Current Issues in Communications

Sponsored By
IAFC Communications Committee
Agenda

• NPSTC, Funding, ICTAP, NIIX: Marilyn Ward
• Key Spectrum Actions: Stu Overby
• Public Safety Spectrum Trust: Alan Caldwell
• Digital Noise Problem: Chief Charles Werner
Important Issues NPSTC and its Members are Leading

- More Spectrum For Public Safety
- Public Safety Spectrum Trust
- Common Channel Naming Interop channels
- Statewide Planning / NIIX
- Participation on the DHS SAFECOM Emergency Response Council (ERC)
Current Activities of the Spectrum Management Committee

• **700 MHz Band**
  – Nationwide Broadband System
  – Public Safety Spectrum Trust (PSST)
  – Consolidation of Narrowband Blocks

• **Border Issues**

• **In-Building Communications**
  – Draft Whitepaper Available

• **Spectrum Below 512**
Current Activities of the Technology Committee

- Broadband Technology
- In-Building Communications
- Amateur Radio Services
- P-25 VoCoder
- Paging
- Emergency Alert Services
PSIC Funding

- Special One-Time grant funded from 700 MHz auction
- Joint effort by DHS and NTIA
- States/Territories awarded grants; must have interop plans to qualify;
- $968 million total; 80% must be passed through for Local or Tribal projects within 60 days of receipt

Recent change opened funding for bands other than 700 MHz

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<tr>
<th>Date</th>
<th>Event Description</th>
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<tr>
<td>7/18/07</td>
<td>Allocations Announced</td>
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<tr>
<td>8/20/07</td>
<td>Basic App Due</td>
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<td>9/30/07</td>
<td>Prelim Interop Plans submitted; 5% of funds given for planning</td>
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<tr>
<td>12/3/07</td>
<td>Final Plans submitted</td>
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<td>1Q08</td>
<td>Remaining Funds Released</td>
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Welcome to the National Interoperability Information eXchange (www.NIIX.org)

- NPSTC, at the request of several Statewide Interoperability Planning Committees, is offering a free service (www.NIIX.org) that includes tools to assist states with the development of statewide communications interoperability plans.

- NIIX is a collaborative effort of local, tribal, state, and regional organizations to share information through a web-based, secure location accessible to Interoperability Planning Committee members.

- Importance to the Fire Community: Statewide plans are becoming an essential element to receive DHS funding.
NIIX Services (cont’d)

• Collaborative section allows Statewide/regional administrators to:
  – Access state/regional sub-communities
  – Securely manage and share draft documents
  – Solicit comments and manage member notification and feedback

• Contact list of other NIIX community members

• NPSTC-provided member training, assistance, and support - 41 states/ 200+ users working on their plans

• For more info
  • www.NIIX.org
  • Support@niix.org
  • www.NPSTC.org
  • Toll Free 866.807.4755

Laura Lippman, NIIX Community Manager
Interoperable Communications Technical Assistance Program (ICTAP)

Support for 66 States and Urban/Metropolitan Areas for Interoperable Communications Planning

Subject Matter Experts (SMEs) serve as points of contact for support and technical assistance to State and local agencies

Communications Assets Survey and Mapping (CASM) Tool provides inventory and interoperable planning and analysis for emergency communications systems and shows equipment used by thousands of public safety agencies Nationwide

ICTAP team tasked with supporting States in developing comprehensive Statewide Communications Interoperability Plans and Investment Justifications for PSIC by the December 3 deadline

• SAFECOM web site: www.safecomprogram.gov
You Can Have A Voice In NPSTC

• Come to NPSTC’s quarterly meetings and **have a voice** in this important work.

• **Participate** in quarterly NPSTC meetings via conference call.

• **Join** a Committee or Working Group and participate in their working conference calls.

• Join NPSTC’s listservs and **stay abreast** of issues and activities.

• **Remain current** with the postings, publications and other resources on the website at [www.NPSTC.org](http://www.npstc.org)
Key Spectrum Actions
FCC VHF/UHF Efficiency Requirements

Equipment

• Since Nov. 1997: Must include 12.5 kHz equivalent efficiency or better

• 1/1/2011: 25 kHz efficiency mode no longer allowed

• 1/1/2011: Must include 6.25 kHz equivalent efficiency or better *

* New FCC Rule Released 3/26/07 3rd Report and Order, WT Docket No. 99-87

User Licensing/Operation

• 1/1/2011: No new/expanded 25 kHz efficiency licenses issued

• 1/1/2013: Operations must be 12.5 kHz equivalent efficiency or better

• No 6.25 or equivalent efficiency user requirements have been set yet

Equivalent Efficiency at VHF/UHF

- FCC mandates efficiency, not channel width
- Efficiency options that meet latest FCC 6.25 kHz equipment efficiency rules for 2011:
  - 2 voice paths in 12.5 kHz;
  - 4 voice paths in 25 kHz;
  - 1 voice path in 6.25 kHz
  - Data: 4800 bps per 6.25 kHz; 9600 bps per 12.5 kHz; 19,200 bps per 25 kHz
- 12.5 kHz efficiency digital and analog equipment from multiple manufacturers in all market tiers readily available
- 6.25 kHz efficiency digital equipment is beginning to enter the market for some market tiers
800 MHz Rebanding

- FCC taking a more active role in assisting public safety over the last several months
- There will be no blanket waiver of the overall June 26, 2008 rebanding completion date
  - FCC is expected to be sensitive to individual cases in which licensees have been diligent in the process
- FCC has advised that rebanding funding does not automatically stop June 26, 2008
- U.S. discussions are ongoing with Canada and Mexico for the border areas
FCC 700 MHz Decision
Released August 10, 2007

Key Elements:

• Spectrum for Nationwide Public Safety Broadband Data Network

• Slight Shift in Plan to Improve Access in U.S./Canadian Border

• Reconfiguration of Narrowband Blocks

• Additional Spectrum for Commercial Auction
FCC Decision: 700 MHz Nationwide Public Safety Broadband Network

- 20 MHz designated for Nationwide Public Safety Broadband Network
- One network uses both Public Safety and auctioned spectrum blocks
- Nationwide public safety licensee and auction winner negotiate agreement and choose technology
- Auction winner builds system to Public Safety specs
- Hybrid system serves both Public Safety and commercial; PS has priority
- Local systems on exception basis only
Provisions for Local Broadband Systems

• No dedicated spectrum for local data systems
• Any local build-out based on agreement among local agency, NW PS BB licensee and D block licensee
  – Local agency leases spectrum from NW PS BB license
• Unless otherwise agreed, local system transferred to D block licensee for integration into nationwide system
• Local system must be interoperable with Nationwide PS BB system
• See paragraphs 470-484 of FCC decision for details
IAFC Digital Problem Working Group
Digital Problem Working Group

- High level background noise can result in the vocoder of any digital radio distorting audio
- The vocoder is the hardware/software component in every digital radio that converts analog voice to digital
- IAFC issued a Member Alert March 20 and convened a “Digital Problem Working Group” on May 8, 2007

Digital Problem WG

- **Best Practices subgroup**
  - Focus: Quicker solutions by behavioral and/or operational changes
- **Testing subgroup**
  - Focus: Long-term Solutions
Digital Problem Working Group

- Multiple radio manufacturers are active and supportive participants:
  - E.F. Johnson, Kenwood, MA-COM, Motorola
- Scott Health and Safety is also represented
- The WG is also working with other SCBA manufacturers
- To stay updated, see IAFC website link
Conclusion

• IAFC, NPSTC, Industry and others are working hard to ensure the best public safety communications possible

• We welcome your active involvement !!!