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May 4, 1994

BY HAND DELIVERY

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D.C. 20554

RE: In the Matter of Amendment of Section 2.106
ET Docket No. 92-28

Dear Mr. Caton:

Transmitted herewith for filing with the Commission on behalf of Loral/QUALCOMM Partnership, L.P., are an original and eleven copies of its "Reply Comments."

Should there be any questions regarding this matter, please communicate with this office.

Very truly yours,



William D. Wallace

Enclosures

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Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

MAY - 4 1994

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of)
)
Amendment of Section 2.106 of) ET Docket No. 92-28
the Commission's Rules to)
Allocate the 1610-1626.5 MHz)
and the 2483.5-2500 MHz Bands)
for Use by the Mobile-Satellite)
Service, Including Non-)
Geostationary Satellites)

To: The Commission

REPLY COMMENTS OF
LORAL/QUALCOMM PARTNERSHIP, L.P.

Loral/QUALCOMM Partnership, L.P. ("LQP"),¹ hereby replies to the Comments filed by AMSC Subsidiary Corporation ("AMSC") and TRW, Inc. ("TRW") on LQP's Petition for Clarification and Partial Reconsideration of the Commission's Report and Order, 9 FCC Rcd 536 (1994) (MSS Allocation Order) in the above-captioned proceeding.

LOP'S PETITION

In its Petition, LQP recommended four Commission actions:

First, clarifying that the MSS Allocation Order was intended only to allocate spectrum for MSS Above 1 GHz and not to establish eligibility requirements for MSS licensees with respect to the orbital height of proposed systems;

¹ As a result of a restructuring of the applicant on March 23, 1994, LQP succeeded to the interest of Loral Qualcomm Satellite Services, Inc., in the Globalstar application. See Amendment to Globalstar System Application (filed April 21, 1994).

Second, modifying the power flux density (PFD) values in International Footnote 753F and clarifying that these values represent triggers to determine whether coordination with terrestrial users is required;

Third, modifying International Footnote 731E to apply the -15 dBW/4 kHz EIRP limit to MSS uplinks in which the coordinated portion of GLONASS operates, and eliminating the ambiguous last sentence of the footnote regarding protection of aeronautical radionavigation systems; and,

Fourth, designating spectrum in the 5/6 GHz band for MSS LEO feederlinks.

These actions will enable MSS Above 1 GHz systems to operate in the United States without constraints that have been demonstrated to be unnecessary.

DISCUSSION

AMSC and TRW expressly supported, or did not object to, nearly all of LQP's recommendations in the Petition. The Commission should therefore take the requested actions as discussed briefly below.

Orbital Height. Neither AMSC nor TRW objected to LQP's request for clarification of the effect of the MSS Allocation Order. See LQP Petition, at 4-7. TRW stated that no clarification was needed, i.e., that the order did not address eligibility requirements for MSS systems in the 1.6/2.4 GHz bands. TRW Comments, at 2 n.1.

AMSC inferred (erroneously) that LQP had argued that the MSS Allocation Order restricted the bands to LEO systems, AMSC Comments, at 3, and stated that the "proper place for rebuttal" to this argument was the pending proceeding in CC Docket No. 92-166, where the licensing rules for MSS Above 1 GHz are under consideration, id., at 4. See Notice of Proposed Rule Making, FCC 94-11 (released Feb. 18, 1994). Thus, AMSC appears not to disagree with LQP's main point on orbital height that the order did not address MSS system eligibility issues.

PFD Limits. Both TRW and AMSC supported LQP's recommendation that the Commission should clarify that the PFD values expressed in International Footnote 753F are intended to be a "trigger" for coordination rather than an absolute limit. AMSC Comments, at 2; TRW Comments, at 2-4; see also LQP Petition, at 10-11. As TRW pointed out, this interpretation of the PFD values is consistent with the recommendation of the Radio-communication Sector Task Group 2-2, and should be endorsed by the Commission and the United States without further debate. TRW Comments, at 4.

AMSC objected to the specific values proposed for PFD limits by LQP on the ground that they had not yet been "formally established" as appropriate to protect incumbent systems in the 2.4 GHz band.² AMSC Comments, at 2 n.2.

In the Petition, LQP recommended that the Commission replace

² TRW did not comment on the specific PFD values proposed by LQP.

the values in RR 753F with the following:

-152 dB(W/m²) in any 4 kHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

-152 + 0.65(δ - 5) dB(W/m²) in any 4 kHz band for angles of arrival δ (in degrees) between 5 and 25 degrees above the horizontal plane;

-139 dB(W/m²) in any 4 kHz band for angles of arrival between 25 and 90 degrees above the horizontal plane;

These limits relate to the power flux-density which would be obtained under assumed free-space propagation conditions.

These values are based upon information presented to Radio-communication Sector Task Group 2-2 in studies of "Non-GSO MSS Satellite Transmissions Interfering to Fixed Service Networks (1-3 GHz)." See LOP Petition, Ex. A.

AMSC's objections should be rejected. Although final recommendations have not been adopted by ITU Study Groups, the input documents all have undergone the United States review process and represent a consensus U.S. position into the ITU Radiocommunication Sector. AMSC should not now be permitted to undermine that process by objecting to such analyses and conclusions, because AMSC participated in the United States review process and had the opportunity to review and participate in the formulation of the papers.

Moreover, it is irrelevant whether these values are "formally established." A number of studies have demonstrated that LEO MSS systems can operate at higher PFD values than those

in Footnote 753F.³ The Commission can and should "formally establish" those values now for U.S. operations of MSS systems and endorse the higher values for international operations at the next World Radiocommunication Conference. Indeed, the values proposed by LQP in its Petition are about 3 dB lower than those which the Task Group 2-2 study indicates could be utilized by a typical CDMA system without causing harmful interference to terrestrial services.⁴

As stated by LQP in its Petition, use of these slightly higher values will enable systems such as LQP's Globalstar to proceed without the need for time-consuming and unnecessary coordinations with terrestrial systems. In addition, in view of the Commission's proposal that non-geostationary CDMA systems which have applied for use of this band operate on a full-band interference sharing basis,⁵ the higher PFD values would enhance opportunities for CDMA systems to achieve capacity objectives in a band-sharing environment. Given the benefits of allowing operation at higher PFD limits, the Commission should adopt LQP's

³ AMSC also claimed that the potential for raising PFD values had been demonstrated for geostationary systems (like AMSC) but not for non-geostationary systems (like LQP). AMSC Comments, at 3. The studies reviewed by Task Group 2-2 as supporting the higher PFD values are expressly for non-geostationary systems, and so, contrary to AMSC's comment, provide evidence that LEO MSS systems can operate at higher PFD values than those specified in Footnote 753F.

⁴ LQP would not object to use of the higher values indicated in the Task Group study.

⁵ Notice of Proposed Rulemaking, FCC 94-11, ¶¶ 30-38 (released Feb. 18, 1994).

recommendation and reconsider the appropriate PFD levels for U.S. MSS systems.

EIRP Limits. Both AMSC and TRW supported LQP's recommendations regarding Footnote 731E. AMSC Comments, at 3; TRW Comments, at 5-7. The Commission also should note that there were no objections to LQP's Petition from MSS applicants or the aeronautical radionavigation community. The Commission should, therefore, adopt both of LQP's recommendations with respect to Footnote 731E. See LQP Petition, at 11-14.

Feederlinks. TRW agreed with LQP's request that the Commission identify specific spectrum for MSS feederlink frequencies. TRW Comments, at 7-8; see also LQP Petition, at 14-17. (AMSC did not comment on this issue.) The Commission has been urged to consider the availability of feederlinks for MSS systems throughout this proceeding, and should follow the recommendations of both TRW and LQP to do so.

CONCLUSION

For the foregoing reasons, LQP strongly urges the Commission to clarify and reconsider its MSS Allocation Order in accordance with the recommendations in LQP's Petition.

Respectfully submitted,

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Dated: May 4, 1994

CERTIFICATE OF SERVICE

I, William D. Wallace, hereby certify that I have on this 4th day of May, 1994, caused copies of the foregoing Reply Comments of Loral/QUALCOMM Partnership, L.P., to be served via hand delivery (indicated with *) or by U.S. mail, postage-prepaid, to the following:

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