



NPSTC Border Presentation Well Received at State Department

On January 24, 2008, NPSTC's Vice Chair (since elected Chair at the February Governing Board meeting), Ralph Haller, accompanied by other NPSTC representatives made an important presentation to the U.S. State Department. Based on earlier discussions with the Border Issues Working Group, Mr. Haller presented a list of issues that are considered to be critical to public safety.

The general propositions they conveyed to the State Department on behalf of public safety are: First, radio communications are essential for successful public safety operations; second, interoperability is vital between agencies and across borders; and, third, interference poses a significant threat to successful communications and to the safety of the lives of public safety responders. "While these issues may seem obvious, negotiations between countries encompass all types of communications and it was important to state the important underlying propositions for public safety," Mr. Haller said.

Different Challenges in Canada and Mexico

Canada and Mexico present different challenges as negotiations move forward to address a variety of issues affecting



Ralph Haller briefs NPSTC's Governing Board on the State Department presentation. [L] Tom Sorley, Chair, Technology Committee, and [R] Stu Overby, Vice Chair, Spectrum Management Committee

public safety telecommunications across the spectrum. NPSTC's position on the Mexican border includes support for the 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. "We were actually very close to resolving issues in 700 MHz, but then the band changed when the FCC's Order was issued this summer so we're back to zero," Mr. Haller said. There are formal procedures for resolving interference on the border. "We have contacts on each side," Mr. Haller said, "and interference is dealt with quite quickly." NPSTC supports the work of the joint Department of State and Department of Homeland Security (DHS) initiative to improve and expand cross-border communications, through their Security Communications Task Group (SCTG) which has

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NPSTC Executive Director

Marilyn Ward

In the FCC's August 2007 Second Report and Order addressing the 700 MHz band, the Public Safety Spectrum Trust (PSST), as the Public Safety Broadband Licensee (PSBL), is directed to fund the relocation of current public safety narrowband operations in channels

63 and 68, and the upper 1 megahertz of channels 64 and 69. The relocation results from the Commission restructuring the band to provide public safety with broadband opportunities.

The NPSTC Governing Board has reorganized its committee structure to better align it with the Commission's 700 MHz decisions and to promote participation by all interests. NPSTC has reconstituted the Regional Planning Committees (RPC) Committee, revised its function, and approved it as the PSST Liaison Committee. Don Root will serve as Chair, with Ron Mayworm serving as Vice Chair. The Committee will be comprised of the original RPC District Chairs, who work with NPSTC, and the National Regional Planning Committee (NRPC), the NRPC Chair and Vice Chairs, and the NPSTC Committee Chairs. NPSTC's technical personnel will support the NPSTC initiative undertaken by the Committee. The PSST Board has established and funded a similar ad hoc liaison committee to oversee the narrowband relocation project and to work with NPSTC's new Liaison Committee. Under the *Second Report and Order*, the relocation must be completed by February 17, 2009.

The new Committee has been very busy collecting information and contacting impacted parties who filed waivers for reimbursement from the PSST for narrowband relocation. The PSST will prepare a plan to present to the FCC. At the time of this writing, there was no D Block winner, however we are moving forward in anticipation that eventually this will be resolved and a D Block winner will be public safety's partner.

NPSTC continues to work to inform the community on events occurring nationally. We are preparing our *2007 NPSTC Annual Report* [to be released in April] and during the information gathering for that report, we have obtained some very impressive statistics. For example, from late 2005 to late 2007 the NPSTC website hits increased by 7,833 percent. In November 2007, we exceeded all our goals and reached a new level of traffic on our website receiving more than 160,000 hits in one month. Our outreach to the community using the website has been outstanding. We even get thank you notes for providing so much technical information to users. This, along with the number of articles in other publications and presentations being done by our members, is incredible. We thank all who contribute to this outreach!

Please join us at our next meeting at the Crystal Gateway, Arlington, Virginia, on June 16-18, 2008.



Governing Board in Session

NPSTC Develops Recommendations to Address Low Power TV Stations at 700 MHz

By Stu Overby

Full power analog TV stations are required by law to vacate the 700 MHz band no later than February 17, 2009. However, there is no wholesale requirement to clear low power TV stations (LPTV), TV translators, ad hoc auxiliary broadcast operations, or wireless microphones from the band. Under the FCC's rules, these uses have secondary status with respect to public safety. An entity with secondary status must resolve interference it causes to primary users or discontinue operation. Public safety communications involve safety of life and therefore licensees cannot afford to wait until interference exists. Instead, a mechanism is needed to eliminate the potential for interference before it occurs.

Public safety agencies need to notify LPTV and TV translator licensees of 700 MHz operations early in the deployment planning. 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.

On January 8 and 9, 2008, NPSTC representatives met with staff in the FCC Public Safety/Homeland Security

and Media Bureaus to provide an understanding of this issue and obtain any guidance. FCC staff supported the NPSTC 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. They advised that LPTV stations need this time to find a viable alternative channel and to obtain authorization from the FCC to use it. FCC staff also provided an up-to-date list of LPTV and Broadcast Auxiliary stations for use in our analysis.

An information package regarding the LPTV and Broadcast Auxiliary issue is on the NPSTC website at www.npstc.org. The package includes a one-page issue summary, a draft notification template that can be used to notify LPTV stations of the need to move to another channel, and an accompanying technical presentation that can help agencies identify which LPTV stations are of concern.

The package was developed by Stu Overby, Vice Chair, NPSTC Spectrum Management Committee, and David Eierman, Principal Member of the Technical Staff at Motorola.

Chief (Colonel) Doug Aiken Receives the Legion of Merit

At NPSTC, he is known as Vice Chair or Chief, but Doug Aiken has also earned the title of Colonel for his service in the military. Col. Aiken, recently retired after 40 years of service in the New Hampshire Air National Guard and U.S. Air Force, was awarded the Legion of Merit, a military decoration of the United States armed forces that is awarded for exceptionally meritorious conduct in the performance of outstanding services and achievements. Following 9/11, Col. Aiken was called to active duty to design and implement the Air National Guard command and control center console system.

The Legion of Merit reads in part, "...the exemplary ability, diligence, and devotion to duty ...were instrumental factors in the many successes achieved by the Joint Force Headquarters-New Hampshire. Col. Aiken was called to active duty to support Air Mobility Command's Command Console Integration Program to design, procure, and install computer-based Air National Guard Operations command and control center console systems at 35 bases through the U.S. His expertise was crucial to the development of the technical specifications, evaluation, vendor selection, and project oversight for the ...\$8 million dollar project."

The award continues, "He established strong relations between the 157th Air Refueling Wing, the N.H. Army National Guard, and state agencies to work interoperability issues of all statewide data and voice systems. He orchestrated ...the State's Quick Reaction Force communications training to prepare team members for deployment in support of local, state, and regional homeland security ...contingencies. A huge success was his effort to secure a Joint Incident Site Communications Capability equipment set, bridging the military-civilian communications gap."

NPSTC congratulates Doug Aiken on the accomplishments in a distinguished career in service of his country.



NPSTC Initiates Technology Education Working Group under Technology Committee *By Stephen Devine*

The National Public Safety Telecommunications Council (NPSTC) has identified the need for and created a Technology Education Working Group to be established within NPSTC's Technology Committee, chaired by Tom Sorley of the City of Houston, Texas. The Working Group operates under the following charter:

This Working Group will identify technology topics of interest to NPSTC participants and the communications community at large. They will facilitate the development and delivery of appropriate training materials to address those topics up to and including creating publications, marketing plans, seminars, and/or other methods of ensuring educational benefit.

The Working Group, introduced at the February Governing Board meeting, is intended to identify areas of technology pertinent to the public safety mission that could provide additional benefit to public safety by developing additional exposure and dialogue with the user community. Many times technology advancements and the improved capabilities associated with them are not considered by users due to a lack of available information correlating the technology and how it is directly associated with the improved benefit to the end user.

The Technology Education Working Group seeks input from NPSTC's Governing Board and their constituents to provide us the topics to consider as focus points of the group. Technology is developing at a rapid pace and though many advances provide benefit to the applications of a single public safety discipline, many others can be utilized amongst multiple disciplines. We seek input from the Governing Board Member Associations to ensure that our focus, in the form of white papers, webinars, and other outreach tools, is addressing the necessary topics.

Historic Information Repository To Be Developed

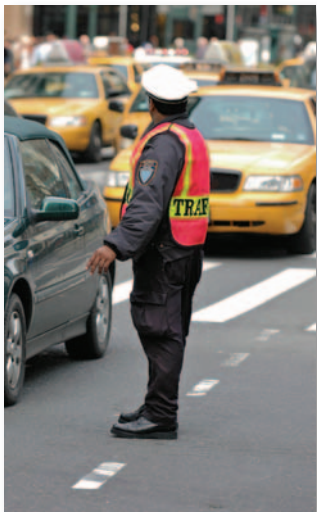
Another task identified by the group as a valuable contribution to the education of the public safety user community is to provide a repository of information documenting the progress and history of certain proceedings. Quite often, proceedings addressing technologies and public safety opportunities occur over a period of years and the Technology Working Group has identified a need to provide necessary background information to the users on certain issues. This historical perspective on long-running issues will allow an interested user to research the history of the initiative and identify which information was available at the time of the decision and how the decisions that are made today by regulating bodies and others are consistent with the proceeding.

For example, with regard to the public safety 700 MHz band, the proceeding has been ongoing for well over a decade. The Technology Education Working Group feels that by compiling relative information on the NPSTC website (presentations, white papers, etc.) chronologically, an interested party could better understand the issues pending today if they were more familiar with the background of the issue. Utilizing the NPSTC website as such a repository will provide a centralized information resource for those seeking additional assistance on these important public safety topics.

In closing, should you identify any technology topics or issues that you think would benefit the user community or if you want to participate in the Technology Education Working Group, contact Stephen Devine at stephen.devine@bearingpoint.com.

Stephen Devine, Chair, Technology Education Working Group, is a former Chair of the NPSTC Spectrum Management Committee and representative of its Regional Planning Committee Working Group, and currently serves as Manager of Public Services with BearingPoint, a management and technology consultancy.





Achieving interoperable emergency communications across all levels of government requires overcoming many technical, operational, and political challenges; the Federal Partnership for Interoperable Communications (FPIC) is eagerly addressing many of them. In 1994, the Treasury Department and the Department of Justice established the Federal Law Enforcement Wireless Users Group

(FLEWUG) as a forum for wireless users within the federal law enforcement community to share information and overcome common obstacles. FLEWUG members quickly identified the need for a national solution to the interoperability challenge and, thus, the Public Safety Wireless Network (PSWN) Program was created.

In 2002, the White House established the Wireless Public Safety Interoperable Communications Program (SAFECOM) to oversee all communication interoperability initiatives, to include the PSWN Program. At the same time, FLEWUG members recognized the need to broaden the reach of their group to the entire federal wireless user community and voted to reestablish their organization as the Federal Partnership for Interoperable Communications (FPIC). At the October 2007 General Membership Meeting, FPIC members voted unanimously to accept a revised charter, which further defined the FPIC's mission and objectives. Currently, FPIC is sponsored and chaired by the Department of Homeland Security's (DHS) Office for Emergency Communications (OEC).

Demonstration Projects for Interoperability Solutions in High-Risk Areas

By serving as an advisory body representing the federal user community and as a forum in which federal, state, local, and tribal users can share information, coordinate activities, and leverage synergies, FPIC has become an integral part of OEC's interoperability assurance strategy. FPIC serves as the "focal point" for federal user representation in a number of state-sponsored activities to provide a consolidated and coordinated response to address

questions concerning capabilities and user needs, and the integration of federal users onto regional, statewide, local, and tribal communication systems.

FPIC also identifies potential demonstration projects and recommends "quick-hit" interoperability solutions in high-risk or priority areas. Current projects include:

- Developing an interface between Wyoming's statewide trunked system (WyoLink) and conventional federal users.
- Integrating federal users into the Virginia Statewide Agencies Radio System (STARS).
- Testing an interoperability solution in Florida that would provide flexible, on-scene communications during incident response.
- Partnering with the Oregon Wireless Integrated Network (OWIN) to test OWIN's proposed solution for the interoperability layer of their network architecture.

Additionally, FPIC has recently begun assisting OEC in the establishment of the Southwest Border Communications Working Group (SWB CWG), designed to facilitate the effective use of the region's scarce critical resources by providing the opportunity to identify and leverage sharing/interoperability opportunities among federal, state, local, and tribal agencies implementing wireless infrastructure along the United States-Mexico border.



At present, FPIC has over 200 members representing 42 federal and 54 state, local, and tribal agencies. For additional information concerning FPIC, please contact Brian Mazanec at FPIC@dhs.gov. For information concerning OEC, please email OEC@hq.dhs.gov.

Jim Downes is Chair of FPIC.



NPSTC EMS Working Group *By Kevin McGinnis*

In 2007, NPSTC chartered a Working Group on emergency medical services (EMS) within the Interoperability Committee. The Working Group's mission is "to serve as a forum for the discussion of communications needs in EMS,

particularly the integration of new communications technology to enhance access to the information required for appropriate emergency patient care and transportation."

The Working Group identified two immediate projects that it wanted to tackle:

1. Development of a white paper for circulation within the national EMS community to gain consensus on the types of diagnostic, treatment, and information technologies that EMS might want to employ in the future so that we can start to acquire the bandwidth and other resources necessary to accommodate those needs.
2. Development of draft standards on patient tracking data exchange, in conjunction with the Department of Homeland Security's (DHS) Office of Interoperability and Compatibility's (OIC) Practitioner Steering Group on data communications, for submission through a formal standards development process.

The white paper project kicked off in December 2007 with an expert panel meeting in Washington, D.C., facilitated by Andy Thiessen of Institute for Telecommunication Sciences (ITS), Working Group Chair Kevin McGinnis, and Touchstone Consulting staff, and funded by DHS. The Working Group, composed of emergency physicians, EMS chiefs, state EMS communications managers, academicians, and other experts, met for 2 days to brainstorm ideas for technology that might become a part of EMS in the future.

Subsequently, project staff has produced a first draft of a white paper which is now under review. The EMS Working Group will continue to meet by teleconference and hope to have completed the white paper and submitted it into the national EMS community for comment by summer 2008.

FCC Commercial Mobile Service Alert Advisory Committee

The Commercial Mobile Service Alert Advisory Committee (CMSAAC) was created by the FCC pursuant to Section 603 of the Warning, Alert and Response

Network Act (WARN Act), which was enacted on October 13, 2006. Its mission was "to develop recommendations on technical standards and protocols to facilitate the ability of commercial mobile service (CMS) providers to voluntarily transmit emergency alerts to their subscribers."

The Committee first met in December 2006 and was chaired by FCC Chairman Kevin Martin. The Committee submitted its recommendations to the FCC on October 3, 2007, and the FCC was still reviewing those recommendations in February 2008. Among the members were representatives of CMS providers and state and local governmental interests. NPSTC Governing Board member Kevin McGinnis represented the National Association of State EMS Officials (NASEMSO) on the Committee, but regularly reported on the Committee's progress at NPSTC Board meetings.

The Committee's findings were based on a system architecture of "interfaces" from the point where a commercial mobile alert (CMA) need is identified by a local, state, or national agency and passed to the federal alerting structure, then passed to commercial mobile services (CMS) points of contact, then to CMS distribution networks, and finally passed to subscribers' CMS devices. The findings concluded that:

- The initial messages through the federal interfaces should be based on the common alerting protocol (CAP) standard, and, once into CMS, interfaces should be based on generic XML standards.
- The system should be capable of 30,000 new CMAs per year.
- The system should handle 30 CMAs per second.
- Distribution should be geo-targeted at the county level (though some wanted more granularity).
- CMS's may opt out but must so advise subscribers, and there are levels of opting out available (e.g., Amber Alerts but not Presidential Alerts).
- The system should not attempt to require multiple language capability until technology in this area advances.

More detail on the process, meetings, members, and other issues may be found at <http://www.fcc.gov/pshs/advisory/cmsaac/>.

Kevin McGinnis represents NASEMSO on NPSTC's Governing Board and chairs the EMS Working Group

There and Back Again *By Bill Brownlow*

Most of us are familiar with the *Lord of the Rings* trilogy by J. R. R. Tolkien. But how many of us have read the prequel, *The Hobbit*? *The Hobbit* tells the story of one Bilbo Baggins of Bag-end and the adventure he undertook with some elves and dwarves. Along the way Bilbo learned a lot about himself and his abilities and came into possession of the Ring which caused all the mischief in the other three books. When Bilbo had completed his journey and returned safely to his home, he sat down and began to write the story of his adventure aptly named *There and Back Again*. But what does a fictional tale have to do with public safety you might ask.

Where Would We Be Without Roads?

In Bilbo's imaginary world, there were few choices for travel. Sure, there were some roads, dirt, mud, a little rock, maybe some bridges and few, very few available services. In Bilbo's travels he made use of many of the same types or modes of transportation available today—surface travel over the roads and trails, water transportation using ferries; he even experienced air travel in the claws of birds and beasts. About the only modern mode of transportation missing was rail. All throughout his journey and the many perils he faced, Bilbo had others who came along as needed. Rangers patrolled the roads and trails helping travelers and keeping evil at bay. In other times of peril, it seemed almost fortuitous that someone would come along side to offer aid, rest, or supplies. Now, stop for a moment and think about our nation's transportation network. Our roads are a vital part of everything we do. Our highways form the economic engine that provides for each of us. Without our modern transportation network, how would you get from home to work and back again? How about the clothes we wear? How did the raw material get to the factory so cloth and yarn could be made? What about the food we eat? Now, think of the services we are provided. The public protection provided by our police, fire, and medical services. How are those services delivered? Why, by road of course.

Public Safety and Transportation Services Are Integrally Connected

Just as Bilbo had many who came to his aid on his journey, we have many who come to ours. Watching over our roads and highways is a large network of dedicated people providing services ranging from everyday maintenance to security. Today we have various law enforcement agencies and fire companies working in concert with those maintaining the roads, bridges, and ferry systems. As events have changed over the past few years, a new understanding that we are all part of a system that requires each of our collec-

tive efforts to function. We are beginning to work together as a team, each realizing we have our own missions, but acknowledging that without being able to work and communicate with others having similar responsibilities but different missions, we would have difficulty in completing our task.

Some of the challenges facing us as emergency responders involve our roads. When we respond, we respond with equipment that travels those same roads and highways we use every day. We rely on the workers of our transportation departments to keep those same roads in repair. When faced with a disaster, we also call upon them to do the heavy lifting of road clearance, debris removal, and to plan and execute mass evacuation plans. In cold weather, public transit is often called upon to provide busses, not for transportation, but as a warm place where we can go for rest and refreshment. Many agencies are beginning to rely upon the various traffic management centers and their networks of cameras. More agencies are being brought together as emergency response shifts from a single agency to a unified effort. To aid in interagency response many jurisdictions are fusing the operations of their individual centers into those that can coordinate on an all hazards approach. These fusion centers often combine various elements from emergency managers, fire, law enforcement, and traffic management in order to bring the proper response to the incident scene.

Fusion centers allow a structured incident command ensuring not only the most efficient response to the incident, but ensuring a flow of official information between responders and the general public is managed. As events escalate, the needed agencies are already at the table, informed of the current situation and fully ready to bring the additional required units into action. Streets and highways can be closed, traffic rerouted, clear paths for evacuations set, and return routes established for any additional responders.

The American Associations of State Highway and Transportation Officials (AASHTO), in cooperation with its partners, the U. S. Department of Transportation, the International Association of Electrical and Electronics Engineers (IEEE), the National Electrical Manufacturers Association (NEMA), the Society of Automotive Engineers (SAE), the Institute of Traffic Engineers (ITE), various state departments of transportation, and many others have been developing Intelligent Transportation Systems or ITS.

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Requests for Waiver of June 26, 2008 Deadline: Understanding the Process

On January 17, 2008, the Federal Communications Commission (FCC) released a Public Notice that established procedures and provided guidance to 800 MHz licensees regarding submission of requests for waiver of the June 26, 2008, deadline for completion of 800 MHz rebanding. The FCC's Public Notice stated that any ...**"800 MHz non-border licensee that will require additional time past June 26, 2008, to complete rebanding must request a waiver of the deadline ..."** from the FCC's Public Safety and Homeland Security Bureau (PSHSB).

The 800 MHz Transition Administrator, LLC (TA) has developed a Request for Waiver template, which includes a Waiver Request Information Form, for licensees to use when preparing a request for waiver. The template is available on the TA's website at http://www.800ta.org/content/documents/rebanding_deadline_extension_process.asp. The FCC strongly recommends that licensees filing requests for waiver utilize this template.

Licensees submitting a request for waiver must be able to demonstrate that they have worked diligently and in good faith to complete rebanding expeditiously and that the additional time requested is no more than reasonably necessary to complete the rebanding process. Specifically, the FCC recommends that licensees provide a proposed timetable that includes the steps necessary for completing rebanding and the anticipated dates on which they will be completed. Deadlines for filing requests for waiver are as follows:

- Waves 1 and 2 licensees must file by March 17, 2008.
- Wave 3 licensees and non-border Wave 4 licensees must file by April 15, 2008.

If a licensee has not executed a Frequency Reconfiguration Agreement (FRA) with Sprint Nextel by the applicable filing deadline, it should file an interim extension request using the Interim Request for Waiver template available on the TA's website. The interim extension request should state when the licensee anticipates having an FRA and filing a final waiver request that will include a proposed timetable for completing rebanding.

Licensees may file requests for waiver with the PSHSB via e-mail to PSHSB800@fcc.gov or pursuant to Section 1.925 of the FCC's rules (47 C.F.R. § 1.925). Licensees should send copies of the requests to the TA (Waivers@800TA.org) and Sprint Nextel (800MHz@Sprint.com). The PSHSB will review and rule on the requests for waiver.

Some licensees have agreed upon a schedule with Sprint Nextel that sets forth a date for Sprint Nextel to clear the licensee's new channels and that agreement has been memorialized in an FRA or in a Retuning Schedule Letter (RSL) from Sprint Nextel.

The FCC has encouraged licensees filing requests for waiver to utilize the templates available on the TA's website and to request only such time as is needed to complete reconfiguration

Some licensees who have agreed to a clearing date that is after June 26, 2008, have asked whether they need to file a request for waiver with the PSHSB. Because the FCC has stated that any non-border licensee requiring additional time past June 26, 2008, to complete rebanding must request a waiver of the deadline, these licensees would need to file a request for waiver. Even if a licensee and Sprint Nextel have contractually established – either in an FRA or a RSL – a channel clearing date after June 26, 2008, that agreement does not relieve the licensee of its regulatory obligation to comply with the June 26, 2008, deadline. If the licensee cannot complete rebanding by the deadline, it must request a

waiver from the PSHSB. Furthermore, even if the channel clearing date is before June 26, 2008, unless the licensee will complete rebanding by June 26, 2008, the licensee must file a request for waiver.

For questions and more information, contact the TA by phone at 1-888-800-8220, by fax at 1-888-701-4380, via e-mail at comments@800TA.org, or visit the TA's website at www.800TA.org.

NPSTC Addresses Best Practices for In-Building Communications

By Stu Overby

For public safety agencies, reliable radio coverage is essential throughout a broad array of public safety jurisdictions, including coverage on the street, in buildings, and in tunnels. The general public often experiences similar needs from the commercial wireless systems they are using. Increasingly, in-building and in-tunnel communications are of key concerns for both public safety agencies and wireless providers since providing reliable coverage in those environments is particularly challenging. However, providing reliable coverage in those environments is particularly challenging and requires knowledge and expertise of the specialized systems designed to meet those needs.

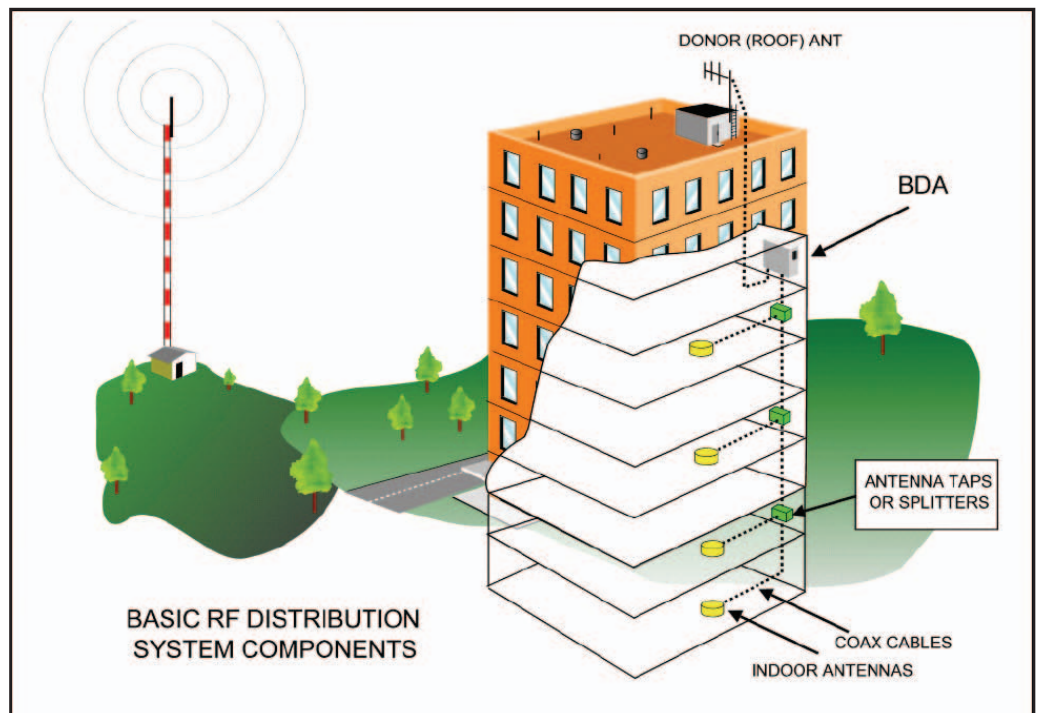
Over the past several years, some jurisdictions have enacted ordinances requiring minimum levels of coverage for public safety communications within new buildings. In addition, the International Code Council (ICC) and the National Fire Protection Association (NFPA) are currently pursuing the adoption of national-level model codes and standards to help ensure that improved in-building coverage is addressed on a nationwide basis.

NPSTC has developed a white paper, *Best Practices for In-Building Communications*, which can be an important resource for public safety agencies. The white paper, developed by the In-Building Working Group of the

NPSTC Technology Committee, covers a number of key topics. These topics include information on various ways to attain in-building coverage, sample local ordinances, national-level code initiatives, the proper design and installation of in-building systems, trade-offs among various technology approaches, interference prevention, regulations, and a summary of best practices. In addition, NPSTC partnered with the In-Building Wireless Alliance (IBWA) which developed and conducted a survey of public safety practitioners on the value proposition of in-building communications. The survey results, reported in the Best Practices paper, address future needs for data and video, as well as current voice requirements.

The Best Practices white paper is available for downloading free of charge from the NPSTC home page at www.NPSTC.org. The paper, which covers a total of 65 pages, is divided into two files -- the main body and the technical appendices. Those interested in the paper are encouraged to download both files. The paper was developed under the leadership of Stu Overby, Chair of the NPSTC In-Building Working Group and approximately 10 contributors from public safety and industry.

Stu Overby, Vice Chair, NPSTC Spectrum Management Committee, and David Eierman, Principal Member of the Technical Staff at Motorola.



Basic In-Building System



REGULATORY UPDATE

Beyond the 700 MHz auction, several matters of significance to public safety are pending. These matters include the following:

In the Matter of Service Rules for the 698-746, 747-762 and 777-792 MHz Bands et al., *Second Report and Order*, FCC 07-132 (August 10, 2007).

700 MHz Relocation of Narrowband Channels

In the FCC's August 2007 *Second Report and Order* addressing public safety and commercial use of the 700 MHz band, the Commission re-designated ten megahertz of public safety 700 MHz spectrum (763-768/793-798 MHz) to establish the nationwide, interoperable broadband public safety communications network. The network is to be administered by the Public Safety Broadband Licensee (PSBL). To accommodate this broadband allocation, the Commission consolidated the public safety narrowband channels so that they are located at 769-775/799-805 MHz. The Commission understood that agencies operating on 700 MHz narrowband channels would need to be relocated and created a process to do so.

To implement the narrowband relocation process, the Commission requires the winning bidder for the D Block license and the PSBL to submit for Commission approval a relocation plan. In November 2007, the Commission appointed the Public Safety Broadband Trust (PSST) as the PSBL. Under the *Second Report and Order*, one of the responsibilities of the PSST is implementing the relocation plan, including administering payment of relocation funds and ensuring that all affected licensees are relocated. Agencies are to be relocated by February 17, 2009. The Commission established a \$10 million cost ceiling.

There are approximately 50 agencies that are authorized to conduct narrowband communications in the 700 MHz band. NPSTC has commenced an initiative to assist the PSST in relocating incumbent 700 MHz licensees. It will draw on the resources and expertise of individuals who operate public safety systems and have experience in regional planning. This joint effort of NPSTC and the PSST seeks to plan and implement a relocation that emanates from the agencies involved. The PSST and NPSTC have embraced a path to pursue the relocation that accommo-

dates the requirements of the agencies involved and to keep the Commission advised of the efforts and any challenges encountered.

In the Matter of the Applications and Waiver Requests of the County of Los Angeles, *Public Notice*, DA 08-125, File Nos. 0002981309 et al. (January 17, 2008) and In the Matter of the Application of the Baldwin, New York Fire District, *Public Notice*, DA 07-5008, File No. 0003023736 (December 14, 2007).

Section 337(c) of the Communications Act

Section 337(c) of the Communications Act affords public safety agencies the opportunity to use unassigned channels designated for other services. The section authorizes the FCC to waive its rules if certain conditions are met. In two recent matters involving sections 337(c), applications of Los Angeles County and the Baldwin, New York Fire District, the FCC has inquired whether the February 2009 availability of channels in the 700 MHz band should affect its examination of these applications.

In supporting both applications, NPSTC noted the important contribution section 337(c) and the Commission's waiver policy has made to public safety communications. Waiver decisions allowing emergency services access to UHF and VHF channels have provided an immeasurable contribution to improved response and more efficient use of the spectrum. NPSTC conveyed that while the 700 MHz band is an important contribution to public safety, the 700 MHz band will not approach fulfilling public safety's wireless requirements, particularly in regions similar to the Los Angeles and New York metropolitan area. These areas are extremely congested with demand far exceeding capacity. The lack of investment in modern communications in the heavily populated metropolitan areas of the country is attributable more to the lack of spectrum than to lack of funding. The number of agencies in the metropolitan areas needing channels and the number of channels needed far exceed the availability, even if the 700 MHz narrowband voice channels were available today.

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RPCs

700 MHz Regional Planning Update *By Bette Rinehart*

Until the regions have developed their plans and had those plans approved by the FCC, no licenses (other than state-wide licenses on the 2.4 MHz state allocation at 700 MHz) can be granted at 700 MHz. The NCC Implementation Subcommittee Regional Planning documents can be found on the NPSTC website at www.npstc.org/documents/html. Fifty-one of the 55 regions have either held or set the date for their first meeting. Three regions have selected conveners but not yet set a date for the first planning meeting. Nineteen Regional Plans are now pending. The ten previously approved and seven pending Plans had to be amended to match the new 700 MHz bandplan and these were filed in January of 2008. Michigan (Region 21) filed its Plan on January 23, 2008 and Alaska (Region 2) filed its plan on February 7, 2008.

Regions in *italics* and highlighted in pink have a Plan pending with the FCC.

Region	Status	Next Meeting	Chair/Convener
1 (Alabama)	<i>Plan Re-Submitted to FCC 1/14/08</i>	<i>TBD</i>	<i>Eric Linsley, Chair</i>
2 (Alaska)	<i>Plan Filed with FCC February 7, 2008</i>		<i>Dean Strid, Chair</i>
3 (Arizona)	<i>Plan Re-Submitted 1/31/2008</i>	<i>TBD</i>	<i>Mark Schroeder, Chair</i>
4 (Arkansas)	First Meeting 2/24/04	TBD	Carl Jacobs, Chair
5 (Southern California)	<i>Plan Re-Submitted to FCC 1/29/08</i>		<i>Dave Buchanan, Chair</i>
6 (N. California)	First Meeting 5/16/02	February 28, 2008	Randall Hagar, Chair
7 (Colorado)	<i>Re-Submitted to FCC 1/28/08</i>	<i>TBD</i>	<i>Emery Reynolds, Chair</i>
8 (Metro New York)	First Meeting 1/23/02	March 18, 2008	William Gardner, Chair
9 (Florida)	<i>Plan Re-Submitted to FCC 1/31/08</i>	<i>TBD</i>	<i>Ray Carlson, Chair</i>
10 (Georgia)	First Meeting 1/24/02	TBD	Jim Mollohan, Chair
11 (Hawaii)	First Meeting 09/18/02	TBD	Robert Hlivak, Chair
12 (Idaho)	<i>Plan Re-Submitted to FCC 1/29/08</i>	<i>TBD</i>	<i>Bart Hamilton, Chair</i>
13 (Illinois)	First Meeting 3/4/01	February 13, 2008	Gary Cochran, Chair
14 (Indiana)	First Meeting 11/14/01	TBD	Anthony Stantz, Chair
15 (Iowa)	First Meeting 5/29/02	TBD	Richard Hester, Chair
16 (Kansas)	<i>Plan Re-Submitted to FCC 1/30/08</i>	<i>TBD</i>	<i>Randy Moon, Chair</i>
17 (Kentucky)	First Meeting 2/15/02	TBD	Bob Stevens, Chair
18 (Louisiana)	First meeting 8/31/01	January 24, 2008	William Vincent, Chair
19 (New England)	<i>Plan Re-Submitted 1/31/08</i>	<i>March 11, 2008</i>	<i>George Pohorilak, Chair</i>
20 (Maryland)	<i>Plan Re-Submitted to FCC 12/31/07</i>		<i>Ed Ryan, Chair</i>
21 (Michigan)	<i>Plan Submitted to FCC 1/23/08</i>	<i>TBD</i>	<i>Joe Turner, Chair</i>
22 (Minnesota)	<i>Plan Re-Submitted to FCC</i>		<i>Steve Pott, Chair</i>
23 (Mississippi)	First Meeting 1/09/02	TBD	Bill Ford, Chair
24 (Missouri)	<i>Plan Re-Submitted to FCC 1/31/08</i>	<i>TBD</i>	<i>Steven Makky, Chair</i>
25 (Montana)	First Meeting 7/17/02	TBD	Jerry Dupler, Chair
26 (Nebraska)	First Meeting 8/8/02	TBD	Mike Jeffries, Chair
27 (Nevada)	<i>Plan Re-Submitted to FCC</i>	<i>January 18, 2008</i>	<i>Mark Pallans, Chair</i>
28 (Eastern PA)	First Meeting 6/24/04	TBD	Richard Reynolds, Chair
29 (New Mexico)	First Meeting 3/21/05	TBD	Don Cooper, Chair
30 (Eastern NY)	First Meeting 12/2/03	February 7, 2008	David Cook, Chair
31 (North Carolina)	First Meeting 11/17/03	TBD	Michael Hodgson, Chair
32 (North Dakota)	Appointed Convener First Meeting	TBD	Rick Hessinger, Convener

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IMSA, the Folks Who Make it all Work

The International Municipal Signal Association (IMSA) is the oldest known association of its

kind in the world, dating back to October 1896, when a group of municipal signal men from several east coast cities met in Brooklyn, New York, and organized an association called the International Association of Fire and Police Telegraph Superintendents. “Back then the members maintained the fire and police telegraph systems. There was no two-way radio. Police received assignments from the police telegraph or telephone box on the street corner. Members of the public reported emergencies by ‘pulling the box’ on the corner,” says Doug Aiken, representing IMSA to the NPSTC Governing Board.

Today IMSA has approximately 11,500 members in all areas of the United States, in many areas of Canada, and in many of the free countries of the world. What is a municipal signal person? IMSA’s members are persons who are interested in promoting public safety in the most economical manner, reflected in IMSA’s objectives to improve the efficiency, installation, construction, and maintenance of public safety equipment and systems by increasing the knowledge of its members on a plethora of signal devices. Traffic controls, fire alarms, radio communications, roadway lighting, work zone traffic control, emergency medical services, and other related systems all fall under IMSA’s purview. “The common area for all of the interests is radio communications and frequency coordination—everyone uses radio communications to manage their profession,” says Chief Aiken.

Thomas Edison was an early member

In 1900, IMSA’s first organization of signal men changed their name to the International Association of Municipal Electricians (IAME), and began developing standards and specifications for wire, cable, fire alarm boxes, and even the size of manhole covers. Association members were also instrumental in the founding of the Underwriters Laboratory and the National Electrical Manufacturers Association during this era.

Thomas A. Edison was an associate member. Lesser known than Edison, but no less remarkable in the field, Charles Proteus Steinmetz was elected First Vice-President of the IAME and held office until his death in 1923. Steinmetz



fostered the development of the alternating current (AC) that made the expansion of the electric power industry possible by describing the mathematics of AC, which had not been explained or understood by earlier engineers. This understanding allowed engineers to design electric motors on paper instead of creating them by trial and error.

In 1935, IAME approved a new constitution and by-laws and changed the organization name to the National Municipal Signal Association (NMSA). Two years later, the organization name was officially changed to the International Municipal Signal Association (IMSA).

Education and Certification Programs

IMSA is dedicated to providing quality certification programs for the safe installation, operation, and maintenance of public safety systems and to delivering value for members by providing the latest information and education in the industry. IMSA is also one of the four FCC-designated frequency coordinators for public safety including fire, emergency medical, special emergency, and the public safety pool. The majority of IMSA members are interested in state-of-the-art training and certification. IMSA has focused on training in public safety technologies and sharing knowledge as its basis since 1896.

“I joined IMSA in 1976 when I first entered the fire service,” says Chief Aiken. “I learned so much through IMSA membership and local section meetings. I not only had the opportunity to take formal training and certification programs; I had the venue to talk to my peers from surrounding states. Networking at the public safety level is important. Members help each other to provide professional services for the public.”

What are some of the signal systems represented?

IMSA provides certification programs in four areas of public safety technology—Public Safety Communications, Fire Alarm, Work Zone Safety, and Transportation. “My personal areas of interest in IMSA are public safety telecommunications, frequency coordination, fire alarm reporting systems, and fire alarm interior systems. I deal with each of these daily as a fire chief. The areas of interest vary in IMSA but most members are involved in the technical side of public safety—the folks that make it all work,” Chief Aiken says.

Within the four general certification categories there are 27 programs covering a number of subjects and levels of certification. They include the following.

Fire Alarm:

- Municipal fire alarm Levels I & II, which cover the design, installation, and maintenance of public reporting systems under NFPA 72 – the National Fire Alarm Code.
- Interior Fire Alarm Levels I & II, which pertain to the design, installation, and maintenance of fire detection systems found in structures (smoke detectors, pull stations, sprinkler monitoring, etc.) also under NFPA 72.

Work Zone Safety:

- Work Zone Safety related to the safety of those folks who you see in the roadways across North America – all those signs, road cones, temporary lanes, etc.
- Work Zone Inspection
- Florida Work Zone and Michigan Traffic regulator, specific programs mandated by the two states.

Transportation Technologies:

- Traffic Signal Technician Levels I, II & III for the technicians that maintain all of the electronic and electrical traffic control equipment on roads and highways. There are specialty areas within these programs that allow specific certifications in bench, field, engineering and construction.
- Traffic Signal Inspection
- Roadway Lighting Levels I & II – All those lights on the roadways that allow you to see at night.
- Signs & Markings Level I & II – There are national standards for every sign posted along a street or high-

way and for all of the markings painted on roadways. These programs certify technicians to install and maintain them.

- A Microprocessor course and an Electronics course. Both of these programs are education programs that do not offer certification. They prepare technicians to take other certification programs.

Public Safety Telecommunications:

- Public Safety Dispatcher Levels I & II – The folks that operate emergency communications centers for police, fire, and EMS. The latest version of these programs will be introduced next month and the program is now called Public Safety Telecommunicator.

IMSA, working closely with the IMSA Educational Foundation, began certification of individuals involved with various public safety activities in 1982. Today over 82,000 individuals have attained IMSA certification in their field of public safety. IMSA membership is not a requirement to obtain certification. The attainment of certification is a way for individuals to indicate to the general public, coworkers, and employers that an impartial, nationally recognized organization has determined that they are qualified to perform specific technical tasks by virtue of their technical knowledge and experiences. It is IMSA's deep conviction that a certification program is warranted in each area of public safety operations to assist governmental agencies in lowering the likelihood of unnecessary legal actions and to increase the quality of public safety personnel.

To learn more about IMSA, visit www.imsasafety.org

There and Back Again continued from page 7

ITS ranges from the design of roadways, tunnels, and bridges to improved lighting and signage along our roads and highways. One new ITS technology being developed is Vehicle to Infrastructure Integration or VII. VII will allow vehicles to communicate through dedicated short range communications channels with the roadside and other vehicles. Emergency vehicles when equipped with VII will be able to broadcast a warning to all other vehicles within about a half kilometer of their approach. These same units will talk to VII enabled traffic signals changing the timing and allowing the signal to be set to either a four-way red or green in the direction of their response.

Sensor data from cars will be collected and analyzed at both Traffic Management and Fusion Centers. Data from

cars provides an immediate indication of road and weather conditions. Sensor information can tell us if the road is free and clear or warn of fog, snow, or ice. Emergency messages such as airbag deployment will trigger an emergency response long before a call is received at a PSAP. Emergency messages will train traffic cameras toward the GPS coordinates allowing emergency managers to evaluate a situation and direct the proper response.

Bilbo Baggins wasn't always aware of the many who provided assistance, often unseen as he and his company traveled on their quest. Also often behind the scenes, modern public safety is continually working to provide safety and assistance to our citizen travelers today.

Bill Brownlow represents AASHTO on NPSTC's Governing Board

developed a cross-border microwave network solution for public safety interoperability with the HLCC. "This project is well underway and will provide for the desired seamless interoperability along the border," Mr. Haller said. Further issues for consideration between the U.S. and Mexico include resolution of 4.9 GHz issues and the adoption of common nomenclature for public safety communications across the border.

It was also suggested that TV channel 15, which will be vacated in San Diego, should be considered for public safety use. The U.S. will need agreement with Mexico to use Channel 15 for public safety and it will also require concurrence from the FCC. Los Angeles County, California, has petitioned the FCC requesting that Channel 15 be allocated for public safety use in the LA area. NPSTC is on record supporting that petition. "There is a corollary area of concern in this area," Mr. Haller said. "Channel 14 is allocated in LA for land mobile use while in San Diego, there is a DTV station scheduled to go on the air in that frequency. While you would think San Diego and LA are far enough apart that this should not be a problem, wireless communications are affected by temperature inversions in southern California and transmission in San Diego will cause interference in LA. DTV spreads power across the whole channel with a noise floor that could effectively wipe out LMR communications in Channel 14 in the LA basin."

And to the North

In Canada, work on resolving issues in 700 and 800 MHz is progressing. The U.S. and Canada have no common interference standards for VHF and UHF applications, no protocol for interference resolution, and no 4.9 GHz agreement. Interference resolution procedures similar to those used with Mexico are needed for Canada.

The Above 30 MHz Agreement needs revision. "There is a very loose agreement for land mobile radio above 30 MHz stating that each country has the right to review new applications along the border," Mr. Haller said. "Canada has the option for any application above line A to approve or deny." Too many U.S. applications are being denied and have been denied for some time. Public safety would like to develop common ideas about what constitutes interference to understand why so many U.S. applications are rejected in Canada. "Because there are no standards for rejection, agencies do not know what or why applications will be rejected. What is needed are common ideas about

what constitutes interference, how to predict it, and what levels would be acceptable at the border. Currently so many applications are rejected by Canada without agencies understanding the basis for that rejection." NPSTC is working directly with its counterpart, the Canadian Interoperability Technology Interest Group (CITIG) on common issues.

This was NPSTC's second presentation at the State Department and it went well, Mr. Haller said. "Public safety has some real friends there and people at the meeting appeared to concur with all that was said in the presentation, hopefully leading to some new and streamlined agreements with Mexico and Canada." Mr. Haller reiterated that the resolution of border issues is essential for national security. Public safety requires seamless interoperability across borders. To accomplish this several additional bilateral agreements to share or coordinate use of spectrum are needed that state that spectrum should be distributed equitably and procedures for coordination streamlined.

Ralph Haller is the Chair of NPSTC and formerly chaired the Border Issues Working Group.



Vuze, Inc, Petition for Rulemaking, Public Notice, DA 08-92, WC Docket No. 07-52 (January 14, 2008)

Broadband Network Management

Vuze, Incorporated (Vuze) has filed a Petition for Rulemaking with the FCC regarding network management practices by broadband network operators. In its petition, Vuze asks the Commission to promulgate enforceable rules to address the parameters of acceptable network management.

In its comments, NPSTC urged the Commission, in considering permissible network practices by broadband network providers, to comprehend the evolving requirements of public safety broadband communications needs. Public safety communications is undergoing radical changes to keep up with the evolving technologies that are

being adopted by the general public. As public safety increasingly turns to using broadband services, the core requirements of open and responsive communications over multiple media types and protocols must be maintained.

NPSTC believes efforts of broadband network providers to manage or regulate the transmission of data over their networks could have an unforeseen impact on public safety's primary mission of protecting and serving our nation's citizens. Delaying or denying the transmission of mission critical information that may be carried over commercial broadband networks will hinder emergency response. NPSTC urged the Commission to include the character and requirements of public safety communications as it examines the issues presented by Vuze.

700 MHz Regional Planning Update continued from page 11

Region	Status	Next Meeting	Chair/Convener
33 (Ohio)	First Meeting 2/28/01	TBD	Paul Mayer, Chair
34 (Oklahoma)	First Meeting 11/19/03	TBD	H. Stephen Williamson, Chair
35 (Oregon)	First Meeting 1/16/02	TBD	David Brooks, Chair
36 (W. PA)	Appointed Convener First Meeting	May 14, 2008	Rich Matason, Convener
37 (South Carolina)	First Meeting 7/17/02	TBD	William Winn, Chair
38 (South Dakota)	Appointed Convener First Meeting	TBD	Todd Dravlund, Convener
39 (Tennessee)	Plan Re-Submitted to FCC 1/31/08	TBD	John Johnson, Chair
40 (Central & NE Texas)	Plan Re-Submitted to FCC 1/31/08		Dan Scrivner, Chair
41 (Utah)	Plan Re-Submitted to FCC 1/30/08		Steve Proctor, Chair
42 (Virginia)	First Meeting 10/2/01	TBD	Robert DeLauney, Chair
43 (Washington)	Plan Re-Submitted to FCC 1/30/08	March 26, 2008	Jon Wiswell, Chair
44 (West Virginia)	First Meeting 6/16/05	TBD	David Saffel, Chair
45 (Wisconsin)	Plan Re-Submitted to FCC 1/31/08	TBD	Russell Schreiner, Chair
46 (Wyoming)	First Meeting 2/15/01	TBD	Mark Joiner, Chair
47 (Puerto Rico)	First Meeting 4/	January 29, 2008	Ferdinand Cedeno, Chair
49 (Central Texas)	First Meeting 10/29/01	TBD	Ron Mayworm, Chair
50 (W. Texas)	First Meeting 7/15/04	TBD	Bonnie Guinn, Chair
51 (Houston)	Plan Filed with FCC March 4, 2008	April 22, 2008	Doug Frankhouser, Chair
52 (NW Texas)	First Meeting 7/30/03	TBD	Bob Sanders, Chair
53 (South Texas)	First Meeting 12/6/01	TBD	Victor Perez, Chair
54 (Chicago)	First Meeting 10/00	TBD	Bill Carter, Chair
55 (New York-Buffalo)	First Meeting 5/20/02	March 27, 2008	Joseph Grube, Chair

This data was compiled by Bette Rinehart, Motorola, and originally appeared in the February 2008 issue of *The Communicator*, a Publication of Motorola Inc. – Government & Public Safety Global Spectrum Strategy Team.

IMPORTANT DATES 2008

DATE	EVENT	LOCATION
April 7-10	URISA/NENA Addressing Conference	Portland, OR
April 14-16	SDR Forum	Rome, Italy
April 21-25	P25/TIA	San Diego, CA
June 7-11	NENA Annual Conference	Tampa Bay, FL
June 16-18	NPSTC Governing Board and Committee Meetings	Arlington, VA
June 27-July 2	NSA Annual Conference	Indianapolis, IN
July 11-15	NACO Annual Conference	Jackson City, MO
July 17-20	IMSA International	Phoenix, AZ
July 29-August 2	P25/TIA	Kansas City, MO

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NPSTC

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