

**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 in the Fixed-Satellite Service That Share Terrestrial Spectrum)	IB Docket No. 00-203 RM-9649
)	
FWCC Petition for Rulemaking 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 for Very Small Aperture Terminal Satellite Network Operations at C- Band)	SAT-PDR-19990910-00091
)	
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 ONSAT NETWORK COMMUNICATIONS, INC.

OnSat Network Communications, Inc. (“OnSat”) files these replies to comments to the Commission’s *Notice of Proposed Rulemaking* in the above-captioned matter (“*Notice*”),¹

¹ *In re FWCC Request for Declaratory Ruling on Partial-Band Licensing of Earth Stations in the Fixed-Satellite Service that Share Terrestrial Spectrum, FWCC Petition for Rulemaking to Set Loading* (continued...)

focusing particularly on the streamlined licensing of C-Band small aperture terminal (“CSAT”) satellite earth stations under a single authorization.²

As the comments in this proceeding make clear, the Commission’s proposal to adopt streamlined CSAT licensing is a welcome improvement over today’s unnecessarily complex and time-consuming licensing procedures. However, in order to fully realize the benefits of streamlined licensing, the Commission should adopt two changes to the proposed rules. *First*, the Commission should not require a CSAT network operator to wait for 30 days to operate once it has completed frequency coordination for an individual remote earth station antenna. OnSat has no objection to notifying the public of the frequency coordination information of remote CSAT antennas and believes such notice serves the purpose of ensuring that industry earth station databases are current. However, requiring CSAT network operators to wait for 30 days (and realistically, it would be considerably more than that) before operating pre-coordinated remote CSAT antennas serves no purpose. No comment runs counter to this proposal. *Second*, as many commenters noted, the Commission should recognize the operational difficulties faced by fixed-satellite service (“FSS”) operators and permit flexibility in the design of CSAT networks. A specific bandwidth limit for all CSAT networks, particularly a limit as unworkably low as 20 MHz over a very few orbital slots, does not provide sufficient flexibility.

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 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, Ex parte Letter Concerning Deployment of Geostationary Orbit FSS Earth Stations in the Shared Portion of the Ka-Band, Notice of Proposed Rulemaking, FCC 00-369, IB Docket No. 00-203, RM-9649, SAT-PDR-19990910-00091 (rel. Oct. 24, 2000).

² *Notice* ¶¶ 81–97. It was a petition by OnSat that prompted these parts of the *Notice*. See OnSat Petition for Declaratory Order and Waiver and Request for Expedited Action, File No. SAT-PDR-19990910-00091, Public Notice, Report No. SAT-00026 (rel. Sept. 23, 1999) (“OnSat Petition”).

I. THE COMMISSION SHOULD ADOPT STREAMLINED LICENSING PROCEDURES FOR CSAT NETWORKS, AS SUPPORT FOR THIS PROPOSAL IS UNANIMOUS.

The comments in this proceeding that address CSAT licensing — including those from parties that represent the interests of the terrestrial fixed service (“FS”) community — are unanimous in their support for streamlined licensing procedures for CSAT networks.³ The Commission’s proposed rules permit licensing of CSAT networks under a single lead authorization, with each subsequent remote antenna requiring frequency coordination prior to activation. The streamlined licensing of CSAT networks will simplify the licensing process for such networks⁴ and serve the public interest by facilitating the deployment of broadband communications service to underserved rural and tribal areas.⁵ The streamlined licensing of CSAT networks is also consistent with the Commission’s recent deregulatory initiatives⁶ and is consistent with the streamlined procedures already in place for Ku-Band networks generally and for at least one C-Band operator.⁷

³ See *Comments of Comsearch* at 9–10 (Jan. 8, 2001) (“Comsearch Comments”); *Comments of the Fixed Wireless Communications Coalition* at 22–23 (Jan. 8, 2001) (“FWCC Comments”); *Comments of Home Box Office and Turner Broadcasting System, Inc.* at 5 (Jan. 8, 2001) (“HBO/TBS Comments”); *Comments of JFL Communications, Inc.* at 3 (Jan. 8, 2001) (“JFL Comments”); *Comments of Lockheed Martin Global Telecommunications, Inc.* at 9–11 (Jan. 8, 2001) (“LMGT Comments”); *Comments of Loral Space & Communications Ltd.* at 13 (Jan. 8, 2001) (“Loral Comments”); *Comments of OnSat Network Communications, Inc.* at 6–10 (Jan. 8, 2001) (“OnSat Comments”); *Comments of Telesat Canada* at 14–15 (Jan. 8, 2001) (“Telesat Canada Comments”); *Comments of Virtual Geosatellite, LLC* at 14–16 (Jan. 8, 2001) (“Virtual Geosatellite Comments”).

⁴ See JFL Comments at 3.

⁵ See HBO/TBS Comments at 5; JFL Comments at 3; OnSat Comments at 2–3.

⁶ See OnSat Comments at 4 & n.6

⁷ See *id.* at 8–12.

The proposed streamlined procedures for licensing CSAT networks are a step in the right direction. However, as discussed below, the proposed procedures do not go far enough to ensure the efficient and realistic implementation of such networks.

II. ONCE FREQUENCY COORDINATION FOR AN INDIVIDUAL CSAT EARTH STATION IS COMPLETE, A FURTHER 30-DAY PUBLIC COMMENT PERIOD IS UNNECESSARY AND SHOULD NOT BE REQUIRED.

Only one party, in addition to Onsat, commented on the proposed public notice period that would delay activation of CSAT remotes for an additional month or more after all the coordination and notifications have been completed. Comsearch believes that public notification of coordinated CSAT antennas serves to keep industry earth station databases up to date.⁸ OnSat wishes to clarify that it supports notifying the public of the frequency coordination information for each remote CSAT earth station for the reasons that Comsearch advances. In fact, the Commission could make public via its website or some other mechanism the CSAT remote antennas an operator has coordinated as soon as the CSAT licensee submits proof of coordination and the technical information on the remote antennas. However, OnSat opposes — and neither Comsearch nor any other party supports — the proposed business-breaking 30-day waiting period that delays activation of remote antennas that have already been coordinated.

As OnSat explained in its initial comments, the post-coordination public notice period is unnecessary, wasteful, and unduly burdensome.⁹ Prior to the submission to the FCC of proof of coordination of any CSAT remote site (the step that OnSat believes should, and that the

⁸ See Comsearch Comments at 10.

⁹ See OnSat Comments at 12–18.

Commission allows in many cases to, trigger activation¹⁰), all affected parties already will have been notified of the remote and will have had a chance to object during the frequency coordination process.¹¹ The extensive frequency coordination process identifies all parties that are susceptible to interference from the proposed antenna and addresses any objections they may have.¹² To address Comsearch’s concern that the industry needs frequency coordination information in order to keep its databases updated, public *notice* following activation of a site is desirable. However, a public *comment* period following successful frequency coordination and prior to activation is redundant, unnecessary, and burdensome.¹³

Should the Commission decide that it must retain the public comment period in addition to a public notice, the Commission should adopt rules that permit conditional authorization similar to those in place for C-Band FS operators.¹⁴ Under the Commission’s conditional authorization rules for C-Band FS operators, an applicant may begin operating an antenna upon submission of an application that meets the following conditions: (1) the frequency coordination has been successfully completed; (2) the antenna structure complies with FAA requirements; (3) the grant of the application does not require a waiver of the Commission’s rules; (4) the antenna does not pose environmental concerns; (5) the antenna does not lie within 56.3 km of an international border or within a radio “Quiet Zone”; and (6) the filed application is consistent

¹⁰ See *In re GTE Spacenet Corporation Streamlined Licensing Procedures for 4/6 GHz Earth Stations, Order and Authorization*, 7 FCC Rcd 5217, 5217 (1992) (“*GTE Spacenet Order*”) (requiring GTE Spacenet to complete frequency coordination before bringing each remote CSAT antenna into service); *Notice* ¶ 85; see also 47 C.F.R. § 101.31(b) (establishing conditional authorization rules for terrestrial FS users, allowing them to begin operating antennas after completing frequency coordination).

¹¹ See *OnSat Comments* at 12–17.

¹² See *id.* at 13–14; *id.* at Attachment A (Statement of Ken Ryan, Comsearch).

¹³ See *id.* at 12–18.

with the proposal that was frequency coordinated.¹⁵ There is no reason that similar procedures should not be available to CSAT operators that share the C-Band with terrestrial FS users. The proposed rules already require CSAT applicants to file a coordination notification that “will include the location of each station, as well as a certification that frequency coordination has been completed and that the earth station complies with all environmental and Federal Aviation Administration requirements.”¹⁶ The only remaining element of the comparable requirements for FS conditional authorization is a showing that the grant of the application does not require a waiver of Commission rules — this would be established in the lead CSAT application. Adopting conditional authorization rules for CSAT operators would make similar procedures available to all C-Band users. Adopting such rules also would allow CSAT operators to promptly begin serving their customers — many of whom are in remote and underserved areas and have no other options for broadband service.¹⁷

In summary, whether it does so through a post-activation public notice or by establishing conditional authorization rules, the Commission should permit CSAT operators to begin operating remote antennas immediately upon the successful completion of frequency coordination. Eliminating the proposed 30-day waiting period before a CSAT operator can begin operating a remote antenna would bring the Commission’s rules in line with rules already in place for FS users, Ku-Band VSAT networks, and at least one CSAT operator, would eliminate a

¹⁴ See 47 C.F.R. § 101.31(b).

¹⁵ *Id.*

¹⁶ Notice ¶ 89. Note that the small size of remote CSAT antennas means that they should not pose FAA or environmental concerns. See OnSat Comments at 15–16.

¹⁷ OnSat Comments at 17–18.

redundant notice period, and would prevent the Commission's rules from being unduly burdensome.

III. THE COMMISSION SHOULD NOT ADOPT A SPECIFIC LIMIT ON SPECTRUM USE BY CSAT NETWORKS.

In criticizing the Commission's "demonstrated use" proposal,¹⁸ numerous commenters stress the importance of flexibility in spectrum use by satellite operators in light of the operational difficulties faced by satellite networks.¹⁹ The uncertainty of satellite operations caused by, for example, satellite failure and severe weather conditions, requires that CSAT network operators be able to use different satellites and transponders.²⁰ The transponders and frequencies earth stations use are often dictated by the satellite operator and beyond the control of the earth station licensee, making operational flexibility all the more important.²¹ Satellite networks also require operational flexibility in their frequency use in order to meet evolving market and customer demands,²² as well as to ensure necessary network redundancy and

¹⁸ Notice ¶¶ 26–61.

¹⁹ See, e.g., *Comments of Catalina Transmission Corp.* at 3–6 (Jan. 8, 2001) ("Catalina Comments"); HBO/TBS Comments at 6; JFL Comments at 3–4; Loral Comments at 4–8; *Comments of National Public Radio, Inc.* at 4–7 (Jan. 8, 2001) ("NPR Comments"); *Comments of PanAmSat Corporation* at 2–7 (Jan. 8, 2001) ("PanAmSat Comments"); *Comments of the Satellite Industry Association et al.* at 12–17, 24–28 (Jan. 8, 2001) ("SIA Comments"); Telesat Canada Comments at 6.

²⁰ See Catalina Comments at 4; HBO/TBS Comments at 6–8; Loral Comments at 6; NPR Comments at 4; PanAmSat Comments at 3–5; SIA Comments at 14–15; *Comments of GE American Communications, Inc.* at 12 (Jan. 8, 2001) ("GE American Comments"); *Comments of Hughes Network Systems et al.* at 6 (Jan. 8, 2001) ("Hughes Comments").

²¹ See Catalina Comments at 4; GE American Comments at 12–13; LMGT Comments at 4–5; PanAmSat Comments at 6–7; SIA Comments at 14, 26–27; Telesat Canada Comments at 6.

²² See JFL Comments at 4; GE American Comments at 13–14; HBO/TBS Comments at 7; Hughes Comments at 6; PanAmSat Comments at 6; SIA Comments at 6; *Comments of TRW Inc.* at 9–10 (Jan. 8, 2001) ("TRW Comments").

robustness.²³ Finally, it should be noted that operational flexibility is especially important for satellite networks in light of the large investments made in deploying such networks.²⁴

Traditionally, the operational flexibility required by satellite operators has been ensured by the Commission’s “full-band/full-arc” policy for satellite licensing.²⁵ Assuming, however, that a limitation on the spectrum licensed to CSAT networks is necessary to address the concerns of the fixed wireless community, a 20 MHz limitation²⁶ is simply not enough to afford CSAT networks the necessary operational flexibility.²⁷ Such a restriction would make CSAT network implementation impractical and the administrative process unworkable.²⁸ There is little point in having a streamlined licensing procedure for CSAT networks if the license is limited to 20 MHz because almost all networks will need to be licensed for more spectrum than that to ensure that the network remotes can be coordinated and can provide a viable service.²⁹ Indeed, the farthest any commenter went in proposing a limitation on spectrum usage was 72 MHz of licensed spectrum.³⁰ Even this limitation is far more restrictive than the traditional full-band of 500 MHz

²³ See HBO/TBS Comments at 7–8; PanAmSat Comments at 6; SIA Comments at 26.

²⁴ See GE American Comments at 11; TRW Comments at 4, 8–9; Virtual Geosatellite Comments at 7–8.

²⁵ Notice ¶ 40.

²⁶ It is OnSat’s understanding that the *Notice* uses standard satellite parlance when referring to satellite bandwidth. In satellite technology, “20 MHz bandwidth” actually refers to 40 MHz of spectrum — 20 MHz on the uplink and 20 MHz on the downlink. The uplink and downlink are almost never addressed in isolation and a MHz of spectrum on the uplink and the corresponding MHz of spectrum on the downlink together comprise what is referred to as one MHz of bandwidth. This parlance differs from terrestrial microwave bandwidth in which one MHz of spectrum refers to one MHz of bandwidth.

²⁷ See OnSat Comments at 20–22; *id.* at Attachment B ¶¶ 7–8 (Statement of Sidney M. Skjei, P.E.).

²⁸ See *id.* at 20–22.

²⁹ It is highly likely that given a 20 MHz limitation, most potential CSAT operators would chose not to deploy CSAT networks in light of the possibility that their network would need to undergo costly license modification in the future. See OnSat Comments at 22.

³⁰ See LMG T Comments at 10.

afforded to satellite operators to give them the desired operational flexibility, particularly when combined with the proposed limitation of CSAT networks to no more than 3 satellite locations.

Although OnSat is authorized to use a total of 60 MHz over 3 orbital slots in its CSAT network, this spectrum assignment is based on the specifics of OnSat's network, not on the requirements of CSAT networks generally.³¹ The Commission should not adopt an absolute and generally applicable limitation on spectrum use that would impair the ability of CSAT network operators to provide a wide array of broadband services to (often underserved) customers. The spectrum requirements of CSAT networks will vary depending on, for example, the number of users the network operator intends to serve and the type of service (narrowband or broadband) the operator intends to offer.³² The Commission should license networks based on a specific network's spectrum needs, rather than adopting an absolute limitation on spectrum usage that would hinder and potentially cripple the development of CSAT networks.³³

IV. CSAT NETWORKS SHOULD BE PERMITTED WHEREVER FREQUENCY COORDINATION PERMITS.

OnSat agrees with several commenters who argue that CSAT networks should not be limited to rural areas and should instead be permitted wherever frequency coordination permits.³⁴ Any limitation on CSAT networks will serve only to limit the provision of broadband communications services to customers who would otherwise benefit from such services.³⁵ OnSat

³¹ See OnSat Comments at 22.

³² See *id.* Cf. TRW Comments at 10 (noting that in order to allow an acceptable return on investment, a satellite operator must design its network with so as to permit future growth).

³³ See OnSat Comments at 23.

³⁴ See HBO/TBS Comments at 5; JFL Comments at 3; LMGMT Comments at 10; Loral Comments at 13; Telesat Canada Comments at 15; *see also Notice* ¶ 95.

³⁵ See HBO/TBS Comments at 5; JFL Comments at 3; OnSat Comments at 24.

also agrees with several commenters that CSAT networks should not be limited to a particular part of the C-Band.³⁶

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For the foregoing reasons, OnSat urges the Commission to adopt streamlined licensing procedures for CSAT networks with two modifications to the proposed rules. *First*, the Commission should permit remote CSAT antennas to become operational upon completion of the frequency coordination process, either by not requiring a public comment period or by adopting conditional authorization rules. *Second*, the Commission should not impose an unduly restrictive limit of 20 MHz on CSAT network spectrum use and should instead permit operational flexibility in CSAT networks by tailoring spectrum use limitations to particular networks or by adopting a more realistic spectrum use limitation.

Respectfully submitted,

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³⁶ See Telesat Canada Comments at 15; Virtual Geosatellite Comments at 15–16.