

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20054**

In the Matter of)

The Development of Operational, Technical)
and Spectrum Requirements for Meeting) WT Docket No. 96-86
Federal, State and Local Public Safety)
Communication Requirements Through)
the Year 2010)

To: The Commission

COMMENTS OF NPSTC

The National Public Safety Telecommunications Council (“NPSTC”) hereby submits these Comments to the *Seventh Notice of Proposed Rulemaking* in the above captioned proceeding.¹ In this proceeding, the Commission requests comment on a number of issues related to the 700 MHz public safety band. As addressed in these comments, NPSTC recommends that the Commission 1) adopt the TIA-902 (SAM) standard for wideband interoperability; 2) require 700 MHz wideband radios that operate on the wideband interoperability channels to do so in the TIA 902 (SAM) mode; 3) modify the 700 MHz narrowband interoperability rules to reflect updates in the P25 Phase 1 standard; and 4) adopt provisions which allow use of digital base station ID’s in the 700 MHz band.²

¹ See combined Fifth Memorandum Opinion and Order, Sixth Report and Order and Seventh Notice of Proposed Rulemaking in WT Docket 96-86 released January 7, 2005.

² As discussed herein, NPSTC also supports limited exceptions of this capability requirement for special use equipment, consistent with previous recommendations of the National Coordination Committee (NCC).

I. Introduction

Formed on May 1, 1997, NPSTC is a federation of associations representing public safety telecommunications. NPSTC currently consists of the following thirteen organizations:

- American Association of State Highway and Transportation Officials
- American Radio Relay League
- American Red Cross
- Association of Public-Safety Communications Officials-International
- Forestry Conservation Communications Association
- International Association of Chiefs of Police
- International Association of Emergency Managers
- International Association of Fire Chiefs
- International Association of Fish and Wildlife Agencies
- International Municipal Signal Association
- National Association of State Emergency Medical Services Directors
- National Association of State Telecommunications Directors
- National Association of State Foresters

NPSTC was originally formed to encourage and facilitate implementation of the findings and recommendations of the Public Safety Wireless Advisory Committee (PSWAC), established in 1994 by the Federal Communications Commission (FCC) and National Telecommunications and Information Administration (NTIA) to evaluate the wireless communications needs of local, tribal, State, and Federal public safety agencies through the year 2010, identify problems, and recommend possible solutions.

NPSTC has since taken on additional responsibilities including implementing the recommendations of the National Coordination Committee (NCC), and the support and development of the Computer Assisted Pre-coordination and Resource Database System (CAPRAD) for 700 MHz spectrum to assist the Regional Planning Committees (RPCs). NPSTC develops and makes recommendations to appropriate governmental bodies regarding public safety communications issues and policies that promote greater interoperability and cooperation

between Federal, State and local agencies. Issues include: Spectrum Resources, 800 MHz rebanding, 700 MHz, 4.9 GHz, Software Defined Radio (SDR), US/Canadian/DTV Transition, Project MESA, Amateur Radio, Regional Planning Committees (RPCs), Statewide Interoperability Executive Committees (SIECs), Broadband, and the International Telecommunications Union.

II. Wideband Interoperability at 700 MHz

The Commission has requested comment on steps to promote interoperability for 700 MHz wideband operations. Specifically, the Seventh NPRM states:

We continue to believe that, if interoperability is to be achieved on the 700 MHz wideband interoperability channels, a single standard must be selected to ensure equipment compatibility.³ Accordingly, we tentatively conclude that we should adopt the SAM standard as proposed by the NCC as the standard for the 700 MHz wideband interoperability channels. We solicit comment on our tentative conclusion.⁴

We believe the rules governing interoperability channels should be similar for wideband and narrowband mobile and portable radios. Therefore, we tentatively conclude that the rules should be amended to require wideband mobile and portable radios to be capable of operating on all the wideband interoperability channels using the TIA-902 (SAM) standard, with the one exception recommended by the NCC: special-purpose equipment where the modem is integral to the special-purpose device (*i.e.*, a non-detachable component in a common enclosure or case). We ask for comments on this tentative conclusion, including recommendations on how best to define specific exceptions.^{5 6}

NPSTC and many of its member organizations are significantly involved in numerous

³ See 47 C.F.R. § 90.548(a).

⁴ Seventh NPRM at para. 50.

⁵ The NCC defines the term “integral to single-purpose equipment” as a single-purpose device and data modem that is contained in the same case or enclosure; the data modem must be dedicated to said device. See *July Letter* at 3-4.

⁶ Seventh NPRM at para. 53.

efforts to improve communications interoperability across multiple agencies and levels of government. Public safety responders face life-threatening situations every day in which communications can make the difference between life and death. Traditionally, much of the focus for interoperability has been on voice communications. However, the increasing responsibilities for both prevention and response now faced by the public safety community have heightened the importance of high speed data, imaging, and similar capabilities as mission critical requirements. These increased requirements reflect both heightened activity to combat terrorism and the need to address situations such as lost or abducted children, bomb threats, large fires, medical emergencies, and other multi-agency, multi-jurisdictional events.

Therefore, NPSTC supports Commission adoption of a wideband data interoperability standard, including a requirement that 700 MHz wideband radios operating on the wideband interoperability channels do so in the TIA 902 (SAM) mode. Furthermore, NPSTC believes the record of deliberations within the NCC provide a sound basis for adoption of TIA-902 (SAM) as that wideband interoperability standard. A letter from the NCC to the Commission addressing the final recommendations is identified below:

In sum, the NCC recommends that the Commission adopt a rule that in substance states:

All 700 MHz wideband data radios not integral to single-purpose equipment shall be capable of operating on all 50 kHz wideband data interoperability channels using the TIA-902 wideband data interoperability standard incorporated by reference in Section 90.XXX of these Rules. As used herein, the term “integral to single-purpose equipment,” shall mean that the single-purpose device and its data modem shall be contained in the same case or enclosure; and that the data modem shall be exclusively dedicated to said device. Devices not incorporating the TIA-902 wideband data interoperability standard are prohibited from operating on the wideband data interoperability channels.⁷

⁷ NCC Ex Parte letter dated July 25, 2003 to the Honorable Michael Powell in WT Docket NO. 96-86 at pages 3 and 4.

A number of the public safety leaders in NPSTC also were involved in the NCC and in partnering with TIA to develop the TIA-902 (SAM) wideband interoperability standard. Based on that involvement, NPSTC is confident that this standard is based on public safety operational requirements. Events occurring since the NCC recommendation heighten the need for FCC adoption of this interoperability standard.

The historical failure to provide both spectrum and a defined technical standard for voice interoperability has led to significant communications restrictions faced by public safety agencies responding to major events. While there are no significant operations on the 700 MHz wideband channels today, we should not repeat the errors of the past by failing to establish both spectrum (the interoperability channels already defined) and technical standards for operation on those channels. Adopting the TIA-902 (SAM) standard as the defined “standard mode of operation” on the wideband interoperability channels and requiring that all 700 MHz wideband radios be capable of operating on the wideband interoperability channels in the TIA-902 (SAM) mode will go a long way toward ensuring both voice and data interoperability in the future.

NPSTC recognizes that interoperability for data systems includes additional complexity beyond that for voice systems. For example, there has been significant discussion regarding the need for compatible data applications software in addition to an interoperable means of transporting the data over the air. While additional steps not under the FCC’s jurisdiction need to take place to address data application software compatibility and other operational issues, NPSTC believes that adoption of the TIA-902 (SAM) standard is a pre-requisite to the establishment of interoperable public safety wideband wireless communications systems. Without the communications platform provided by these technical standards, development of the software applications and operational procedures cannot move forward. The Internet Protocol (IP) physical layer standards suite allows compatible computer applications supporting

Transmission Control Protocol (TCP, thus together TCP/IP) to communicate seamlessly at different speeds depending upon network capabilities through a standard data port connection supported by virtually every computer manufactured today. Similarly, we envision the TIA-902 (SAM) standards suite to support seamless communications between compatible public safety wideband data devices and applications at various speeds dictated by transmission path quality.

NPSTC believes an approach similar to that previously used for the voice channels provides the proper balance to promote interoperability and yet leave room for technology innovation. Therefore, while NPSTC supports an FCC requirement for TIA-902 (SAM) on the wideband interoperability channels, it recommends the Commission refrain from establishing standards for operations on the general use channels. Individual public safety entities should be free to address their own requirements for the general use channels through their own procurement processes.

The NCC recommended an exception to the requirement that all wideband data radios be required to support operations on the interoperability channels. NPSTC continues to support this recommendation. NPSTC can foresee certain applications in which the 700 MHz wideband radio will be used for a dedicated purpose that would never involve a need for interoperability with any other agency or system. These applications may include video surveillance applications, telemetry or SCADA-type applications, and “under-cover” operations among others. In granting this exception, NPSTC recommends that manufacturer be required to document the “single purpose nature” of the device as part of the FCC’s transmitter type certification process to include a description of how the device cannot be re-configured or used in a mode that might involve communications between and amongst units from multiple agencies or jurisdictions.

III. Updates to the Rules for Narrowband Interoperability

NPSTC supports modification of Section 90.548 of the rules to specify the most current version of the TIA/ANSI-102 P25 Phase I standards documents. NPSTC further recommends that any equipment certified based on the original TIA/ANSI documents be permanently grandfathered from an FCC equipment certification perspective. It is NPSTC's understanding that equipment conforming to either the original or the updated standards documents are mutually compatible for purposes of interoperability. Nonetheless, it would be desirable to use this opportunity to reference the most current version of each document as opposed to referencing a document that would otherwise be out-of-date.

IV. Digital Base Station ID

The Seventh NPRM also requests comments with regard to modification of Section 90.647 of the rules to allow digital base station identification in the 700 MHz band and if so, whether the existing 800 MHz rules should apply.⁸ This section of the rules already contains provisions for digital base station ID in the 800 MHz band for licensees that have exclusive use of the channel. However, when the 700 MHz rules were adopted, this flexibility for a digital base station ID was not extended to this new band. This is somewhat ironic since the rules did require that digital modulation be the primary mode of operation for 700 MHz band systems. NPSTC previously recommended that the Commission modify the rules to allow the option of a

⁸ Seventh NPRM at para. 41.

digital base station ID in the 700 MHz public safety band when this issue arose in another proceeding and we reaffirm that support here.⁹

Digital ID's have been allowed in the 800 MHz band for a number of years and we are unaware of problems from doing so. Therefore, we see no reason to deny use of digital ID's in the 700 MHz and recommend the Rules be modified to permit use of digital ID'.

V. Secondary Fixed Signaling

The NPRM requests comments on whether the Commission should update the current rules allowing secondary fixed signaling at 800 MHz to include the 700 MHz band.¹⁰ NPSTC previously supported such action in one of the Commission's Biennial Review Proceedings aimed at streamlining and harmonizing rules.¹¹ NPSTC reaffirms that support. NPSTC expects that in the future many 700 MHz radios offered in the marketplace will also be capable of operating in the 800 MHz public safety bands. Thus, to the extent that the rules for these two bands can be harmonized, such would enhance the ability of manufacturers to develop and offer "dual-band" radios. Not only will such "dual-band" radios enhance the ability of public safety agencies to develop radio systems operating in either or both bands, it will enhance the interoperability between systems operating in these bands.

⁹ See NPSTC Ex Parte letter to John Muleta in WT Docket 03-264, dated September 28, 2004.

¹⁰ Seventh NPRM at para. 41.

¹¹ Ex Parte letter from NPSTC dated September 28, 2004 in WT Docket 03-264, Biennial Regulatory Review, Amendment of Parts 1, 22, 24, 27 and 90 to Streamline and Harmonize Various Rules.

VI. Display Labeling (Channel Nomenclature)

NPSTC again wishes to express its disappointment with the tentative conclusions to decline to mandate the use of a standard nomenclature for naming the interoperability channels.¹² Numerous events have highlighted the difficulty that arises when field personnel do not know that their radios are capable of operating with the radios of other agencies. Oftentimes, this lack of knowledge is the outgrowth of differences in the “names” that each agency has assigned to a specific frequency that both have in common. While this may appear to be an operational issue outside the responsibility of the Commission, it is an issue that the Commission can address through the type certification process, and one that participating manufacturers unanimously supported during significant NCC deliberations on this subject. It is only through this process that public safety agencies across the country will have radios that are not only technically capable of interoperability (as the Rules would now provide), but that field personnel will be capable of using in that interoperable mode. NPSTC implores the Commission to take a leadership role in making interoperability a reality in the 700 MHz band.

VI. Summary

NPSTC appreciates this opportunity to comment on proposed changes to the Federal Communications Commission’s Rules and Regulations. The 700 MHz band is an essential resource for public safety users, particularly in view of the increased prevention and response requirements, and the expanded communications needs that accompany those requirements. The wideband data operations that are a key focus of this NPRM will play a significant role in these

¹² Seventh NPRM at para. 57.

expanded operational and communications requirements. NPSTC supports the rule changes addressed in these comments as a necessary step toward providing for interoperable communications between and amongst public safety entities not only in a voice mode of operation but also in a data mode. NPSTC looks forward to expeditious Commission decisions on these issues and other necessary activities related to the 700 MHz band, such as the clearing of incumbent television broadcaster, so public safety can deploy this spectrum throughout the country as soon as possible.

Respectfully Submitted,

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