

BEFORE THE
Federal Communications Commission
WASHINGTON, D.C. 20554

In the Matter of)	
)	
FWCC Request for Declaratory Ruling on)	
Partial-Band Licensing of Earth Stations)	IB Docket No. 00-203
In the Fixed-Satellite Service That Share)	RM-9649
Terrestrial Spectrum)	
)	
FWCC Petition for Rule Making to Set)	
Loading Standards for Earth Stations)	
In The Fixed-Satellite Service That)	
Share Terrestrial Spectrum)	
)	
Onsat Petition for Declaratory Order that Blanket)	
Licensing Pursuant to Rule 25.115(c) Is Available)	SAT-PDR-19990910-00091
For Very Small Aperture Terminal Satellite)	
Network Operations at C-Band)	
)	
Onsat Petition for Waiver of Rule 25.212(d) to)	
The Extent Necessary to Permit Routine)	
Licensing Of 3.7 Meter Transmit and Receive)	
Stations At C-Band)	
)	
<i>Ex Parte</i> Letter Concerning Deployment of)	
Geostationary Orbit FSS Earth Stations in the)	
Shared Portion of the Ka-band)	

To: The Commission

REPLY COMMENTS OF TRW INC.

TRW Inc. (“TRW”), by counsel and pursuant to Sections 1.415 and 1.419 of the Commission’s rules, hereby replies to the initial comments filed in response to the Notice of Proposed Rule Making (“*NPRM*”) in the above-captioned docket.¹ The comments reflect overwhelming opposition to the Commission’s proposals concerning changes to the current

¹ *FWCC Request for Declaratory Ruling on Partial-Band Licensing of Earth Stations in the Fixed-Satellite Service That Share Terrestrial Spectrum*, FCC 00-369 (released October 24, 2000)(“*NPRM*”).

approach to fixed-satellite service (“FSS”) spectrum use and coordination of FSS earth stations with terrestrial fixed service facilities. Indeed, the specific approach that the Commission has proposed has elicited no public support. Accordingly, on the record that has been established, the only appropriate action for the Commission to take at this time is the rejection of the elements of its *NPRM* proposing new “demonstrated use,” efficiency and coordination requirements for FSS, and the termination of this portion of the proceeding.

1. There Is No Evidence In The Record Of This Proceeding That Could Justify The Sweeping Regulatory Changes That Have Been Proposed In The NPRM.

In initial comments, TRW expressed concern that the Commission had moved to propose new and cumbersome regulations governing frequency bands shared between the terrestrial fixed service and without first determining whether there is actually a problem with the current system that would justify the dramatic change proposed. It noted that the *NPRM* itself sought input on the threshold issue of “the extent of the FS and FSS sharing problem,” and had requested specific input on the “numbers of cases in which the FS and FSS have experienced sharing difficulties.”² TRW observed that such a basic inquiry would ordinarily have been completed before specific rule changes were advanced.³

It is therefore remarkable that the Commission’s further request for information to establish more clearly the existence of problems that could have provided justification for new regulations has been met by complete silence from the fixed service community. Not a single FS operator has filed comments reporting on actual cases where the current system has blocked efforts

² See TRW Comments at 2 n.2, citing *NPRM* at ¶ 30.

³ See *id.*

to implement new service.⁴ The FWCC's Comments continue to rely on sweeping characterizations of alleged inequities in the shared bands, and unsubstantiated allegations that the manner of FSS spectrum use constitutes "warehousing."⁵ Incredibly, the lone anecdotal instance cited of a specific coordination problem involving an existing earth station and a proposed FS facility *occurred well over a decade ago*.⁶

On the other hand, numerous parties have indicated that the inequitable treatment that the FWCC has alleged is not a reality. For example, Loral Space and Communications Ltd. states that over the past twenty years, Loral Skynet[®] has "in every case . . . been able to reach a satisfactory coordination agreement" with FS licensees, and that the FSS industry as a whole "has a sound record of attaining mutually agreeable coordination agreements with terrestrial operators."⁷ The truth is that the balance of obstacles to service in the C- and Ku-bands in no way tilts in favor of the satellite services. As GE Americom notes, earth station operators are required by rule to site their facilities so as to minimize potential interference impact to terrestrial stations and are able to control only one end of the transmission path, while terrestrial wireless operators have much more flexibility as a practical matter, both in terms of operational options and in available frequencies.⁸ Moreover, because of the ability to deploy wireless facilities quickly and at low cost, fixed service operators have had a substantial advantage in gaining initial access to

⁴ Indeed, with the exception of WinStar Communications, Inc. ("WinStar"), no fixed service licensee has filed any comments in this proceeding in support of the FWCC position. While WinStar "generally supports the positions of the FWCC," it offers no arguments of its own in favor of these initiatives, and limits the bulk of its comments to opposition to extension of the *NPRM* proposals to fixed service frequencies above Ku-band. *See* WinStar Comments at 2. *See also* Section 3, below.

⁵ *See* FWCC Comments at 17.

⁶ *See id.* at 18 & n.26, *citing* a Ku-band earth station operator's denial of a coordination *at some unspecified time in the 1980s* where an FS facility that would have caused a substantially lower level of interference than had previously been accepted from another operator on the same frequency.

⁷ Loral Comments at 4 & 14.

⁸ *See* GE Americom Comments at 7-9. *See also* TRW Comments at 6.

spectrum, and FS links have been widely deployed throughout most major metropolitan areas.⁹ Accordingly, to the extent that new C- and Ku-band licensing opportunities in urban areas are unavailable for terrestrial wireless facilities, the impediments to new FS growth are far more likely to be other FS licensees than satellite earth stations. In rural areas, there remains plenty of unused spectrum for the fixed service because service providers have not found it cost effective to construct wireless facilities in these areas, not because of any close proximity of FSS ground segment.¹⁰

Perhaps most significant in highlighting the lack of merit in the FWCC's position, however, are the comments of the spectrum coordination consulting firms that have participated in this proceeding. As Comsearch notes, it "holds a unique perspective on the spectrum sharing issues between these competing technologies,"¹¹ as the leading firm providing coordination services in the C- and Ku-bands to both satellite and terrestrial wireless customers. Given this role, Comsearch can be expected, based on its desire to maintain good relations with all of its clients, to tread a very careful line, so as not to step on the toes of either constituency. Given this understandable basis for taking a diplomatic approach, it is striking that Comsearch states bluntly in its comments that it believes "the difficulty of FS/FSS coordination has been overstated in this proceeding."¹² Similarly, Pinnacle Telecom Group states, with specific reference to the coordination issues raised by the FWCC, that it does not believe that "the problem described is at all a real issue in the industry."¹³ These statements are unequivocal and provide strong evidence to

⁹ See GE Americom Comments at 9.

¹⁰ See GE Americom Comments at 8; TRW Comments at 9.

¹¹ Comsearch Comments at 2.

¹² *Id.* at 3.

¹³ Pinnacle Comments at 3 (¶ 7).

the Commission that the most neutral arbiters available outside its own hallways do not believe that there is any real problem with respect to FS/FSS band sharing that can or should be addressed in this proceeding.

2. The *NPRM* Proposals Based On The FWCC Petition Have Been Almost Universally Opposed Due To The Adverse Impact They Would Have On Operators And Users Of Satellite Services.

Given the Commission's open acknowledgment in the *NPRM* that increased regulation is undesirable,¹⁴ the complete lack of foundation in the record for the FWCC-inspired proposals is more than sufficient to prompt swift rejection. However, in addition to the lack of substantive support for the *NPRM* proposals from the fixed service community, the comments reflect vociferous, well-founded and broad-based opposition¹⁵ to the Commission's specific "demonstrated use" and coordination proposals. This overwhelming opposition comes from satellite space segment operators,¹⁶ broadcast and cable networks,¹⁷ teleport and earth station

¹⁴ See *NPRM* at ¶ 61.

¹⁵ Indeed, at least two prominent members of the loose coalition of parties that make up the FWCC have publicly disassociated themselves from the group's efforts in this proceeding. The FWCC Comments note that the National Cable Television Association ("NCTA") does not support the filing, and the NCTA filed comments of its own opposing the FWCC. See NCTA Comments. In addition, after the initial round of comments was submitted, the National Association of Broadcasters ("NAB") filed an *ex parte* letter in this docket stating that it "does not join" the FWCC Comments in this proceeding. See Letter from Jack N. Goodman, Senior Vice President & General Counsel, NAB, to Magalie R. Salas, Secretary, FCC, IB Dkt. No. 00-203, filed January 25, 2001.

¹⁶ See comments filed by the following parties: ASTROLINK International LLC, ("ASTROLINK"), GE American Communications, Inc. ("GE Americom"), Hughes Network Systems/Hughes Communications, Inc./Hughes Communications Galaxy, Inc. ("Hughes"), Lockheed Martin Global Telecommunications, Inc. ("LMGT"), Loral Space & Communications Ltd. ("Loral"), PanAmSat Corporation ("PanAmSat"), SkyBridge LLC, Teledesic LLC ("Teledesic"), Telesat Canada, and Virtual Geosatellite, LLC.

¹⁷ See comments filed by Home Box Office and Turner Broadcasting System, Inc., National Public Radio, Inc. ("NPR"), and The Walt Disney Company ("Disney").

licensees,¹⁸ telecommunications service providers,¹⁹ satellite manufacturers,²⁰ as well as several major trade associations representing both satellite interests and other broad segments of the communications industry.²¹ These parties have made clear that the present flexibility available to FSS earth station operators is critical to promoting a variety of important private, governmental, and commercial uses capable of meeting long-term, occasional-use and emergency needs.²²

These parties have also shown that it is the fundamental differences in terrestrial and satellite technology and service operations that have dictated the distinct regulatory standards that apply to these services, and that there is not a double standard that arbitrarily disadvantages the fixed service.²³ As Teledesic notes, “the public interest is not served by treating the two services the same; it is served by treating the two services *appropriately*.”²⁴

With respect to the coordination issues for which the *NPRM* attempts to craft new regulatory procedures, Comsearch appropriately notes that these “are best handled through the flexibility allowed under the current rules and implemented through industry interaction.”²⁵ This assessment is consistent with the concerns expressed by a broad range of satellite industry

¹⁸ See comments filed by Arrowhead Space & Telecommunications, Inc., Catalina Transmission Corp. (“Catalina”), JFL Communications, Inc. (“JFL”), Megastar, Inc., and Verestar, Inc. (“Verestar”).

¹⁹ See comments of BT North America Inc. (“BT North America”) and Sprint Communications Company L.P. (“Sprint”).

²⁰ See Comments of TRW Inc. LMGT and Loral are also affiliated with satellite manufacturing companies.

²¹ See comments filed by the National Cable Television Association, and jointly by the Satellite Industry Association, the Satellite Broadcasting and Communications Association, the World Teleport Association, and the Aerospace Industries Association of America (“Satellite Industry Coalition”).

²² See, e.g., BT North America Comments at 3; Disney Comments at 2-4; NPR Comments at 4; JFL Comments at 3-4; Loral Comments at 4-6; PanAmSat Comments at 2-5; Sprint Comments at 2-3; Verestar Comments at 2 & 3.

²³ See, e.g., ASTROLINK Comments at 3-4; Catalina Comments at 3-4; Loral Comments at 4-5.

²⁴ Teledesic Comments at 4 (emphasis in original).

²⁵ Comsearch Comments at 3. See also Pinnacle at 3.

commenters, many of whom echo the fears of LMGT that the coordination procedures envisioned “are unnecessary and will lead to endless numbers of disputed cases that the Commission will have to resolve,” thus slowing down “an already time-consuming frequency coordination process.”²⁶

With respect to the demonstrated use provision, commenters observe that such a requirement can only add to administrative burdens for all parties involved, from the earth station operators, to the frequency coordinators, to the Commission itself.²⁷ Indeed, the record demonstrates that frequency coordinators have no desire to take on the added burdens that the *NPRM* would impose upon them. The Satellite Industry Coalition insightfully observed in its initial comments that spectrum coordinators “may have no interest in being put in a position where instead of facilitating coordination, their job is to choose winners and losers in a conflict over access to spectrum.”²⁸ As if in response, Comsearch has made clear its belief that “coordinators should not be put in a position of having to make . . . arbitrary decision[s]” with respect to demonstrations of frequency use by satellite operators.²⁹ Comsearch concludes that, while well-intentioned, the Commission’s proposals would, in practice, “be unworkable and [would] not achieve the desired results.”³⁰ Even if frequency coordinators were amenable to performing the arbitral function suggested, however, it is far from certain that it would be appropriate for the Commission to delegate such a role to a private entity.³¹

²⁶ LMGT Comments at 8.

²⁷ See BT North America Comments at 6-8; Catalina Comments at 5; GE Americom Comments at 18-19; Loral Comments at 9; NPR Comments at 4-5.

²⁸ Satellite Industry Coalition Comments at 34.

²⁹ Comsearch Comments at 7.

³⁰ *Id.* at 5.

³¹ See Satellite Industry Coalition Comments at 34-35.

Notably, even the FWCC finds fault with the demonstrated use concept, fearing that it “will prove to be cumbersome in practice.”³² Indeed, the FWCC rejects much of what the Commission has proposed, preferring instead to agitate further for what amounts to the initial proposal that the Commission has already soundly rejected in the *NPRM*.³³ Because the record amply demonstrates that there is no basis for any alteration of the *status quo*, the FWCC’s self-serving and unsupported notions that even more extreme changes in current policy should be made are entitled to no further consideration. Too much of the Commission’s time has already been squandered on this matter, and it is time for the FWCC-initiated portion of this proceeding to be concluded.

3. Both Satellite And Wireless Interests Reject Application Of The *NPRM* Proposals To The Ka-band And The V-band.

Finally, there appears to be complete agreement among the satellite and terrestrial parties that the proposals in the *NPRM* should not be applied, under any circumstance, to the Ka-band and/or V-band frequencies that are allocated on a shared co-primary basis to FSS and the fixed service, but for which soft-segmentation licensing approaches have been adopted.³⁴ These licensing arrangements have been embraced because the nature of the services to be operated in these bands requires that terrestrial services and satellite services operate primarily in separate bands. Thus, Teledesic strongly urges the Commission to “clarify that the proposals developed for the unsegmented C- and Ku-bands are entirely inappropriate in the Ka-band where the Commission has segmented the band to keep FS and FSS networks separate and thereby avoid

³² FWCC Comments at 5-6.

³³ See FWCC Comments at 10. Compare FWCC Comments at 6.

³⁴ See, e.g., FWCC Comments at 11; Hughes Comments at 16-17; Teledesic Comments at 6-7; TRW Comments at 14-17; WinStar Comments at 2 *et seq.*

