

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matters of

Service Rules for the 698-746, 747-762
and 777-792 MHz Bands

WT Docket No. 06-150

Revision of the Commission's Rules to Ensure
Compatibility with Enhanced 911 Emergency
Calling Systems

CC Docket No. 94-102

Section 68.4(a) of the Commission's Rules
Governing Hearing Aid-Compatible
Telephones

WT Docket No. 01-309

Biennial Regulatory Review – Amendment of
Parts 1, 22, 24, 27, and 90 to Streamline and
Harmonize Various Rules Affecting Wireless
Radio Services

WT Docket No. 03-264

Former Nextel Communications, Inc.
Upper 700 MHz Guard Band
Licenses and Revisions to Part 27 of
the Commission's Rules

WT Docket No. 06-169

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

**REPLY COMMENTS OF M/A-COM, INC. ON THE
FURTHER NOTICE OF PROPOSED RULEMAKING**

M/A-COM, Inc. ("M/A-COM"), hereby files these Reply Comments to oppose the authorization of wideband operations in spectrum allocated for narrowband public safety voice. Voice is mission-critical. Voice is the key application enabling public safety to protect the

public. Voice cannot be jeopardized by wideband operations in narrowband spectrum. Instead, M/A-COM reiterates its proposal to license spectrum in the internal guard band with channel aggregation in 50 kHz increments up to the complete guard band through Regional Planning Committee (“RPC”) coordination of licensing to local public safety entities.

M/A-COM is a leading technology developer and manufacturer of radio frequency, microwave, and millimeter wave semiconductors, components, and technologies serving the public safety and critical infrastructure, broadband, wireless data, aerospace, defense, and automotive market segments. M/A-COM provides the statewide networks in New York, Florida, Pennsylvania, and Nevada. M/A-COM has long been an industry leader in providing advanced two-way land mobile products and systems to the public safety community, including its recent introduction of cutting edge 6.25 kHz equivalent efficiency public safety solutions, poised for deployment at 700 MHz. Several of M/A-COM’s public safety network customers plan to deploy 700 MHz radios in the near future. M/A-COM is also a pioneer in the development of IP-based networks for private radio applications, and supplies industry-leading brands such as EDACS®, OpenSky®, NetworkFirst™, and ProVoice™. M/A-COM is therefore no stranger to IP-based data communications for public safety. M/A-COM is part of Tyco Electronics, one of the world’s leading suppliers of electronic components.

I. The Commission Must Protect Public Safety Narrowband Voice Communications from Harmful Interference and Therefore Prohibit Wideband in the Narrowband Spectrum

M/A-COM and other commenters have repeatedly urged the Commission to protect the 700 MHz public safety narrowband channels from potential interference from broadband systems not only in the public safety band, but also in adjacent commercial spectrum.¹ As many

¹ See e.g., Comments of M/A-COM, Inc. on the Eighth Notice of Proposed Ruling Making WT Docket No. 96-86, at 4 (filed June 6, 2006).

observers have noted,² public safety will have to maintain and upgrade their voice communications systems for years to come, independent of broadband plans. The need to protect mission-critical voice is therefore paramount. Deployment of broadband does not decrease the need for voice communications.

Yet, several commenters proposed allowing wideband use in the narrowband channels.³ Frontline in particular proposes that wideband be permitted in the “unused” portions of the public safety narrowband spectrum.⁴ Similarly, Cyren Call proposes “the authorization of both narrowband and wideband systems in the upper portion of the Public Safety allocation.”⁵ Given the importance of voice, and public safety agencies’ current plans⁶ to deploy 700 MHz voice systems in the narrowband spectrum, the potential for interference is too great. Public safety has witnessed harmful interference to mission-critical voice systems in the past. M/A-COM therefore urges the Commission to protect mission-critical voice communications by prohibiting the use of wideband in the narrowband channels.

To protect public safety narrowband voice, M/A-COM supports the Commission’s tentative conclusion to consolidate the 700 MHz public safety narrowband channels to provide

² See e.g., Session Report, “Public Safety Broadband; Can it work?”, 2007 Department of Homeland Security Office of Interoperable Communications Roundtable May 9-10, 2007, Washington, D.C. at 2 (“Public safety needs to be aware that their legacy system will [need to] be maintained, even upgraded, while paying usage fees for broadband.”) available at <http://oic.csrincorporated.com/registration/presentations/SeriesIIIBBroadbandreportout.pdf>

³ See Comments of Cyren Call Communications Corporation, at iii-iv (filed May 23, 2007) (“Cyren Call Comments”); Initial Comments of Frontline Wireless, LLC, at 55 (filed May 23, 2007) (“Frontline Comments”).

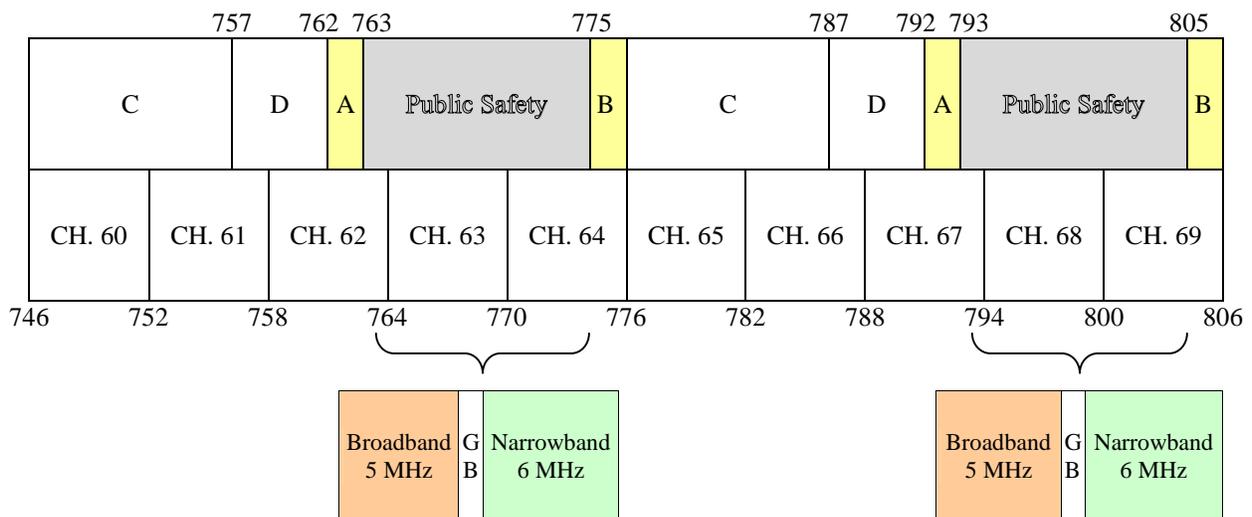
⁴ Frontline Comments at 33, 37.

⁵ Cyren Call Comments at 23–24.

⁶ Some communities, such as New Orleans, have already deployed 700 MHz voice systems, where the band is already cleared of television operations.

one contiguous 6 MHz block of paired narrowband spectrum.⁷ This consolidation would halve the number of narrowband channel edges and thereby significantly improve interference protection in the narrowband spectrum while providing spectrum for wideband applications in the 1 MHz internal guard band located at paired 768-769 MHz/798-799 MHz as depicted in Figure 1 below.

Figure 1: Depiction of Public Safety Spectrum Internal Guard Band
From FNPRM Proposal 3⁸



⁷ Report and Order and Further Notice of Proposed Rulemaking, WT Docket Nos. 06-150, 01-309, 03-364, 06-169, 96-98, CC Docket No. 94-102, and PS Docket No. 06-229 (¶ 257) (rel. April 27, 2007) (“FNPRM”). M/A-COM likewise also supports the proposal to “shift” the 700 MHz public safety band downward by 1 MHz “to remedy potential narrowband interference issues with Canada and Mexico” that would result from the narrowband consolidation and relocation. *See id.* at ¶ 196; *See also* Comments of M/A-COM Inc. On the Further Notice of Proposed Rulemaking, PS Docket No. 06-229 and WT Docket No. 96-86 (filed May 23 2007) (“M/A-COM Initial Comments”).

⁸ FNPRM ¶ 195 (Figure 8).

II. The Commission Should Authorize Local Licensing of the Internal Guard Band with Channel Aggregation in 50 kHz Increments up to the Complete Guard Band, Subject to Frequency Coordination by RPCs

M/A-COM urges the Commission to authorize wideband operations, through local licensing coordinated by the RPCs, in the internal guard band.⁹ M/A-COM therefore supports commenters that likewise have proposed wideband operations in the internal guard band. The State of Hawaii, for instance, proposes a possible allocation within the internal public safety guard band.¹⁰ Similarly, the Region 22 Planning Committee, in its proposed Broadband with Limited Wideband Flexibility Plan (“Region 22’s Plan”), advocates for a 1 MHz internal guard band that would be channelized into 50 kHz subchannels.¹¹ Region 22’s Plan would allow aggregation of multiple 50 kHz channels up to 150 kHz for wideband systems in the internal guard band on a secondary non-interference basis to adjacent operations outside the guard band.¹² M/A-COM also advocated for a comparable channelization of the internal guard band—in 50 kHz subchannels up to the complete guard band, which would provide a local entity flexibility to deploy local systems of their choice.¹³ A number of public safety representatives

⁹ M/A-COM Initial Comments at 3.

¹⁰ See Comments on the Report and Order and Further Notice of Proposed Rulemaking adopted April 25, 2007 for WT Docket No. 06-150, CC Docket No. 94-102, WT Docket No. 01-309, WT Docket 03-264, WT Docket No. 06-169, PS Docket No. 06-229 and WT Docket No. 96-86 “Service Rules for the 698-746, 747-762 and 777-792 Bands”; “In the Matter of Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band; Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2019”, State of Hawaii, Department of Accounting and General Services, at 2 (filed May 23, 2007).

¹¹ See Comments of the Region 22 (Minnesota) 700 MHz Public Safety Regional Planning Committee, at 3 (filed May 23, 2007).

¹² See *id.*

¹³ See M/A-COM Initial Comments at 3.

and regional planning committee representatives support Region 22's Plan and M/A-COM's wideband proposal.¹⁴

Other commenters, while not expressly supporting Region 22's Plan, nonetheless advocated that public safety entities be able to deploy wideband applications if they so choose.¹⁵ M/A-COM supports those commenters and the principle of local choice in the guard band.

¹⁴ See Comments of the Hennepin County Sheriff's Office, Minneapolis, Minnesota, at 2 (filed May 23, 2007); Comments from the Mower County, Minnesota Office of the Sheriff, at 1 (filed May 23, 2007) ("Mower County Comments"); Comments of Sherburne County, Minnesota Emergency Services, at 2 (filed May 23, 2007).

¹⁵ See Comments of the Association of Public-Safety Communications Officials – International, Inc., at 3, 6 (filed May 23, 2007); Comments of the City of Fort Lauderdale, Florida, at 2 (filed May 23, 2007); Comments of City of Tacoma, Washington, at 2 (filed May 23, 2007); Comments of Communications Service, Inc., at 1, 3 (filed May 23, 2007); Comments of Dataradio Inc., at 2 (filed May 23, 2007); Comments of the Hampton Roads Interoperable Communications Advisory Committee, at 3 (filed May 22, 2007); Comments of Jefferson County, Alabama, at 2 (filed May 23, 2007); Comments regarding the FCC FNPRM 07-72 of 4/25/07 Johnson County, Kansas at 2 (filed May 17, 2007); Comments of Motorola, Inc., at i (filed May 23, 2007); Comments of Mid-America Regional Council, at 2 (filed May 22, 2007); Mower County Comments at 1; National Association of Telecommunications Officers and Advisors, et al., at 6 (filed May 23, 2007); Comments of RCC Consultants, Inc., at 71, (filed May 23, 2007); Comments of Region 9 (Florida) 700 MHz Regional Planning Committee, at 2 (filed May 23, 2007); Comments of Region # 13 Illinois 700 MHz Planning Committee, at 2 (filed May 22, 2007); Comments of the Indiana (Region 14) 700 MHz Region Planning Committee, at 2 (filed May 22, 2007); Comments of the Nevada (Region 27) 700 MHz Region Planning Committee, at 4 (filed May 22, 2007); Comments of the San Diego County-Imperial County, California Regional Communications System, at 11 (filed May 23, 2007); Comments of the Texas Statewide Interoperability Executive Committee, at 6-7 (filed May 22, 2007); Comments of York County, at 2 (filed May 18, 2007); and Comments of L-3 Communications Corporation, at 3 (filed May 23, 2007).

CONCLUSION

For the reasons stated above, M/A-COM urges the Commission to adopt a 700 MHz public safety spectrum band plan that protects mission-critical narrowband communications from harmful interference and permits local public safety licensing in the internal guard band.

Respectfully submitted,

M/A-COM, INC.

A handwritten signature in black ink, appearing to read "Kent D. Bressie", is written over a horizontal line. The signature is fluid and cursive.

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4 June 2007