National Public Safety Telecommunications Council

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August 19, 2004

Mr. John Muleta
Chief – Wireless Telecommunications Bureau
Federal Communications Commission
445 12th St. SW
Washington DC 20554

RE: WT Docket 00-32

Dear Chief Muleta:

On behalf of the National Public Safety Telecommunications Council (NPSTC), we thank you for the recent opportunity for a representative of NPSTC to meet with you and your staff on this very important issue. Although I regret that I was unable to attend in person, I am sure that our representative, Sean O'Hara, has expressed both our interests and concerns. Mr. O'Hara is the Co-Chair of our Broadband Working Group, the Vice Chair of our Technology Committee, has been an invited Speaker at your Technology Advisory Committee Meetings on related matters, and has been very involved with the NPSTC 4.9 GHz activities to enable public safety broadband capabilities.

From our meetings with you and your staff it was clear that the Wireless Bureau did not feel that the current record adequately supported the conclusion (proposed by NPSTC and others) that would reduce the emission mask protections provided by the Commission for public safety 4.9 GHz operations, as ordered in the MEMORANDUM OPINION AND ORDER AND THIRD REPORT AND ORDER (Adopted: April 23, 2003, Released: May 2, 2003).

We sincerely appreciate your attention to this matter, and respect your caution with respect to concerns of interference and protection of public safety operations. However, in this band we feel that undue attention is being placed upon the emissions mask as being the primary source of possible interference. First, we feel that packet data communications present different "interference" effects than legacy operations. Second, we feel that effective Regional Planning processes can provide levels of interference mitigation and protection in this dedicated public safety band that are orders of magnitude larger than even the tightest emissions mask could offer.

As discussed at the August 4, 2004 meeting, we indicated that we would quickly provide the Commission with complex detailed simulations that better presented our concerns on this matter. This further technical showing is attached here, and clearly illustrates the real life, tangible effects of mask selection on public safety operations.

The attached scenario and technical analyses illustrates an example of an operational deployment of 4.9 GHz at the scene of a severe incident. This scenario demonstrates many important characteristics of 4.9 GHz utilization, including its role as a support resource for public safety, how multiple frequency band resources (including 4.9 GHz) work together to meet public safety's operational objectives, what types of applications 4.9 GHz will be used for, the physical limitations and propagations characteristics of the 4.9 GHz band, and how technology is used to solve some of the propagation constraints inherent to the use of 4.9 GHz.

In this scenario, even though multiple agencies have high density deployments of 4.9 GHz units at the scene, only a minimum degree of incident spectrum management is assumed (or even required). Most all infrastructure resources serving the area have been destroyed, so all communications are set up "on-the-fly". It is assumed that all 4.9 GHz channels have been assigned to individual services or operations ahead of time through the local Regional Planning Guidelines. For this scenario, incident managers do not consider adjacent channel planning at all. Note that these are all "worst case" characteristics.

What should be clear after the Commission navigates this scenario and reviews the simulation results is that the standard technologies used to support the first responder operations can support this extremely complex and stressing incident without any noticeable degradation of Quality of Service (QoS) to the end users at the scene. Furthermore, it will be apparent that the selection of a standard emission mask (e.g. DSRC Mask A or IEEE 802.11a/j) over a more stringent mask (e.g. DSRC Mask C) has little if any effect upon real life user operations.

Again, to clearly reiterate our continue assertion, the selection and mandate of an emissions mask stricter than that represented by standard 802.11 OFDM technologies will only serve to limit the gains that would otherwise be afforded by market driven forces. It will not provide any significant performance gains, and will in fact stifle the technological innovation and economic gains that would be otherwise available by properly aligning public safety's requirements with technologies developed for larger markets.

It is important to note that over the last several years, NPSTC has been proactively participating within both standards development activities and industry forums involved with the development of advanced communications technologies. NPSTC currently holds voting rights within IEEE 802, TIA TR-8, and the Software Defined Radio Forum Groups. We have actively contributed within these activities, and developed a solid working relationship with those in Industry that support these technologies. Besides educating these Industry Groups regarding Public Safety's Communications requirement, we have also been actively assessing the capabilities of these advanced technologies, and evaluating the impact and opportunities gained through the leveraging of these technologies to support Public Safely operations. Let us assure you that NPSTC has spent a considerable amount of time and effort reaching their conclusions on the 4.9 GHz issues, and consider the recent compromise offered by NPSTC and to be both a practical and sound solution.

To summarize our position: *We recommend that the Commission allow the DSRC-A mask at transmitter power levels 20 dBm and below, and postpone new action on transmitters operating at power levels above 20 dBm until real life testing indicates what Mask(s) would be required to effectively support Public Safety operations at these higher power levels. Until such testing is complete, any operations at power levels above 20 dBm (or 29 dBm ERP) would be subject to the Mask specified in the 2003 MO&O of Docket 00-32.* Suggested Part 90 Rules that are consistent with our position are also attached.

Sincerely,
Marilyn Ward
Chair – National Public Safety Telecommunications Council

CC: Ms. Marlene H. Dortch, Secretary, FCC
FCC Chairman Michael K. Powell
FCC Commissioner Kathleen Q. Abernathy
FCC Commissioner Michael J. Copps
FCC Commissioner Kevin J. Martin
FCC Commissioner Jonathan S. Adelstein