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December 21, 1998

**VIA HAND DELIVERY**

Magalie Salas, Esquire  
Secretary  
Federal Communications Commission  
1919 M Street, N.W. - Room 222  
Washington, D.C. 20554

Re: Redesignation of the 17.7-19.7 GHz  
Frequency Bands IB Docket 98-172;  
RM-9005, RM-9818

Dear Ms. Salas:

On behalf of the Fixed Wireless Communications Coalition (FWCC), we are filing an original and nine (9) copies of its Reply Comments in the above-referenced proceeding.

If additional information is required, please communicate with us.

Very truly yours,

FLETCHER, HEALD & HILDRETH, PLC



Leonard Robert Raish  
George Petrutsas  
Counsel for the Fixed Wireless  
Communications Coalition

GP:cej  
Enclosures

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cc: Chairman William E. Kennard (VIA HAND DELIVERY)  
Commissioner Susan Ness (VIA HAND DELIVERY)  
Commissioner Harold Furchtgott-Roth (VIA HAND DELIVERY)  
Commissioner Michael K. Powell (VIA HAND DELIVERY)  
Commissioner Gloria Tristani (VIA HAND DELIVERY)  
Chief, International Bureau (VIA HAND DELIVERY)  
Acting Chief, Wireless Tel. Bureau (VIA HAND DELIVERY)  
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ORIGINAL

BEFORE THE

**Federal Communications Commission**

WASHINGTON, D.C. 20554

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DEC 21 1998

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

In the Matter of )  
 )  
 Redesignation of the 17.7-19.7 GHz Frequency )  
 Band, Blanket Licensing of Satellite )  
 Earth Stations in the 17.7-20.2 GHz and )  
 27.5-30.0 GHz Frequency Bands, )  
 and the Allocation of Additional Spectrum )  
 in the 17.3-17.8 GHz and 24.75-25.25 GHz )  
 Frequency Bands for Broadcast )  
 Satellite-Service Use )

IB Docket No. 98-172  
 RM-9005  
 RM-9818

**REPLY COMMENTS OF THE  
 FIXED WIRELESS COMMUNICATIONS COALITION**

Respectfully submitted,

**FIXED WIRELESS COMMUNICATIONS  
 COALITION**

Leonard Robert Raish  
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Date: December 21, 1998

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Earth Stations in the 17.7-20.2 GHz and	)	RM-9005
27.5-30.0 GHz Frequency Bands,	)	RM-9818
and the Allocation of Additional Spectrum	)	
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Frequency Bands for Broadcast	)	
Satellite-Service Use	)	

To: The Commission

**REPLY COMMENTS OF THE  
FIXED WIRELESS COMMUNICATIONS COALITION**

The Fixed Wireless Communications Coalition ("FWCC" or "Coalition"),<sup>1</sup> by counsel hereby files its Reply Comments in the above-referenced proceeding.

**I. INTRODUCTION AND SUMMARY**

FWCC respectfully submits that the record of the proceeding demonstrate, as the Commission itself has recognized,<sup>2</sup> that the 18 GHz band is essential for the

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<sup>1</sup>The Fixed Wireless Communications Coalition (FWCC) is a broad coalition of diverse entities with vital interest in terrestrial fixed communications. Its membership includes manufacturers of microwave equipment, licensees of terrestrial fixed microwave systems and their associations, 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, and others.

<sup>2</sup>In the Matter of Redesignation of the 17.7-19.9 GHz Frequency Bands, Notice of Proposed Rulemaking, released on September 18, 1998, FCC 98-235, 63 Fed. Reg. 54100, October 8, 1998 ("Notice" or "NPRM") para. 8.

continued viability of the terrestrial fixed services (FS) and that the public interest requires that the Commission continue to provide sufficient useable spectrum in the band to accommodate existing and growing requirements of current and developing technologies and services.<sup>3</sup> The Coalition also submits that the alternative band segmentation plan proposed by the Fixed Point-to-Point Section, Wireless Communications Division of the Telecommunications Industry Association ("TIA Fixed Section" or "Fixed Section")<sup>4</sup> which was endorsed by FWCC and was broadly supported,<sup>5</sup> is a reasonable compromise and should given serious consideration by the Commission. In these Reply Comments, the Coalition comments on some of the alternative band segmentation proposals and related issues and addresses the demands of the satellite interests for spectrum in the 18 GHz band.

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<sup>3</sup>See (e.g.) Comments of AirTouch Communications Inc. ("AirTouch"), pp. 3-5; GTE Service Corporation ("GTS"), pp. 4-5; BellSouth Corporation ("BellSouth"), pp. 3-9; Associated Public-Safety Communication Officers (APCO); Los Angeles County; Cellular Telecommunications Industry Association ("CTIA"), pp. 3-5; SBC Communications, Inc. (SBC), pp. 2-5; American Petroleum Institute (API), pp. 4-6; Association of American Railroads (AAR), pp. 3-6; Independent Cable & Telecommunications Association ("ICTA"), pp. 3-13; Wireless Communications Association International, Inc. (WCAI), pp. 2-3; Association of Maximum Service Telecasters ("MST"); AT&T Wireless Services, Inc. ("AT&T Wireless"), pp. 2-3; BP Communications Alaska, Inc. ("BP Communications"), pp. 1-3; RCN Telecom Services, Inc. ("RCN"), pp. 2-4; Winstar Communications Inc. ("Winstar"), pp. 2-6; Tadiran Microwave Networks ("Tadiran"), pp. 2-3; Fixed Point-to-Point Section, Wireless Communications Division of the Telecommunications Industry Association ("TIA's Fixed Section"), pp. 4-5.

<sup>4</sup>See Comments of TIA's Fixed Section, pp. 3-4, 12-14.

<sup>5</sup>The Fixed Section's proposed plan was also specifically endorsed by ICTA, MST, AAR, Tadiran, WCAI, GTE, BellSouth.

## II. REPLY COMMENTS

1. The demand of the satellite interests for the designation of 1000 MHz of “unencumbered” spectrum for the satellite fixed service is unreasonable

Several satellite commenters<sup>6</sup> have asked the Commission to designate 1000 MHz of unencumbered spectrum in the 18 GHz band for the fixed satellite service, GSO/FS or NGSO/FSS, on a primary basis. They base that demand primarily on the Commission’s action in the 28 GHz reallocation proceeding in CC Docket No. 92-297, where the Commission allocated 1000 MHz of spectrum for satellite fixed uplink services. However, in the 28 GHz proceeding, the Commission was allocating virtually vacant spectrum so that the allocation of the amount of spectrum requested by the satellite interests was attainable. The landscape at 18 GHz is, of course, quite different. For one thing, as the Commission has recognized,<sup>7</sup> the 18 GHz band is occupied by thousands of terrestrial fixed systems providing essential communications services. Also, as the record in the proceeding demonstrates<sup>8</sup> a substantial amount of spectrum in the band will be needed to accommodate growth in existing and developing

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<sup>6</sup>See, for example, Comments of Hughes Electronics, Inc. (“Hughes”), pp. 4-8; TRW Inc. (“TRW”), pp. 4-6; GE American Communications Inc. (“GE American”), pp. 4-9; Lockheed Martin Corporation (“Lockheed Martin”), pp. 2-12; DIRECTV Enterprises (“DIRECTV”), pp. 13-14; Panamsat Corporation (“Panamsat”), pp. 2-51; and the Spectrum & Orbin Utilization Section of the Satellite Communications Division of the Telecommunications Industry Association (TIA’s SOUS), pp. 4.

<sup>7</sup>See NPRM, para. 8.

<sup>8</sup>See, footnote 3, above.

technologies and services as well as many, if not most, of the systems that must soon be relocated from the 2 GHz band.

The Commission has proposed to designate 1000 MHz for the fixed satellite services. The satellite interests object to the Commission's proposal because only 750 of the proposed 1000 MHz would be "unencumbered." The remaining 250 MHz would be shared with terrestrial fixed systems on a co-primary basis. But, as the TIA's Fixed Section demonstrated in its Comments,<sup>9</sup> adoption of even the Commission's proposal would seriously restrict the ability of the terrestrial fixed services to serve the many existing and developing communications requirements of the Nation. Adoption of the proposal of the satellite interests would have a devastating impact on the terrestrial fixed services.

In sum, given the realities in the 18 GHz band, grant of the satellite interests's demand for 1000 MHz of unencumbered spectrum is untenable. Given the heavy current usage of the band, the band segmentation plan proposed by TIA's Fixed Section is an eminently reasonable compromise and should be adopted.

## 2. Comments on alternative band segmentation proposals

FWCC has reviewed the many alternative band segmentation plans recommended in the proceeding, and is of the opinion that none of them address adequately the concerns FWCC and TIA's Fixed Section expressed in their respective comments. The comments below address two such alternative proposals.

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<sup>9</sup>See TIA's Fixed Section Comments, pp. 2-3, 4-6.



(a) The alternative band plan proposed by TIA's SOUS.

The Spectrum and Orbit Utilization Section of the Telecommunications Industry Association ("TIA's SOUS") has proposed a segmentation plan under which 17.7-17.8 GHz would be allocated to BSS for primary use; 17.8-18.3 GHz to FS for primary use; 18.3-18.8 GHz to GSO/FSS for primary use; 18.8-19.3 GHz for NGSO/FSS for primary use; and 19.3-19.7 GHz for MSS/FL and FS for co-primary, shared use.<sup>10</sup> The foregoing proposal would constitute poor spectrum management and would have a destructive affect. First, the proposal to allocate 17.7-17.8 GHz to BSS will deny the fixed services not only the 100 MHz directly involved but also the corresponding 100 MHz with which this spectrum is now paired. Given the spectrum requirements of the fixed services, such a loss simply is untenable.

Moreover, as Skybridge Inc. has pointed out,<sup>11</sup> it is premature to earmark the 17.7-17.8 GHz spectrum for BSS now since it may not be used for BSS purposes before 2007 under ITU regulations. Moreover, as Skybridge also noted,<sup>12</sup> technology and service requirements advance too rapidly to allow a reasonably accurate prediction now of what the proper use of that band should be in 2007.

Finally, the TIA SOUS proposal would provide even less spectrum for the

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<sup>10</sup>See TIA's SOUS comments, p. 4.

<sup>11</sup>Comments of Skybridge LLC ("Skybridge"), pp. 3

<sup>12</sup>Skybridge Comments, p. 3.

terrestrial fixed services than the Commission's proposal,<sup>13</sup> which itself would provide too little spectrum for the terrestrial fixed services. Therefore, TIA SOUS's proposal should be rejected.

(b) The plan proposed by  
Comsearch.

A principal element of the plan proposed by Comsearch Inc.<sup>14</sup> is that the band segment 17.7-18.55 GHz would be allocated for GSO/FSS and FS for co-primary shared use. This is also the principal and fatal defect of the proposal because it is generally accepted by the majority of the commenters, including FWCC and TIA's Fixed Section, and TIA's SOUS<sup>15</sup> that sharing between terrestrial fixed systems and satellite earth stations, particularly ubiquitously deployed earth stations, is not feasible. For this reason, Comsearch's plan should not be adopted.

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<sup>13</sup>Under TIA's SOUS plan, the terrestrial fixed services would receive 500 MHz, the band segment 17.8-18.3 GHz for primary use. In that segment not only point-to-point systems but also point-to-multi-direction video distribution systems would be authorized. Video distribution systems currently occupy a total of 440 MHz of spectrum and such systems are designed to occupy the entire 440 MHz. Since it is well recognized that point-to-point systems cannot share the same spectrum with point-to-multiple-direction video systems, either the point-to-point services would be confined to 60 MHz of spectrum or the video distribution service would be eliminated from the 18 GHz band.

<sup>14</sup>See Comments of Comsearch, Inc. ("Comsearch"), pp. 2-3.

<sup>15</sup>See TIA's Fixed Section Comments, pp. 6-11; TIA's SOUS Comments, pp. 2-3.

3. If decisions in this proceeding will require incumbent relocation, the Commission should also adopt relocation and reimbursement policies similar to those developed for the 2 GHz band

If, as it appears likely, incumbent terrestrial systems will have to be relocated to permit implementation of band segmentation, the Commission should adopt relocation and relocation cost reimbursement rules similar to those adopted in the Emerging Technologies proceeding in ET Docket No. 92-9 under the eye of a concerned Congress<sup>16</sup> and should reject alternative proposals advanced by satellite interests which would, in effect, unfairly deny relocated incumbents reimbursement for their relocation costs. One such proposal was advanced by Teledesic LLC ("Teledesic").<sup>17</sup> Teledesic would "sunset" the reimbursement rights of incumbents by 2004 and would limit reimbursement payments to the undepreciated value of their equipment plus 2% to cover engineering and installation costs. Teledesic's proposal, of course, is contrary to the policies developed in the Emerging Technologies proceeding. And, as the Commission determined in its recent decision in ET Docket 95-18,<sup>18</sup> there is no reason why those policies should not also apply where terrestrial fixed incumbents are to be relocated, against their wishes and at a cost of considerable disruption, for the benefit

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<sup>16</sup>Emerging Technologies, ET Docket 92-9; 7 FCC Rcd 6886 (1992); 8 FCC Rcd 6495 (1993), 8 FCC Rcd 6495 (1993).

<sup>17</sup>See Comments of Teledesic LLC ("Teledesic"), pp. 11-20.

<sup>18</sup>Memorandum Opinion and Order, ET Docket No. 95-18, released November 25, 1998, paras. 12-29.

of satellite system operators.<sup>19</sup>

Moreover, Teledesic's proposal is totally unreasonable. The proposal to "sunset" reimbursement rights in 2004 is an all too transparent effort to avoid reimbursing incumbents altogether, since neither Teledesic nor other satellite fixed systems are likely to deploy extensively their ground facilities much before 2004. Its proposal to limit payment to the undepreciated value of the hardware would simply not compensate incumbents for the reasonable costs they will actually incur to relocate their facilities. Those costs have been identified and accepted by the Commission in ET Dockets 92-9 and 95-18 and there is no reason to provide for vastly smaller cost elements here.

In sum, nothing offered by Teledesic or by other satellite interests requires or warrants departure from the policies established in ET Docket 92-9 and re-affirmed in ET Docket 95-18. Therefore, those proposals should be rejected and, should relocation become necessary, the Commission should apply the relocation and cost reimbursement policies developed in the Emerging Technologies proceeding.

4. For band segments to be shared by terrestrial fixed and satellite fixed mobile satellite feeder links, efficient coordination requirements must be established

FWCC wishes to emphasize the proposal of TIA's Fixed Section that the satellite terrestrial fixed coordination requirements should be improved. The current practices,

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<sup>19</sup>See M,O&O, at para. 12 where the Commission stated: "We find that the goals stated in the Emerging Technologies proceeding for . . . . . minimizing the economic impact on incumbent licensees are unchanged and apply with equal weight to the present situation. . . . ."

under which the entire frequency band is “coordinated” for any given gateway earth station, must be re-considered. Such full band “coordination” creates large “exclusion zones” for the entire shared band preventing re-use of any frequencies in that band over large areas around the earth station. By contrast, terrestrial fixed applicants coordinate only the frequencies they need for immediate use, plus a small amount for growth. Satellite earth station applicants should also be required to coordinate the amount of radio spectrum and arc necessary for immediate use and for reasonable growth. Otherwise, equitable sharing of spectrum between terrestrial fixed and satellite system would not be possible. Finally, as the Fixed Section has urged<sup>20</sup> gateway stations should be located in remote areas, at sites that include as close to 360 degrees integral shielding as possible, to provide at least 25 dB protection from terrestrial fixed transmitters. Such requirements would reduce the number of large exclusion zones and would make possible reasonably effective sharing of common bands.

5. The Commission should re-channelize the terrestrial fixed bands as recommended by the TIA's Fixed Section, as part of its decision in the proceeding

TIA's Fixed Section has recommended, as part of the band segmentation plan it has proposed, that the bands 17.7-18.14 and 19.26-19.7 GHz, which are now channelized for wideband systems, should be re-channelized so as to accommodate efficiently narrow band as well as wide band systems. The Fixed Section recommended 2.5, 5, 10, 20, and 40 MHz channelization. FWCC supports the


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<sup>20</sup>See TIA Fixed Section Comments, pp. 15-16.

proposal and takes this opportunity to emphasize that it is important for the Commission to adopt the proposed channelization plan as soon as possible. The availability of channels in these bands for narrow as well as for wide band systems will ease transition problems.

Respectfully submitted,

FIXED WIRELESS COMMUNICATIONS  
COALITION

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