ALMR INSIDER

NPSTC Publishes Reports on Interoperability, Encryption

The National Public Safety Telecommunications Council (NPSTC) has released publications on radio interoperability and encryption.

The NPSTC governing board approved "Radio Interoperability Best Practices," including a master report and three best practice statements that identify specific actions local public safety agencies can take to improve emergency communications interoperability.

The report explains the role of best practices and migration strategies that enhance first responder safety and how each topic relates to the SAFECOM Interoperability Continuum.

The first three best practice statements cover specific issues that are critical to achieving interoperability:

- Nationwide interoperability channel naming and usage
- Interoperability systems change management practices
- Training and proficiency in the management and usage of interoperability equipment and systems

The group identified 13 topics that will result in unique best practice statements. NPSTC intends to publish these additional reports as they are completed by a working group.

The NPSTC governing board also approved an encryption on interoperability channels report.

The use of digital encryption is increasing among public-safety agencies, creating interoperability problems for first responders. NPSTC members have long advocated that analog voice be the standard for interoperability communications.

A task force studied this issue and issued a questionnaire last May to assess how public safety agencies use encryption and to what extent on designated interoperability channels. The FCC also issued a ruling on analog voice communications that directly impacted the use of digital encryption on nationwide interoperability frequencies.

The task force finalized an outreach document to educate public safety agencies on this issue and developed the following findings:

- Encryption is not allowed on nationwide interoperability calling and tactical channels in VHF, UHF and 800MHz.
- Encryption is not allowed on 700MHz calling channels but is allowed on 700 MHz tactical channels.
- Some frequencies are allocated as mutual-aid channels (VLAW and VFIRE), and encryption is allowed.
- Encryption is allowed on local, regional and statewide interoperability channels if allowed by the local authority.

(Article from March 2017 Mission Critical Magazine)

Console Upgrades Continue

Installation of six MCC7500 consoles has been completed at the Soldotna Public Safety Communications Center (PSSC) under a Kenai Peninsula Borough contract with Motorola.

Motorola also contracted with the State of Alaska (SOA) to install MCC7500 consoles at Fairbanks (AST) Dispatch, Goose Creek Cor-

rectional Center (GCCC) Dispatch, Ketchikan AST Dispatch, the Department of Military and Veteran Affairs (DMVA) Emergency Operations Center (EOC), and the ALMR Tudor Road Master Site. The console equipment for the SOA has been staged in Anchorage and installation at the various dispatch centers is currently underway.

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Inside this issue:

NPSTC Radio Interoperability Best Practices #1 -
Nationwide Interoperability Channel Naming and Usage

This Best Practice is part of a larger, ongoing effort on the part of NPSTC to identify best practice recommendations for a variety of topics dealing with interoperability. Readers are encouraged to read the Radio Interoperability Best Practices Report companion document (link at end of article) for a more detailed explanation of the history, development process, and intent of this document.

Nationwide Radio Interoperability Channels should be used with the ANSI Standard 2017 designated names, frequencies, and technical information; and in accordance with the FCC and NTIA designated usage for that channel.

Communications interoperability refers to the ability of emergency response agencies to talk across disciplines and jurisdictions via radio communications systems, exchanging voice or data with one another on demand, in real time, when needed, and as authorized.
The effective use of interoperability frequencies has failed when agencies use these resources without following the standards that have been defined for these channels.

It is not enough for agencies to simply program the interoperable channels in their equipment. Doing so without conforming to the ANSI Standard Naming practice or using the standardized tone squelch or network access codes creates a problem nearly as large as not having them at all. The potential consequences of failed communications place lives, infrastructure and property at risk.

Furthermore, it is important to understand that technology is only a piece of the interoperability solution. For a technical solution to be successful, areas of governance (often the most difficult challenge of all), standard oper-

ating procedures (SOPs), training and exercises, and the promotion of routine usage must also be addressed.

Interoperability channels can be local, regional, and statewide, in addition to nationwide. These channels will only work when every agency makes it a priority to program them in their radios and consoles, using the ANSI channel names, when applicable.
It is also equally important to train members on how to use these channels, as well as when to utilize them, and to have agreements with neighboring departments or mutual aid organizations.

Interoperability channels should be programmed based on ANSI standards and should never be edited or abbreviated for local variation. Additionally, channels that are not designated nationwide interoperability channels should never be programmed using a naming convention that is so similar to the designated channel name as to become misleading to the first responders. This has occurred where local agencies use VTAC names for their local channels for example. The NPSTC Intrastate Channel Naming Recommendations report provides recommendations for state and local interoperability channels.

Nationwide I/O Channel Naming and Usage touches every lane of the Continuum, which effectively demonstrates its importance in creating an interoperability solution.

(Article excerpts taken from NPSTC Radio Interoperability Best Practices, January 2017)

(Best Practices Report - http://npstc.org/download.jsp?tableId=37&column=217&id=3853&file=NPSTC_Radio_IO_Best_Practice_Overall_Report_Final.pdf)

NPSTC and APCO Announce Approval of Standard Channel Nomenclature
for Public Safety Interoperability Channels

The American National Standards Institute (ANSI) has approved the Standard Channel Nomenclature for Public Safety Interoperability Channels as revised in 2017. The standard, an update of earlier joint work accomplished by the National Public Safety Telecommunications Council (NPSTC) and the Association of Public-Safety Communications Officials (APCO) International, identifies common channel names for all FCC designated nationwide interoperability channels.

Over 10 years ago, NPSTC established a Common Channel Naming Task Group for interoperability use. The Task Group solicited input from public safety and held a Public Forum in February 2007. The Task Group developed a Report of Committee, proposing the consensus Revised Common Naming Standard. Following ex-

tensive review, the Standard Channel Nomenclature for the Public Safety Interoperability Channels became a standard within the American National Standards Institute (ANSI) in 2010.

The 2017 version includes new 700 MHz Air to Ground frequencies, adds 155.160 MHz as a common use Search and Rescue frequency, clarifies the tone code squelch for transportable relay stations, and has a revised appendix, which follows the NIMS-217A format. This version of the standard is consistent with the 2016 National Interoperability Field Operations Guide (NIFOG).

(Article from the National Public Safety Telecommunications Council Daily News, January 18, 2017)

P25 Committee Launches Working Group for Radio Programming Compatibility

The Telecommunications Industry Association (TIA) announced that its TR-8 Mobile and Personal Private Radio Standards Committee launched several new initiatives, including the development of new working groups, and elected new leaders. The committee develops the Project 25 (P25) standards.

At the recent TIA TR-8 meeting, three engineering committees initiated new technical work and launched new working groups. TR-8 created a new working group addressing radio programming compatibility requirements. At the request of the National Public Safety Telecommunications Council (NPSTC), TR-8 members agreed to begin development of a draft schema that will allow the import of certain radio programming parameters from a manufacturer's code plug programming software and allow the export of these parameters into another manufacturer's code plug programming software.

The TR-8.5.1 working group was launched to work on a revision to the P25 Location Services Overview Bulletin TSB-102.BAJA-A. The revision is based on comments that resulted from a review of the published document.

The TR-8.25.1 working group is working on a revision to add tests that are recommended for the Console Subsys-

tem Interface (CSSI) application of the Inter RF Subsystem Interface (ISSI). Once approved, these recommendations will be given to the DHS Office for Interoperability and Compatibility (OIC) P25 Compliance Assessment Program (CAP) advisory panel. The panel will consider incorporating them as they draft a Compliance Assessment Bulletin (CAB) for CSSI testing.

Committee participants include staff from Motorola Solutions, Harris, Relm Wireless, Airbus DS Communications, the U.S. Department of Homeland Security (DHS) E.F. Johnson Technologies and others.

"TR-8 is led by an incredibly dedicated group of industry volunteers, and their work is having a very real and very positive impact," said Stephanie Montgomery, TIA vice president for technology and standards. "Public safety is one of the most important areas of focus for the committee, and we are excited about the new initiatives launched at our recent meeting. Because of the critical nature of this work, we hope to expand industry participation and invite anyone with technical expertise or interest in public-safety equipment standards to contact us."

(Article excerpts taken from Mission Critical Communications Magazine, February 27, 2017)

ALMR Subscriber Programming and Maintenance

To ensure interoperability among Alaska Land Mobile Radio (ALMR) member agencies, the ALMR Executive and User Councils have established policies and procedures that must be adhered to when programming agency radios.

Some Federal, State and local agencies/organizations have chosen to program their own radios. This is not a problem if all ALMR policies, procedures and protocols are followed. Unfortunately, this isn't happening in some cases.

While not usually an issue for agency day-to-day operations, it becomes one during multi-agency/multi-jurisdictional emergency events, when first responders may not be able to communicate with one another because the programming in one, or both, of the radios doesn't comply with established ALMR programming standards.

We also see radios that haven't been "touched" in years and the programming is out of date. Any changes to ALMR, National, State and Regional Interoperability and Command Zones are always announced in the ALMR Insider newsletter and associated ALMR documentation. It is strongly suggested that each agency's radio technician check for programming changes annually, and update accordingly.

Established ALMR programming policies, procedures and protocols are all located on the ALMR web site at www.alaskalandmobileradio.org. The following documents detail proper up-to-date programming and naming conventions:
- Concept of Operations (CONOP)
- Interoperability Procedure 300-3
- Usage and Transmission Protocols Procedure 300-6
- Talkgroup Development Procedure 400-14

Although the ALMR Help Desk won't be able to program your radios, they will assist with your programming questions. However, a list of Alaska commercial communications service providers that can program agency radios is available on the ALMR web site.

All State agencies should coordinate their radio programming with the Department of Administration, Enterprise Technology Services office.

In addition to ensuring the radios are properly programmed, radios should be checked over annually by the agency technician to ensure it is properly aligned/tuned.

If you have further questions, please contact the Operations Management Office.

(Article originally submitted by Mr. Rich Leber, retired ALMR Technical Advisor, updated by Mr. Del Smith, Operations Manager)

Training and Exercise for Optimal Interoperability

A review of the SAFECOM interoperability continuum to determine the level of interoperability provided to its members by the Alaska Land Mobile Radio Communications System (ALMR) confirms the System is at the optimal level in four of the five critical areas. Those areas are:

- **Governance:** ALMR Executive Council and User Council regular monthly meetings and representation for all agencies;
- **Standard operating procedures:** National Incident Management System Integrated SOPs available on the ALMR website and reviewed/updated annually and approved by the User Council;
- **Technology:** Standards based P25 shared system with 126-member agencies;
- **Usage:** Monthly average of 1.2 million voice calls per month

The one area where ALMR agencies need to be more actively engaged on a regular basis is:

Training & Exercise: To achieve an optimal level of interoperability, member agencies should engage on a continuing basis in agency and multi-agency tabletop exercises. To test out practices developed during tabletops, regularly scheduled multi-agency, full function exercises involving all staff should be conducted. Finally, to confirm the viability of the practices during tabletops and multi-agency exercises, comprehensive regional training and exercises involving all agencies within a region utilizing ALMR regional Incident Command (IC) zone talkgroups.

Engaging in training and exercise as outlined above assures ALMR member agencies will be ready for any major manmade or natural emergency.

(Article by Mr. Del Smith, Operations Manager; //www.dhs.gov/sites/default/files/publications/nteroperability_continuum_brochure_2.pdf)

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Donnelly Dome Power Upgrade

The replacement of the failed battery plant at the Donnelly Dome site was completed on March 21 and a follow-up check of output was accomplished on March 30.

The battery plant installation completed almost seven months of planning from the initial bid through the execution.

(Article by Sherry Shafer, Operations Management Office)

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