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The Honorable Michael Powell  
Chairman  
Federal Communications Commission  
445 Twelfth Street, SW  
Washington, DC 20554

REF: WT Docket No. 96-86

Dear Mr. Chairman:

At its November 21 and 22, 2002, meetings in Brooklyn, New York, the Public Safety National Coordination Committee (NCC) reached consensus on another set of recommendations to be forwarded to the Commission as part of the NCC's continuing obligation to advise the Commission on issues involving communications interoperability, principally in the 700 MHz public safety band. At the November, 2002, meeting, the NCC reserved forwarding the recommendations pending agreement on certain editorial changes. The matter was discussed again at the February, 2003, NCC meeting; and the NCC's final effort is reflected in this letter.

Three sets of recommendations on the following issues are presented below: (1) standard channel identification nomenclature for all interoperability channels in the bands designated for public safety use; (2) assignment of an additional VHF low-band frequency pair for interoperability use by the fire service; and (3) minimum signal levels for public safety systems in urban and rural environments.

- Standard Channel Nomenclature. At an incident, it is crucial that all responding public safety agencies are able to tune their radios to the frequency or frequencies that the incident commander directs. However, there have been instances in which the lack of standard channel nomenclature has caused confusion among public safety agencies and delayed their response to the incident. This problem arises because different jurisdictions often assign the same operational name to different frequencies. Consider the following hypothetical example:
  - A Baltimore, Maryland, police cruiser responding to an incident in Washington, D.C., could be directed to report in on channel "TAC ONE" on arrival at the scene.
  - The Baltimore unit would then tune its radio to "TAC ONE," which, on Baltimore's police radio system, corresponds to 453.4625 MHz.
  - However, the "TAC ONE" channels in the two jurisdictions – Baltimore and the District of Columbia – could correspond to different frequencies. For example, the District of Columbia "TAC ONE" channel could correspond to 453.7125 MHz.
  - Thus, even though the Baltimore unit had the capability of tuning to 453.7125 MHz – the District of Columbia "TAC ONE" frequency – the officer would not know to tune to that channel; and instead would tune to 453.4625 MHz – the Baltimore "TAC ONE" frequency -- and would be unable to initiate communication with the District of Columbia system.

In short, there is little uniformity among jurisdictions in the naming of radio channels. Some jurisdictions designate their channels by colors; others by numbers. A unit from a

jurisdiction which uses number designators would likely be completely confused by an instruction to tune to the “blue channel” on arrival at the scene.

The problem described in the above hypothetical examples has been encountered in the field multiple times and has disrupted coordination of effective response to incidents. The problem could become particularly acute – and endanger life and property – if, in a very large-scale incident, several jurisdictions responded, each with a different manner of designating its radio interoperability channels.

Unlike other problems faced by public safety radio communications users, the solution to the channel nomenclature problem on interoperability channels, as described above, could be resolved in a short time at virtually no cost. The NCC has developed a recommended standard channel nomenclature for interoperability channels and has included with this letter a chart designating a unique name for each public safety interoperability frequency. Embedded in each unique name is the frequency band, the primary use of the channel, a channel number and whether it is being used in the direct (mobile to mobile) or repeater (mobile, to base station, to mobile) mode. For example, “4TAC28D” refers to a 450 MHz band channel,<sup>1</sup> used for tactical purposes, the twenty-eighth frequency in the sequence, operating in the direct mode.<sup>2</sup>

At its meetings in November, 2002, and February, 2003, the NCC discussed how best to implement standard channel nomenclature so that all public safety systems in the country would use consistent interoperability channel designations. The NCC considered having the enclosed table promulgated as a “best practice” by a public safety organization or organizations; having the table adopted by a national standards developer, such as the Telecommunication Industries Association (TIA); and other alternatives. The NCC concluded that all of the alternatives considered were wanting in one respect or another; and that incorporation of the table into the Commission’s rules would be a far more effective means of assuring consistent use of the table by public safety licensees. It therefore recommends that the table be made part of the Commission’s Rules as soon as possible. Adoption of this NCC recommendation by the Commission would be consistent with similar Commission practice in the past. For example, the Commission designated channels in the 463.0000 MHz - 463.19375 MHz range, specified for medical communications use, as “Med 1” through “Med 83” for the specific purpose of “uniform usage.”<sup>3</sup> Moreover, the Federal Government, through the National Telecommunications and Information Administration, is considering adoption of a table consistent with that proposed by the NCC herein.

- **Additional Fire Service Channel.** Based on information it has received from fire service personnel, the NCC’s Interoperability Subcommittee has determined that there is a need for a second low-band VHF channel restricted to coordination by the Fire Coordinator and to be used primarily for intersystem communications.<sup>4</sup> The NCC therefore recommends that the Commission designate 39.48 MHz for interoperability use by applying footnote 19 of 47 C.F.R. § 90.20(c) to the limitations for that frequency; and that it designate the Fire Coordinator as the exclusive coordinator for that frequency.

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<sup>1</sup> Other band designators are 1 – VHF High Band; 3 – VHF Low Band; 7 – 700 MHz Band; and 8 – 800 MHz Band.

<sup>2</sup> Other use designators are DAT – Data; FIR – Fire; EMS – Emergency Medical Service; LAW – Police; MOB – Mobile Repeater; and CAL – National Calling Channel.

<sup>3</sup> See 47 C.F.R. § 90.20(c)(1) n. 63.

<sup>4</sup> Currently, there is one such low band fire channel at 45.88 MHz. Two such low band VHF intersystem frequencies, 39.46 MHz and 45.86 MHz, currently are coordinated only by the Police Coordinator.

- System Design Parameters. The NCC has reached a general recommendation concerning coverage design parameters for 700 MHz public safety systems. Although it does not suggest that the recommendation be codified, the NCC believes that the recommendation may be useful to the public safety communications community generally, and to the Commission in its administration of the 700 MHz public safety band, especially with respect to resolution of interference conflicts.

The NCC recommends that a 700 MHz public safety system should be designed for at least a 40 dBu signal within the system's operational area, which, for the purposes of this recommendation, is taken to be the jurisdictional area plus three miles in rural areas and the jurisdictional area plus five miles in urban areas. However, for systems in unfavorable interference environments, and for systems requiring in-building coverage, the NCC recommends a minimum 50 dBu signal within the systems' operational area. In either event – the 40 dBu or 50 dBu design criterion – all reasonable efforts, *e.g.*, use of directional antennas, antenna beam tilt, reduced power, suitable site location, etc., should be undertaken to minimize signal levels beyond the system's operational area. Licensees electing to design systems with less than a 40 dBu signal within their operational areas should, of course, not be prohibited from doing so; however, they should recognize that such systems may be vulnerable to harmful interference. Further, the NCC recommends that when evaluating proposed co-channel and adjacent channel assignments, the 700 MHz Regional Planning Committees and system designers should follow the procedures set out in TIA Technical Services Bulletin No. 88. To evaluate the need for, and parameters of, a recommended minimum signal level, the NCC requested that TIA study the matter. The culmination of the study was the document *TIA 50 dBu Contour Recommendation* prepared by the TIA TR-8 Committee. This, and other major efforts by TIA have been invaluable to the NCC in formulating its recommendations to the Commission; and the NCC wishes to acknowledge and commend TIA's efforts.

- Wideband Data Standard. The NCC continues to work with TIA to develop a standard for the 700 MHz wideband data interoperability channels. The NCC had hoped to receive the final standard from TIA, complete its evaluation and make a final recommendation to the Commission before the conclusion of the NCC's current term on July 25, 2003. However, at the NCC's last meeting in February, TIA informed the NCC that work on one of the several documents making up the recommended standard was taking longer than initially expected. The document now is projected for completion in August, 2003. The NCC intends to review TIA's progress on this matter at the NCC's final meeting on July 17, 2003. If it appears, at that time, that TIA will not be making any material changes to the wideband data standard, the NCC intends to conditionally recommend the TIA standard to the Commission.

Respectfully submitted,

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Chair, National Coordination Committee

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