

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, DC 20554

|   |   |                      |
|---|---|----------------------|
| In the Matter of                            | ) |                      |
|   | ) |                      |
| 1998 Biennial Regulatory Review—            | ) | WT Docket No. 98-182 |
| 47 CFR Part 90—Private Land Mobile          | ) | RM-9222              |
| Radio Services                              | ) |                      |
|   | ) |                      |
| Replacement of Part 90 by Part 88 to Revise | ) | PR Docket No. 92-235 |
| the Private Land Mobile Radio Services and  | ) |                      |
| Modify the Policies Governing Them          | ) |                      |
|   | ) |                      |
| and   | ) |                      |
|   | ) |                      |
| Examination of Exclusivity and Frequency    | ) |                      |
| Assignment Policies of the                  | ) |                      |
| Private Land Mobile Services                | ) |                      |

**SUPPLEMENTAL COMMENTS OF MOTOROLA**

Motorola hereby submits these supplemental comments in the above-captioned proceeding concerning the FCC’s decision to create the consumer-oriented Multi-Use Radio Service (“MURS”) from frequencies previously allocated for business and industrial use.<sup>1</sup> As originally argued in its previously filed petition for reconsideration, Motorola continues to believe that the FCC’s decision failed to adequately protect incumbent business and industrial users of the VHF “color dot” frequencies that now comprise the MURS spectrum allocation.<sup>2</sup> After careful consideration of the record

---

<sup>1</sup> See *1998 Biennial Regulatory Review – 47 C.F.R. Part 90 – Private Land Mobile Radio Services, Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them and Examination of Exclusivity and Frequency Assignment Policies in the Private Land Mobile Services*, FCC 00-235, WT Docket No. 98-182, PR Docket No. 92-235 (rel. July 12, 2000) (“*Report and Order*”).

<sup>2</sup> See, e.g., *Petition for Reconsideration, Motorola, Inc.*, WT Docket No. 98-182, *et al.*, (filed Nov. 13, 2000) at 2 (“*Motorola Petition*”).

developed in this proceeding, Motorola now recommends a transitional plan to better accommodate all potential users of this spectrum.

Throughout this proceeding, Motorola has cautioned the FCC against merging consumer and business uses on these frequencies to guard against further degradation of the existing quality of service.<sup>3</sup> Motorola has stated that the expanded eligibility coupled with the lack of any technical or operational restrictions for MURS equipment would lead to the development of consumer devices that would be incompatible with the traditional voice “walkie-talkie” type services now used by the incumbent licensees. For example, Motorola noted that the ability to interconnect MURS devices with the public switched telephone network could invite the development of a two-watt cordless VHF telephone capable of operating miles from its home base.<sup>4</sup> Because of such concerns for the incumbent business and industrial users, Motorola has asked the FCC to reconsider its decision to design MURS as an open-entry radio service with no licensing requirements and few, if any, operational and technical restrictions.

---

<sup>3</sup> See, e.g., Comments of Motorola, Inc., WT Docket No. 98-182, filed January 19, 1999, at 9 (“[T]he frequencies at issue should not be reallocated to the subcategory Citizens Band Radio Service, the Family Radio Service, or the Low Power Radio Service . . . because of differences in technical characteristics. In addition, the frequencies identified in the Notice are already being used extensively for business and industrial communications as opposed to the types of communications contemplated in the subcategory Citizens Band Radio Service, the Family Radio Service, or the Low Power Radio Service.”) See also Reply Comments of Motorola, Inc., WT Docket No. 98-182, filed February 3, 1999, at 4 (“[I]t is essential that the frequencies in question be reallocated to Part 95 and included in a new unlicensed radio service category . . . that will be designated for business users only and clearly distinguishes itself from the Family Radio Service and the Low Power Radio Service frequencies in the Citizens Band Radio Service.”)

<sup>4</sup> Motorola Petition at 6.

As one of the leading manufacturers of consumer-oriented Family Radio Service units, Motorola is not, of course, “anti-MURS”. To the contrary, Motorola is very interested in new spectrum opportunities for consumer two-way devices. As presently configured, however, Motorola is convinced that the MURS service rules have great potential to cause significant interference situations for those incumbent business and industrial users of the color-dot frequencies that require a higher quality of service than that offered by an open entry, citizens-band radio service. This impact could be alleviated if such incumbent users were to have an alternative spectrum home available to migrate more critical low power uses.

Currently, the FCC is considering a petition for rulemaking filed by the LMCC that proposes changes to 450 MHz frequencies now identified as the “low power pool”.<sup>5</sup> If adopted, certain of the LMCC’s proposed rule changes – particularly the creation of twenty five channel pairs for low power uncoordinated use – would provide the necessary spectrum alternative for industrial and business users displaced from the color-dot frequencies by the creation of the MURS service.

Motorola therefore recommends that the FCC defer full implementation of the MURS service until two years after the effective date of a future Report and Order addressing the recommendations contained in the LMCC petition. Motorola believes that this short transition schedule adequately balances the need for incumbents to plan and budget equipment replacements with the FCC’s desire to implement a new consumer oriented service. If the FCC acts quickly to initiate the rule making process, final action

---

<sup>5</sup> See, *Petition for Rule Making of the Land Mobile Communications Council*, WT Docket No. 98-182, filed September 11, 2000.

on the LMCC recommendations easily could be completed within one year. Thus, under Motorola's plan, MURS could be fully implemented no later than the summer of 2004.

During this transition period, MURS could be allowed to move forward in some limited fashion. Motorola understands that the FCC has not stayed its MURS decision and that, in fact, the rules are now in full effect. However, it is also clear that the uncertainty surrounding this decision created by the pending petitions for reconsideration has resulted in a "wait and see" attitude by manufacturers and that no new product developments have been introduced.<sup>6</sup> Thus, deferring full implementation of MURS should not have negative affect on equipment vendors.

Motorola believes that the greater threat to incumbent private wireless users of the color dot frequencies is the marketing and use of non-compatible MURS devices rather than expanding eligibility and allowing consumers to access these frequencies. Stated another way, Motorola believes that the impact of consumers, who have a tendency toward less disciplined operations than the typical private wireless user, using the color dot frequencies can be minimized by additional technical and operations restrictions on the technology. Therefore, Motorola recommends that during this transition, MURS continue to exist as a Part 95 service with licensing authorized by rule. Motorola further believes that eligibility can remain unchanged from the provisions adopted in the subject *Report and Order*, which means that both consumers and industrial/business users would be eligible to use MURS.

---

<sup>6</sup> See, e.g., *Suppliers Holding off on MURS*, February 26, 2001, available at <http://www.tvinsite.com/twice/index.asp?layout=story&articleId=CA64600&display=searchResults>.

However, during the recommended transition period, the FCC should limit the technical capabilities of MURS devices to ensure their compatibility with incumbent two-way voice units. To this end, Motorola recommends that the FCC impose the following temporary limitations on the manufacturing and marketing of MURS devices:

- Transitional MURS designs should be voice-only, no data products would be permitted.
- Interconnection with the public switched telephone service would be prohibited.
- There should be no repeaters authorized under Part 95.
- Antennas should be non-detachable and integral to the radio unit.

In making these recommendations, Motorola's intent is to ensure that devices designed for the consumer market are compatible with the professional use that now occurs on these channels. Motorola further believes that certain of these restrictions are appropriate for the permanent regulation of MURS. Indeed, there are other petitions for reconsideration pending that seek such permanent modifications to the technical and operational rules for MURS.<sup>7</sup> To that end, Motorola agrees with the recommendations in the PRSG Petition that the permanent rules for MURS should: 1) ban interconnection with the public switched telephone network, 2) prohibit the use of MURS frequencies as the input or output for a mobile relay station, and 3) limit the maximum height of transmitting antennas.<sup>8</sup> Such restrictions will benefit all MURS users by limiting interference potential of any single user.

---

<sup>7</sup> See, e.g., Petition for Reconsideration, Personal Radio Steering Group, Inc., WT Docket No. 98-182, *et al.*, (filed November 13, 2000) ("PRSG Petition).

<sup>8</sup> PRSG also recommends that operating power be regulated by limiting the maximum transmitter output power rather than effective radiated power (ERP). In

Motorola appreciates the Commission's interest into this unique segment of the communications industry. If adopted, Motorola's recommendations will strike the appropriate balance between protecting incumbents and providing for new consumer services.

Respectfully Submitted,

/S/ John F. Lyons  
John F. Lyons  
Director, Telecommunications  
Strategy and Regulation  
Motorola, Inc.  
1350 I Street, N.W.  
Washington, DC 20005  
(202) 371- 6900

July 2, 2001

---

Motorola's opinion, this is tied directly to the rules regarding antenna connections. If the FCC requires MURS units to have integral, non-detachable antennas, then an ERP regulation is appropriate because the transmitting apparatus as whole can be reviewed under the equipment authorization process. If non-detachable antenna designs are permitted, however, an ERP limitation would be confusing to users that choose to attach aftermarket antennas. Motorola believes that the FCC should require non-detachable antennas to minimize the use of high gain antennas, linear amplifiers or other devices that will spread interfering signals across great distances.