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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

BY HAND DELIVERY

Magalie Salas, Esq.
Federal Communications Commission
445 12th Street, SW, Room TW-B204
Washington, DC 20554

Re: IB Docket No. 97-95

Dear Ms. Salas:

Enclosed please find the original and four copies of the Opposition to Petitions for Reconsideration of the Fixed Wireless Communications Coalition in the above-referenced matters

Please date stamp and return the enclosed extra copy of the Opposition.

If further information is necessary, please call me at the number above.

Respectfully submitted,



Mitchell Lazarus
Counsel for the Fixed Wireless Communications Coalition

ML:deb

Enclosures

cc: Service List

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ORIGINAL

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)
)
Allocation and Designation of Spectrum for)
Fixed-Satellite Services in the 37.5-38.5 GHz,)
40.5-41.5 GHz, and 48.2-50.2 GHz Frequency)
Bands; Allocation of Spectrum to Upgrade) IB Docket No. 97-95
Fixed and Mobile Allocations in the) RM-8811
40.5-42.5 GHz Frequency Band; Allocation of)
Spectrum in the 46.9-47.0 GHz Frequency Band)
For Wireless Services; and Allocation of)
Spectrum in the 37.0-38.0 GHz and)
40.0-40.5 GHz for Government Operations)

OPPOSITION TO PETITIONS FOR RECONSIDERATION

Pursuant to Section 1.429(f) of the Commission's Rules, the Fixed Wireless Communications Coalition (FWCC)¹ opposes the Petitions for Reconsideration² challenging the Commission's Report and Order in this proceeding.³

¹ The FWCC is a coalition of equipment manufacturers and users interested in terrestrial fixed microwave communications. Its membership includes manufacturers of microwave equipment, licensees of terrestrial fixed microwave systems and their associations, and communication service providers and their associations. Its membership also includes railroads, public utilities, petroleum and pipeline entities, public safety agencies, the broadcast industry, and their respective associations, telecommunications carriers, landline and wireless, local, and interexchange carriers, and others. A list of members is attached as Appendix A.

² Petition for Reconsideration of Hughes Communications, Inc. ("Hughes") (filed Feb. 16, 1999); Petition for Reconsideration of GE American Communications, Inc. ("GE") (filed Feb. 16, 1999); and Petition for Reconsideration/Clarification of TRW, Inc. ("TRW") (filed Feb. 16, 1999).

³ Allocation and Designation of Spectrum, IB Docket No. 97-95, Report and Order, FCC 98-336 (released Dec. 23, 1998) (Report and Order).

I. THE COMMISSION MADE AN EQUITABLE ALLOCATION BETWEEN FSS AND TERRESTRIAL APPLICATIONS.

In its Report and Order, the Commission struck a fair balance in its effort to accommodate competing interests seeking access to the 36-51 GHz band. The Report and Order correctly determined that "sharing the same spectrum between ubiquitous wireless and satellite systems is not currently feasible,"⁴ and provided separate primary allocations for both FSS and wireless services, including the Fixed Service.

GE and Hughes assert that the balance struck by the Commission is "miscalculated" and "unequal."⁵ GE adds that the shift from shared to dedicated spectrum resulted in "a much higher amount of designated spectrum" for the Fixed Service.⁶ In fact, a simple analysis indicates the Report and Order cost the wireless services a higher percentage of their shared spectrum than the FSS — 50% vs. 42%. More important, however, this decision helps to offset the ongoing erosion of Fixed Service spectrum by the FSS in other bands, as explained below.

The Commission offered two explanations for giving FSS an amount of exclusive spectrum slightly reduced from what it could access before on a shared basis: *first*, an exclusive designation permits more effective use of the spectrum; and *second*, FSS interests can, if they wish, acquire spectrum from the wireless allocation at auction.⁷ Hughes and GE challenge these points.⁸ However, both points are unarguably true. And, as noted above, the Commission

⁴ Report and Order at ¶ 18.

⁵ GE Petition at 5; Hughes Petition at 2.

⁶ GE Petition at 8.

⁷ Report and Order at ¶ 28.

⁸ GE Petition at 6-9; Hughes Petition at 6-8.

established in the Report and Order that experience has shown sharing between the FSS and the Fixed Service to be infeasible.⁹

Moreover, the FSS's claims of "unequal" allocations should be swept aside, as they overlook re-allocations from the Fixed Service to satellite services in several other bands. Over a series of decisions, the Commission has seriously limited Fixed Service operators' access to spectrum in those other bands for forced relocation and to accommodate needed growth. First came a reallocation of 2 GHz band frequencies from the Fixed Service to mobile satellite services.¹⁰ Then, despite having identified the 6 GHz band as a primary relocation site for 2 GHz users,¹¹ the Commission has proposed designating the upper 6 GHz band (6700-7075 MHz) for mobile satellite feeder links.¹² The Commission has also proposed a similarly severe reduction of spectrum available to the Fixed Service in the 18 GHz band.¹³ The ongoing Ku-band proceeding threatens to move NGSO gateway stations into the already-congested 11 GHz band, and to expand GSO FSS downlink operations from half that band to the full band.¹⁴ The

⁹ Report and Order at ¶ 18.

¹⁰ Redevelopment of the Spectrum to Encourage Innovation in New Telecommunications Technology, ET Docket No. 92-2, First Report and Order, 7 FCC Rcd 6886 (1992), Second Report and Order, 8 FCC Rcd 6495 (1993), Third Report and Order, 8 FCC Rcd 6589 (1993). The same proceeding also allocated 2 GHz frequencies to PCS.

¹¹ Second Report and Order, *supra*, 8 FCC Rcd at 6506, ¶ 28 ("We believe that 6 GHz will be the primary relocation band for 2 GHz licensees, and therefore efficiently accommodating these licensees in this band is of the utmost importance.")

¹² Amendment of Parts 2, 25 and 97 of the Commission's Rules with Regard to Mobile Satellite Service Above 1 GHz, 13 FCC Rcd 17107 (1998).

¹³ Redesignation of the 17.7-19.7 GHz Frequency Band, 13 FCC Rcd 19923 (1998).

¹⁴ NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems, ET Docket No. 98-206, Notice of Proposed Rulemaking, FCC 98-310 (released Nov. 24, 1998). The

"shared" 3.7-4.2 GHz band has become effectively unavailable to the Fixed Service due to the extremely difficult problems of coordinating new Fixed Service stations with existing licensed earth stations.

The Petitioners' repeated claims that the FSS industry needs more spectrum¹⁵ largely reflect the industry's own decision to use wasteful modulation techniques. Fixed Service point-to-point operators, in contrast, are required by regulation to achieve at least 2.5-4.5 bits/second/Hertz in the 4, 6, 10, and 11 GHz bands.¹⁶ Modern Fixed Service systems typically do far better, achieving 7 bits/second/Hertz using 128-QAM modulation, and technologies that permit up to 9 bits/second/Hertz are coming into use. As a matter of principle, the FSS has no right to demand reallocations at the expense of other services until it has done everything possible to improve its own spectrum efficiencies.

Finally, claims that the Fixed Service industry has been virtually silent in the proceeding are inaccurate,¹⁷ and even if true, would be beside the point.¹⁸ This is not an election in which an industry wins spectrum by filing the most pleadings. The FSS industry consists of a few dozen well-funded entities whose major business is satellite communications, and which have every

proposal to expand GSO FSS operations is not discussed in text, but appears in Appendix A, C.F.R. § 25.202(a)(1) (proposed).

¹⁵ GE Petition at 4-5; Hughes Petition at 4-6.

¹⁶ 47 C.F.R. § 101.141(a)(3).

¹⁷ Hughes Petition at 5. Fixed Service industry participants included Advanced Radio Telecom; Alcatel Network Systems; BizTel; Digital Microwave Corp.; Harris-Fariron; Fixed Point-to-Point Communications Section, Wireless Communications Division, Telecommunications Industry Association; and WinStar.

¹⁸ Equally beside the point is agreement by "the entire satellite industry" that it wants more spectrum. GE Petition at 5.

incentive and every means to appear often before the Commission. The Fixed Service, in contrast, is composed of many more entities — thousands of railroads, pipelines, electrical utilities, public safety agencies, broadcasters, and other enterprises — for which telecommunications operations are a vital supporting function, not a main business interest. The vast majority of these organizations do not track Commission proceedings, and could not devote the necessary resources to filing comments. A relatively small number of Fixed Service pleadings in a particular proceeding hardly indicates indifference, as Hughes suggests, but merely reflects the nature of the industry.

II. THE COMMISSION'S DECISIONS ARE NOT INCONSISTENT WITH INTERNATIONAL ALLOCATIONS.

GE objects that part of the 4 GHz allocated to FSS is only partially and provisionally designated as FSS spectrum under international allocations.¹⁹ GE requests that this allocation be changed to comport with the international table, or alternatively, that the Commission withhold action in this docket pending WRC-2000.²⁰

GE has brought its issue to the wrong forum. The Report and Order allocates three bands to FSS: 37.6-38.6 GHz (space-to-Earth), 40.0-40.1 GHz (space-to-Earth) and 48.2-50.2 GHz (Earth-to-space).²¹ All of these bands are allocated to FSS worldwide, except for the 500 MHz at that 40.5-41.0 GHz, although even that is allocated to FSS throughout Regions 2 and 3 and in

¹⁹ GE Petition at 11.

²⁰ GE Petition at 11-13.

²¹ Report and Order at ¶ 30.

almost two dozen Region 1 countries.²² No part of the world has conflicting or incompatible allocations. The Commission has acted in accordance with the international table, and GE's request for uniform allocations belongs in the ITU process, not at the Commission.

III. TRW'S REQUEST TO "CLARIFY" SHARING ISSUES MUST BE DENIED.

TRW petitions the Commission to "clarify" its Order by permitting FSS operators to share spectrum allocated to the Fixed Service (but not vice versa).²³ TRW's request is not for clarification, but rather seeks a complete reversal of Section III(A)(2)(a) of the Report and Order. There, the Commission noted that a majority of commenters support separate designations for FSS and Fixed Service, with no sharing or underlay scheme, and found that the public interest is best served by providing separate designations.²⁴ The only argument TRW offers to the contrary is an unsupported statement that band segmentation is "anathema" to maximizing efficient use of spectrum and orbital arc.²⁵ The Commission and most of the commenters have already concluded the opposite, that segmentation is the best way to maximize efficiency. TRW has made no demonstration that those commenters and the Commission are wrong.

The Fixed Service opposes sharing with FSS because, even in bands with co-primary allocations, sharing between these services in practice has been far from coequal. (TRW's sharing proposal is not coequal even on its face.) The Commission routinely licenses an FSS

²² 47 C.F.R. § 2.106 (as amended); International Telecommunications Union, Final Acts of the World Radiocommunication Conference 1997 & Note S5.551D at 59-60 (Geneva 1997).

²³ TRW Petition at 4-7.

²⁴ Report and Order at ¶ 17-18.

²⁵ TRW Petition at 4.

earth station for the entire allocated band, without regard to any actual need for bandwidth, and with no requirements as to either efficiency or loading. Fixed point-to-point terrestrial services sharing the same bands, in contrast, are generally limited to frequencies actually needed, and additionally are subject to stringent requirements for both spectrum efficiency and loading. Moreover, Commission-accepted frequency coordination procedures allow satellite operators to warehouse huge amounts of unused spectrum for their earth stations, even if the spectrum is desperately needed by terrestrial operators. In combination, these rules and policies enable a single earth station to "sterilize" a large area against future fixed terrestrial operations. As a result, "sharing" has operated to the extreme disadvantage of the Fixed Service.

In short, the Commission reached a correct and well-supported decision in its Report and Order when it made separate allocations for the Fixed Service and FSS. TRW's Petition fails to establish otherwise and must be summarily denied.

CONCLUSION

Hughes and GE fail to support their claims that the Commission acted in an "arbitrary and capricious" manner²⁶ and "contrary to Commission policy and to the record."²⁷ The allocations made by the Commission in this proceeding are reasonable and well supported by the record — even more so in the context of recent FSS spectrum gains in other bands at the expense of the Fixed Service. TRW's request for a "clarification" of the Report and Order to allow FSS to share Fixed Spectrum should likewise be denied, as it seeks reconsideration of a well supported decision already made by the Commission.

²⁶ Hughes Petition at 1.

²⁷ GE Petition at 1.

The Commission should affirm its Report and Order.

Respectfully submitted,

A handwritten signature in cursive script that reads "Leonard R. Raish". The signature is written in black ink and is positioned above the typed name and address.

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April 6, 1999

Counsel for the Fixed Wireless
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WIRELESS COMMUNICATIONS COALITION**

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American Mobile Telephone Association
UTC - The Telecommunications Association
National Association of Broadcasters
Independent Cable Telecommunications Association
American Petroleum Institute
International Wireless Cable Association
Personal Communications Industry Association
CBS Communications Services
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Sierra Digital Communications
California Microwave, Microwave Data Systems
Tadiran Microwave Networks

CERTIFICATE OF SERVICE

I, Deborah N. Lunt, a secretary for the law firm of Fletcher, Heald & Hildreth, P.L.C., hereby certify that a true copy of the foregoing "Opposition to Petitions for Reconsideration" of the Fixed Wireless Communications Coalition was sent this 6th day of April, 1999, by first class mail, postage prepaid, to the following:

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