

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

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)

FWCC Request for Declaratory Ruling on)
Partial-Band Licensing of 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 for Very Small Aperture)
Terminal Satellite Network Operations at C-)
Band)

Ex Parte Letter Concerning Deployment of)
Geostationary Orbit FSS Earth Stations in the)
Shared Portion of the Ka-band)
_____)

IB Docket No. 00-203)
RM-9649

SAT-PDR-19990910-00091

COMMENTS OF TELEDESIC LLC

Teledesic LLC respectfully submits comments on the Notice of Proposed Rulemaking in the above-captioned proceeding. Teledesic strongly opposes the rules proposed to address the concerns raised by the Fixed Wireless Communications Coalition ("FWCC") in its May 5, 1999 Request for Declaratory Ruling about purported inequities in spectrum use by Fixed-Satellite Service ("FSS") operators in bands shared with Fixed Service ("FS"). Rather than serving the public interest by promoting the effective and equitable use of spectrum, promulgation of these rules would unduly constrain FSS operators in shared bands and jeopardize the important array of services they deliver to the public.

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In the NPRM, the Commission wisely rejected the FWCC's specific proposals to limit *a priori* the use of spectrum in shared bands based on its recognition that different regulatory and spectrum management regimes are necessary for the FS and the FSS, and that the Commission's full band licensing policy "promotes important operational objectives in FSS."¹ However, the alternative relief proposed by the Commission seems grounded in tacit acceptance of the FWCC's thesis: that since not all FSS earth stations use the full licensed band for regular transmissions, they are in effect warehousing spectrum that should be liberated in favor of FS operators. The Commission's acceptance of this claim does violence to the satellite licensing regime associated with full-band licensing.

The Commission's proposed revisions to the Part 25 rules for Fixed Satellite Service – adding a "demonstrated use requirement" and revised interference coordination requirements in the C and Ku bands – ignore the heavy, reasoned opposition to the FWCC's petition from satellite operators and the users who depend on them. The rules are a surprising departure from the Commission's long-standing recognition of the unique nature of satellite services– all the more surprising when the Commission expresses uncertainty about whether a sharing problem even exists between the FS and FSS.²

Given the strong record in this proceeding against revising the Part 25 rules, the Commission has an obligation to abandon the proposed rules for FSS operators in the C and Ku bands. It is, however, even more urgent that the Commission explicitly clarify that the proposals developed for the unsegmented C and Ku bands are entirely inappropriate in the Ka

¹ *Notice of Proposed Rulemaking*, FCC 00-369, IB Docket No. 00-203, RM- 9649, SAT-PDR-1999-0910-00091 (released October 24, 2000), ¶ 40 (hereinafter "NPRM").

² *Id.* at ¶30.

band where the Commission has segmented the band to keep FS and FSS networks separate and thereby avoid sharing problems.

I. The Commission Has Properly Rejected the FWCC's Proposals, But the Alternative Measures Proposed by the Commission Are Unnecessary.

Teledesic congratulates the Commission for its recognition that the traditional full-band, full-arc licensing approach for satellites is driven by the distinctive architecture of satellite networks. In particular, Teledesic agrees that the Commission's "full-band licensing policy promotes important operational objectives in the FSS, . . . by providing earth station licensees the needed flexibility to change transponders or satellites on short notice, and without having to be re-licensed by the Commission, to meet changing operational requirements."³ Teledesic also agrees with the Commission's rejection of specific spectrum efficiency standards for the FSS,⁴ and its recognition that the FSS is already subject to numerous technical constraints designed to promote spectrum efficiency.

However, in its attempts to "address[] the concern of the FS community regarding access to spectrum,"⁵ the Commission seems to forget the very sound principles on which its rejection of the FWCC's proposals was based. For example, the Commission rightly concludes that operational flexibility justifies full-band licensing, and that it justifies full-band coordination with the FS for the first two years after earth station licensing. But the Commission inexplicably proposes a "demonstrated use" criterion for coordinations occurring more than two years after earth station licensing. Why? Is operational flexibility less important in the

³ *Id.* at ¶ 40.

⁴ *Id.* at ¶ 59.

⁵ *Id.* at ¶ 44.

third year of an earth station license than in the first? Given the fact that the mix of space stations is constantly changing, is it not more reasonable to assume that the need for operational flexibility continues throughout the full license term? Indeed, in the normal course of events, doesn't the risk that an in-orbit failure will require the repointing of an earth station actually *increase* as time passes?

The root of the problem seems to be that the Commission has been hoodwinked into framing the issue as one of equal treatment for terrestrial and satellite services. In fact, the public interest is not served by treating the two services the same; it is served by treating two services *appropriately*. One cannot decide how to regulate satellites by laying the satellite rules side by side with the terrestrial rules and looking for parallels and divergences. That is the legendary Procrustean error. Instead, the Commission must continue to regulate the satellite services in a way that maximizes their usefulness to the public, and do the same for terrestrial services. If it turns out that the resulting regulatory regimes are inconsistent with co-primary sharing of any particular band, then the Commission should exercise its spectrum management responsibilities to separate the two services, as it has done at 2 GHz, 12 GHz, 18 GHz, 28 GHz, and 38 GHz (a non-exhaustive list).

It is therefore misleading to frame the question in terms of either service's "advantage" in securing adequate spectrum. Indeed, if "advantage" were the criterion, any fair-minded observer would agree that the terrestrial services have a tremendous advantage in securing adequate spectrum because their scale and cost are so much smaller, and their technology and market issues are so much simpler, that they can often deploy years ahead of satellite networks. Yet it would obviously be inappropriate to burden the FS with all the factors that contribute to long lead-times for satellite deployment. It would be inappropriate to require every FS

applicant to notify frequency assignments to the ITU, even in the name of equal treatment. It would be inappropriate to require FS networks to cover the 48 continental United States, even in the name of equal treatment. Likewise, “equal treatment” is not a sufficient – or even a rational – basis for limiting either the frequencies or the azimuths over which satellite earth station licensees are protected from interference.

Moreover, the new regulations proposed by the Commission open a Pandora’s box of definitional problems, as the Commission itself recognizes.⁶ It is evident that no narrow definition of “use” will do justice to the operational flexibility that satellite networks are designed to provide; and yet once the language is broadened sufficiently to account for the way in which satellite earth stations are in fact “used,” it is difficult to see how such a broad rule would differ materially from the current full-band, full-arc approach (except that it would generate much more controversy). Similarly with the Commission’s proposed rule on subsequent coordinations: Once we acknowledge that some coordination concessions are simply the result of necessary compromise in favor of an FS licensee with priority in the band, then no subsequent coordination can ever really be a “like case” that should be “treated alike” because it was the priority that determined the first result and will determine the second as well.

Teledesic therefore encourages the Commission to follow its better instincts and continue to regulate satellite services in the manner appropriate to satellite services. The Commission can continue its current policy in the comfort that there is an active market in GSO transponders. This market helps ensure that satellite usage remains competitive and economic – should any operator fail to attract sufficient market-driven “use” the satellite

⁶ *Id.* at ¶¶ 54, 59, and 77.

network will go out of business. (This cannot be said for point-to-point FS systems that are user-dedicated.) For the same reasons that the Commission rejected the FWCC's proposals, it should withdraw its own alternative proposals on "demonstrated use" and subsequent coordinations.

II. The Alternative Measures Proposed by the Commission Are Particularly Inappropriate in Segmented Bands.

The Commission notes several times in the NPRM, that its proposals are intended only for bands in which satellite and terrestrial services share on a co-primary basis. It should be clear, therefore, that the proposals are inapplicable to bands in which the Commission has opted for band segmentation. Unfortunately, it is not.

In the 18 GHz band, for example, the Commission has recently segmented almost the entire band to keep FS and FSS networks separate.⁷ Unfortunately, there are some exceptions to this policy, including not only the 18.3-18.58 GHz band (shared by GSO FSS and CARS stations), but also the 18.82-18.87 and 19.16-19.21 GHz sub-bands (shared by the NGSO FSS and an apparently non-existent class of low-power terrestrial operators). The Commission's decision to leave low-power FS operators in the middle of an 18.8-19.3 GHz band that is otherwise reserved for NGSO FSS has never been adequately explained, and is quite mysterious in light of the fact that Teledesic strongly argued against the proposal and not a single comment in favor of co-primary sharing between these services was ever published. However, it would greatly compound the Commission's earlier error if in this proceeding the

⁷ *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 for Broadcast Satellite-Service Use, FCC 00-212 (rel. June 22, 2000)(the "18 GHz Order).*

Commission were to saddle NGSO FSS operators with the proposals it has developed for the unsegmented C and Ku bands.

Moreover, even in band segments where the Commission has clearly designated a primary use, the Commission's flawed relocation rules guarantee that co-primary sharing will continue to take place for up to ten years.⁸ Combined with the Commission's unbelievably liberal standard for the modification of grandfathered FS stations in segmented spectrum, the "demonstrated use" and subsequent coordination regulations proposed in this proceeding could inflict real harm on satellite licensees who must spend billions of dollars to deploy, in reliance on the Commission's assurances that exclusive primary spectrum would be available in the 18 GHz band.

This portion of the NPRM is too urgent to be held up while the various C-band and Ku-band issues are resolved. The Commission should *promptly – within two or three months* – issue a First Report and Order in this proceeding, establishing that recently segmented bands such as the 18 GHz band will be entirely unaffected by the proposals under consideration here.

⁸ See *18 GHz Order* at ¶¶ 67-84. In the *18 GHz Order* the Commission established a sunset provision for existing terrestrial service systems operating in spectrum designated by the order for exclusive satellite use. Grandfathered terrestrial fixed service operators are thereby permitted to continue to operate on a co-primary basis with satellite operators for a period of ten years subject to the overriding right of satellite providers to require terrestrial fixed stations to relocate. If a grandfathered terrestrial fixed station is compelled to relocate within the ten-year sunset period, the satellite provider must pay for the relocation costs associated with the establishment of comparable facilities in another band. At the conclusion of the ten-year sunset period, terrestrial fixed stations may continue to operate, but only on a non-interference basis. (Note that in the case of 19.26-19.30 GHz, the co-primary status of grandfathered terrestrial fixed stations, as well as their entitlement to relocation costs, is permanent.).

III. A Modest Proposal

Finally, the Commission seeks comment on whether limiting the frequencies and azimuths available to existing FSS earth station licensees would “constitute a modification to the FSS earth station license and, if so, what Commission procedures would be required before re-licensing could occur?”⁹

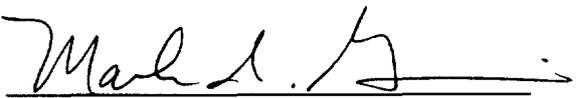
Teledesic believes the Commission can eliminate its litigation risk in this situation by employing the relocation procedures it has already developed in other proceedings. In the event that an FS applicant wishes to coordinate the use of frequencies or azimuths that are already assigned to an FSS earth station operator, the FS applicant should be entitled to negotiate with the FSS earth station operator over the right to use the spectrum in question. The FS applicant might negotiate a “voluntary” relocation, with the FSS earth station operator demanding a cash payment of pretty much whatever she pleased. Alternatively, the FS applicant could invoke involuntary relocation by providing comparable facilities in another band. The FS applicant might in that case be forced to spend hundreds of millions of dollars on a new geostationary satellite in a suitable band and orbit location – or billions on a new compatible NGSO constellation. But, according to recent orders of the Commission, this would be neither a windfall to the FSS nor an undue burden on the FS. Naturally, the FS applicant providing the comparable facilities would be required to complete all necessary ITU-R activities on behalf of the relocated satellite operator. Perhaps the FS operator’s customer would wait that long. In any event, having recently wheedled the Commission into accepting the idea that responsible spectrum management requires large checks to change hands, the FWCC is in no position to argue that the spectrum concessions it now seeks should come free of charge.

⁹ NPRM at ¶ 58.

The point of this puckish suggestion is not merely to show how unbalanced the Commission's relocation policies are, nor even to demonstrate that the Commission's proposals in this proceeding effectively revoke part of the interference protection in every FSS earth station license. The point is to show how badly the Commission can err when it ignores the essential differences between satellite and terrestrial services. The Commission must not make that mistake in this proceeding. For all of the foregoing reasons, the Commission should abandon the "demonstrated use" and subsequent coordination proposals in the NPRM and terminate the proceeding.

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CERTIFICATE OF SERVICE

I hereby certify that on this 8th day of January, 2001, I served a copy of the foregoing Comments of Teledesic LLC by first class U.S. mail, postage-prepaid to the following:

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