

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554**

In the Matter of	)	
	)	
Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band	)	PS Docket No. 06-229
	)	
Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010	)	WT Docket No. 96-86
	)	

**COMMENTS OF THE REGION 22 (MINNESOTA)  
PUBLIC SAFETY REGIONAL PLANNING COMMITTEE**

**FEBRUARY, 2007**

**I. INTRODUCTION**

At its quarterly business meeting held on February 6, 2007 in St. Paul, Minnesota, the Region 22 (Minnesota) Public Safety Regional Planning Committee (MN-RPC) approved a Resolution adopting the following six key policy positions with respect to the above captioned matters before the Commission, which are of great importance to public safety.

**II. KEY POLICY POSITIONS**

MN-RPC, in the strongest possible terms, **opposes** the concept outlined in the 9<sup>th</sup> NPRM to reallocate 12 MHz of current public safety wideband & reserve spectrum to a “single national public safety broadband licensee” to construct a nationwide commercial system to be made available to public safety on a fee for service basis.

MN-RPC **supports** the concept recently proposed by U.S. Senator John McCain, and supported by NPSTC, to allocate an additional 30 MHz of radio spectrum in the upper 700 MHz band, currently allocated for public auction, to a Public Safety Broadband Trust to implement a system similar to that proposed in the 9<sup>th</sup> NPRM, rather than using the 12 MHz of spectrum currently allocated to public safety agencies as proposed by the Commission.

MN-RPC **conditionally supports** Access Spectrum’s “Broadband Optimization Plan” to consolidate the narrow band allocation at the upper end of the band and the broadband allocation at the lower end provided that RPCs be afforded the flexibility to implement a mix of wideband 50-100-150 kHz and/or broadband 1.25+ MHz technologies (Flexible WB/BB Scenario) in their respective regions as originally proposed by NPSTC and further refined by Motorola.

MN-RPC **opposes** any leased, shared or secondary use of 700 MHz public safety spectrum by broadband commercial wireless providers or other non public safety entities. If permitted as proposed by the Commission, it must only be on a secondary basis and must not cause interference to any 700 MHz public safety systems operating in the band. If interference is experienced, interfering stations must either immediately alter or cease their operations to eliminate the interference.

MN-RPC **urges** the Commission, when it revises the 700 MHz public safety band plan, to permit RPCs to aggregate two adjoining 25 kHz aggregated channels in the narrowband segment thereby creating a 50 kHz aggregate channel for wideband data operations. This approach will provide greater regional flexibility in implementing a mix of narrowband, wideband and broadband voice and data systems to meet local requirements.

MN-RPC **urges** the Commission that regardless of how the existing 700 MHz public safety band is reconfigured, public safety agencies purchasing wideband data systems based on the current band plan which are under contract prior to the effective date of any new rulemaking, be entitled to issuance of radio station licenses and afforded a reasonable system life cycle including expansion of those systems.

### III. DISCUSSION

1. MN-RPC, in the strongest possible terms, opposes the concept outlined in the 9<sup>th</sup> NPRM to reallocate 12 MHz of current public safety wideband & reserve spectrum to a “single national public safety broadband licensee” to construct a nationwide commercial system to be made available to public safety on a fee for service basis.

- MN-RPC believes it is essential that the entire 24 MHz of public safety spectrum at 700 MHz continue to be available for coordinated local, region-wide and statewide interoperable voice and data networks planned, managed and operated at the regional level. Prohibiting direct licensing of any portion of this spectrum to state and local governments would be catastrophic to continued advances in regional and statewide oriented first responder interoperability.
- As recently demonstrated in the Twin Cities Metropolitan Area<sup>1</sup> (TCMA), successful interoperability among first responders is achieved by a combination of: (1) implementation of the requisite enabling technologies, (2) collaborative regional planning and governance of shared communications networks, (3) standardized regional operating procedures, and (4) consistent training and exercises among regional first responders. A top down nationalized single network approach to first responder interoperability has not been identified by SAFECOM, DHS, or public safety practitioners as a known successful strategy or best practice.
- Withdrawing 12 MHz of public safety spectrum for which many state, regional and local jurisdictions have been actively engaged in planning and implementation activities for ten years would in fact frustrate, hinder and set back numerous regional initiatives currently underway to implement regional interoperable data communications systems.<sup>2</sup>

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<sup>1</sup> Tactical Interoperable Communications Scorecard Summary Report and Findings, U.S. Department of Homeland Security, January, 2007. The TCMA was one of six regions in the nation that achieved advanced implementation in all areas evaluated. The TCMA regional 700 MHz wideband interoperable data system project was specifically mentioned in the DHS report.

<sup>2</sup> Multiple wideband 700 MHz data communications systems are currently in various stages of procurement and implementation in the following locations in Minnesota: Nine counties in the TCMA; Sherburne County, MN; Mower County, MN and the Fargo/ Moorhead metropolitan area.

- The TCMA data interoperability initiative recognizes that implementing a standardized transport layer such as TIA-902 in and of itself does not achieve interoperability and that commonality at the application layer is necessary to achieve data communications among diverse public safety entities. The Commission’s vision that somehow the creation of a commercially derived broadband transport layer, even if it were economically feasible, would inherently result in interoperability among first responders seems far fetched, somewhat ill conceived and unlikely to achieve the Commission’s goals for interoperability.
- The current “nationwide broadband” data networks touted by major commercial wireless carriers, while offering some degree of wide area roaming among selected urban areas and interstate highway corridors, continue to frustrate local public safety users with high access charges, inability to handle peak traffic during emergencies, lack of reliability during power outages, spotty coverage and no ability to manage access priorities. Even though these commercial systems currently utilize standardized air interfaces identical to those proposed by the broadband carrier and manufacturer community for use in the proposed nationwide public safety system, these commercial systems have done little to create interoperability among diverse public safety entities. Merely using the same commercial transport network does not achieve interoperability, nor will the Commission’s proposed nationwide public safety system.
- The proposed spectrum reallocation would essentially close the door on the ability of public safety entities to manage and operate government owned wideband and broadband wireless data communications networks and would impose a national “one size fits all” single layer commercial system for public safety data communications. It is inconceivable that such a network, planned and managed by a distant non profit entity with marginal technical, financial, legal and project management resources, could meet the diverse and complex needs of local first responders on a region by region basis, particularly for on-scene tactical communications involving command, control, situational awareness and resource management.
- For conclusive technical and economic reasons, the Metropolitan Emergency Services Board in St. Paul, Minnesota adopted a region-wide data plan involving a flexible multi-layered approach to high speed public safety data communications.<sup>3</sup> This multi layer strategy includes a base line wide area TIA-902 standards based 50 kHz wideband data system, broadband overlays in high density areas, augmented by commercial wireless networks where needed.

2. MN-RPC supports the concept recently proposed by U.S. Senator John McCain,<sup>4</sup> and supported by NPSTC,<sup>5</sup> to allocate an additional 30 MHz of radio spectrum in the upper 700 MHz band, currently allocated for public auction, to a Public Safety Broadband Trust to implement a system similar to that proposed in the 9<sup>th</sup> NPRM, rather than using the 12 MHz of spectrum currently allocated to public safety agencies as proposed by the Commission.

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<sup>3</sup> On December 5, 2003 the Metropolitan Radio Board adopted a Plan for Adding a High Speed Data Layer to the Regionwide Public Safety Communications System and on November 9, 2005 the Metropolitan Emergency Services Board approved a proposal evaluation report recommending a multi-layer approach to meeting the metro region’s high speed data communications needs, commencing with the construction of a multi county TIA-902 700 MHz wideband data system.

<sup>4</sup> A plan to introduce legislation that would establish a new nationwide, state-of-the-art public safety broadband network to promote interoperable communications among first responders announced by U.S. Senator John McCain on January 31, 2007. A statement regarding this proposal by Senator John McCain delivered to the U.S. Senate Committee on Commerce, Science and Transportation hearing on the Present and Future of Public Safety Communications on February 8, 2007.

<sup>5</sup> Testimony by Chief Harlin McEwen, representing NPSTC, delivered to the U.S. Senate Committee on Commerce, Science and Transportation hearing on the Present and Future of Public Safety Communications on February 8, 2007.

- The concept of a nationally developed and managed hybrid commercial/ public safety broadband network using additional spectrum currently earmarked for auction, in addition to primary state and locally developed and managed wideband and broadband networks, would be applicable and desirable for some, but not all, public safety data applications.
- The primary application would be extraordinary occasions like those impacting the Gulf Coast region after the hurricanes in 2005 when public safety personnel from distant parts of the nation responded outside their states to render assistance during a catastrophic disaster.
- Public safety entities in remote, offshore and areas with difficult terrain, or with insufficient funding and/or justification to implement their own systems may find such a network desirable.
- Some entities, if they actually require broadband services, may elect to use such a national network for local day to day first responder use if it provides advantageous cost, performance and reliability characteristics compared to locally funded and implemented systems.
- The national network could provide a valuable second “layer” in addition to local and regional wideband and broadband networks providing access to higher burst speeds for those users that need it, system level redundancy, additional capacity during disasters and out of area roaming capabilities when local users leave the coverage footprint of their primary system.

3. MN-RPC conditionally supports Access Spectrum’s “Broadband Optimization Plan,” shown in Appendix A, to consolidate the narrow band allocation at the upper end of the band and the broadband allocation at the lower end provided that RPCs be afforded the flexibility to implement a mix of wideband 50-100-150 kHz and/or broadband 1.25+ MHz technologies (Flexible WB/BB Scenario) in their respective regions as originally proposed by NPSTC<sup>6</sup> and further refined by Motorola.<sup>7</sup>

- MN-RPC believes it is absolutely essential to retain the concept of flexibility to permit RPCs with the ability to implement a combination of 50-100-150 kHz and 1.25+ MHz data channel aggregation in order to meet the full continuum of local and regional public safety needs.
- While much has been made of the potential future virtues of broadband technology, it remains to be demonstrated that wireless broadband, which requires a very dense infrastructure to achieve acceptable geographic coverage, is economically feasible in non-urban areas.
- Wideband technologies can provide a very large geographic coverage footprint, with cell edge performance characteristics comparable to broadband, for a fraction of the infrastructure development costs compared to broadband.<sup>8</sup> Not all agencies actually need broadband.

4. MN-RPC opposes any leased, shared or secondary use of 700 MHz public safety spectrum by broadband commercial wireless providers or other non public safety entities. If permitted as proposed by the Commission, it must only be on a secondary basis and must not cause interference to any 700 MHz public safety systems operating in the band. If interference is experienced, interfering stations

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<sup>6</sup> Comments submitted by NPSTC on June 5, 2005 in the 8<sup>th</sup> NPRM in Docket 96-86 supporting a combination of WB&BB.

<sup>7</sup> Notice of Presentation to the FCC filed by Motorola on October 4, 2006 in Docket 96-86, see Appendix A for table.

<sup>8</sup> Multiple competitive system proposals received by the Metropolitan Radio Board in March, 2005 for broadband 700 MHz systems required 6-8 times the number of antenna sites with a correlating increase in backbone system costs compared to wideband 700 MHz systems. A nine county wideband system was ultimately purchased for the same investment that would have been required to deploy a broadband system in just one single county.

must either immediately alter or cease their operations to eliminate the interference.

- Any kind of leasing agreements, compensation, in kind contributions or other arrangements permitting commercial carrier or other secondary use of public safety 700 MHz spectrum is ill advised and will likely cause adverse impacts. For example, broadband operators could negotiate an agreement with one licensee, including the national licensee, and then use that agreement to resist interference claims of another licensee using the same spectrum elsewhere. The Commission determined in an earlier finding that similar arrangements for non-public safety entities negotiating use of 700 MHz public safety spectrum was not permitted.<sup>9</sup>
- These types of secondary use arrangements would be particularly problematic for any proposed space based satellite communications segments intended to serve rural areas potentially causing interference in other areas where the spectrum is in use for terrestrial based public safety systems.
- The Commission’s reliance on an undeveloped and unproven technical concept of “cognitive radios” to avoid interference to primary public safety services as the basis for considering secondary access to public safety spectrum by commercial broadband operators is at the very least overly optimistic, risky, premature and indicates that this proposal is not sufficiently developed to support a rulemaking decision without substantial additional information.

5. MN-RPC urges the Commission, when it revises the 700 MHz public safety band plan, to permit RPCs to aggregate two adjoining 25 kHz aggregated channels in the narrowband segment thereby creating a 50 kHz aggregate channel for wideband data operations. This approach will provide greater regional flexibility in implementing a mix of narrowband, wideband and broadband voice and data systems to meet the full range of local requirements.

- MN-RPC acknowledges there are potential technical trade offs involved with implementing a mixture of wideband and broadband systems within the BOP’s lower 12 MHz of public safety spectrum, particularly in urbanized areas where all available spectrum will be quickly utilized. Providing the ability to aggregate up to 50 kHz blocks in the NB segment would permit deployment of additional technology choices including mixed voice and data networks. Local entities would have the option to better balance spectrum resources with technologies to match first responder voice and data needs. Regions with a need for both wideband and broadband data systems will have a greater opportunity to accommodate both with this approach.
- This approach would reduce the current scenario whereby large segments of the overall 700 MHz public safety allocation are unused due to balkanized FCC channelization schemes inhibiting spectrum use in a manner which matches public safety user needs in a given region.

6. MN-RPC urges the Commission that regardless of how the existing 700 MHz public safety band is reconfigured, public safety agencies purchasing wideband data systems based on the current band plan which are under contract prior to the effective date of any new rulemaking, be entitled to issuance of radio station licenses and afforded a reasonable system life cycle including expansion of those systems.

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<sup>9</sup> The Report and Order in ET Docket No. 97-157 (FCC 97-421) and the subsequent related Memorandum Opinion and Order (FCC 98-261) for the “Reallocation of Television Channels 60-69, the 746-806 MHz Band,” determined that public safety licensees could not enter into negotiated agreements permitting non-public safety entities to operate on 700 MHz spectrum reallocated for public safety use.

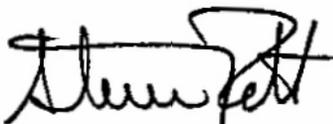
- It would be grossly unfair and contrary to the public interest for public safety entities which have proceeded in good faith with system planning, budgeting, design, procurement and implementation of 700 MHz wideband data systems based on existing FCC Rules, and in alignment with the established regulatory development framework in this Docket prior to issuance of the 9<sup>th</sup> NPRM, to now be preempted from licensing and operating those systems. In the case of the TCMA TIA-902 wideband system, \$8 million in public funds have been expended to implement this wideband system, which is now potentially in jeopardy due to uncertainty regarding the Commission's willingness to issue wideband licenses.<sup>10</sup> However, requiring existing licensees to re-channelize their wideband systems to conform to revised FCC 700 MHz band plans and RPC Plans would not be unreasonable.
- The proposals in the 9<sup>th</sup> NPRM constitute an unsupported disconnect from the prior regulatory development progress made in this Docket, particularly with respect to the existence of wideband networks, adoption of national interoperability standards for such wideband networks and most importantly direct licensing to state and local governments for construction of locally owned and operated systems. Proceeding with such an unsupported and disconnected course of action a full ten years into a previously well crafted regulatory development process would result in substantial erosion of the public safety community's confidence in the Commission's integrity with respect to such important regulatory development matters in the future.

#### IV. CONCLUSION

MN-RPC urges the Commission to withdraw its public safety broadband proposal contained in the 9<sup>th</sup> NPRM and to work with Congress to adopt legislation enabling reassignment of 30 MHz of additional 700 MHz spectrum for a national hybrid commercial/ public safety broadband network. The Commission should immediately adopt Access Spectrum's BOP along with Motorola's WB/BB Flex Plan permitting either wideband, broadband or a combination of both. MN-RPC urges the commission not to permit any secondary use of 700 MHz public safety spectrum by non public safety entities. The new 700 MHz band plan should permit channel aggregation up to 50 kHz in the narrowband segment. MN-RPC urges the Commission to ensure that existing investments made in wideband systems be protected and that those systems be permitted to enjoy a reasonable system life cycle. Additionally, MN-RPC urges the Commission to address remaining unresolved issues in this matter, particularly with respect to interoperability standards for wideband and broadband technologies, and to proceed expeditiously with issuance of wideband and broadband primary radio station licenses.

Respectfully Submitted,

**Region 22 (Minnesota)**  
**Public Safety Regional Planning Committee**

By: 

Steve Pott, Chair

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<sup>10</sup> On December 22, 2006 Hennepin County, MN withdrew an expedited request for temporary rule waivers regarding use of 50 kHz wideband data channels for a region-wide system, originally submitted on April 14, 2006 due to unacceptable delays by the Commission in acting on the request. The system is temporarily operating on 25 kHz narrowband 700 MHz channels and is under contract to be upgraded to 50 kHz operation in June, 2008. No wideband primary licenses have been issued by the Commission as of February 21, 2007.

## Appendix A

**Access Spectrum’s “Broadband Optimization Plan” (BOP) with broadband/wideband mix provides regional choice for a combination of wideband and/or broadband technologies to meet local needs (Fig 1).**

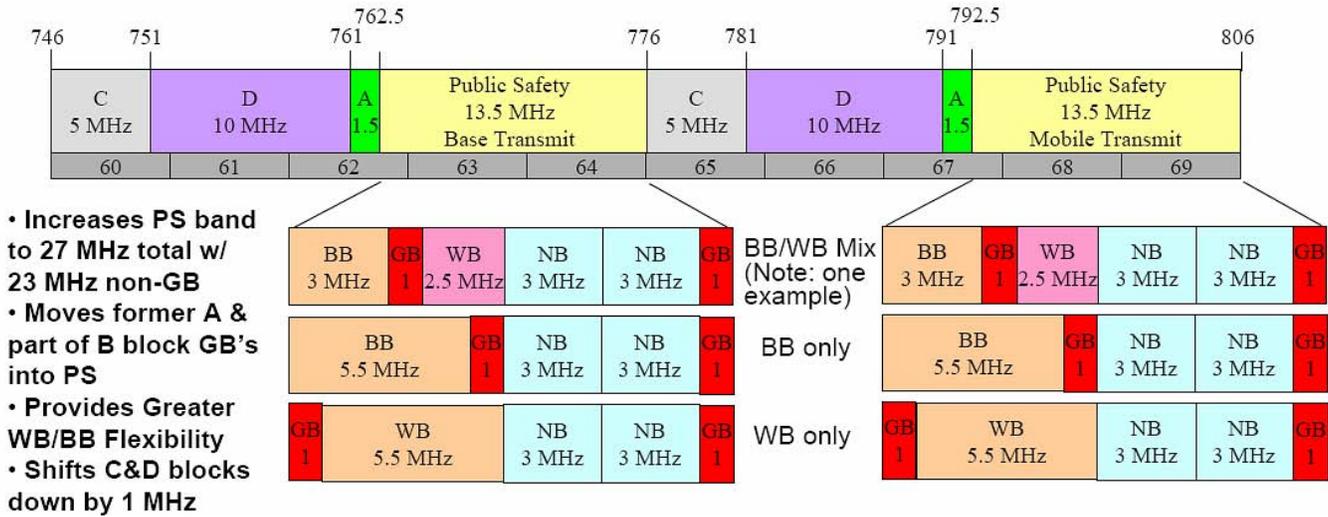


Fig 1

**Motorola’s “Flex Plan” with narrow band consolidation provides full broadband/wideband flexibility with regional choice for a combination of wideband and/or broadband technologies to meet local needs (Fig 2).**

Consolidating narrowband channels with flex plan would reduce internal guardbands and provide additional flexibility for broadband deployment



Fig 2