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

In the Matter of)
)
Amendment of the Commission's Rules to) CC Docket No. 92-166
Establish Rules and Policies Pertaining)
to a Mobile-Satellite Service in the 1610-1626.5)
and 2483.5-2500 MHz Frequency Bands)

REPLY

Constellation Communications, Inc. ("Constellation"), by its attorney, hereby replies to the opposition and comments concerning clarification and/or reconsideration of the Commission's Report and Order, FCC 94-261 released October 14, 1994 ("Report and Order") in the above-captioned matter.

I. The Commission Should Reconsider Its Qualification Standards and Exclude Existing GSO MSS Licensees From Eligibility To Hold A 1.6/2.4 GHz MSS License

Constellation, LQP, Motorola, and TRW request the Commission to reconsider its decision to allow AMSC to apply for an authorization in the 1.6/2.4 GHz MSS. The record clearly supports restricting the use of these bands to non-geostationary satellite systems because of the demonstrated public interests to be served by the introduction of LEO MSS technology on a global basis and the new markets to be developed by LEO MSS systems beyond those possible with geostationary satellite technology. Moreover, it is clear that AMSC's only purpose for amending its application is to retain standing to pursue its proposal to add 1.6/2.4 GHz MSS frequencies to the 63 MHz capability it already has built into its geostationary satellite orbit ("GSO") satellites.¹

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¹ See AMSC Opposition at 2-3.

In response to Constellation's petition, AMSC claims that the amount of spectrum it has access to (i.e. 63 MHz) is not enough because of international coordination and priority/preemptive access requirements.² However, AMSC has failed to identify what specific portion of this spectrum will be denied to it as a result of international coordination agreements or priority/preemptive access requirements, and has failed to demonstrate by detailed technical analysis that the spectrum available to it is insufficient to provide enough capacity for it to be economically viable. Absent such a factual showing, it must be presumed that AMSC, as the sole licensee of this conventional MSS spectrum, has sufficient spectrum to meet its needs. AMSC's attempt to use the 1.6/2.4 GHz MSS bands is no more than an attempt to warehouse spectrum at the expense of impairing the multiple entry of new companies who will share the smaller amount of 1.6/2.4 MHz spectrum.

AMSC also attempts to paint itself as a significant competitor in global MSS services.³ However, as long as AMSC's interest is only in adding 1.6/2.4 GHz frequencies to its currently authorized geostationary satellites, the only competition it will offer is limited to the United States and adjacent countries.

Constellation does not believe that AMSC has the right to hold a 1.6/2.4 GHz MSS system authorization as a matter of fairness simply because it filed an application on June 3, 1991 to modify its currently authorized satellites to add these frequencies. As the exclusive United States licensee of 30 MHz of spectrum, and the only United States

² See AMSC Opposition at 4. Moreover, AMSC confuses its position on compatibility between geostationary and non-geostationary satellites by its observation that "the spectrum available for AMSC for mobile links must be used for a GSO system, which effectively precludes AMSC from using the spectrum for the global non-GSO system that is the subject of its November 1994 application." AMSC Opposition at 4. If AMSC cannot use its current assignments for GSO and non-GSO mobile links, it is not clear how AMSC can use 1.6/2.4 GHz spectrum compatibility with the non-GSO systems to be licensed in these bands to satisfy its customer requirements.

³ AMSC Opposition at 5-6.

company permitted to include another 33 MHz in its satellites, the Commission has the legal authority and the policy mandate to exclude AMSC from being eligible to hold a license to use any portion of the 33 MHz of spectrum in the 1.6/2.4 GHz MHz bands. The Commission should exclude AMSC from the 1.61/2.4 GHz bands in order to maximize the opportunities to develop a competitive MSS market by multiple entry into these bands by global LEO MSS systems. AMSC has not yet launched a single satellite, and has not even attempted to demonstrate on the basis of any facts or technical analysis that this satellite, together with the two additional satellites it has been authorized to construct and operate, will have insufficient capacity to satisfy its customer requirements. For this reason, the Commission should declare AMSC ineligible to hold a 1.6/2.4 GHz MSS system authorization and dismiss AMSC's amended application.⁴

II. The Commission Should Clarify Its LEO MSS System Licensing Policies

Milestones. LQP requests the Commission to base its construction milestones on the date of the issuance of a "conditional" authorization, and TRW proposes that the Commission allow the milestones to be relaxed after a portion of the system is in operation. Constellation and TRW opposed LQP's proposal as being illogical since any feeder link band assignments can only be made now on a "conditional" basis, and "unconditional" assignments are not likely until after the 1995 World Radio Conference. The Commission clearly indicated that the construction milestones would be measured from the date of the "unconditional" authorization and the Commission should continue to follow this procedure. While Motorola opposes TRW's request for a relaxation of the milestone requirements,

⁴ The Commission may implement this decision by adding the sentence "A holder of a satellite authorization in the Mobile-Satellite Service in the 1545-1559/1646.5-1660.5 MHz frequency bands is not eligible to hold such a system authorization" as the penultimate sentence in §25.143(b)(1).

Constellation believes that the Commission retains the flexibility to adjust milestone requirements based on the actual circumstances facing a LEO MSS operator at the time an extension is requested and the progress made in the implementation of its system.⁵

Exclusive agreements. In their petitions, Motorola and TRW urge the Commission to prohibit LEO MSS from entering into exclusive operating agreements in foreign countries.⁶ Both Constellation and LQP agree with Motorola and TRW that contracts which expressly exclude other United States MSS LEO systems should be prohibited. But both are also concerned that these proposals appear to improperly extend the concern over prohibiting monopolistic business practices into detailed Commission intervention in the negotiation of operating agreements in a competitive market or in the development of foreign frequency management policies.

Constellation would not object to the Commission issuing MSS LEO licenses with a condition that precludes the licensee from entering into a contract or other agreement with foreign administrations that would exclude other U.S. MSS licensees. However, Constellation objects to any extension of such condition that would limit Constellation's ability to negotiate individualized operating agreements to best fit the market conditions in each country. The problem with TRW's position is that TRW would simply prohibit any "preferential arrangements" or "special concessions" without specifying what types of arrangements are anticompetitive and what types of arrangements simply reflect the results

⁵ See Constellation Opposition at 12-13. Constellation also agreed with TRW that the Commission should order a licensee who missed a construction milestone to show cause why it should not forfeit its license before revoking a system authorization rather than have the authorization automatically rendered null and void.

⁶ AMSC's opposition to the Motorola and TRW proposals is phrased in terms of opposition to the extension of Commission's frequency assignment plan to other countries based on a country's right to foster its own national systems by limits on foreign systems. AMSC Opposition at 8-9. However, AMSC misses the point that the issue here concerns the activities of United States systems seeking to serve the same foreign country.

of competitive business negotiations under a variety of market conditions. Since each MSS LEO system has a different business plan, it is likely that operating arrangements will vary from country to country among the different MSS LEO operators, as well as for a single LEO MSS operator.⁷ While such differences in operating arrangements may be perceived as "preferential" or "special" the Commission should not automatically conclude that they are anticompetitive. Nor should the Commission involve itself in the details of such operating arrangements until there is some evidence that a particular operating arrangement is anticompetitive.

Constellation does not however agree with LQP's arguments concerning extension of the Commission's frequency assignment plan.⁸ While Constellation does not advocate that the Commission's frequency assignment plan be rigidly applied on a global basis, Constellation believes it is as good as any other plan on which to conduct coordination of U.S. systems with the MSS LEO systems of other countries. It is also a good basis on which the U.S. MSS LEO system operators should initially conduct their operational planning on a global basis pending the availability of more detailed operational experience with the various inter-system coordination techniques that have been identified in this proceeding, including the ones mentioned by LQP, and a better knowledge of the actual traffic requirements of the different systems. Thus, Constellation supported TRW's proposal to use the Commission's frequency assignment plan as the basis for North American operations.

Constellation is, however, concerned with LQP's characterization of the scope of a

⁷ The fact that each of the MSS LEO operators are proposing to operate their space segments on a non-common carrier basis indicates that each operator intends to negotiate individualized operating agreements on a country-by-country basis that is specialized to the MSS LEO operator's business plan and the market conditions in each country.

⁸ See LQP Opposition at 2-9.

foreign country's sovereign rights and the practical aspects of the U.S. LEO MSS operators coordinating their operations with each other. In particular, Constellation is concerned that LQP's characterization of this matter would lead to a large patchwork of conflicting operating conditions which no inter-system coordination agreements among the space segment operations could ever satisfy.

Constellation sees no problem in using the Commission's frequency assignment plan as the starting point for a global inter-system operating agreement and letting that agreement evolve in response to specific requirements as they develop throughout the world in response to market conditions.

Interim Glonass Plan. Both LQP and Motorola request the Commission to eliminate its proposed interim L-Band assignment plan that would be invoked if the amount of spectrum available to the CDMA operators were impaired by a governmental decision to protect Glonass operations.⁹ Nevertheless, Constellation supports the Commission's treatment of this issue in the Report and Order since it clearly identifies how the burden will be shared if the Commission ultimately decides to impose any operational restrictions on the CDMA systems. The problem, in Constellation's view, is that the Commission has not yet made the types of definitive rulings needed to conclude that use of the CDMA portion of the band will be unimpaired by any requirements to protect Glonass, whether co-channel or out-of-band.¹⁰ Until the Commission does so, Constellation believes that the interim plan serves a useful purpose in clearly identifying now the principles under which any impairments would be apportioned among the LEO MSS licensees in the band.

⁹ See Report and Order at paras. 49-53.

¹⁰ This problem is exacerbated by §25.213(c) which could be read as placing the entire burden of resolving any Glonass interference on the MSS even though both have primary status in the band.

Out-Of-Band Emission Mask. Constellation, LQP and TRW oppose Motorola's request for reconsideration of the Commission's decision not to adopt the out-of-band emission mask advocated by Motorola. Constellation agrees with the positions taken by LQP and TRW on this issue, and urges the Commission to reject Motorola's attempts to place further burdens on the CDMA operators in order to resolve the problems resulting from Motorola's own choice of transmission design parameters.

III. Revision of Specific Rule Provisions

Section 25.130(c) of the Rules. Constellation, LQP and Motorola express concerns over the current formulation of the Commission's replacement licensing provisions, while TRW believes that these concerns are adequately covered under the current wording of §25.130(e). However, TRW may have missed the significance of the Constellation, LQP and Motorola positions in light of the coincidence of a 10-year license term and the 10 year lifetime of the Odyssey satellites compared to shorter lifetimes of the other LEO satellites.

Constellation reiterates its belief that §25.120(e) of the Commission's rules confuse the process of replacing satellites with improved or second generation versions with the process of renewing a 10 year license under §307(c) of the Communications Act, and incorrectly assumes in §25.143(c) that all replacement satellites during the license term will be technically identical.¹¹ Constellation believes that this issue can be resolved by the Commission carefully reviewing the text of its Rules to clarify its procedures to clearly indicate that (1) additional "technically identical" satellites can be built and launched to replace either failed in-orbit spare or failed operational satellites without prior Commission

¹¹ Consequential modification and/or clarification of other sections of the Rules may also be required. See Constellation Petition at 4-9. See also Constellation's Comments and Reply Comments on the proposed rules. Supra n.2.

authorization under the provisions of §25.143 (c) and (d), (2) modification applications which do not propose new MSS frequency bands¹² will be accepted at any time to change the system configuration or individual satellite parameters. They will be reviewed only with respect to the potential for increased interference under §25.116, and they will not trigger a new application processing round even if they are for "second generation" satellites,¹³ and (3) §25.130 refers only to renewal applications for the original 10 year blanket system authorization under §307(c) of the Communications Act and they will be filed on the schedule specified by the Commission and will be reviewed only in light of the Commission's policies on renewal expectancy.¹⁴ For this reason, Constellation does not believe LQP's proposed addition to §25.130(e) is either necessary or desirable.¹⁵

Section 25.213(a) of the Rules. In its petition, Constellation proposed a revision of §25.213(a)(1) which would eliminate the need for position determination capability of subscriber transceivers that did not operate in the radio astronomy portion of the band. TRW supported this proposal. LQP opposed this change on the grounds that it would

¹² If a new MSS frequency band is made available by the Commission, a new processing round would normally be established. Constellation does not believe that modification applications that do not propose new service link bands, even if they propose significant changes to the system or satellite designs, should not invoke a new processing round and that they should be evaluated only in light of the interference caused to the other operational systems. In considering such applications, the number of operational systems, sharing constraints due to coordination with systems authorized by other countries, and actual traffic levels will be better known and may permit significant changes to be made in the operational LEO systems that result in an overall increase in the available capacity for all of the systems. Whether such changes are characterized as "minor Modifications", "technical improvements", "second Generation" or whatever, they should be reviewed only in the context of the inter-system coordination procedures.

¹³ Procedures for modifications of feeder link use should be deferred until the Commission identifies the feeder link bands available for unconditional authorizations.

¹⁴ See Report and Order at paragraph 187.

¹⁵ Constellation also objects to the text proposed by LQP because of a number of practical problems raised by the text. For example, is the license for the satellites being replaced automatically terminated? Or can they continue to be operated and cause excessive interference? How many replacement satellites have to be operational before the new license term begins? How much change is needed for a satellite to be "technically-improved"?

unduly complicate coordination among CDMA operators. However, as recognized by LQP, Constellation agrees that it would have the responsibility to insure that operation of such terminals conforms to the aggregate uplink e.i.r.p density level agreed upon during inter-system coordination. Constellation's purpose in making this proposal is that there is likely to be classes of MSS customers to whom subscriber unit cost is the key factor in whether or not to subscribe to the service. If Constellation can reduce subscriber transceiver costs for this portion of its customer base by eliminating position determination circuitry and operate them outside of the radio astronomy portion of the band, but limit the aggregate e.i.r.p.density to the agreed upon levels, it may be able to provide access to its system to a greater total number of users. Of course, only a portion of Constellation's customers would be supplied with such non-position determining subscriber transceivers. The other portion of its customer transceivers would be equipped with position determination circuitry¹⁶ to prohibit transmissions within radio astronomy protection zones on the protected frequencies.

CORF also opposes Constellation's proposals on the grounds that position determination capabilities are needed to protect radio astronomy sites from out-of-band interference. However, CORF has not justified why position determination capabilities are required if subscriber unit operations are confined to frequencies outside the band for which radio astronomy sites are afforded protection, whether the protected band is limited to 1610.6-1613.8MHz for co-channel operations or whether the band includes 1613.8-1615.8 MHz for out-of-band emission protection as proposed by the Commission. There is simply no need to require position determination for subscriber transceivers that are restricted from

¹⁶ Or equivalently, they would be equipped with beacon-activated transceivers, as proposed by TRW.

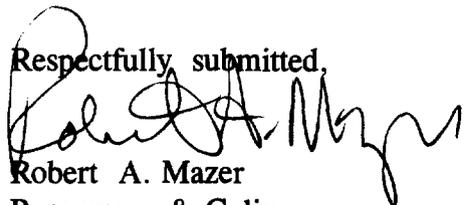
accessing the specific bands for which the radio astronomy protection zones are defined.

CORF's opposition to Constellation's proposal that the Commission delete §25.213(a)(1)(iii) or provide a technical justification for it stems from its belief that radio astronomy has a superior status over MSS in light of RR 733E. This footnote is an artifact from the 1987 WARC when the radio determination-satellite service was added to the 1610-1626.5 MHz band in Regions 1 and 3 on a secondary basis and radio astronomy was allocated the 1610.6-1613.8 MHz band on a secondary basis. There is no reason to retain such a provision with the elevation of radio astronomy to a primary service, which was the price paid by MSS to obtain primary status in the band in all 3 Regions at WARC-92. If CORF is allowed to pursue its claim that there is something unique about out-of-band emissions from MSS in this band, then CORF can argue that similar provisions should be applied in the bands adjacent to all radio astronomy allocations and RR 344 should be revoked. The Commission should reject this line of reasoning and confirm that the principle of RR 344 applies in this band.

Conclusion

For the foregoing reasons, Constellation requests the Commission to reconsider and/or clarify its Report and Order as set forth in Constellation's November 21, 1994 Petition, December 20, 1994 Opposition and Comments.

Respectfully submitted,



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CERTIFICATE OF SERVICE

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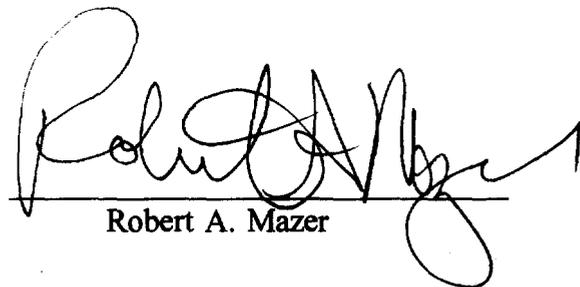
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