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

MAR 1 1995

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

In the Matter of: )  
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)  
Amendments of Parts 2 and 15 ) ET Docket No. 94-124  
of the Commission's Rules to Permit ) RM-8308  
Use of Radio Frequencies Above )  
40 GHz for New Radio Applications )

REPLY COMMENTS OF MOTOROLA SATELLITE COMMUNICATIONS, INC.

Motorola Satellite Communications, Inc. ("Motorola") hereby submits its reply comments to the Notice of Proposed Rule Making ("NPRM") initiating this proceeding,<sup>1/</sup> where the Commission proposes to open for commercial development and use a portion of the "millimeter wave" frequency bands above 40 GHz.

In principle, Motorola applauds the Commission's efforts to spearhead more intensive non-government use of this spectrum. However, Motorola wishes to respond to those commenters<sup>2/</sup> that, by focusing exclusively on potential terrestrial uses of the spectrum, appear not to be cognizant of the existing non-government worldwide allocation of some of these bands for satellite services.<sup>3/</sup> These commenters should not

<sup>1/</sup> Notice of Proposed Rule Making, 9 FCC Rcd. 7078 (1994).

<sup>2/</sup> See, e.g., the comments of the Telecommunications Industry Association ("TIA"), Harris Corporation, Troy State University Montgomery, AT&T Corporation, Pacific Bell Mobile Services and Telesis Technologies Laboratory.

<sup>3/</sup> Of the bands encompassed within this proceeding, the 40.5-42.5 GHz band is allocated to the Broadcasting-Satellite Service ("BSS"); the 47.2-48.2 GHz band (part of the 47.2-50.2 GHz

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distract the Commission from ensuring that any terrestrial non-government uses in this spectrum are in such bands and subject to such rules as to pose the least potential for impeding the implementation of future satellite systems under the existing allocations. Motorola also cautions the Commission against grouping the satellite services to which certain of these bands are already allocated with any terrestrial services, and subjecting such heterogeneous offerings, despite their vastly different characteristics, to a straitjacket of uniform licensing rules.

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<sup>3/</sup> (...continued)

allocation) is allocated to the Fixed-Satellite Service ("FSS"); the 59.0-64.0 GHz band is allocated to the Inter-Satellite Service; the 71.0-72.0 GHz band (as part of the 71-74 GHz allocation) is allocated to the FSS; the 84.0-85.0 GHz band (as part of the 84-86 GHz allocation) is allocated to the BSS; the 94.7-95.0 GHz band (as part of the 92-95 GHz allocation) is allocated to the FSS, while the 95.0-95.7 GHz band (as part of the 95-100 GHz allocation) is allocated to the Mobile-Satellite Service ("MSS"); the 103.0-104.0 GHz band (part of the 102-105 GHz band) has an FSS allocation, while the 116-117 and 122-123 GHz bands (part of the 116-126 GHz band) have an Inter-Satellite Service and a passive Earth Exploration-Satellite Service allocation. The 126-127 GHz band (part of 126-134 GHz) is allocated to the Inter-Satellite Service; the 139-140 GHz band (as part of the 134-142 GHz allocation) is allocated to the MSS and the Radionavigation-Satellite Service; and the 152-153 GHz band (as part of the 151-164 GHz band) is allocated to the FSS. See 47 C.F.R. § 2.106.

**I. THE 40-50 GHz BANDS CONSTITUTE THE NEXT AVAILABLE SPECTRUM FOR FIXED SATELLITE SYSTEMS**

Motorola is most acutely concerned with those comments that implicate the 40.5-42.5 GHz and 47.2-48.2 GHz Bands,<sup>4/</sup> which are currently allocated to the Broadcasting-Satellite Service and Fixed-Satellite Service, respectively. As lower bands allocated to satellite services are becoming rapidly congested, these bands, in conjunction with the contiguous and intermediate spectrum which is also allocated to FSS,<sup>5/</sup> are the next available bands for the implementation of domestic and international satellite systems. Carving out the 40.5-42.5 and 47.2-48.2 GHz bands exclusively for terrestrial services could make it difficult, if not impossible, to implement certain types of satellite systems in these bands as well as in adjacent bands to the extent that such systems need to operate over a broader range of spectrum.

**II. LOCAL MULTIPOINT DISTRIBUTION SERVICES CAN CO-EXIST WITH MSS FEEDER LINKS IN THE 28 GHz BAND**

Motorola takes issue with those comments which ignore or misstate the fact that co-frequency sharing between LMDS and MSS feeder links is possible. For example, GE American

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<sup>4/</sup> See, e.g., TIA comments at 9 and passim, Harris comments, AT&T comments at 2-3.

<sup>5/</sup> The 37.5-40.5 GHz band is allocated to the FSS; the 39.5-40.5 GHz band is allocated to the MSS; the 42.5-43.5 GHz band is allocated to the FSS; the 43.5-47.0 GHz band is allocated to the MSS and the Radionavigation-Satellite Service; the 47.0-47.2 GHz band is allocated to the Amateur-Satellite Service; and the 47.2-50.2 GHz band is allocated to the FSS.

Communications, Inc. ("GE Americom") states that there is no "acceptable method" of sharing the 28 GHz band, which also has an FSS primary allocation, by "fundamentally incompatible" satellite and LMDS technologies. See GE Americom Comments at 4, 8. As the Commission is aware, Motorola has applied to use the 29.1-29.3 GHz band for the feeder uplinks of its 66-satellite IRIDIUM® system, for which it has received a conditional license.<sup>6/</sup> In this connection, the Commission should bear in mind as it considers the comments in this proceeding that, as a result of the FCC's 28 GHz negotiated rulemaking, Motorola was able to reach an agreement with a majority of the LMDS interests who participated in the negotiated rulemaking on a set of rules governing sharing between LMDS systems and MSS feeder links. See NRMC-84 (Rev. 1) (Sept. 23, 1994).

### **III. SPECTRUM SHOULD NOT BE REALLOCATED EXCLUSIVELY TO POINT-TO-POINT MICROWAVE OPERATIONS**

Certain commenters have variously requested that the Commission include in this proceeding the 48.2-50.2 or 48.5-51.4 GHz bands,<sup>7/</sup> and that it exclusively reallocate this spectrum to fixed point-to-point microwave uses. For the same reasons articulated above, the Commission should not include these bands

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<sup>6/</sup> Motorola Satellite Communications, Inc., DA 95-131 (rel. Jan. 31, 1995).

<sup>7/</sup> See Comments of Hewlett-Packard Co. at ¶ 6, TIA Comments at 10-13, Harris Comments.

in this proceeding, and certainly should not remove the current primary allocation of the 47.2-50.2 GHz band to the FSS.

**IV. SATELLITE SERVICES SHOULD NOT BE SUBJECT TO THE SAME LICENSING RULES AS TERRESTRIAL SERVICES**

The Notice proposes to retain the full range of services presently allowed under the domestic allocation table. NPRM at ¶ 21. For convenience, the Commission refers to these uses as "Licensed Millimeter Wave Service" ("LMWS"). The Notice further proposes to define licensing rules not in the context of a specific service, but rather on the basis of the Commission's "best judgment of what the dominant use of this spectrum is likely to be." Id. at ¶ 22.

It is Motorola's understanding that the term "LMWS" and the Commission's proposal of uniform licensing rules does not encompass satellite technologies. As the Commission must surely recognize, satellite services are simply not amenable to the licensing rules that the Commission proposes for terrestrial services. As an example, the MTA-by-MTA licensing proposed by the Commission plainly makes no sense for satellite services that are provided at least on a nationwide basis and more recently on an international or global basis. Accordingly, Motorola does not comment on the proposed terrestrial licensing rules.

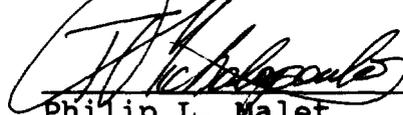
**V. CONCLUSION**

Motorola applauds the Commission's intention to open up above-40 GHz spectrum for commercial development, so long as

implementation of its proposals does not compromise the existing satellite allocations in these bands.

Respectfully submitted,

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