sector: Ms. Wharram provided an overview of the work of Industry Canada (IC), its partnerships, and offices. Frequency planning in Canada is managed by types of use, not by the type of user such as public safety. Spectrum management and providing access to spectrum is on a first come, first serve basis for licensed spectrum or through a competitive process.

Jennifer Manner, Deputy Chief, Public Safety Homeland Security Bureau (PSHSB), FCC: Ms. Manner discussed broadband for public safety and said the FCC had granted a total of 22 broadband early deployment waivers, including a recent grant to the State of Texas.

Brian Marenco, Electronics Engineer, Policy and Licensing Division, PSHSB: Mr. Marenco said OEC and PSC have participated in cross-border workshops to develop practical solutions to problems on the border. Public safety wants to be able to roam into one another's country. As

mentioned earlier, the solution appears to be based on an update to the 1952 agreement. The 1952 agreement only refers to mobile radios installed in public safety vehicles and does not address portable use. Mr. Marenco has brought the issue to the State Department.

Roberto Mussenden, Advisor, Policy and Licensing Division, PSHSB: Mr. Mussenden discussed the ongoing narrowbanding effort, thanking OEC, NPSTC, and APCO for their extensive outreach and guidance to public safety. In April, the FCC sent out 32,000 letters to wideband licensees reminding them that the deadline was rapidly approaching. NPSTC, OEC, and the SWICs have provided the points of contacts to help licensees through the process. Since April, in the UHF/VHF bands, public safety has made 2,900 changes to their licenses and 235 licenses have been canceled.

David Furth, Deputy Chief, PSHSB: Mr. Furth reiterated the comments on narrowbanding made by Mr. Mussenden and Admiral Barnett, stressing the need to accomplish this mandate in a coordinated fashion. NPSTC's petition on the interim narrowbanding deadlines, which was granted in part, helped to focus the Commission on the issue of narrowbanding and ensuring compliance, Mr. Furth said. Other issues in progress include Next Generation 911. NG 911 and public safety broadband should work together as part of a public safety ecosystem. In September 2010, the FCC adopted an Order and FN on location accuracy issues, and associated issues such as delivering text and videos to PSAPs.

Defense R&D Canada (DRDC) Centre for Security Science, Dr. Anthony Ashley, Director General
Dr. Ashley briefed on the DRDC, the embedded science and technology component for national defense. In Canada, interoperability enabling perspectives include:

- Governance: Canada's senior provincial and federal officials approved the *Communications Interoperability Strategy and Action Plan for Canada*;
- SOPs and Best Practices: Canada devoted much work in these areas as the country prepared for the 2010 Olympics; and
- Technology: CSS in partnership with the Communications Research Centre (CRC) published a document on Rigorous Spectrum Capacity and Usage Analysis that modeled improvements in spectral efficiency vs. increasing bandwidth demand for a public safety use, based on frequently recurring major incidents such as a sporting riot, major traffic pile-up, and major hazmat incident, and found that the 20 MHz spectrum requirement is now well substantiated, using balanced and quite conservative models.

Communications Research Centre (CRC) Canada, Claude Belisle, Vice President, Satellite Communications & Radio Propagation Research: Mr. Belisle discussed the technology programs related to interoperability that CRC addresses. CRC is the research arm of IC and the federal government's centre of excellence in telecommunications. Their research can be transferred to practical solutions through their technology transfer to industry. CRC areas of expertise include radio propagation, satellite communications, terrestrial wireless communications, broadcast and multi media, and broadband networks. Specific projects include work on antenna technologies, advanced electronics, search and rescue satellite-aided tracking, software defined radio (SDR) and cognitive radio (CR), emergency multi media broadcasting, and gateways.

Department of Homeland Security (DHS), Gregory Schaffer, Assistant Secretary, Office of Cybersecurity & Communications: Mr. Schaffer discussed what he called an historic opportunity to address the important and critical issue of interoperability. The community has made much progress since 9/11. Before then, there was no NECP and no SWICs; however the public safety community still does not have consistent capability across jurisdictions. "We have a chance to put together a national broadband public safety network. A variety of things have come together to make this happen," he said, "including the focus of LTE as the standard with the same kind of LTE investment on the commercial side."

Jeff Carlisle, LightSquared, EVP, Regulatory Affairs and Public Policy: Mr. Carlisle briefed on the work of the TWG. LS was in the midst of testing at the time of the meeting. LS is building a wholesale-only wireless 4G LTE network, at a cost of $8 billion over 8 years that will have seamless satellite/terrestrial service. The network will use 40 MHz of spectrum; part of which is in the L band, right next to GPS. Mr. Carlisle indicated that LS has followed all applicable FCC processes to obtain and use its spectrum.

Save Our GPS Coalition, Jim Kirkland, Trimble Navigation Limited: Mr. Kirkland discussed the GPS industry's concerns about interference. LS's filing in November essentially changed the landscape when they filed to operate a free-standing broadband terrestrial network with 40,000 sites. Prior to this filing, the FCC said any use of this spectrum had to be ancillary and highly integrated. Prior to this terrestrial build out, the GPS industry felt that LS's desire to protect their own satellites from interference would protect the GPS spectrum, but the current LS filing indicates the spectrum will be used for broadband wireless.

Outreach and Public Safety Participation Opportunities

NPSTC's Executive Director and various NPSTC Committee volunteers participated in events and tasks related to public safety telecommunications, which provided opportunities to engage the public safety community, including the following meetings, some of which occur monthly.

- SAFECOM EC Monthly Conference Call
- Spectrum Dual Path Monthly Meeting -wrap up graphic
- SAFECOM Narrowbanding WG meetings
- Meeting with the State Department regarding Southern Border activities and hosted a conference call with OEC, Texas Sheriff's association, the FCC and the NPSTC Border Working Group to develop future efforts
- Intrinsically Safe (IS) Radio Working Group
- Meeting with the Coast Guard, OSHA, DHS, and IS radio chairman to discuss issues regarding OSHA certification of radios
- GPS Working Group and sub groups
- Pre-meeting with NPSTC Executive Committee to discuss General Accounting Office (GAO) report and interviews
- Discussion with Lightsquared regarding GPS and public safety

- Narrowbanding discussion
- Public Safety Broadband Licensee (PSBL) meeting with PSST
- Meeting with American Radio Relay League (ARRL) representatives and alarm Industry regarding S.604 position letter from the Governing Board

Outreach Support

Through NPSTC participants' volunteer efforts, NPSTC engages and educates the public safety telecommunications community through personal contact at trade shows and conferences, providing opportunities for participants to learn from others facing the same challenges, and educating practitioners on policy, federal initiatives, technology, and the latest research through open forums and publications.

Volunteer Participation

NPSTC's Volunteer Participation Chair has been reaching out to NPSTC's volunteers to ascertain their interest and connect them to appropriate Committees and Working Groups. NPSTC has 208 volunteers on 14 Working Groups.

Editorial Review

During the Second Quarter, the Working Group reviewed and approved May Quarterly Committee meeting minutes and the First Quarter 2011 report.

Outreach Listserv. Almost daily emails on federal, regulatory, and other important public safety communications news are sent to the NPSTC Participant and Outreach listservs, as well as other subject matter listservs depending on the topic.

Listservs

NPSTC maintains a number of listserv groups used to communicate with the public safety community. Each group is maintained for those requested or invited to participate. Membership and messages are monitored on a daily basis. This form of communication is used for daily announcements or reports, updates, and discussions on critical issues. The table below shows the list of groups with numbers of members. Total participation for all Listserv groups to date is 1,490.

Listserv Total Members	
Group	**Members**
Interoperability Committee	227
Spectrum Management	138
Technology Committee	125
Broadband Working Group	175
Narrowbanding Working Group	14
AFST Working Group	18
Participants	681
Voting	53
GPS Interference Working Group	38
Intrinsically Safe Radio	21

Listserv Total Members	
Group	**Members**
Total Membership	**1490**

Press releases. NPSTC issued the following press releases in the Second Quarter, 2011.

- *Spring 2011 Newsletter Online Now*. April 2011.
- *Needed POCs to Assess GPS Interference.* April 2011.
- *Broadband Working Group Needs Your Input.* April 2011.
- *Be Part of the Exciting Future of Broadband*. May 2011.
- *Cross Border Interoperability Forum*. May 2011.
- *Do You Know a Winner*? May 2011.
- *GPS Interference WG Update*. May 2011.

Article Repository. NPSTC maintains an article repository that includes a searchable database by topic on NPSTC newsletter articles and articles in other publications that refer to NPSTC or are written by NPSTC Participants.

Website Review
The website is regularly reviewed for ease of use and correct information. The website is a practical, outreach tool which offers pertinent information to the public safety telecommunications community. It reaches beyond program initiatives by having links to public safety organizations, government agencies, OIC/OEC, along with links to assist the community with tools to accomplish their telecommunication plans and networks. Statistical information is collected and reviewed as a record of public use and trends.

NIIX (National Interoperability Information Exchange) provides a centralized, secure warehouse to house communications to be shared with other members within a specific community. Registered NIIX members can access peer-created documents and share information with each other. Members can also use NIIX tools to collaborate in the creation and development of their documents. Today NIIX hosts 117 communities.

Committee Reports

NPSTC's Committees identify needs and requirements regarding public safety communications issues. NPSTC's recurring meetings and the teleconferences of the Committee's Working Groups provide an opportunity to gather the individual viewpoints and opinions of the public safety community and conversely to update the public safety community on current telecommunications projects and issues.

Spectrum Management Committee

700 MHz Working Group
The Working Group prepared comments for the Governing Board's review and approval in response to the 700 MHz Broadband Third Report and Order (R&O) and the Fourth Notice of

Further Rulemaking (FNPRM), issued January 26, 2011. The 3rd R&O established LTE as standard while the 4th FNPRM asked the community for feedback on a variety of issues. NPSTC filed comments in response to the 4th FNPRM on April 11, 2011.

The Working Group is working to raise awareness on an upcoming FCC deadline in the 700 MHz band. The FCC requires that all 700 MHz state licensees must have constructed or be prepared to construct their state license to cover one third of the state population by April 2012. The potential consequence for missing the 2012 buildout requirement is the frequencies may automatically revert back to the pertinent Regional Planning Committee (RPC). The Working Group assembled a list of state licensees with a draft letter, but the issue is on temporary hold pending clarification of the build out dates by the FCC. The original buildout deadlines were tied to TV clearing dates and changes in the TV clearing schedule requires clarification on the buildout deadlines.

4.9 GHz Working Group

The Chair participated in an FCC panel on 4.9 GHz earlier in the year with a focus on how to better utilize the band. Recommendations included stronger planning/coordination rules to remove uncertainty over interference issues. The FCC may issue a Notice to look further at these issues and to improve use in the band.

Narrowbanding below 512 MHz Working Group

The Working Group has been working with the SAFECOM Narrowband Workgroup, which has been producing a number of articles and tools for public safety. NPSTC has offered to help the FCC update the addresses of license holders that have come back to the Bureau, marked addressee unknown.

GPS Interference Working Group

Background: *LightSquared is a company that has spectrum in the 1.5 GHz band adjacent to the spectrum used by all Global Positioning System (GPS) receivers. LightSquared plans to build an LTE terrestrial network with approximately 40,000 sites which would provide wholesale capacity to commercial broadband providers. This could radically change and degrade the spectrum environment in which adjacent GPS signals are received, as strong signals from the LightSquared facilities could block GPS reception by public safety communications facilities and devices.*

In January 2011, NPSTC wrote to the FCC raising concerns about the potential for interference. Accurate GPS information is very important to the public safety community. GPS is used for wireless 911 location, support of dispatch operations, mapping/response directions to responders, and synchronization of simulcast systems across the country. The FCC subsequently required LightSquared to test for interference to GPS and submit a report by June 15, 2011, to document the potential for interference and recommended mitigation procedures. NPSTC volunteered, and was selected, to participate in the GPS Technical Working Group (TWG) being co-chaired by LightSquared and the U.S. GPS Industry Council to assess the potential for interference.

In the Second Quarter, the GPS TWG, which had created the Location/Navigation and Timing Sub Groups to develop plans and test for interference, was nearing completion of the testing. All documents from the NPSTC GPS Working Group, the Sub Groups, and the TWG are posted on NIIX

and NPSTC's GPS Yahoo Listserv. The GPS TWG filed a report with the FCC on June 30, after receiving a short extension of the original June 15 deadline. .

TETRA: On April 26, 2011, the FCC issued an Order granting a waiver for TETRA in the UHF business/industrial channels and 800 MHz ESMR (Enhanced Specialized Mobile Radio) channels, and also issued an NPRM with proposed rules that could broaden allowed use into public safety channels. The waiver was effective April 26, 2011. Petitions for Clarification or Reconsideration of the waiver were due on May 26. NPRM Comments were due June 27, with Replies due August 9. There were several key issues to address on the waiver: Clarification is needed on the prohibition of use on 821-824/866-869 MHz, and, for the NPRM, interoperability, frequency coordination, and low site/high site questions need to be answered. NPSTC filed a Request for Clarification May 26 and Comments on June 27.

Boosters: In the WT Docket 10-4, a comprehensive NPRM was issued regarding many aspects of both consumer and Part 90 public safety signal boosters. The Committee developed a summary of the NPRM for the Committee. Comments were originally due June 24, with Replies due July 25, but FCC extended the dates to July 25 and August 24, respectively.

Airborne Use: The FCC released a Public Notice on June 30, 2011 seeking comments on a Petition for Rulemaking NPSTC had submitted in March 2010. The Petition recommends allowing public safety aircraft voice operations on channels designated for secondary trunking use and was filed to help meet operational needs expressed by public safety agencies including the State of Maryland.

Spectrum Management Monitoring Topics

The following Petitions for Rulemaking filed by NPSTC continue to await action:

- Petition for changes to 700 MHz Narrowband Interoperability and Low Power Pool Frequencies. Last FCC Action: Public Notice June 2008.
- Petition to Change the TV Sharing Rules 470-512 MHz. Last FCC Action: Public Notice June 2009.
- Petition to make unused Part 22 Paging Frequencies Available to Public Safety.
- Petition to Make 900 MHz Narrowband PCS Channels Available for Public Safety Use. Last FCC Action: Public Notice December 2009.
- Petition to Allow Voice Aircraft Operations on Certain 700 MHz Narrowband Interoperability Frequencies. Filed March 2010.

Technology Committee

Broadband Working Group

The Working Group is engaged in four areas of work:

- Mission-Critical Voice Requirements: The comment resolution process of this document began in late February. The process to ensure traceability between the comments and the original document has been a bit more cumbersome than expected due to the volume of comments. However, work is near completion and a recommendation is in the final stages of NPSTC approval.

- NOVES: The BBWG, working with Public Safety Communications Research Program (PSCR), is participating in the 3GPP standards development upon which LTE is based. Part of this work focuses on NOVES, or non-voice emergency services. The BBWG has added a NOVES Task Group to provide public safety input into this active effort.
- Priority and Quality of Service: Priority and quality of service functionality is built into LTE standards. To help set expectations among the user community, as well as ensure standards-based solutions for these areas, the BBWG has started to look at public safety's requirements, potentially expanding what was covered in the 2007 Statement of Requirements (SoR). Recent discussions have included the development and standardization of a framework for each topic that would be based on National Incident Management System (NIMS) /Incident Command System (ICS).
- State/Local Control of Network: The BBWG is developing a definition similar to the mission-critical voice definition for state/local broadband control during an incident.

  At the NPSTC May meeting, the Working group sought and obtained volunteer co-leaders from public safety and industry for the NOVES, Priority and Quality of Service and State/Local Control focus areas.

Intrinsically Safe Radio Working Group

The Intrinsically Safe Radio Working Group was created in November 2010 to research and solve problems that will occur due to a change in the intrinsically safe (IS) standard for LMR. The Working Group has asked Factory Mutual (FM) and the International Society of Automation (ISA) why there is a need for a new standard as there have not been any safety issues with the current standard. The revised standard appears to be driven not by any concern that the existing standard is unsafe, but rather to harmonize the U.S. standard with international standards.

Certification agencies have changed their IS testing process in accordance with international standards. All new radios and accessories submitted for certification after January 1, 2012, will be certified according to FM 3610 (2010) not FM 3610 (1988). The financial impact of the proposed change is huge. Pinellas County, FL, estimated the cost at $36 million, and Houston, TX, at $50 million to comply with the new standard. As a result of the change in the standard, LMR radios may need to reduce transmitter power from 3 db to 10 db to be certified as IS Class 1, Division 1. Reduced transmitter power will equal reduced range, which may require more fixed sites, more voting receivers, and may reduce coverage inside buildings.

Additional impacts of a “harmonized” standard include:

- Reduced inductance and capacitance of the overall radio may impact TIA-603 and TIA-102 radio specifications (receiver sensitivity, battery shift life, transmitter RF power).
- Copper wiring size must be increased to handle short circuits, possibly making radios larger.
- Radio housings must meet new electrostatic discharge (ESD) requirements, which may increase size and/or limit ruggedness.
- Current/voltage limiting must be added to the batteries, with either a 10 to 20 percent capacity loss, or the need to increase battery size by the same amount to have the same capacity/shift life.

NPSTC representatives attended the ISA 12.2 meeting held in March, in San Diego, CA. The meeting was very productive with more than half the time devoted to the public safety problem with the revised standard. At the meeting, the Chair asked if public safety had a list of the changes they would want to make the revised standard more acceptable. The group developed a list on the spot and clarified it with ISA. ISA will issue it through the ISA balloted process for making changes. At the same time, the Telecommunications Industry Association (TIA) is in the process of developing a LMR-specific standard. NPSTC representatives also participated at the IWCE during a "Lunch and Learn" session on IS. At the lunch, FM announced its intention to also develop an LMR-specific standard but the Working Group had seen nothing in writing demonstrating that intention at the time.

In April, NPSTC representatives met with OSHA to discuss public safety concerns. OSHA said it will consider future LMR-specific standards if such are developed using American National Standards Institute (ANSI) procedures and are supported by the certification industry. FM has said that as long as there are no changes to radios or batteries after January 1, 2012, they will still be valid under the old FM standard; however, there are always ongoing changes in design and equipment including perhaps the need to replace GPS chips in radios per the above discussion on GPS and LightSquared.

PSWAC Follow-Up: Assessment of Future Spectrum and Technology (AFST) Working Group
The mission of the AFST Working Group is to follow up on the 1996 PSWAC Report to determine spectrum needs as well as the technology and operational requirements through the year 2020. Last summer the Operational Task Group distributed a questionnaire to public safety receiving well over 300 responses. In the fall the Working Group hosted focus groups to develop metrics of spectrum usage in tabletop exercises. Currently the Working Group is working with several corporate partners on modeling broadband data from the AFST Focus Groups and monitoring similar projects regarding spectrum analysis by others. The operational needs and spectrum sections of report are well under way. The technology section is under development and the Working Group seeks volunteers to help write this section of the report. An initial draft is planned for late Fall 2011 followed by a review and comment period.

Video Quality in Public Safety (VQiPS) Working Group
The Video Quality in Public Safety (VQiPS) Working Group is an existing group developed by OIC, and comprised of representatives from public safety, academia, and industry, that accomplishes its work through the ITS lab in Boulder, CO. The Working Group is now affiliated with NPSTC. They have issued a public safety user's/buyer's guide to video systems that provides a vehicle for a user to correlate functional needs to technical requirements that will meet those needs.

Technology Monitoring Topics
<u>P25 Compliance Assessment Program (CAP).</u> The P25 CAP program is in the process of making changes in how conformance testing goes forward, which will now occur outside of the traditional P25/TIA process. They will publish the first two draft tests in the near future, which will expedite the development and publication of tests, and allow the labs to certify and conduct the tests. This is a good result for the user.

Interoperability Committee, John Powell, Committee Chair, Pam Montanari, Vice Chair

Amateur Radio Working Group

The Amateur Radio Working Group hosted its first live OEC-sponsored auxiliary communicator class in Charlotte, NC, during the quarter.

ESF-2 Working Group

The Working Group has added Vice Chair, Lucien Jones, from Oklahoma City, with a strong background in IT.

Monitoring Topics

9/11 Working Group. The Vice Chair asked NPSTC's Governing Board representatives to urge local, state, and tribal entities to participate in the 9/11 timeline, sharing the improvements that they have made since 9/11. The "story" section is in review now and will be made public.

NECP. Guidance, outreach, reporting, and validation for NECP Goal 2 is ongoing through a web-based tool that will be complete in September.

P25 radio programming/software compatibility. Responding to an issue in Pinellas County, FL reported by the Vice Chair, it was suggested that NPSTC create a working group to research software programming and compatibility standards to resolve the problem of how to export fields into a middleware program that allows import into another manufacturer's radio.

SDR Working Group

The Chair is actively participating in a Wireless Innovation Forum (WinnF) interoperability workshop on September 15, 2011, in Montreal on CR/SDR benefits across commercial, defense, and public safety sectors.

Future NPSTC Activities

NPSTC will host a panel at the APCO meeting held August 7-10 in Philadelphia, PA. The next NPSTC Committee meeting will be held on September 29-30 at the Holiday Inn, in Orlando, FL.