

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

In the Matter of)
)
Amendment of Part 101 of the) WT Docket No. 00-19
Commission's Rules to Streamline)
Processing of Microwave Applications in)
the Wireless Telecommunications Services)

REPLY COMMENTS OF MOTOROLA, INC.

Motorola, Inc. hereby submits these comments in reply to comments filed in the *Notice of Proposed Rulemaking* (“NPRM”) in the above-captioned proceeding.¹

Motorola believes that it is necessary for the Commission to clarify its emission mask requirements and calculations based upon differing interpretations of commenters.

Additionally, Motorola strongly supports the continued availability of mission critical public safety spectrum that is allocated under Part 101.

I. THE COMMISSION SHOULD CLARIFY EMISSION MASK REQUIREMENTS.

Several commenters discuss the out-of-band emission requirements for systems operating above 15 GHz, especially concerning LMDS networks.² Currently, for

¹ Reorganization and Revision of Parts 1, 2, 21, and 94 of the Rules to Establish a New Part 101 Governing Terrestrial Microwave Fixed Radio Services, *Memorandum Opinion and Order and Notice of Proposed Rulemaking*, WT Docket Nos. 94-148 and 00-19 (rel. Feb. 14, 2000) (“NPRM”) (commenters were asked to file in WT Docket No. 00-19 only); 63 FR 3833 (June 20, 2000).

² See Comments of National Spectrum Managers Association (“NSMA”) at 18; Comments of Fixed Wireless Communications Coalition (“FWCC”) at 20-21; Comments of Alcatel USA, Inc. (“Alcatel”) at 26-29; Comments of WinStar Communications, Inc. (“WinStar”) at 6-7.

operating frequencies above 15 GHz, in any 1 MHz band, the center frequency of which is removed from the assigned frequency by more than 50 percent up to and including 250 percent of the authorized bandwidth as specified by the following equation but in no event less than 11 decibels: $A = 11 + 0.4(P-50) + 10 \text{Log}_{10} B$ [Attenuation greater than 56 decibels is not required], where P is the percent removed from the carrier frequency and B is the authorized bandwidth in MHz.³ Additionally, in any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: attenuation must be at least $43 + 10 \log_{10}(\text{mean output power in watts})$ decibels, or 80 decibels, whichever is the lesser attenuation.⁴

Commenters on this point discuss a variety of methods for calculating bandwidth for out-of-band emission limits (or B in the equation above). Motorola urges the Commission to reaffirm its practice of utilizing the maximum bandwidth for LMDS as listed in Section 101.109(c) of the Commission's rules.⁵ Using maximum authorized bandwidth as the value for the out-of-band bandwidth, does force LMDS carriers to be no closer than about one occupied bandwidth inside the edge of the band. In practice, separation from the band edge is a self imposed "guard band" that has a width that depends on the quality and operating point of the transmitter. If the Commission is to adopt the suggestions by other commenters to use a bandwidth narrower than the maximum bandwidth limitations found in Section 101.109(c), Motorola suggests that it will be necessary for the Commission to provide clear and descriptive definitions for terms

³ See 47 C.F.R. § 101.111(a)(2)(ii).

⁴ See 47 C.F.R. § 101.111(a)(2)(iii).

⁵ See 47 C.F.R. § 101.109(c).

such as single-carrier, multicarrier, assigned bandwidth of the station, block band edge, affect on aggregation and disaggregation of channels/blocks, occupied bandwidth, and emission designator bandwidth for the requirement to be clearly understood and implemented. Motorola asserts that, at a minimum, it is critical for the Commission to clarify the specific requirements for out-of-band emissions, as it is apparent from the commenters there is a disparity in how these rules are being interpreted.

However, Motorola certainly agrees with these commenters that out-of-band emission limitations apply outside and not inside the assigned band of the station no matter how the out-of-band bandwidth is calculated. Such a result is exactly what occurs when using the maximum authorized bandwidth for the out-of-band bandwidth and is consistent with the Commission's past interpretations and implementation of the emission mask rules for LMDS. Therefore, Motorola encourages the Commission to clarify that out-of-band emission limits continue to only apply outside the assigned band of operation.

II. THE COMMISSION SHOULD CONTINUE TO PROTECT AND PROVIDE CRITICAL SPECTRUM FOR PUBLIC SAFETY.

Commenters from the public safety community express concern about a number of the Commission's proposals concerning the licensing of Part 101 microwave spectrum through use of competitive bidding.⁶ These commenters unanimously decry the Commission's proposals concerning the potential for licensing microwave spectrum through competitive bidding as failing to address the unique needs of public safety entities. Motorola agrees. The Commission should not take any steps that would inadvertently

⁶ See e.g., Comments of County of Riverside at 3-6; Comments of APCO at 4-9; Comments of the County of Los Angeles at 3-6.

jeopardize the provision of mission critical public safety communications. Any efforts that could potentially subject fixed microwave facilities that are used, for example, to connect public safety radio base stations, should not be entertained. Moreover, the future availability of this spectrum for similar multi-site systems should also not be endangered. Motorola believes that the Commission should continue its current licensing practices for fixed microwave services, as this has led to the practical elimination of mutually exclusive applications and effectively protects the urgent needs of the public safety communications infrastructure.

III. CONCLUSION

Motorola urges the Commission to clarify the out-of-band emission requirements for fixed microwave operations above 15 GHz, especially those surrounding the LMDS bands. Additionally, Motorola asks that the Commission not take any action to

jeopardize mission critical public safety communications systems and networks by modifying the fixed microwave licensing methodology.

Respectfully submitted,
Motorola, Inc.

By: /s/ Barry Lambergman
Barry Lambergman
Director, International Regulatory Affairs
1350 Eye Street, N.W.
Suite 400
Washington, DC 20005-3305
202-371-6929
barry.lambergman@motorola.com

George Cummings
Spectrum Principal Staff Engineer
8075 S. River Parkway H-154
Tempe, AZ 85284
480-456-2590
George.Cummings@motorola.com

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