

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of

The Development of Operational, Technical
and Spectrum Requirements for Meeting
Federal, State and Local Public Safety
Communication Requirements Through the
Year 2010

WT Docket No. 96-86

REPLY OF M/A-COM, INC.

Nothing in Motorola's opposition to M/A-COM's petition for reconsideration undermines M/A-COM's demonstration that 6.25 kHz-efficient equipment is available for 700 MHz applications.¹ Backing away from its claim that it was unaware of the development of such equipment,² Motorola now argues that the Commission should impose additional prerequisites—such as the existence of a mature industry standard or Commission-issued equipment authorizations—for finding such equipment available. Motorola also attempts to make a technically meaningless distinction between 6.25 kHz equipment for the 800 MHz band and such

¹ Opposition of Motorola, Inc., WT Docket No. 96-86 (filed Sept. 1, 2005) (“Motorola Opposition”); M/A-COM, Inc.’s Petition for Reconsideration of the Fifth Memorandum Opinion and Order, WT Docket No. 96-86 (filed May 27, 2005) (“M/A-COM Petition”).

² See *Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010, Fifth Memorandum Opinion and Order*, 20 FCC Rcd. 831, 836 ¶ 10 (2005) (“*Fifth MO&O*”); Motorola Petition for Reconsideration, WT Docket No. 96-86 (filed Jan. 13, 2003).

equipment for the 700 MHz band. Yet the fact remains that M/A-COM and other manufacturers presently have the ability to manufacture 6.25 kHz-efficient equipment for the 700 MHz band, as demonstrated in M/A-COM's petition, thus satisfying the equipment availability requirement on which the Commission based its original transition deadlines.³ M/A-COM therefore urges the Commission to revert to its original transition deadlines in order to spur the deployment of spectrally efficient equipment in the 700 MHz band.

I. TO AVOID THE CONCLUSION THAT 6.25 KHZ-EFFICIENT EQUIPMENT IS AVAILABLE FOR 700 MHZ APPLICATIONS, MOTOROLA HAS APPLIED A REQUIREMENT DIFFERENT FROM THE ONE THE COMMISSION ADOPTED

To avoid the conclusion that 6.25 kHz-efficient equipment is available for 700 MHz applications, Motorola has applied a requirement different from the one the Commission adopted. The Commission found that “the transition to 6.25 kHz efficiency will be driven by equipment availability.”⁴ Nowhere did the Commission establish the existence of a mature industry standard or Commission-issued equipment authorizations as prerequisites for finding such equipment “available.”⁵ Instead, the Commission referenced equipment manufacturers’ “ability to manufacture” in explaining the basis for its transition deadlines.⁶

³ See *Development of Operational, Technical and Spectrum Requirements For Meeting Federal, State and Local Public Safety Agency Communications Requirements Through the Year 2010, Fifth Report and Order*, 17 FCC Rcd. 14,999, 15,007-09 ¶¶ 16-19 (2002) (“*Fifth R&O*”) (banning the marketing, manufacture and importation of 700 MHz public safety equipment using 12.5 kHz bandwidths after December 31, 2006, and banning the filing of applications for new 700 MHz public safety systems using 12.5 kHz voice channels after December 31, 2006).

⁴ *Id.* at 15,004 ¶ 11.

⁵ See Motorola Opposition at 5-6. Motorola also suggests that the unresolved digital television transition somehow renders 6.25 kHz-efficient equipment unavailable at 700 MHz, when in fact it is the radio spectrum itself that remains unavailable through no fault of the equipment manufacturers. See *id.* at 5.

⁶ See *Fifth R&O*, 17 FCC Rcd. at 15,004 ¶ 11.

As a participant in that standards development process, M/A-COM does not dispute Motorola's statement that the development of industry standards for 6.25 kHz technologies continues.⁷ But M/A-COM disputes Motorola's contention that a finalized industry standard is a necessary precondition for the availability of 6.25 kHz-efficient equipment at 700 MHz. The Commission made no mention of such a standard in adopting its original requirement or in considering Motorola's petition to defer the transition deadlines.⁸ Instead, the Commission has adopted technology- and standards-neutral technical rules for the 700 MHz band in order to encourage the timely application of various technologies, not to mention competition.⁹ By waiting for an industry standard, the Commission would undermine these efforts.

Similarly, the Commission should reject Motorola's effort to introduce the existence of Commission equipment authorizations as a prerequisite to finding 6.25 kHz-efficient equipment "available" for the 700 MHz band.¹⁰ The Commission's equipment authorization process does not require an equipment manufacturer to seek an equipment authorization the very moment the manufacturer is able to manufacture such equipment.¹¹ Moreover, the Commission's equipment authorization process is public, and equipment manufacturers regularly seek equipment authorizations in a strategic manner, waiting until the last possible moment in order to avoid premature disclosures regarding new product launches. Far from serving as dispositive evidence regarding the availability of 6.25 kHz-efficient equipment, the absence of Commission-issued

⁷ See Motorola Opposition at 5-6.

⁸ *Fifth R&O*, 17 FCC Rcd. at 15,005-06 ¶ 11 (establishing the original transition deadline); *Fifth MO&O*, 20 FCC Rcd. at 836-38 ¶¶ 9-15.

⁹ See, e.g., *Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010, Sixth Report and Order*, 20 FCC Rcd. 831, 838-44 ¶¶ 16-34 (2005).

¹⁰ See Motorola Opposition at 5.

¹¹ See 47 C.F.R. § 2.803.

equipment authorizations for such equipment means only that equipment manufacturers have decided not yet to seek such authorizations.

II. MOTOROLA FAILS TO MAKE A MEANINGFUL TECHNICAL DISTINCTION BETWEEN 6.25 KHZ-EFFICIENT EQUIPMENT FOR THE 700 MHZ BAND AND 6.25 KHZ-EFFICIENT EQUIPMENT FOR THE 800 MHZ BAND

In claiming that 6.25 kHz-efficient equipment remains unavailable at 700 MHz, Motorola fails to make a meaningful technical distinction between such equipment for the 700 MHz band and such equipment for the 800 MHz band.¹² In fact, equipment manufacturers can easily adapt equipment developed and available for 800 MHz deployments so that it may be deployed at 700 MHz. To address the small shift in frequency, an equipment manufacturer need only engage in minor re-engineering that would take, at most, at matter of months to accomplish. Deployments of 6.25 kHz equipment at 800 MHz therefore demonstrate the availability of 6.25 kHz efficient equipment for public safety application in the 700 MHz band.¹³

Such equipment is not unique to M/A-COM. For example, TETRA systems and products—which employ a 4-slot TDMA technology operating with 25 kHz emissions—provide 6.25 kHz equivalent technology. For at least five years, several equipment manufacturers—including Motorola—have offered and deployed TETRA systems at 800 MHz for public safety applications. With minimal time and effort, these equipment manufacturers could alter the operating frequencies of their 800 MHz TETRA products to allow for operation in the 700 MHz band and compliance with the technical and operational rules for the 700 MHz band.

¹² See Motorola Opposition at 5.

¹³ See M/A-COM Petition at 6-8.

CONCLUSION

For the reasons stated above and in M/A-COM's original petition, the Commission should reconsider its revised transition benchmark dates and revert to its original December 31, 2006, transition benchmark dates for banning the marketing, manufacture and importation of 700 MHz public safety equipment using 12.5 kHz bandwidths, and for banning the filing of applications for new 700 MHz public safety systems using 12.5 kHz voice channels.

Respectfully submitted,

M/A-COM, INC.



Dr. Ernest Hofmeister
Technology Fellow
Wireless Systems Business Unit
M/A-COM, INC.
221 Jefferson Ridge Parkway
Lynchburg, Virginia 24551
+1 434 455 9555 tel

Kent D. Bressie
Damon C. Ladson*
HARRIS, WILTSHIRE & GRANNIS LLP
1200 18th Street, N.W., Suite 1200
Washington, D.C. 20036-2560
+1 202 730 1337 tel

Counsel for M/A-COM, Inc.

12 September 2005

* Technical Policy Advisor

CERTIFICATE OF SERVICE

On September 12, 2005, I served the foregoing document by electronic mail upon the following representative of Motorola, Inc.:

Steve B. Sharkey
Director, Spectrum and Standards Strategy
Motorola, Inc.
1350 I Street, N.W.
Washington, D.C. 20005

A handwritten signature in black ink, appearing to read "Kent L. Zinn", is written over a horizontal line. The signature is cursive and stylized.