

BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

In the Matter of )  
 )  
 Amendment of Section 2.106 of )  
 The Commission's Rules to )  
 Allocate The 1610-1625.5 MHz And )  
 The 2483.5-2500 MHz Bands )  
 For Use By The Mobile-Satellite )  
 Service, Including )  
 Non-Geostationary Satellites )

ET Docket No. 92-28

To: The Commission

**COMMENTS OF TRW INC. CONCERNING PETITION FOR  
 CLARIFICATION AND PARTIAL RECONSIDERATION  
 FILED BY LORAL QUALCOMM SATELLITE SERVICES, INC.**

TRW Inc. ("TRW"), by its attorneys, hereby comments in partial support of the "Petition for Clarification and Partial Reconsideration" filed by Loral Qualcomm Satellite Services, Inc. ("LQSS"), which seeks review of certain aspects of the Commission's allocation of spectrum in the above-captioned proceeding. See Report & Order, 9 FCC Rcd 536 (1994) ("R&O"). TRW's Comments are filed pursuant to Section 1.429(e) of the Commission's Rules, 47 C.F.R. § 1.429(e) (1992), in response to the Federal Register public notice of the Petition's filing. See 59 Fed. Reg. 16209.

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TRW concurs with LQSS's judgments concerning two changes in the International Telecommunication Union's Radio Regulations ("RR") made at the 1992 World Administrative Radio Conference. Specifically, neither RR 753F nor RR 731E of the ITU's regulations should be interpreted in a manner that impedes non-geostationary MSS operation in the allocated bands. TRW also agrees that the Commission was mistaken in not allocating specific frequencies for MSS feeder links as part of the allocation proceeding.<sup>1/</sup>

**I. The Commission Should Clarify That The PFD Values Referenced In RR Footnote 753F Are Coordination Triggers, Not Absolute Limits.**

First, TRW agrees with LQSS that the Commission should clear up the persistent confusion concerning the meaning of the S-band power flux density ("PFD") limitations referenced in

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<sup>1/</sup> Although TRW strongly agrees with the Commission's proposal in CC Docket No. 92-166 to limit the allocated bands to use by non-geostationary satellites, TRW does not believe that the Commission must necessarily "clarify" its decision in this proceeding, which did not directly address this issue. Despite the fact that the Commission left open in the R&O the issue of the non-eligibility of geostationary systems in these bands, it is nonetheless clear that the Commission may adopt a threshold eligibility requirement in the pending service rules proceeding limiting the service to non-geostationary systems, as it has indeed proposed to do. See Amendment of the Commission's Rules to Establish Rules and Policies Pertaining To A Mobile-Satellite Service in the 1610-1626.5/2483.5-2500 MHz Frequency Bands, 9 FCC Rcd 1094, 1106 (¶ 22) (1994). See also United States v. Storer Broadcasting, 351 U.S. 192 (1956).

RR 753F of the Radio Regulations. Constellation Communications, Inc. stated in initial comments in this proceeding that "[t]he Commission's position in . . . the Notice is confusing because it both 'requires' LEO systems to conform to this PFD limit and recognizes the need for coordination if the PFD limit is exceeded."<sup>2/</sup> This confusion did not abate upon the adoption of the R&O, as the Commission simply adopted with little comment the proposals set forth in the NPRM, adding RR 753F (as well as RR 731E and RR 731F, discussed infra) to the Domestic Table of Allotments.<sup>3/</sup>

The ambiguity in this case results from the cross reference in Footnote 753F to RR 2566. Despite the apparent contradiction between the rules, however, there can be no doubt as to their proper interpretation. The statement in RR 2566 that PFD emissions "shall not exceed" the listed values does not derogate from the language of RR 753F itself, which provides that the coordination is required only if the limits are exceeded.<sup>4/</sup>

The changes in the ITU regulations made at WARC-92 were designed to facilitate the use of the 2483.5 - 2500 MHz bands by

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<sup>2/</sup> Comments of Constellation, ET Docket No. 92-28, at 7 (filed December 4, 1992).

<sup>3/</sup> See R&O, 9 FCC Rcd at 541 (¶ 26).

<sup>4/</sup> Compare RR 2566 and RR 753F.

non-geostationary systems, not to impede such use. The purpose of RR 2566 is simply to ensure that an MSS system's PFD "shall not exceed" the stated limits without prior coordination with other band users.

Indeed, the Commission stated at the introduction to its discussion of this issue in the R&O, in generally explaining the effect of the rule, that the PFD levels applicable in the S-band "are to be used as a threshold to determine when coordination is required . . . with respect to terrestrial services."<sup>5/</sup> This description appears to be fully consistent with the interpretation contained in the recent recommendation of the Radiocommunication Sector Task Group 2-2.<sup>6/</sup> Nonetheless, the Commission's adoption of the ITU regulation without providing some comment concerning how the FCC will interpret the regulation can only produce future uncertainty. Thus, the Commission should definitively and explicitly adopt the approach endorsed by Task Group 2-2, as requested by LQSS.

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<sup>5/</sup> R&O, 9 FCC Rcd 540 (¶ 23).

<sup>6/</sup> Annex 1 to Document 2-2/TEMP/3-E (Feb. 3, 1994), attached as Exhibit B to the LQSS Petition.

**II. The Final Sentence Of RR Footnote 731E Should Be Interpreted Simply To Require Coordination When The Applicable EIRP Values Are Exceeded.**

Second, LQSS argues that the final sentence of RR 731E should be "deleted."<sup>1/</sup> Although TRW does not agree that the Commission should attempt editorial changes in the ITU's rules, TRW shares LQSS's belief that the rule must be viewed in a way that does not hinder the development of the MSS Above 1 GHz service. The effect that LQSS desires, however, can be achieved simply by adopting an appropriate interpretation of the rule.

At least for domestic applications, therefore, limits contained in RR 731E should serve as an identification of the level of acceptable interference, not as a definition of harmful interference barring MSS operation in the band. Only if effective isotropically radiated power ("EIRP") levels exceed those stated in the band should further coordination be required. The EIRP limits contained in RR 731E must thus be viewed as "trigger" values indicating when interference may be considered harmful, not as a means of down-grading the co-primary status of non-geostationary satellites operating in the 1610-1626.5 MHz band.

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<sup>1/</sup> See LQSS Petition at 12.

Moreover, in the recent NPRM in CC Docket No. 92-166, the Commission observed that the Negotiated Rulemaking Committee had suggested that GLONASS be reconfigured so as not to operate above 1610 MHz.<sup>8/</sup> TRW supported this suggestion in the Committee Report and reiterates its belief that in order for MSS systems to make optimal use of the 1610-1626.5 MHz band, GLONASS must be strongly encouraged to migrate well below 1610 MHz to eliminate co-channel operation with MSS and allow for sufficient guardband between GLONASS and the MSS systems.<sup>9/</sup> As LQSS notes in its Petition, the United States currently is involved in discussions with the Russian Federation directed to this very goal.<sup>10/</sup>

Nonetheless, prior to such a step, TRW agrees with LQSS that, in the portion of the L-band used by systems operating in

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<sup>8/</sup> See Amendment of the Commission's Rules to Establish Rules and Policies Pertaining To A Mobile-Satellite Service in the 1610-1626.5/2483.5-2500 MHz Frequency Bands, 9 FCC Rcd 1094, 1123 (¶ 56) (1994).

<sup>9/</sup> TRW notes that many of the GLONASS applications proposed by the aviation community render them very susceptible to interference from MSS mobile receivers. Some of these applications -- for example, ground navigation or terminal communications -- are not "true" ARS services. It seems reasonable and appropriate for GLONASS to shift its operations far enough below 1610 MHz that it can provide a wide range of services to the aviation community in an environment with relatively less interference.

<sup>10/</sup> See LQSS Petition at 13.

accordance with RR 732 (also cross-referenced in RR 731E), the Commission should authorize without further limitation any MSS earth station operating at an equivalent EIRP density below -15 dB(W/4kHz). MSS earth stations operating in excess of this limit should be required to coordinate with stations operating in accordance with RR 732.

### **III. Other Matters**

Finally, TRW concurs with LQSS's concern that the Commission erred in not setting aside specific feeder links for systems in the allocated bands. The availability of sufficient spectrum to conduct feeder operations is essential to the availability of the MSS Above 1 GHz service. Having found that huge untapped demand exists for this service, and that the allocation of service uplink and downlink frequencies to provide it is necessary to serve the public interest, the Commission cannot ignore the fundamental needs of the proposed service providers to accommodate satellite-to-gateway and gateway-to-satellite transmissions as well.

Because the availability of adequate spectrum for these purposes is absolutely essential to development of the MSS Above 1 GHz service, resolution of this question must not be further

delayed.<sup>11/</sup> Accordingly, the Commission should specifically identify and allocate sufficient bandwidth to provide feeder links for MSS Above 1 GHz systems.

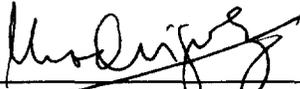
**IV. Conclusion**

For the foregoing reasons, TRW respectfully encourages the Commission to clarify its interpretation of ITU rules RR 731E and 753F, and to adopt expeditiously feeder link allocations for the MSS Above 1 GHz.

Respectfully submitted,

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<sup>11/</sup> Cf. R&O, 9 FCC Rcd at 541-542 (¶¶ 29-30).

**CERTIFICATE OF SERVICE**

I, Kaigh K. Johnson, do hereby certify that a copy of the foregoing "Comments of TRW Inc. Concerning Petition For Clarification and Partial Reconsideration Filed By Loral Qualcomm Satellite Services, Inc." was mailed by United States first-class postage prepaid this 21st day of April 1994, to the following:

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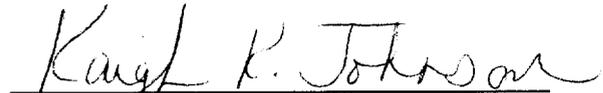
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