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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

EX PARTE OR LATE FILED

November 3, 1999

Via Hand Delivery

Magalie Roman Salas, Secretary
Federal Communications Commission
445 12th St., S.W., Room TW-B204
Washington, D.C. 20554

Re: Written *Ex Parte* Communication in ET Docket Nos. 98-206, RM-9147, and RM-9245

Dear Ms. Salas:

This letter is submitted on behalf of SkyBridge LLC ("SkyBridge") in response to certain *ex parte* communications made by Qualcomm Incorporated ("Qualcomm") in the above-referenced docket. Qualcomm appears to be claiming (albeit somewhat elliptically) that it is entitled to some measure of protection from nongeostationary orbit ("NGSO") fixed satellite service ("FSS") systems, such as SkyBridge, for its OmniTRACS mobile satellite service ("MSS") system. Specifically, Qualcomm attempts to derive equivalent power flux-density ("EPFD") levels that it claims would protect the secondary OmniTRACS system from primary NGSO FSS systems. Qualcomm's presentation is misinformed and misleading at several levels, as discussed below.

First, as SkyBridge explained in its Reply Comments in this docket, the OmniTRACS service operates on a secondary basis in the subject FSS bands, and is not entitled to any protection from primary services such as GSO or NGSO FSS systems.[1/] The Commission should reject Qualcomm's implied request that OmniTRACS be treated as essentially primary for the purpose of developing

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1/ Reply Comments of SkyBridge, ET Docket No. 98-206, RM-9147, RM-9245 (filed April 14, 1999), at 20-21.

GSO FSS/NGSO FSS spectrum sharing criteria.[2] The concept of EPFD limits adopted by WRC-97 was specifically tailored to govern sharing between two co-primary FSS services. The limits ensure the protection of both services, without requiring individual coordinations. It is entirely inappropriate to place additional EPFD limits on co-primary NGSO FSS systems specifically for the protection of a secondary system like OmniTRACS.

Second, Qualcomm's presentation fails to demonstrate that its secondary system would be harmed in any way by any of the proposed primary NGSO FSS systems. At present, only Qualcomm can determine with certainty the impact on its system, if any, of NGSO FSS systems. Accurate interference analysis requires detailed information on the OmniTRACS link budgets and antennas, and Qualcomm has not made this information available in any forum of which SkyBridge is aware.[3] In particular, Qualcomm did not submit any of its links in response to either of the two requests for such information by ITU-R Joint Task Group 4-9-11. Moreover, as Qualcomm notes in its *ex parte* presentations, its receiver antenna pattern is quite different from the patterns used for FSS systems in the subject bands; a proper analysis would require submission of its antenna pattern to the international working groups.

Qualcomm's attempt to derive EPFD levels that it believes would protect its system is not a substitute for such analysis. Even if Qualcomm were entitled to protection -- which it indisputably is not -- and even if Qualcomm could demonstrate that its system might be harmed in the absence of a particular EPFD limit, its rudimentary calculations fall well short of the mark. Among other things, those calculations fail to take into account the computation methodologies and procedures developed by the international satellite community.

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[2] Qualcomm conceded to secondary status to ease its efforts to obtain authorization to provide mobile service in FSS bands; it should be estopped from now claiming greater priority than it agreed to in order to obtain a license.

[3] It is unfortunate that Qualcomm has not participated in the extensive technical studies that have been taking place internationally and domestically since at least November 1997. Detailed studies have been performed for all of the co-primary services for which there is an allocation in the bands identified for NGSO FSS systems, including GSO FSS, GSO BSS, FS, Radiolocation and Space Science. Nearly all outstanding sharing issues have been resolved, and proposals have already been submitted to the Conference Preparatory Meeting for the 2000 World Radiocommunication Conference.

In its analysis, Qualcomm attempts to apply Methodology B of Recommendation ITU-R S.1323, which was designed for the protection of GSO FSS receivers. Aside from the fact that the applicability of Methodology B to a non-time sensitive MSS application like OmniTRACS has never even been studied, let alone confirmed, the primary purpose of Methodology B is computing "back of the envelope" EPFD levels; the international community has agreed that it should not be used to determine actual protection requirements.[4/]

Methodology B computes only one of an infinite number of possible EPFD masks that might protect a given GSO system in a manner consistent with the S.1323 protection criteria. The results say nothing about whether this is the most appropriate mask, taking into account not only the needs of the GSO system but also of the NGSO system as well. Indeed, the results do not even indicate whether OmniTRACS would actually be harmed by an NGSO FSS system operating at higher power levels than the computed EPFD levels.

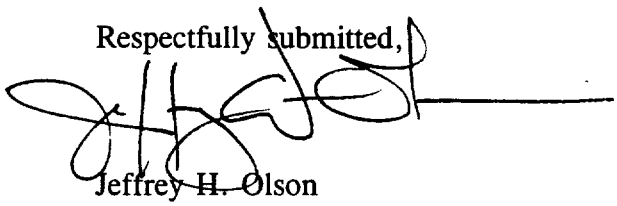
In short, Qualcomm's proferred analysis is both legally and technically irrelevant to the issues under consideration in this rulemaking. A secondary service is not entitled to protection, and even a co-primary service, such as a GSO FSS system, must employ the proper methodology in attempting to identify the appropriate limits.

As SkyBridge explained in its reply comments, based on the information available, it appears that the OmniTRACS system will in fact not suffer any significant harm from NGSO systems operating under the EPFD limits proposed by SkyBridge. Qualcomm has not demonstrated anything to the contrary.

4/ For deriving the limits that actually will be applied to NGSO FSS systems for the protection of co-primary GSO FSS systems, the international study groups agreed that "Procedure D" of the recommendation should be used to ensure compatibility both with NGSO performance and the protection requirements prescribed in S.1323. The 6% noise temperature increase (in the long term) used in connection with Methodology B, upon which Qualcomm bases its protection requirements, is not a factor in the determination of the final limits using Procedure D. Moreover, Procedure D involves a more rigorous analysis than Methodology B. It employs a mathematical convolution of the statistics of interference from NGSO FSS systems with those from rain fading, in order to determine whether the resulting carrier-to-noise ratio for the GSO system meets the protection criteria of S.1323. It also requires use of more detailed information on the GSO system than that employed by Qualcomm in its Methodology B calculations.

If there are any questions regarding this matter, please contact the undersigned.

Respectfully submitted,



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