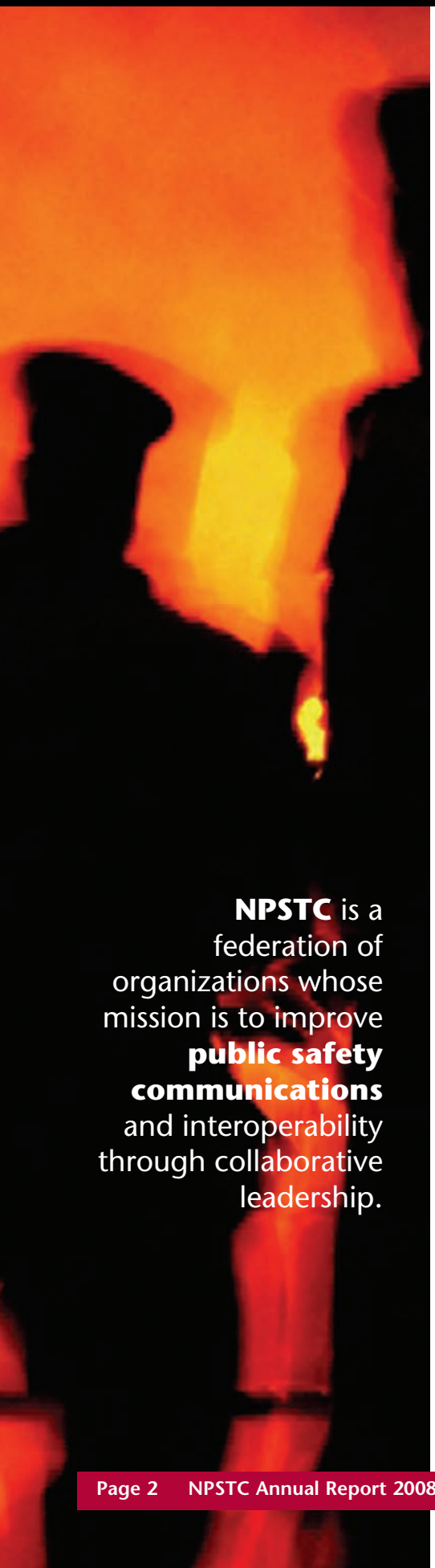
2008 Annual Report

NPSTC is a federation of organizations whose mission is to improve **public safety communications** and interoperability through collaborative leadership.

NPSTC

National Public Safety Telecommunications Council

www.npstc.org



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Member Organizations

American Association of State Highway and Transportation Officials
Association of Fish and Wildlife Agencies
Association of Public-Safety Communications Officials – International
Amateur Radio Relay League
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 Emergency Number Association
National Sheriffs' Association

Associate Member Organizations

Canadian Interoperability Technology Interest Group
Telecommunications Industry Association

Liaison Organizations

Federal Communications Commission
National Telecommunications and Information Administration
U.S. Department of Agriculture
U.S. Department of Homeland Security,
Federal Emergency Management Administration, Office of Emergency Communications, Office of Interoperability and Compatibility *SAFECOM Program*
U.S. Department of Interior
U.S. Department of Justice, National Institute of Justice, *CommTech Program*

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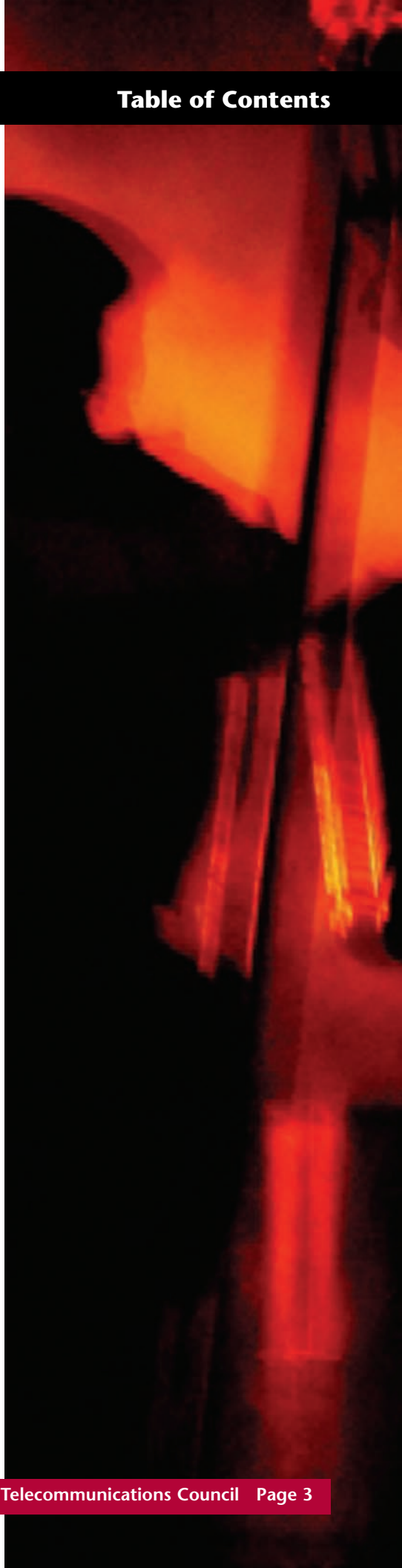


Message from the Chair

NPSTC provides a unique opportunity for its 15 member public safety organizations to come together and develop common directions and goals. It allows input from others in developing policies, including the manufacturing community, local and state governments, and federal partners. The result is a unified voice from the public safety community to the regulators and to Congress.

Ralph Haller, Chair

"The more experience we can bring to solving issues, the better the solutions will be."

This year was filled with eager anticipation for the digital television transition. With that transition in February 2009 [since extended until June 2009], the 700 MHz band will finally become available to public safety licensees. The promise of this new spectrum, made over 10 years ago, finally will become a reality. Although all full power analog television stations will have to switch to digital transmissions, many low power television (LPTV) and television translator stations can remain in the analog mode and in the 700 MHz band past the transition date. These stations can remain in operation until notified that a public safety licensee will begin 700 MHz operations. NPSTC provided guidance to public safety licensees on this issue and developed sample notifications that can be sent to the LPTV and translator licensees to help clear the band in an orderly manner.

Another obstacle to unfettered use of 700 MHz is wireless microphones. For years, wireless microphones have been manufactured and sold operating in the 700 MHz band. Many of the microphones are used by hotels, houses of worship, schools, and local theaters on an unlicensed basis. Broadcasters also operate wireless microphones in the band through licensing. These microphones can cause interference to public safety radio systems and receive interference from such systems. NPSTC, joining with other interested wireless industry groups, encouraged the Federal Communications Commission (FCC) to take all necessary steps to remove wireless microphone operations from the band as soon as possible after the 2009 transition date.

The year saw a failed FCC auction for the 700 MHz broadband spectrum. NPSTC encouraged the FCC to create a public/private partnership to roll out 700 MHz broadband across the country. When essentially no bidders played in the auction, NPSTC provided the FCC with a number of recommendations on how to change the auction rules to make the next auction successful.

NPSTC has taken a lead in attempting to improve cross-border frequency coordination with Canada and Mexico. NPSTC representatives briefed the Department of State on problems with cross-border licensing, including use of different interference models between administrations and met with the FCC. NPSTC invited Industry Canada to attend NPSTC meetings to present our desire to normalize procedures on each side of the border.

As Chair of NPSTC, I encourage anyone with an interest in public safety communications to get involved, even if only by calling into our meetings. The more experience we can bring to solving issues, the better the solutions will be.

Ralph A. Haller
Chair, National Public Safety Telecommunications Council

From the Executive Director

Welcome to the NPSTC Annual Report 2008. This year has been one of our busiest ever. As we move into the new year, we expect all of the local and state public safety communications professionals to be busy implementing their statewide plans and training in the duties of the Communications Unit Leader (COML). NPSTC is pleased to have participated in the development of these materials. Many of us have spent years trying to improve the training and standardize the role of communications responders to emergencies. I can't tell you the number of After Action Reviews in which I have participated where communication issues were a problem. Not due to the people, but due to the use of outdated systems and the procedures (or lack of procedures) in place. I am personally gratified at the progress made by our community and thankful to the leaders who have encouraged federal funding and support to make communications training a top priority.

"I am **personally gratified** at the progress made by our **community** and thankful to the **leaders** who have encouraged federal funding and support to make **communications training a top priority.**"

NPSTC members have been active in so many initiatives this year that will have a positive impact on the jobs our public safety personnel do. One very important issue for mutual aid response is the simple task of assigning common names on radio channels so that when responders go to a multi-jurisdictional scene, they can be told what talk group or channel to turn to on their radio. This year our member, the Association of Public-Safety Communications Officials-International (APCO), has moved the NPSTC Common Channel Naming Report through their standards-making committee and we hope that in 2009 we will see it published as an American National Standards Institute (ANSI) standard. This effort is a joint effort of APCO, American Association of State Highway and Transportation Officials (AASHTO), and the International Municipal Signal Association (IMSA), who are also standards bodies. NPSTC is a diverse organization with volunteers from all walks of the public safety community. We are fortunate to have several policy level organizations to support these efforts.

Marilyn Ward, Executive Director

The National Interoperability Information eXchange (NIIX) tool for sharing documents has been a huge success. We have been busy doing training and working hard to serve the needs of the community. NPSTC is thankful to the Office of Interoperability and Compatibility (OIC) and the Office of Emergency Communications (OEC) for the support we received in 2008 to manage NPSTC member's goals and initiatives. NIIX is an example of the collaboration between all levels of government in that the federal government has funded the development, and the state and local users support it by using NIIX to store Statewide Communications Interoperability Plans (SCIP), COML materials, and other statewide planning materials. The security of NIIX allows for each community to set their own guidelines and choose those who can utilize it. As more inter-jurisdiction and inter-disciplinary collaboration and response occurs, NIIX will continue to be a wonderful asset for public safety communications.

Please enjoy this Annual Report and support our member's activities as we move into 2009. NPSTC members represent thousands of public safety responders and those who support them. We are thankful for their collaborative leadership and your continued support for public safety communications.

Marilyn Ward
Executive Director, National Public Safety Telecommunications Council

NPSTC is a Collaboration

"Many organizations would not even talk to each other 10 years ago. For the Governing Board to be able to assemble and work on issues in a **cooperative spirit** is amazing.

The **net result** is that the public safety community ends up with FCC rules that are **based on the best outcomes** for public safety and the American people ultimately."

Ralph Haller,
Forestry Conservation Communications Association, NPSTC Chair

There is currently *no other forum* for all of the various public safety organizations to come together and develop consensus positions for legislative and regulatory bodies on the broad range of topics impacting public safety communications. There's an unquantifiable benefit of bringing the whole community together in a forum…local and state public safety organizations, federal public safety representatives, and industry.

The National Public Safety Telecommunications Council is a volunteer federation of 15 public safety organizations whose mission is to improve public safety communications and interoperability through collaborative leadership. NPSTC has no individual members; instead the voting members are representatives who vote on behalf of the member organizations.

NPSTC is a resource and advocate for public safety organizations on matters relating to public safety telecommunications. NPSTC explores technologies and public policy involving public safety telecommunications, analyzes the ramifications of particular issues, and submits comments to governmental bodies with the objective of furthering public safety telecommunications worldwide. NPSTC serves as a standing forum for the exchange of ideas and information for effective public safety telecommunications.

One of NPSTC's most important missions is education. Both as a collaboration of organizations and through the diverse work of our individual member organizations, information flows to and from the public safety telecommunications community, providing the opportunity for our participants to learn from others facing the same challenges and educating practitioners on policy, federal initiatives, technology, and the latest research.

NPSTC is a **resource and advocate** for public safety organizations on matters relating to **public safety telecommunications.**

NPSTC actively seeks your participation as a person interested in public safety telecommunications. As a NPSTC participant you can impact national policies of tomorrow and be a part of planning the future course of public safety communications today by being part of the debate and discussion. You will learn the most current information on the newest policies and plans for the nation. As an original source for much of the information that is critically important to professionals in the field, NPSTC also provides a conduit for the exchange of information to and from the federal organizations that make policy and provide funding for programs to the field.

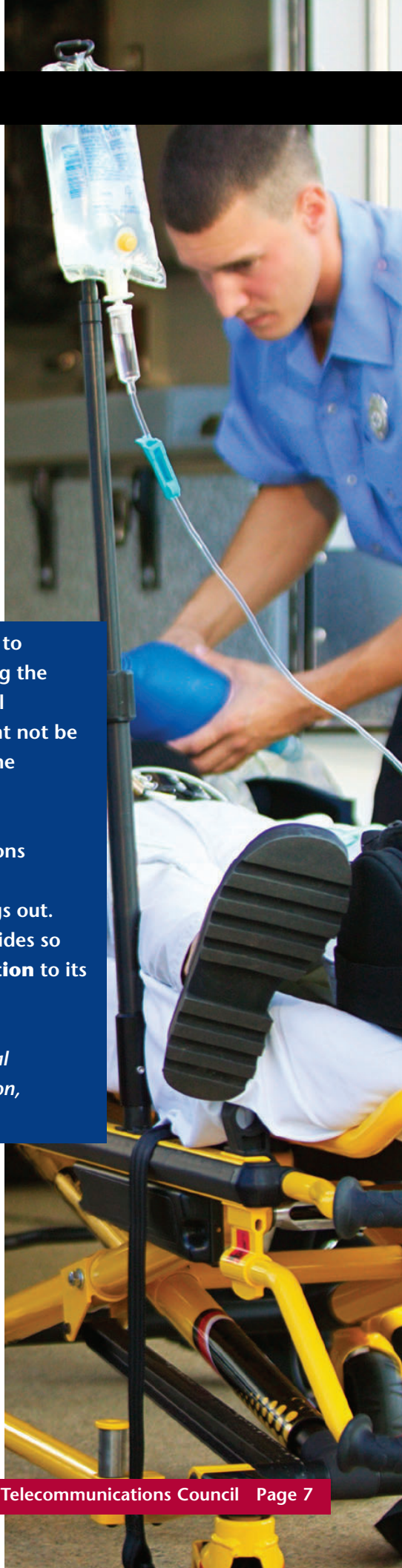
You can affect the rules and regulations that will affect your agency. You can communicate with the FCC, DHS, State Department, OEC, OIC, and other governmental agencies to make them aware of issues and resolutions that the users face everyday.

NPSTC Participants are critical to its consensus process. As NPSTC seeks to understand the complex technical and policy issues surrounding many of the public safety telecommunications issues that the Council faces, the lively debate of issues from the NPSTC community and the viewpoints expressed at its quarterly meetings and listserv discussions are very important in providing as broad a base of informed input possible. The voices of NPSTC Participants shape public safety telecommunications, and we want you to have a voice in the community and the future of our profession. Join NPSTC and participate in the future of public safety communications.

For more information, please contact us at www.npstc.org or call 866.807.4755.

"If you hadn't been close to the process [of petitioning the FCC] on the national level prior to NPSTC, you might not be able to appreciate how the collaboration has changed the process. In those days, organizations did not have the ability to sit down to work things out. Additionally, NPSTC provides so much **valuable information** to its member associations."

Doug Aiken, *International Municipal Signal Association, Vice Chair, NPSTC*



How NPSTC's FCC Filings Benefit Public Safety

Public Safety Doesn't Have Enough Spectrum NPSTC supported waiver applications for Baldwin, New York Fire District and Los Angeles County. Waiver decisions allow emergency services access to unassigned channels designated for other services and have provided an immeasurable contribution to improved response and more efficient use of the spectrum. *Reply Comment addressing the application and waiver request for the Baldwin, New York Fire District. January 14, 2008.*

Comments were filed addressing the applications and waiver request of Woodbridge Township, New Jersey. The filing reiterates NPSTC's position that the Commission, in considering waiver applications must comprehend the 700 MHz band does not by itself totally satisfy local, county, tribal, and state public safety communications. *Comments to a Request for Waiver by Woodbridge Township. August 18, 2008.*

"I am writing on behalf of the Township of Woodbridge to personally thank you for your letter supporting our effort to obtain frequencies from the Federal Communications Commission for our interoperable radio communications system … We are certain your support was extremely helpful in achieving a favorable ruling from the FCC."

Robert Landolfi,
Woodbridge, New Jersey

Private two-way digital paging has emerged as an important technology in strengthening emergency preparedness. NPSTC researched public safety's potential access to commercial paging channels and reviewed the city of Richmond's (VA) 337(c) waiver documents; conducted a review of the defaulting paging licensees to demonstrate how spectrum is available, and compiled a chart of defaulted paging licenses. *Spectrum for Commercial Paging*

The Commission's extensive work examining Hurricane Katrina and other catastrophic events indicates that effort should be directed to expanding two-way paging opportunities for public safety. This information will afford the Commission, public safety agencies, and current licensees opportunity to broaden use of this spectrum by assisting emergency response. *Ex Parte on Paging July 14, 2008.*

Public Safety Has Special Mission Critical Needs Vuze, Inc., a broadband network provider, asked the Commission to promulgate rules to address acceptable network management. NPSTC said efforts of broadband network providers to regulate the transmission of data over their networks could have an unforeseen impact on public safety's primary mission of protecting and serving citizens. NPSTC urged the Commission to consider that delaying or denying the transmission of mission critical information that may be carried over commercial broadband networks will hinder emergency response. *Vuze Petition: Network Management Policies of Internet Service Providers. January 31, 2008.*

Public Safety Needs Access to Broadband In the FCC's August 2007 Second Report and Order addressing public safety and commercial use of the 700 MHz band, the Commission designated 10 MHz of public safety 700 MHz spectrum, and an adjacent 10 MHz of commercial spectrum to establish the nationwide, interoperable broadband public safety communications network. To accommodate this broadband allocation, the Commission revised the public safety narrowband channel plan by maintaining the same amount of narrowband spectrum but shifting its location. The Commission understood that agencies operating on 700 MHz narrowband channels would need to be relocated to meet the revised plan and created a process to do so. NPSTC submitted a number of filings related to these and other issues in 700 MHz.

NPSTC submitted a Petition for Rulemaking, recommending that the Commission amend its rules addressing the band plan and interoperability channel assignments for the 700 MHz public safety radio service. *Band Plan and Channel Assignments for 700 MHz. February 8, 2008*

NPSTC submitted an Ex Parte offering assistance to the Public Safety Spectrum Trust (PSST) regarding the mandated narrowband relocation of public safety agencies. *Public Safety 700 MHz Broadband Licensee. February 12, 2008*

NPSTC filed comments supporting the PSST. The issues addressed the viability of a public private partnership to deploy and manage a 700 MHz nationwide interoperable broadband network serving public safety and commercial interests.

--Comments in Response to the Second Further Notice of Proposed Rulemaking (FNPRM) 700 MHz Band. June 20, 2008.

--NPSTC Submitted Reply Comments in the Second Further Notice of Proposed Rulemaking. July 7, 2008.

NPSTC affirmed its objective to support the development of a network that reflects public safety requirements and is built out to serve the geographic areas where public safety agencies respond.

--NPSTC Submitted Comments in the Third Further Notice of Proposed Rulemaking on, regarding the 700 MHz D Block, the Public/Private Partnership, and the Public Safety Broadband Licensee. November 3, 2008.

--NPSTC Submitted Reply Comments in the Third Further Notice of Proposed Rulemaking. November 12, 2008.

Public Safety Input is Required on the Borders NPSTC reviewed and prepared a draft comment addressing whether Industry Canada's 700 MHz band plan should align with that of the United States. If it does not, significant challenges would be created for border agency communications as it will reduce the amount of 700 MHz spectrum available to agencies and how it can be used. NPSTC submitted comments to Industry Canada. *Proposed Revisions to the Frequency Plan for Public Safety in the 700 MHz Band. April 4, 2008.*

NPSTC informally submitted a recommendation to the FCC regarding 700 MHz issues on the southwest border. *700 MHz Southwest Border Issues*

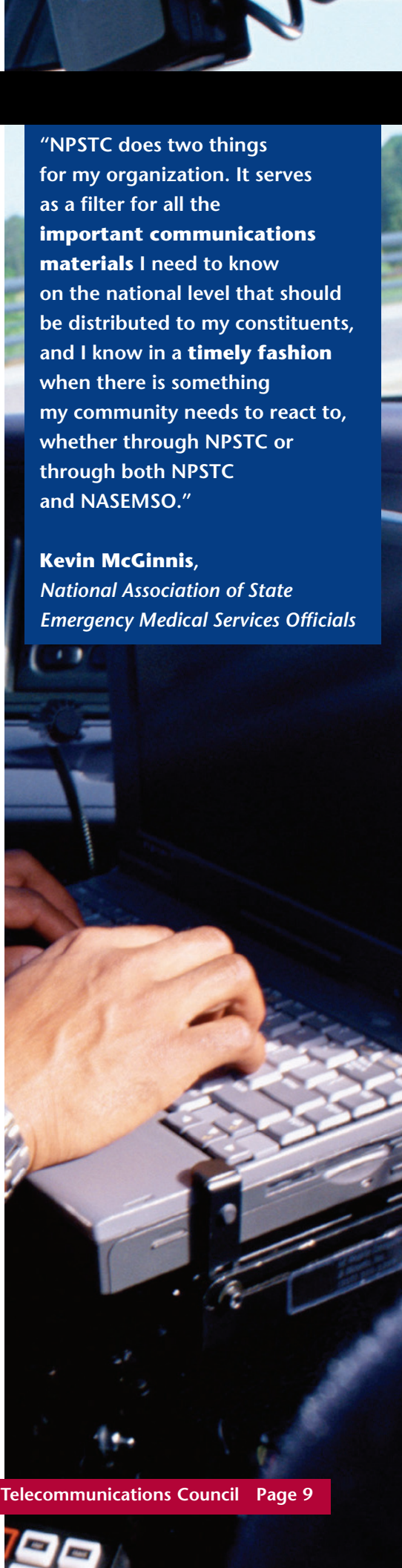
Public Safety Needs To Be Protected from Interference NPSTC submitted a letter urging the Commission to take action to ensure that wireless microphones and other similar audio devices that can interfere with public safety would no longer be certified or marketed in the 700 MHz public safety spectrum. *Wireless Microphones and Audio Devices in the 700 MHz Band June 30, 2008.*

As follow-up, the Commission issued a Notice of Proposed Rulemaking (NPRM) addressing removal of wireless microphones from the 698-806 MHz band, to which NPSTC filed Comments. October 3, 2008.

NPSTC Collaborated on a Joint Ex Parte Letter to the FCC re Wireless Microphones. The letter was signed by NPSTC, the Association of Public-Safety Communications Officials – International (APCO), the CTIA, and the National Emergency Number Association (NENA). November 25, 2008. These actions should help promote effective public safety communications by removing low power auxiliary operations from the 700 MHz band once the Commission acts on the pending rulemaking.

"NPSTC does two things for my organization. It serves as a filter for all the important communications materials I need to know on the national level that should be distributed to my constituents, and I know in a timely fashion when there is something my community needs to react to, whether through NPSTC or through both NPSTC and NASEMSO."

Kevin McGinnis,
National Association of State Emergency Medical Services Officials



NPSTC Provides a Voice for Public Safety on the Borders

NPSTC has reached out to the FCC, the State Department, and counterparts in Canada to discuss and educate on public safety needs on the borders, briefing on problems with cross-border licensing, including use of different interference models across the northern border. NPSTC continues to support the ongoing work of the U.S./Mexico High Level Consultative Commission (HLCC) and its Directory of Bilateral Issues for 2007-2009, which include protocols for VHF/UHF spectrum use, reconfiguration of the 800 MHz band, 700 MHz compatibility, and interference resolution procedures. NPSTC supports the work of the joint Department of State and DHS initiative to improve and expand cross-border communications.

Industry Canada Attends NPSTC Meeting

In June, NPSTC invited Industry Canada (IC), the Canadian counterpart for licensing and spectrum management to the FCC, to attend a NPSTC meeting. Jennifer Wharram spoke at NPSTC's meeting briefing on a number of subjects covering spectrum management in Canada, Canada/U.S. Considerations, IC's role in public safety radio communication, spectrum used by public safety in Canada, radio interoperability, and public safety and radio frequency spectrum in Canada.

Rick Finn, CITIG; Marilyn Ward, NPSTC; Ralph Haller, NPSTC; Jennifer Wharram, Industry Canada; Tom Black, Public Safety Canada

Lance Valcour, Canadian Interoperability Technology Interest Group (CITIG), said, "CITIG is extremely happy that, once again, **NPSTC is showing leadership** in the area of improving public safety interoperability. We look forward to **joining forces again** with the Northern Border Task Force to ensure that our ability to communicate with our U.S. partners continues to be improved both in times of disaster and during day-to-day operations along the border."

NPSTC Stands Up Northern and Southern Border Task Forces

In September, NPSTC created task forces that will develop white papers to summarize current issues on the cross-border coordination process and spectrum access with recommendations to improve coordination, spectrum access, and cross-border interoperability in both the near- and long-term. The white paper will include recommendations for the actions required by various government agencies to implement recommendations.

Interference Validation Testing–Improved Cross-Border Coordination in Action

One of the big issues agencies on the border face is acceptance of license applications that may cause interference on the other side of the border. In June 2007, the State of Vermont applied to IC for 66 applications; 32 were denied due to anticipated harmful interference. Following that decision, Terry LaValley, Chair, Northern Border Task Force, representing Vermont, the FCC, and IC worked together to test actual frequencies for interference from different locations. The combined FCC and Canadian interference calculations showed the potential for interference from 16 sites in Vermont. Those projections were based on final technical parameters (transmitter ERP, frequency, antenna type, and orientation) mutually agreed to by all parties. The actual on air tests were very successful. A combination of 25 frequencies in both the VHF and UHF band were tested from the 16 sites. Only one site failed the initial test. "This was a great opportunity for the State of Vermont to be able to work directly with the FCC and IC. The information obtained through this process has been enlightening," LaValley says.

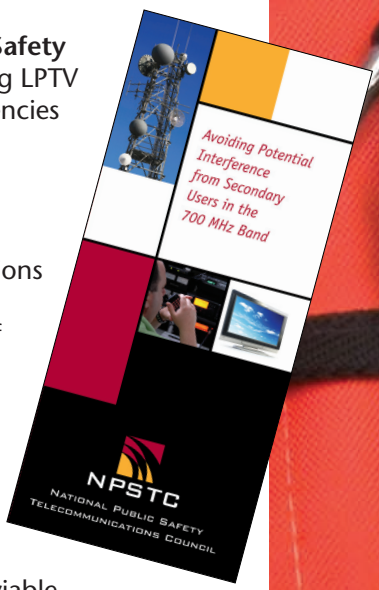
NPSTC Takes Action to Protect Public Safety 700 MHz from Interference

The 700 MHz band spectrum is an essential resource for public safety, both to support mission critical narrowband systems and the prospective nationwide interoperable broadband system. February 17, 2009, [since pushed back until June 2009] begins a new era as TV broadcasters vacate 700 MHz and make the transition to digital television. While full power analog TV stations are required by law to vacate the 700 MHz band, there is no wholesale requirement to clear low power TV stations (LPTV), TV translators, and ad hoc auxiliary broadcast operations, including wireless microphones and similar devices, from the band. Under the FCC rules, these uses have secondary status to public safety users but harmful interference to public safety could still occur. NPSTC chose to be proactive on this issue. Stu Overby, Chair of the 700 MHz Working Group, who led the initiative said, "Our goal was to raise awareness of the issue, develop recommended solutions, and tools to assist public safety agencies and obtain FCC support."

NPSTC Urges FCC To Address Licensed and Unlicensed Wireless Mics
In June, NPSTC urged the FCC to take action to ensure that wireless microphones and similar audio devices would no longer be certified or marketed in the 700 MHz public safety spectrum. NPSTC recommended that the Commission address clearing wireless microphones from the 700 MHz public safety band and that the FCC initiate a rulemaking to prohibit certification, marketing, and use of wireless microphones licensed under Part 74 of the Commission rules within the 700 MHz public safety bands.

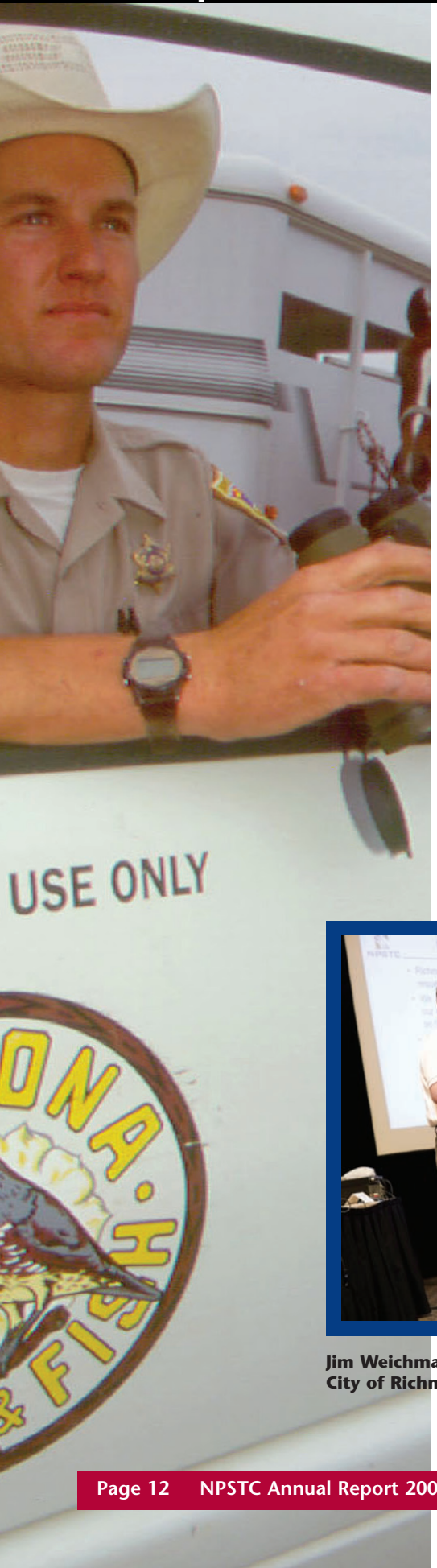
NPSTC also recommended action on unlicensed wireless microphones which have no specific authority to operate but are prevalent in the market. The Commission promptly issued a Notice of Proposed Rulemaking, proposing to prohibit the certification, marketing, and use of wireless microphones in the 700 MHz band.

NPSTC Develops LPTV Brochure and Resources for Public Safety
NPSTC reached out to public safety with a brochure explaining LPTV and wireless microphone issues. It notes that public safety agencies planning to deploy in 700 MHz need to notify LPTV and TV translator licensees. NPSTC developed a template letter and additional analysis and resources for addressing the risk of interference from LPTV and other secondary sources. The notifications would be targeted to LPTV and TV translator stations on conflicting channels within interference range of pending public safety deployments and would advise these licensees of the need to move to an alternative channel. An entity with secondary status must resolve the interference it causes to primary users or discontinue operation.



The FCC supported NPSTC's efforts and recommended that notifications for relevant LPTV and TV translator stations occur 9 to 12 months prior to actual operation of a 700 MHz public safety system as LPTV stations need this time to find a viable alternative channel and to obtain authorization from the FCC to use it.

NPSTC Helps Public Safety Acquire Needed Spectrum



Jim Weichman, Systems Manager, City of Richmond, Virginia, was frustrated that Part 24 spectrum in the 900 MHz band, the intended band for two-way paging applications, was unavailable to public safety. In 2007, he approached NPSTC seeking their assistance on a two-way paging initiative he had developed for emergency group alerting. "Paging devices are one of the most affordable means of communications for public safety. This capability is very important to the fire service, where many firefighters are volunteers and must be dispatched from wide geographic areas to an incident in a cost-effective manner," Weichman says. "The only roadblock and the reason it has not been widely implemented in public safety is the lack of spectrum for commercial-off-the-shelf devices that operate at 900 MHz, in an environment where the entire 900 MHz Narrowband Personal Communication Service (NPCS) allocation has already been auctioned," he adds.

NPSTC researched public safety's potential access to commercial paging, conducted a review of the defaulting paging licensees to demonstrate how spectrum is available, and compiled a chart of defaulted paging licenses. NPSTC asked the FCC to examine the availability of channels in the 901-902/930-931/940-941 MHz band where the Commission has granted geographic licenses in the narrowband PCS auctions and determine whether capacity can be made available to public safety agencies. The request also sought use of 900 MHz Business and Industrial/Land Transportation (B/ILT) channels.

The FCC issued a Report and Order in October 2008 regarding NPSTC's request to access the 900 MHz Business Industrial Land Transportation band for public safety alerting. The Commission denied the request, but stated that the Wireless and Homeland Security Bureaus will discuss how public safety alerting can be accommodated. The Spectrum Management Committee will follow up with a request that the Commission perform an audit of the 900 MHz two-way paging frequencies and, develop a Petition for Rulemaking (PFR) asking the Commission to consider allocating some of those channels to public safety if they find some unused.

Jim Weichman, Systems Manager, City of Richmond, VA

NPSTC Provides Tools for Planning, Sharing, and Storing Documents

The National Interoperability Information eXchange (NIIX) is a free online tool available to public safety for sharing, posting, and reviewing documents. Totally secure, this central warehouse is efficient and easy to use with online and telephone support readily available to answer any questions you may have. While NPSTC originally developed NIIX to assist agencies as they developed their Statewide Communications Interoperability Plans (SCIPs) for interoperability, NIIX is not limited to statewide planning, but can be used to serve state and local public safety users who need a collaborative tool.

How Do Public Safety Communities Use NIIX?

- Communities are using NIIX as a repository for interoperability plans generated by the states, regions within or between states, UASI Urban Areas, etc.
- They use it to manage draft documents, solicit comments, and manage member notification and feedback.
- They use NIIX as an online national library of peer-supplied documents, including various plans, agreements, governance, policy, legislation, SOPs, funding and other useful documents concerning planning and achieving interoperability.

NIIX Adds International Access for Users on the Borders

For public safety professionals working with counterparts in Canada or Mexico on the coordination of cross-border issues or preparing for special events like the 2010 Olympics, NIIX can accept registrations from both Canadian and Mexican government officials. With the Community Coordinator's approval, your counterparts across the borders can now join NIIX communities to collaborate.

A country code has been added which, depending on the country selected, causes the state/province drop-down box to change accordingly. It also checks for the correct Canadian/Mexican postal code format. For authentication purposes, Canadian or Mexican applicants should provide the NIIX Administrator with the name of their U.S. counterpart with whom they are working on cross-border initiatives.

NIIX Used To Develop COML Curriculum

The Communications Unit Working Group, initially assembled in 2007 by OIC, answers a need identified over a decade ago in incidents highlighting the importance of the Communications Unit to overall successful incident management. The WG is now managed by OEC, which is updating the curriculum and delivering the Communications Unit Leader (COML) course to the states/territories.

"Course development relied heavily on NIIX with documents and associated follow-on edits and recommendations regularly uploaded to the special NIIX Communications Unit community," says John Powell, Interoperability Chair, and one of the developers of the COML training. "Development of the initial curriculum and the revised version that meets FEMA design requirements, made extensive use of the ability for NIIX to manage documents and to restrict their distribution to only members of the associated Working Group and Subgroups," he adds.

More recently these same NIIX features have supported development of the COML Train-the-Trainer class now nearing rollout and a Communications Unit Awareness Course. For more information on the COML course, its history and development, visit: http://www.npstc.org/CommUnitLeader.jsp

NPSTC's Committees and Working Groups

NPSTC's Executive Committee consists of the Chair, Vice Chair, and Five Committee Chairs and Vice Chairs, representing the Interoperability, Outreach, Regional and Broadband Liaison, Spectrum Management, and Technology Committees. Each Committee fields a number of Working Groups. As new needs evolve and old issues are resolved, Working Groups are created and disbanded to meet the current needs.

The Committees are responsible for conducting research, writing position papers, and giving presentations at various meetings and conferences. The Working Groups interact extensively with one another and the member organizations via conference calls and emails, but the face-to-face Governing Board and Committee meetings are critical opportunities for the expanded discussion needed to achieve group consensus. The Working Groups add knowledge and research, by reaching out to subject matter experts and developing positions for the Committee Chairs, who in turn forward those positions with their comments to the Governing Board for approval.

For more information on the specific activities and missions of the Working Groups, visit www.npstc.org

NPSTC

Liaison Organizations
FCC, FEMA, FPIC, NTIA, OEC, OIC, SAFECOM, US DOI, US DOJ-NIJ CommTech

Governing Board
AASHTO, AFWA, ARRL, APCO, FCCA, IACP, IAEM, IAFC, IMSA, NASCIO, NASEMSO, NASF, NASTD, NENA, NSA

Associate Members
CITIG, TIA

Interoperability Committee
- Emergency Medical Services
- ESF-2
- Interoperability Channel Naming
- Project MESA
- Software Defined Radio
- Statewide Interoperability Executive Committees
  - National Interoperability Information eXchange (NIIX) Steering Committee

Regional & Broadband Liaison Committee
- 700 MHz Narrowband Relocation
- 700 MHz Itinerant Channel Naming
- National Planning Assistance and Coordination
- U.S. Districts
  - East Coast
  - Gulf Coast
  - North Central
  - West Coast

Outreach Committee
- Volunteer Coordination Working Group
- Website Review
- Editorial Review

Spectrum Management Committee
- 470-512 MHz
- 700 MHz Advocacy
- 800 MHz Reconfiguration
- Airborne Video
- Border Issues
- Wireless Alerting

Technology Committee
- Amateur Radio
- Broadband
- In-Building Coverage
- Technology Education

Interoperability Committee

NPSTC's Interoperability Committee was formed to ensure that the public safety and public service communities maximize interoperability effectiveness by promoting the concepts of governance, standard operating procedures, technology, training/exercises, and usage described in the SAFECOM Interoperability Continuum.

In 2008, the Committee added the **ESF2 Working Group**, the FEMA designation for Emergency Support Function #2 or communications, to work with FEMA to provide feedback on the National Response Framework issued in late 2007. The Working Group serves as a forum for the discussion of communications restoration needs at the local, tribal, state, and federal levels following a major event or incident. NPSTC will coordinate with FEMA's Disaster Emergency Communications (DEC) and Regional Emergency Communications Coordination Working Groups (RECCWG) through this Working Group.

In 2008, the **EMS Working Group** reviewed a white paper on potential technologies with implications for bandwidth that might be used in the medical field in the future. Available on NPSTC's website, NASEMSO issued a *Guide to Information/Communications Technology for EMS Officials*. The document was written at a high level for users not familiar with communications information, but the five-page document has additional embedded files that provide more specific, technical information.

The *Channel Naming Report* developed and maintained by the **Interoperability Channel Naming Working Group** added supplemental material that describes a shortened naming system for radios that do not support eight characters. APCO's Standards Development Committee, which initiated the American National Standards Institute (ANSI) process to move the Channel Naming Report into a voluntary standard in late 2007, continued to move the process forward with a standard expected in early 2009.

The **Software Defined Radio (SDR) Working Group** has a strong voice in monitoring development of SDR and Cognitive Radio (CR) through its relationship with SDR Forum. At several Governing Board meetings, the Working Group hosted presentations on the latest developments in SDR and CR, including OIC's multi-band radio project and the Radio Over Wireless Broadband (ROW-B) bridging technology.

SDR Forum offered its *Cost Model Workbook Hierarchy*, a detailed spread sheet, made up of all the different cost components organized within a hierarchical structure, for NPSTC to publish as a resource. 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. The Workbook is currently under review.

… to ensure that the public safety and public service communities maximize interoperability effectiveness …

Outreach Committee

In 2008, the Governing Board created the Outreach Committee with a mission to engage new NPSTC Participants, educating them on the structure of NPSTC and on how their participation makes a difference to public safety. NPSTC Participants bring invaluable skill sets to the work NPSTC does on the national and local levels.

The Outreach Committee comprises three Working Groups—**Editorial Review**, **Volunteer Coordination**, and **Website Review**. One of the tasks of Outreach was to formalize volunteer support in the booths at conferences. NPSTC's Participants are the faces and voices of NPSTC. Their knowledge and expertise on telecommunications issues is NPSTC's greatest strength and its most valuable education resource.

NPSTC participated on panels and in booth outreach at various conferences and meetings including the International Wireless Communications Expo (IWCE), and at the NENA, FCCA, APCO, and IAFC conferences. A number of NPSTC Participants provided valuable expertise at the NPSTC booth at APCO's conference in Kansas City, Missouri. This year 186 articles have been written by or about NPSTC members. NPSTC had almost 2, 200,000 website hits in 2008. 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.

Tom Sorley, Chair, Technology Committee, answers questions at APCO's Conference.

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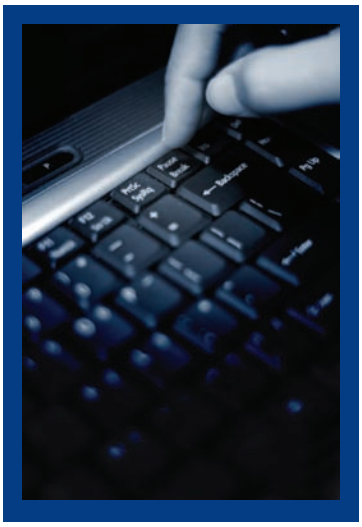
Regional and Broadband Liaison Committee

Formerly the Regional Planning Committees (RPC) Committee, in the First Quarter of 2008, the Committee became a liaison between the RPCs and the PSST, the broadband licensee established by the FCC for the 700 MHz private/public safety broadband network. One of the most immediate tasks expected at that time was assisting coordination between the RPCs and the PSST, which was accorded responsibility for a narrowband relocation in the 700 MHz band, required in the FCC's Second Report and Order.



In the meantime, the RPCs created a group focused on regional planning only, the National Regional Planning Council (NRPC). In the Third Quarter, the Committee added two new Working Groups, 700 MHz Narrowband Relocation and 700 MHz Itinerant Channel Naming.

The **700 MHz Narrowband Relocation Working Group** spent much time quantifying the costs for agencies affected by the relocation required by the changes in the 700 MHz band plan. There were and continue to be strong concerns that it will not be possible to fund this relocation with the $10 million originally allotted for this task. Approximately 50 700 MHz systems are up and running currently, including a large number of vehicular repeaters, a category that was not factored into the original cost estimate.

The **700 MHz Itinerant Channel Naming Working Group** developed a summary report on the 6.25 kHz and 12.5 kHz channels at either end of the 700 MHz band and potential use as traveling trunking channels. The Working Group is developing channel names for these itinerant channels that will not be confused with the interoperability channels, for which the rules are entirely different.

The existing **National Planning Assistance and Coordination (NPAC) Working Group** created a Dispute Resolution Process based on earlier documents. The Working Group also updated National Coordination Committee (NCC) documents, the 700 MHz regional plan template, the guidelines, and six appendices to reflect updated information.

Spectrum Management Committee

NPSTC's Spectrum Management Committee focuses on regulatory and technical issues regarding the availability, effectiveness, and usability of public safety spectrum on a nationwide basis. The Spectrum Management Committee works, in conjunction with the NPSTC Governing Board, to provide NPSTC's perspective on outstanding public safety issues to the FCC. The Committee also monitors progress of the 800 MHz reconfiguration.

The **700 MHz Advocacy Working Group** continued to focus on two main issues—the 700 MHz Broadband Initiative and the NPRM and the Order regarding low power broadcast auxiliary operations, including 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.

NPSTC's comments in response to the Second Further Notice of Proposed Rulemaking (FNPRM) 700 MHz Band, were extensive and involved a task force that included two NPSTC Committees, Technology and Spectrum Management, and the Executive Director.

In 2008, the **Border Issues Working Group** created two task forces to focus on the Southern and Northern borders. Each Task Force will develop recommendations to improve coordination/spectrum access, in both the near- and long-term, and recommendations to help enable cross-border interoperability, in both the near- and long-term. From this analysis, the Task Forces will develop external action plans, detailing what NPSTC believes various government agencies would need to do to implement recommendations, and internal action plans to guide NPSTC actions.

The Spectrum Management Committee added an **Airborne Video Working Group** to address strategies and spectrum for public safety airborne-to-ground video operations. In many of the urban areas, spectrum for video from helicopters or light aircraft platforms is only available by sharing with the broadcasters. When there are incidents such as the recent train crash in Los Angeles, with many broadcast helicopters doing video downlinks to trucks on the ground, there is not enough spectrum capacity for public safety incident command to review video of the incident.

The **470-512 MHz Working Group** began drafting a Petition for Rulemaking (PFR) addressing the so-called T-band. The current Part 90 Rules for sharing with TV/DTV were written for analog television over 30 years ago. Protection is based strictly on mileage, and the rules are obsolete and extremely conservative. The Commission faced a similar problem when it opened 700 MHz. It then adopted rules for protection of DTV stations, relaxing the protection compared to that used for 470-512 MHz in most markets and allowing engineering showings when standard mileage separations are unnecessary to protect TV. The PFR proposes that the FCC adopt the same protection standards for the T-band on channels 14-20 as it adopted at 700 MHz. The changes to rules on the T-band would allow expansion of land mobile systems to 80 miles from center city coordinates,compared to the current 50 mile limit.

As noted earlier in this report, the **Wireless Alerting Working Group** has actively sought spectrum in 900 MHz to be used for public safety alerting. In 2008, the Working Group Chair, NPSTC's Regulatory Advisor, 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. The Working Group developed a draft band plan asking for eight nationwide control channels. With additional spectrum for operational capacity, public safety could build out those channels and develop interoperability policies across the nation.

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Technology Committee

… to **ensure** that the public safety and public service communities **maximize communications capabilities** by facilitating the best possible utilization of **current and future technologies.**

NPSTC's Technology Committee was formed to ensure that the public safety and public service communities maximize communications capabilities by facilitating the best possible utilization of current and future technologies. The Committee helps these communities to maintain a high degree of awareness of technological development, deployment, standardization, and regulation.

The **In-Building Working Group**, which developed a white paper on the Best Practices for In-Building Communications, was asked to develop a similar paper on Best Practices for In-Tunnel Communications. The paper will comprise 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.
- Maintenance.

The **Technology Education Working Group** has completed initial products that are available on the technology education web page.

Understanding the FCC is an interactive slide show on filing comments with the FCC. These are detailed, easy-to-follow presentations with links to the FCC website.

- *Participating in the process aka Making your Voice Heard at the FCC: A NPSTC tutorial on filing comments, replies, and other documents in FCC proceedings*
- *What questions are being asked by the FCC, and/or What is the FCC Thinking? A NPSTC tutorial on searching for FCC documents to clearly understand what is being asked, or Why the FCC decided one way rather than another.*
- *What have others said or recommended as their part of Participating in the Process? A NPSTC tutorial on searching comments, replies, and other documents in FCC proceedings.*

Land Mobile Radio (LMR) 101. Beginning with the basics and moving to a thorough discussion of the Project 25 (P25) standards history, process, and current status.

Next Generation (NG) 9-1-1. A look at the history of 9-1-1, the development of NG 9-1-1, and how it affects users.

Coming Soon: ***700 MHz Backbone.*** A history that provides context and understanding of the complicated evolution of 700 MHz for public safety, and ***4.9 GHz Demonstration Project.*** A technological explanation of how Pinellas County, Florida, tested varying implementations of 4.9 GHz technology to connect local systems to Department of Defense systems to provide information sharing that would be vital in disaster situations.

Executive Committee

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Ralph Haller

Vice Chair
Douglas Aiken

Executive Director and Founding Chair
Marilyn Ward

Chair Emeritus
Vincent Stile

Interoperability Committee Chair
John Powell

Outreach Committee Chair
Bill Brownlow

Regional and Broadband Liaison Committee Chair
Don Root

Spectrum Management Committee Chair
David Buchanan

Technology Committee Chair
Tom Sorley

Executive Committee

Governing Board Voting Members and Alternates

AAHSTO, Bill Brownlow, George Carbonell

AFWA, Michael Hutton, Paul Leary

APCO, Willis Carter, Chris Fischer

ARRL, Dennis Dura, Tom Abernethy

FCCA, Paul Leary, Lloyd Mitchell

IACP, Harlin McEwen, Eddie Reyes

IAEM, Richard Comerford

IAFC, Alan Caldwell, Charles Werner

IMSA, Doug Aiken, Paul Szoc

NASCIO, Tom Jarret, Gopal Khanna

NASEMSO, Kevin McGinnis, Shawn Rogers

NASF, Lloyd Mitchell, Paul Leary

NASTD, Richard Reynolds, Jack Doane

NENA, Jason Barbour, Ron Bonneau

NSA, Aaron Kennard, Paul Fitzgerald

Governing Board Members and Alternates

Associate Non-Voting Members and Alternates

CITIG, Lance Valcour, Richard Finn

TIA, Bob Speidel, Lawrence Nyberg

Member Organizations

The **American Association of State Highway and Transportation Officials (AASHTO)** advocates transportation-related policies and provides technical services to support states in their efforts to efficiently and safely move people and goods. www.transportation.org

The **Association of Fish and Wildlife Agencies (AFWA)** serves as the "voice for fish and wildlife" by helping to foster a deep appreciation and understanding for the public management and conservation of the natural communities that represent the diversity of North America - fish, wildlife, and their habitats. www.fishwildlife.org

The **Association of Public-Safety Communications Officials - International (APCO)** is a member-driven association of communications professionals that provides leadership; influences public safety communications decisions of government and industry; promotes professional development; and fosters the development and use of technology for the benefit of the public. www.apcointl.org

The **American Radio Relay League (ARRL)**, a not-for-profit organization that promotes interest in amateur radio communications and experimentation, represents U.S. radio amateurs in legislative matters, and maintains fraternalism and a high standard of conduct among amateur radio operators. www.arrl.org

The **Canadian Interoperability Technology Interest Group (CITIG)** brings together representatives from public safety, industry, academia and government to help shape the direction of research and development activities related to interoperability amongst Canadian public safety providers. www.cprc.org/citig/

The **Forestry Conservation Communications Association (FCCA)** was formed to promote efficiency and advancement of radio communications in support of public agencies charged with natural resource conservation. www.fcca-usa.org

The **International Association of Chiefs of Police (IACP)** is the world's oldest and largest nonprofit membership organization of police executives, with over 20,000 members in over 89 different countries. IACP's leadership consists of the operating chief executives of international, federal, state, and local agencies of all sizes. www.theiacp.org

The **International Association of Emergency Managers (IAEM)** is a non-profit educational organization dedicated to promoting the goals of saving lives and protecting property during emergencies and disasters. www.iaem.com

The **International Association of Fire Chiefs (IAFC)** is a network of more than 12,000 chief fire and emergency officers. Its members are the world's leading experts in fire fighting, emergency medical services, terrorism response, hazardous materials spills, natural disasters, search and rescue, and public safety legislation. www.iafc.org

The **International Municipal Signal Association (IMSA)** is the oldest known association of its kind in the world. Its objectives are to improve the efficiency, installation, construction, and maintenance of public safety equipment and systems by increasing the knowledge of its members on traffic controls, fire alarms, radio communications, roadway lighting, work zone traffic control, emergency medical services, and other related systems. www.imsasafety.org

The **National Association of State Chief Information Officers (NASCIO)** represents state chief information officers and information technology executives and managers. State members are senior officials who have executive level and statewide responsibility for information technology management. www.nascio.org

The **National Association of State Emergency Medical Services Officials (NASEMSO)** is the lead national organization for EMS, a respected voice for national EMS policy with comprehensive concern and commitment for the development of effective, integrated, community-based, universal, and consistent EMS systems. www.nasemsd.org

The **National Association of State Foresters (NASF)** is a non-profit organization that represents the directors of all 50 State Forestry agencies, the eight U.S. territories, and the District of Columbia. Through public-private partnerships, NASF seeks to discuss, develop, sponsor and promote programs and activities which will advance the practice of sustainable forestry, the conservation and protection of forest lands and associated resources, and the establishment and protection of forests in the urban environment. www.stateforesters.org

The **National Association of State Technology Directors (NASTD)**, Technology Professionals Serving State Government, is a member-driven organization whose purpose is to advance and promote the effective use of telecommunications technology and services to improve the operation of state government. www.nastd.org

The **National Emergency Number Association's (NENA)** mission is to foster the technological advancement, availabillity, and implementation of a universal emergency telephone number system (9-1-1). In carrying out its mission, NENA promotes research, planning, training, and education. www.nena.org.

The **National Sheriffs' Association (NSA)**, serving law enforcement and other criminal justice professionals of the nation for 67 years, is a non-profit organization dedicated to raising the level of professionalism among those in the criminal justice field. www.sheriffs.org.

The **Telecommunications Industry Association (TIA)** is the leading trade association for the information, communications, and entertainment technology industry. TIA serves industry suppliers to global markets through its leadership in standards development, domestic and international policy advocacy, and facilitating member business opportunities. www.tiaonline.org

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For more information, contact NPSTC or visit the website at **www.npstc.org.**

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NPSTC

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