ORIGINAL

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

In re	)	
	)	
REDESIGNATION OF THE 17.7-19.7 GHZ FREQUENCY BAND, BLANKET LICENSING OF EARTH STATIONS IN THE 17.7-20.2 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 TELEDESIC LLC

Mark A. Grannis
Evan R. Grayer
HARRIS, WILTSHIRE & GRANNIS LLP
1200 EIGHTEENTH STREET, N.W.
WASHINGTON, D.C. 20036
(202) 730-1300

Attorneys for Teledesic LLC

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SUMMARY OF ARGUMENT

Teledesic LLC welcomes the high degree of consensus apparent from the initial comments in this proceeding. Almost all commenters endorse the Commission's general approach of segmenting the 18 GHz band and permitting blanket licensing of satellite earth terminals. In addition, the comments reveal widespread skepticism regarding the Commission's proposal to grandfather FS stations in FSS primary bands — skepticism that is almost as pervasive in the FS industry as in the FSS industry. All commenters agree that ubiquitously deployed FSS earth terminals and FS stations cannot operate co-frequency.

Paradoxically, several FS and GSO FSS commenters insist that they will "lose spectrum" if the Commission adopts the proposed band plan, even though the Commission's proposal neither shrinks the band nor adds any new service. These arguments ignore the central point of this proceeding, which is to use the existing spectrum more efficiently. Contrary to the exaggerated claims of spectrum "loss" in some of the FS and FSS comments, no spectrum disappears and each service gets more exclusive spectrum than it had before. Segmentation will therefore benefit all of the services — much as drawing a yellow line down the middle of a highway benefits both northbound and southbound drivers without either increasing or decreasing the size of the road.

The Commission should adopt its proposal to designate the entire 18.8-19.3 GHz band for NGSO FSS downlinks. The contrary suggestion of some terrestrial interests, who want the Commission to sever the frequencies at 19.26-19.3 GHz from the rest of the band, would be a retreat from the WRC-95 and WRC-97 decisions regarding these frequencies. The decisions of those two World Radiocommunication Conferences make the 18.8-19.3 GHz frequencies truly unique for NGSO FSS, whereas the FS has ample alternative spectrum.

Finally, the Commission should not undercut its own segmentation proposal by designating FSS portions of the band for secondary FS use. Terrestrial interests acknowledge that secondary use would be of little value to the FS, and the costs of administering a regime of secondary use would be great. The public interest would not be served by incurring such a large cost for such a small benefit.

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	)	RM-9005
	)	RM-9818

REPLY COMMENTS OF TELEDESIC LLC

Teledesic LLC respectfully submits these Reply Comments regarding the Commission's Notice of Proposed Rulemaking ("NPRM")[1] in the above captioned proceeding. The Comments filed so far in this proceeding reveal a great deal of consensus. Almost all commenters — be they operators in the non-geostationary fixed-satellite service ("NGSO FSS"), geostationary fixed-satellite service ("GSO FSS"), terrestrial Fixed Service ("FS"), or non-geostationary Mobile Satellite Service ("NGSO MSS") — endorse the Commission's general approach of segmenting the 18 GHz band and permitting blanket licensing of satellite earth terminals. In addition, the comments reveal widespread skepticism regarding the Commission's proposal to grandfather FS stations in FSS primary bands — skepticism that is almost as

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[1] Notice of Proposed Rulemaking, FCC 98-235 (released September 18, 1998) (hereinafter, "*NPRM*").

pervasive in the FS industry as in the FSS industry. All commenters agree that ubiquitously deployed FSS earth terminals and FS stations cannot operate co-frequency.

Paradoxically, despite the consensus on segmentation, blanket licensing, and grandfathering, several FS and GSO FSS commenters insist that they will "lose spectrum" if the Commission adopts the proposed band plan. These arguments ignore the central point of this proceeding, which is to improve spectrum efficiency by segmenting the 18 GHz band and allowing each service to develop unconstrained in its own portion of the band. Contrary to the exaggerated claims of spectrum "loss" in some of the FS and FSS comments, all of the services will benefit enormously from segmentation.

In addition to the foregoing points, Teledesic responds herein to terrestrial interests who argue that the 19.26-19.3 GHz band should be designated exclusively for FS rather than NGSO FSS. The Commission should not retreat from its plan to protect the WRC-95 and WRC-97 decisions to designate the 18.8-19.3 GHz band for NGSO FSS downlinks. Finally, the Commission should not undercut its own segmentation proposal by designating FSS portions of the band for secondary FS use.

I. There is Broad Consensus on Band Segmentation, Blanket Licensing, and Grandfathering

Although the comments produced very disparate views on some issues, there is substantial agreement on three of the most important subjects: segmentation, blanket licensing, and grandfathering.

First, there is an overwhelming consensus among commenting parties that segmentation of the 18 GHz band is in the public interest. Virtually all of the commenters recognize that FS

stations and ubiquitously deployed FSS earth terminals cannot operate co-frequency without harmful interference.[2] Band segmentation will allow for ubiquitous deployment of GSO and NGSO satellite earth terminals, and for much denser deployment of terrestrial fixed stations than would otherwise be possible. Within each segment, the respective services will no longer be foreclosed from geographic areas due to the presence of stations of another, incompatible service.

Second, the comments evidence virtually no opposition to the Commission's proposal to implement licensing in the 18.8-19.3 GHz and 19.7-20.2 GHz bands. Blanket licensing of FSS earth terminals will bring extraordinary benefits to American consumers. It will enable millions of consumers to access a broadband infrastructure without the delay, cost, and other burdens associated with applying for licenses on a case-by-case basis. The Commission should therefore grant blanket earth station authorizations to both GSO FSS and NGSO FSS licensees as expeditiously as possible.[3]

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[2] Comments of the Fixed Point-to-Point Communications Section, Wireless Communications Division of the Telecommunications Industry Association, at 11 (Nov. 19, 1998); Comments of Winstar Communications, Inc., at 7 (Nov. 19, 1998) ("WinStar Comments"); Comments of Hughes Electronics, Inc., at 2 (Nov. 19, 1998) ("Hughes Comments"); Comments of KaStar Satellite Communications Corp., KaStarCom.World Satellite, LLC and @Contact, LLC, at 7 (Nov. 19, 1998); Comments of the Spectrum and Orbit Utilization Section, Satellite Communications Division of the Telecommunications Industry Association, (no page numbers) (Nov. 19, 1998) ("TIA SOUS Comments"); Comments of SBC Communications, Inc., at 2 (Nov. 19, 1998) ("SBC Comments"); Comments of Comsearch, at 6-7 (Nov. 19, 1998); Comments of BellSouth, at 7 (Nov. 19, 1998).

[3] Some parties asked the Commission to delay blanket licensing of NGSO FSS terminals because of concerns over NGSO FSS sharing issues that have little or nothing to do with earth station placement. Hughes Comments, at 25. However, there are unresolved space station sharing issues in *all* parts of the band, so there is no reason to single out NGSO FSS earth stations for delay. In addition, as Teledesic noted in its initial comments, the fact that NGSO FSS systems can employ such a wide variety of

Finally, the comments show widespread skepticism regarding the Commission's proposal to grandfather existing FS stations. An FS station will interfere with FSS earth stations in the vicinity regardless of whether it was licensed before or after the release date of the NPRM in this proceeding.[4] The interference may exclude FSS operations in an area of up to fifty square kilometers. Thus, for every FS station grandfathered in FSS spectrum, there might be hundreds or thousands of consumers who would be denied the option of broadband satellite services due to interference. This is not necessary, nor is it in the public interest. Recognizing the severe interference problems, both FS and FSS commenters note that the Commission's proposal to grandfather existing FS terminals is counterproductive.[5]

Continued ...

orbital architectures makes it hopeless to pursue a single set of earth station criteria that would guarantee the compatibility of space networks with different architectures. See Comments of Teledesic LLC at 9-11 (Nov. 19, 1998).

[4] The Commission has proposed to grandfather terrestrial stations that had been licensed, or for which applications were pending, on the date of the NPRM. *NPRM*, at ¶ 40.

[5] See, e.g., Comments of the Fixed Wireless Communications Coalition, at 11 (Nov. 19, 1998) ("FWCC Comments"); Comments of the Association of American Railroads, at 6 (Nov. 19, 1998); TIA SOUS Comments; Comments of the Fixed Point-to-Point Communications Section, Wireless Communications Division of the Telecommunications Industry Association, at 11 (Nov. 19, 1998) ("FPTP Comments"); Comments of Lockheed Martin Corporation, at 12-13 (Nov. 19, 1998) ("Lockheed Martin Comments"); Comments of the Independent Cable & Telecommunications Association, at 14 (Nov. 19, 1998); Comments of GTE, at 6-7 (Nov. 19, 1998). Indeed, a number of terrestrial operators assert that grandfathering would be worthless if the Commission adopts its proposal to prohibit grandfathered stations from "[expanding] or [changing] their current operations . . . in any manner that might increase interference to satellite earth stations." *NPRM*, at ¶ 40. But if FSS operators must accept new interference from modifications to "grandfathered" FS stations, the line between existing and future stations blurs and the need for extensive site-by-site coordination returns. The insistence by some FS operators that grandfathering must include the right to modify in ways that cause additional interference is a persuasive argument for rejecting grandfathering altogether.

Instead of grandfathering FS stations, the Commission should adopt the relocation approach outlined in Teledesic's initial comments.[6] FS operators should be granted a temporary "right to stay" in the newly allocated bands until January 1, 2001. Subsequently, new entrants such as Teledesic should have a "right to move" FS stations, provided they compensate the FS operators for their relocation costs.[7] After January 1, 2004, new entrants should have the right to move FS stations without compensation. As explained in our initial comments, this approach is fair to all parties involved, and maximizes efficient use of the band.

II. Exaggerated Claims of Spectrum "Loss" Ignore the Incalculable Efficiency Gains of Band Segmentation

Despite the fact that the Commission's proposal neither shrinks the band nor introduces any new allocations, the vast majority of commenters claim that they will suffer some grievous spectrum loss if it is adopted. These commenters are either intentionally mischaracterizing their gain as a loss, or else they truly fail to appreciate the benefits of band segmentation.

Any serious discussion of the Commission's proposal must begin with an honest appraisal of the status quo. Since 1984, both satellite and terrestrial services have been authorized in the 17.7-19.7 GHz band. But neither service has enjoyed *exclusive* access to *any*

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[6] Comments of Teledesic LLC, at 12-21 (filed November 19, 1998) ("Teledesic Comments").

[7] As Teledesic argued in its initial comments, it is more efficient to require new entrants to make a cash relocation payment based on a clear and objective "unamortized cost" formula than to require the new entrant to provide turnkey relocation to "comparable" facilities, with all the vagueness inherent in that term. See Teledesic Comments at 15-19.

part of the band, as both are allocated on a co-primary basis throughout. The Commission now proposes to divide the band so that 750 MHz go *exclusively* to FSS, 600 MHz go *exclusively* to FS, and the remaining 650 MHz are shared. Obviously this adds up to 2,000 MHz both before and after the Commission's proposal. No spectrum disappears.

The point of band segmentation is to use the 2,000 MHz more efficiently by "separating terrestrial fixed service operations from the operations of non-government ubiquitously deployed FSS earth stations."[8] Virtually all commenters agree that this segmentation benefits both services, much as painting a yellow line down the middle of a road benefits both northbound and southbound drivers without either increasing or decreasing the size of the road. It is this large but unquantifiable efficiency gain that undermines the competing claims of "loss" in this proceeding.

The attempts by FS commenters to quantify their alleged spectrum "losses" are perhaps the most misleading. FS operators and the organizations that represent them have claimed that if the Commission implements its proposal, Point-to-Point FS operators will lose up to 84 % of their current spectrum.[9] These claims are outlandish, because they incorrectly treat the 18 GHz spectrum currently used by the FS as if it were an exclusive rather than a shared allocation. But in fact, the FS does not currently have *any* exclusive primary allocation in the 18

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[8] *NPRM*, at ¶ 1.

[9] FPTP Comments, at 3 ("[t]he ultimate impact of this action would be either the loss of 84 % of FS point-to-point frequencies where full video distribution services are deployed, or the loss of 53% of FS point-to-point frequencies and the loss of 100% of the VIDEO distribution services); Comments of the American Petroleum Institute, at 5 (filed November 19, 1998) (American Petroleum Comments) ([t]he proposed redesignation of the 17.7-19.7 GHz band as advanced by the Commission would result in a reduction of more than 37% of the spectrum currently available for FS licensing."); FWCC Comments, at 4 (same as FPTP Comments).

GHz band. All 2,000 MHz is currently allocated to FS and FSS on a co-primary basis. Of this 2000 MHz, the Commission has designated 1,600 MHz to be shared between FS and FSS, with the remaining 400 MHz to be shared between FS and feeder links of the Mobile Satellite Service.[10] The Commission's proposal in this proceeding actually provides for FS in 1,250 of the 2,000 MHz at issue, of which 600 MHz is exclusively FS and 400 MHz need only be shared with perhaps a dozen MSS feeder links nationwide. Furthermore, the 600 MHz of exclusive FS spectrum is 600 MHz more than the FS has now. This gain cannot in good conscience be called an 84 % spectrum loss.

Several GSO FSS operators criticize the Commission's band plan on grounds that are just as problematic. Using the same faulty logic used by the FS, these GSO FSS commenters claim *they* are the victims in this proceeding. They assert that the Commission's proposal fails to grant them a 1,000 MHz block of exclusive primary spectrum they say the Commission already promised them[11] in the 28 GHz Rulemaking. But neither the Table of Allocations nor the 28 GHz Report and Order gives GSO FSS 1,000 MHz of *exclusive* spectrum for either uplinks or downlinks. In fact, neither the Table of Allocations nor the *28 GHz Report and Order* gives GSO FSS a single megahertz of exclusive downlink spectrum between 17.7 and 19.7 GHz. In the *28 GHz Report and Order*, the Commission explicitly designated the 17.7-19.7 GHz band for GSO FSS on a *co-primary basis,* noting that "there are several restrictions on

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[10] See, *NPRM*, at ¶ 7.

[11] Hughes claims that "the Commission's commitment to provide 1000 MHz of spectrum is central to Hughes' ability to provide broadband FSS services in the Ka band." Hughes Comments, at 9.

[GSO FSS] use of this band, including . . . the need to coordinate with Fixed Service . . . ."[12] Hence, adoption of the Commission's proposal to designate an additional 250 MHz of the 17.7-19.7 GHz band for GSO FSS (on top of the 500 MHz already available at 19.7-20.2 GHz) cannot be interpreted either as a loss of spectrum or as a failure to satisfy a commitment made in the 28 GHz Report and Order. In fact, the proposal preserves 1,000 MHz for GSO FSS downlinks while increasing the amount of exclusive spectrum by 250 MHz, or 50%. It is surprising that the very same GSO FSS commenters who profess to have no use at all for shared spectrum simultaneously complain about a proposal that actually converts some previously shared spectrum into exclusive spectrum.

The desire of both the FS and the GSO FSS for more spectrum is of course understandable. Every service would like to have more spectrum at its disposal. Certainly, the 500 MHz designated for NGSO FSS under the Commission's plan is far less than Teledesic would like.[13] But because the 18.8-19.3 GHz band is the only downlink band in which NGSO FSS systems need not protect the geostationary arc,[14] Teledesic must operate its service in the 500 MHz made available for NGSO FSS at WRC-95 and WRC-97. Similarly, GSO FSS operators should drop their opposition to the Commission's more generous designation of 750

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[12] Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, *First Report and Order and Fourth Notice of Proposed Rulemaking*, 11 F.C.C. Rcd. 19005, ¶ 78 (1996)("28 GHz Report and Order").

[13] *Cf.* GE American Comments, at 6 (urging the Commission to "spread the pain" to NGSO FSS systems); *id.* at 10. If 750 MHz of exclusive primary downlink spectrum is GE's idea of pain, Teledesic hereby asks the Commission for as much pain as it can inflict.

[14] Radio Regulation S5.523A.

MHz of exclusive primary and 250 MHz of co-primary spectrum. If NGSO FSS operators can provide high-quality broadband services with only 500 MHz total in each direction, then surely GSO operators should be able to provide a viable broadband service using 1,000 MHz of spectrum, even if 250 MHz is shared.

III. The Commission Should Protect the WRC-95 and WRC-97 Decisions to Designate the 18.8-19.3 GHz Band for NGSO FSS

Even though band segmentation achieves efficiencies that benefit all parties, it is still only natural for the various users who currently share the band to differ over who gets what. However, the band plan promoted by the FS industry,[15] which designates the frequencies at 19.26-19.3 GHz for FS rather than NGSO FSS, seems to have been drafted without full awareness of the unique potential of the 18.8-19.3 GHz band for NGSO FSS. The history of the 18.8-19.3 GHz band makes it imperative for the Commission to designate this full band for NGSO FSS use.

Prior to the 1995 World Radiocommunication Conference ("WRC-95"), the international regulatory structure assumed essentially that all fixed satellite services would be provided through traditional GSO technology. Consequently, NGSO FSS satellites were required, at all times and in all bands, to protect GSO networks from unacceptable interference, even if the NGSO system was in orbit before the GSO system was on the drawing board. The result was predictable: no commercial NGSO FSS systems. WRC-95

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[15] FPTP Comments, at 3-4.

changed all this by identifying the paired 18.8-19.3 GHz and 28.6-29.1 GHz bands for use by NGSO FSS networks. Of these 500 MHz NGSO FSS bands, 400 MHz was made immediately available and another 100 MHz was reserved pending further consideration at WRC-97. WRC-97 completed the work of WRC-95 by making the full 500 MHz in each direction available for NGSO FSS. Today there are at least five applications on file with the Commission to operate commercial NGSO FSS in these frequencies,[16] and they are still the only frequencies in which NGSO FSS need not protect the geostationary arc.

It is also important to recognize that NGSO FSS networks are designed to use broadband carriers — 500 MHz wide in Teledesic's case. There is therefore no practical way for an NGSO FSS system using any reasonable number of downlink carriers to use, for example, the full 500 MHz in rural areas but only a 460 MHz sub-band near an FS station. Nor, for that matter, is there any practical way for such an NGSO FSS system to use a 460 MHz sub-band in the U.S., but a different sub-band in Canada, and still another in Germany, etc. Such a design would be theoretically possible (as a sort of multi-billion-dollar science project), but it

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[16] Teledesic knows of at least five pending applications for authority to use the 28.6-29.1 GHz and 18.8-19.3 GHz bands: Application of Skybridge II L.L.C. for Authority to Launch and Operate the Skybridge II System (File No. 58-SAT-P/LA-98(96), filed Dec. 22, 1997); Application of @Contact, LLC for Authority to Construct, Launch and Operate a Nongeostationary Orbital Fixed Communications Satellite System (File No. 59-SAT-P/LA-98(20), filed Dec. 22, 1997); Application of Lockheed Martin Corporation for Authority to Launch and Operate the LM-MEO Satellite Communications System (File No. _____, filed Dec. 22, 1997); Application of Hughes Communications, Inc. for Authority to Launch and Operate Spaceway NGSO (File No. 44-SAT-P/LA-98(20), filed Dec. 22, 1997); Amendment to Application of TRW Inc. for Authority to Launch and Operate a Global Satellite System Employing Geostationary and Nongeostationary Satellites in the Fixed-Satellite Service (File No. _____, filed Dec. 22, 1997).

would not be economically feasible to build satellites capable of making minute adjustments to carrier bandwidth and center frequency from country to country.[17]

The FS, to be sure, has its own reasons for claiming the frequencies at 19.26-19.3 GHz. An exclusive primary allocation for NGSO FSS would require at least some existing users in the 19.26-19.3 GHz FS channels to be accommodated elsewhere. But Comsearch, which proposes to designate the entire 18.8-19.3 GHz band for NGSO FSS, opines that most displaced FS operations can be accommodated elsewhere in the 18 GHz band.[18] Furthermore, even in rare instances where an FS operator might be required to relocate to another band,[19] the FS operator has a number of viable options. By contrast, in the whole 300 GHz Table of Allocations, there is no substitute for the NGSO FSS downlink spectrum at 18.8-19.3 GHz. Finally, the FS operator is entitled to compensation for the relocation. If the frequencies at 19.26-19.3 GHz were instead designated exclusively for FS, how could FS operators possibly

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[17] Distinct carrier bandwidths on a country-by-country basis would require a larger number of carriers, each using a much narrower bandwidth. This would dramatically increase the already astronomical costs of constructing the satellites, as well as the weight and complexity of each satellite. Such a design would also substantially increase either the minimum size of each user terminal or the power requirements on each satellite. Furthermore, each user terminal would also need to be capable of using narrower bandwidths on varying center frequencies, which could result in different filtering requirements for terminals in different countries.

[18] Comsearch Comments at 4, 5 n.11.

[19] The U.S. Table of Frequency Allocations identifies approximately 10 GHz of commercial FS spectrum between 10 and 50 GHz. The 40 MHz at issue therefore constitutes 4/1000 of the total spectrum available to the FS industry.

compensate *Teledesic* for relocating to alternative spectrum when no such alternative spectrum exists?[20]

Thus, while Teledesic understands the desire of FS operators to continue operating at 19.26-19.3 GHz, the 40 MHz in question has unique potential for NGSO FSS service. Indeed, a U.S. segmentation plan that diverges from the decisions of the last two WRCs would introduce enormous and disastrous complexity for NGSO FSS worldwide by encouraging other administrations to follow suit, and perhaps carve out different portions of the 18.8-19.3 GHz band. If administrations were to adopt distinct designations in this manner, implementing NGSO FSS would be, for all intents and purposes, impossible. The Commission should not squander the gains made at WRC-95 and WRC-97 by designating any portion of this hard-won spectrum for FS operations that can just as easily be accommodated elsewhere in the 1,250 MHz of FS spectrum proposed by the Commission in its 18 GHz band plan.

IV. The Costs Associated with an FS Secondary Allocation Far Exceed The Benefits

A secondary allocation for the FS in FSS primary bands would introduce unnecessary cost and delay to the provision of satellite broadband service without providing a

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[20] FS interests also argue that designating the 19.26-19.3 GHz frequencies for NGSO FSS costs the FS 80 MHz rather than 40 MHz, because an inability to use these channels necessarily deprives the FS of the ability to use the paired channels at 17.7-17.74 GHz. This argument is at best a wash for the FS, since by exactly parallel logic a decision to designate only 460 MHz of downlink for NGSO FSS would impair the 500 MHz uplink designation for NGSO FSS at 28.6-29.1 GHz. And in reality, although the channels at 17.7-17.74 GHz might be less useful without the paired channels at 19.26-19.3 GHz, these lower channels are relatively undesirable in any event due to the co-primary BSS allocation proposed at 17.7-17.8 GHz. Moreover, even if these frequencies could no longer be used as part of a two-way link, there are an increasing number of asymmetric applications for which one-way terrestrial links are useful.

corresponding benefit to the FS.[21] As FS commenters have acknowledged, a secondary allocation is of little benefit to FS operators because it will be inherently preemptible.[22] But the allocation could be extraordinarily burdensome to FSS. As one commenter put it:

> As a result of the potential for interference, secondary FS operation in primary FSS spectrum substantially undermines the primary benefit of a sole primary allocation: to avoid interference from the secondary service and the cost and delay associated with interservice coordination. The coordination scheme proposed by the Commission — which involves burdensome requirements on FSS licensees to report the specific location of millions of user terminals, combined with time-consuming procedures to resolve interference from secondary' FS stations only after it has occurred — cannot rectify the substantial disruption that secondary FS operations will cause to primary FSS systems.[23]

As discussed above, NGSO FSS and GSO FSS will be consumer services designed to serve a mass market. Keeping track of the location of millions of user terminals, identifying and attempting to resolve disputes regarding the cause of interference, and waiting for FS operators to attempt to "cure" interference would both raise the costs of providing FSS and substantially undermine the quality of service it delivers. Again, FS commenters themselves have acknowledged that "any type of interference, and especially intermittent interference, is

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21 Many commenters agree. *See, e.g.*, Comments of Loral Space and Communications Ltd., at 7 (Nov. 19, 1998); Lockheed Martin Comments at 9; TIA SOUS Comments.

22 *E.g.*, BellSouth Comments, at 4 (noting that "the half of a frequency pair that would be relegated to secondary status would be required to accept interference from any primary use" and "the normally expected high reliability associated with terrestrial microwave would be rendered meaningless"). *See also* Comments of the Association of American Railroads, at 7 (where half of a channel pair is secondary, "the entire paired allocation . . . will be useless for future FS use"); FPTP Comments, at 5 (FS channels at 18.58-18.82 GHz of "no use" to FS because paired channels have only secondary status); Fixed Wireless Coalition Comments, at 8 (same).

23 Lockheed Martin Comments, at 9.

EXTREMELY difficult to identify, locate, and resolve."[24] Providing an inherently preemptable allocation to FS does not justify such a burden.

V. Conclusion

The comments filed so far in this proceeding indicate widespread endorsement of the Commission's proposal to segment the 18 GHz band and to allow blanket licensing of satellite earth terminals. The comments also reveal equally widespread skepticism about the Commission's grandfathering proposal, which the Commission should abandon in favor of a relocation plan based on its *Emerging Technologies* framework. Regarding the particulars of any band plan, the Commission should not allow disingenuous claims of spectrum loss to dissuade it from adopting a sensible segmentation plan that actually benefits all these critics, though perhaps not as abundantly as they may desire. The Commission should also protect the decisions of WRC-95 and WRC-97 by adopting its proposal to designate the entire 18.8-19.3 GHz band for NGSO FSS downlinks. Finally, the Commission should abandon its proposal to designate all FSS spectrum for secondary FS use.

Respectfully submitted,

By: _____

Mark A. Grannis
Evan R. Grayer
HARRIS, WILTSHIRE & GRANNIS LLP
1200 EIGHTEENTH STREET, N.W.
WASHINGTON, D.C. 20036
(202) 730-1300

Attorneys for Teledesic LLC

December 21, 1998

[24] FPTP Comments, at 10.

CERTIFICATE OF SERVICE

I, Lee Mullins, with the law firm of Harris, Wiltshire & Grannis LLP, do hereby certify that copies of the foregoing Reply Comments of Teledesic LLC were served on the parties listed below by first-class U.S. mail, postage prepaid, on this 21st day of December, 1998.

Barry J. Ohlson
WinStar Communications, Inc.
1146 19th Street, N.W.
Suite 200
Washington, D.C. 20036

Bruce D. Jacobs
Stephen J. Berman
Fisher Wayland Cooper Leader & Zaragoza L.L.P.
2001 Pennsylvania Avenue, N.W.
Suite 400
Washington, D.C. 20006

Christopher R. Hardy
COMSEARCH
2002 Edmund Halley Drive
Reston, Virginia 20191

Cleveland Lawrence III
Cellular Telecommunications Industry Association
1250 Connecticut Avenue, N.W.
Suite 200
Washington, D.C. 20036

David K. Moskowitz
Senior Vice President and General Counsel
EchoStar Communications Corp.
90 Inverness Circle East
Englewood, Colorado 80112

Francis L. Young
Young & Jatlow
2300 N Street, N.W.
Washington, D.C. 20037

Gail L. Polivy
GTE Service Corporation
1850 M Street, N.W.
Washington, D.C. 20036

John F. Raposa
GTE Service Corporation
600 Hidden Ridge, HQE03J27
P.O. Box 152092
Irving, Texas 75015-2092

Gary M. Epstein
James H. Barker
Kimberly S. Reindl
John P. Janka
Arthur S. Landerholm
Latham & Watkins
1001 Pennsylvania Avenue, N.W.
Suite 1300
Washington, D.C. 20004-2505

Gerald Musarra
Jennifer A. Warren
Lockheed Martin Corporation
1725 Jefferson Davis Highway
Crystal Square 2, Suite 300
Arlington, Virginia 22202

Ray Bender
Carlos Nalda
Dow, Lohnes & Albertson
Suite 800
1200 New Hampshire Avenue, N.W.
Washington, D.C. 20036

Gerald S. Rosenblatt
Telecommunications Industry Association
2500 Wilson Boulevard
Suite 300
Arlington, Virginia 22201

William Lye, Chairman
Spectrum and Orbit Utilization Section of the
Satellite Communications Division of the
Telecommunications Industry Association
2500 Wilson Boulevard
Suite 300
Arlington, Virginia 22201

Gina Harrison
Director – Federal Regulatory
SBC Communications Inc.
1401 I Street, N.W.
Suite 1100
Washington, D.C. 20005

Henry L. Baumann
Barry D. Umansky
National Association of Broadcasters
1771 N Street, N.W.
Washington, D.C. 20036

Howard J. Symonds
Sara F. Seldman
Michelle M. Mundt
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
701 Pennsylvania Avenue, N.W.
Suite 900
Washington, D.C. 20004

James M. Talens
Steptoe & Johnson LLP
1330 Connecticut Avenue, N.W.
Washington, D.C. 20036

Jay L. Birnbaum
Cheryl L. Hudson
Skadden, Arps, Slate, Meagher & Flom LLP
1440 New York Avenue, N.W.
Washington, D.C. 20005

Jeffrey L. Sheldon
UTC, The Telecommunications Association
1140 Connecticut Avenue, N.W.
Suite 1140
Washington, D.C. 20036

Jonathan D. Blake
Gerard J. Waldron
Erin M. Egan
Covington & Burling
1201 Pennsylvania Avenue, N.W.
Washington, D.C. 20044

Joseph P. Markoski
Herbert E. Marks
David A. Nall
Bruce A. Olcott
Squire, Sanders & Dempsey L.L.P.
1201 Pennsylvania Avenue, N.W.
P.O. Box 407
Washington, D.C. 20044-0407

Leonard Robert Raish
George Petrutsas
Fletcher, Heald & Hildreth, P.C.
1300 North 17th Street
Eleventh Floor
Arlington, Virginia 22209

Norman P. Leventhal
Stephen D. Baruch
David S. Keir
Leventhal, Senter & Lerman, P.L.L.C.
2000 K Street, N.W.
Suite 600
Washington, D.C. 20006

Pamela J. Riley
David A. Gross
Steve Sharkey
AirTouch Communications
1818 N Street, N.W.
Suite 800
Washington, D.C. 20036

Patricia A. Mahoney
Brent H. Weingardt
Iridium LLC
1575 Eye Street, N.W.
Washington, D.C. 20005

Paul J. Sinderbrand
William W. Huber
Wilkinson, Barker, Knauer & Quinn, LLP
2300 N Street, N.W.
Washington, D.C. 20037-1128

Pete Wanzenried
Chief Public Safety Radio Services
Telecommunications Division
601 Sequoia Pacific Boulevard
Sacramento, California 95814-0282

Philip L. Verveer
Stephen R. Bell
Jennifer D. McCarthy
Willkie Farr & Gallagher
Three Lafayette Centre
1155 21st Street, N.W.
Washington, D.C. 20036-3384

Phillip L. Spector
Jeffrey H. Olson
Diane C. Gaylor
Paul, Weiss, Rifkind, Wharton & Garrison
1615 L Street, N.W.
Suite 1300
Washington, D.C. 20036

Richard Ocko
AESCO Systems
14 South Bryn Mawr Avenue
Bryn Mawr, Pennsylvania 19010

Robert J. Miller
Gardere & Wynne, L.L.P.
Thanksgiving Tower
1601 Elm Street
Suite 3000
Dallas, Texas 75201

Robert M. Gurss
Wilkes, Artis, Hedrick & Lane, Chartered
1666 K Street, N.W.
Suite 1100
Washington, D.C. 20006

Ron Coles, Chairman
Erich Schimmel, Vice President
Fixed Point-to-Point Communications Section
Wireless Communications Division of the
Telecommunications Industry Association
2500 Wilson Boulevard
Suite 300
Arlington, Virginia 22201

Sam Antar
Vice President, Law & Regulation
ABC, Inc.
77 West 66th Street
New York, New York 10023

Stephen E. Coran
David G. O'Neil
Rini, Coran & Lancellotta, P.C.
1350 Connecticut Avenue, N.W.
Suite 900
Washington, D.C. 20036

Thomas J. Keller
John M.R. Kneuer
Verner, Liipfert, Bernhard, McPherson and Hand,
Chartered
901 15th Street, N.W.
Suite 700
Washington, D.C. 20005

Thomas R. Gibbon
Anthony Black
Bell Boyd & Lloyd
1615 L Street, N.W.
Suite 1200
Washington, D.C. 20036

Thomas R. Johnston
Executive Director, Regulatory Affairs
Loral Space & Communications Ltd.

VisionStar, Inc.
40 E. 21st Street
Suite 11
New York, New York 10010

W. Kenneth Ferree
Law Offices
Goldberg, Godles, Wiener & Wright
1229 Nineteenth Street, N.W.
Washington, D.C. 20036

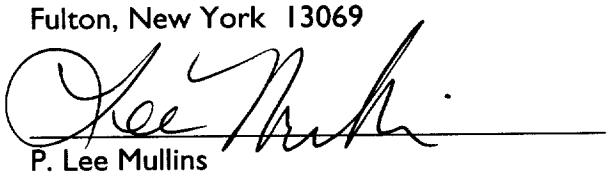
Wayne V. Black
John Reardon
Keller and Heckman LLP
1001 G Street, N.W.
Suite 500 West
Washington, D.C. 20001

William B. Barfield
Jim O. Llewellyn
1155 Peachtree Street, N.E.
Suite 1800
Atlanta, Georgia 30309-3610

David G. Frolio
1133 21st Street, N.W.
Suite 900
Washington, D.C. 20036

William F. LeBeau
Peter A. Rohrbach
Karis A. Hastings
Hogan & Hartson, L.L.P.
555 13th Street, N.W.
Washington, D.C. 20004

William R. Lye
National Spectrum Managers Association, Inc.
1529 County Route 8
Fulton, New York 13069



P. Lee Mullins