

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

In the Matter of)	
)	
FWCC Request for Declaratory Ruling on)	
Partial-Band Licensing of Earth)	IB Docket No. 00-203
Stations in the Fixed-Satellite Service)	RM-9649
That Share Terrestrial Spectrum)	
)	
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))	SAT-PDR-19990910-00091
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)	
)	
<i>Ex parte</i> Letter Concerning Deployment of)	
Geostationary Orbit FSS Earth Stations in the)	
Shared Portion of the Ka-band)	

FIRST REPORT AND ORDER

Adopted: May 23, 2001

Released: May 25, 2001

By the Commission:

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I. INTRODUCTION

1. In this Order we amend Part 25 of our rules¹ to give operators the option of obtaining licenses for a limited class of small aperture terminal earth station networks in the C-band² (CSAT), under a single authorization. This option is available only to those seeking licensing of CSAT networks that use no more than 40 MHz of C-band spectrum for each of no more than three satellite locations within the visible geostationary satellite arc. That is, this option provides for streamline licensing of a system that uses no more than 20 MHz of uplink and 20 MHz of downlink spectrum for each of a maximum of 3 satellites. The 20 MHz of uplink and 20 MHz of downlink spectrum may be different for each of the 3 satellites. Among other things, these procedures require CSAT applicants to complete frequency coordination for each individual earth station antenna before bringing it into use. We find that these changes will promote more efficient and equitable use of C-band spectrum shared by the fixed service (FS) and fixed-satellite service (FSS). In those cases where these streamlined procedures can be used, it will also alleviate concerns that individual licensing of earth stations in a network of small aperture terminal earth stations could result in longer overall license processing times, increased consumer costs, and additional administrative burdens. In addition, we find that licensing CSATs in this manner will better enable the rapid delivery of earth station services, including broadband access, to rural Americans.

¹ 47 C.F.R. Part 25.

² The term C-band as used in this context refers to the traditional C-band at 3700-4200 and 5925-6425 MHz, and not to what is called the extended C-band at 3650-3700 MHz.

II. BACKGROUND

2. The Telecommunications Act of 1996 requires the Commission to encourage the deployment of advanced telecommunications, on a reasonable and timely basis to all Americans.³ It also requires the Commission to take action to accelerate deployment of that capability to all Americans.⁴ In our most recent report to Congress, we observed that although advanced telecommunications capability is generally being deployed in a reasonable and timely fashion, certain groups of consumers - including rural Americans and consumers in tribal areas - are not receiving such service in a timely fashion.⁵

3. In 1999, we adopted a Notice of Proposed Rulemaking in which we sought comment on potential terrestrial wireless and satellite policy initiatives to address the telecommunications needs of Native Americans living on tribal lands.⁶ In that *Tribal Lands NPRM*, we cited small aperture terminal earth station networks as one satellite technology increasingly being deployed for low-cost telephony that is also capable of providing advanced telecommunications services.⁷ We sought comment identifying any satellite policies we could adopt to further the deployment of such networks on tribal lands and in other unserved areas.⁸ The Report and Order that the Commission adopted in the proceeding concluded that technical and administrative hurdles to the provision of satellite service to tribal lands are best considered on a case-by-case basis, with waivers granted as necessary to facilitate such deployment.⁹

4. Onsat Network Communications, Inc. (Onsat) responded to the Commission's effort to find potential terrestrial wireless and satellite policies to address the telecommunications needs of rural Americans with the subject petitions,¹⁰ which essentially requested that the Commission issue a declaratory order that Section 25.115(c) of the Commission's rules permits the licensing

³ Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, Section 706 (1996) (1996 Act). "Advanced telecommunications capability" is defined as "high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology." 47 U.S.C. § 706 (c)(1)).

⁴ *Id.*

⁵ Second Report, *Inquiry Concerning The Deployment Of Advanced Telecommunications Capability To All Americans In A Reasonable And Timely Fashion, And Possible Steps To Accelerate Such Deployment Pursuant To Section 706 of the Telecommunications Act of 1996*, FCC 00-290, CC Docket No. 98-146 (2000).

⁶ *Extending Wireless Telecommunications Services to Tribal Lands*, Notice of Proposed Rulemaking, 14 FCC Rcd 13679, FCC 99-205 (1999) (*Tribal Lands NPRM*).

⁷ *Id.* at ¶ 14.

⁸ *Id.* at ¶ 39.

⁹ *Extending Wireless Telecommunications Services to Tribal Lands*, Report and Order and Further Notice of Proposed Rule Making, FCC 00-209, WT Docket No. 99-266 (2000) (*Tribal Lands Report and Order*) at ¶51.

¹⁰ Petition for Declaratory Order and Waiver and Request for Expedited Action, filed Sept. 10, 1999 (Onsat Petition).

of very small aperture terminal (VSAT) satellite earth stations in the C-band.¹¹ Onsat's petition raised the issue of whether we should authorize a network of small aperture terminal satellite earth stations in the C-band under a single license.¹² Onsat's petition further asserted that blanket licensing of such CSATs is permissible in the C-band under existing Commission rules, and Onsat sought a declaratory ruling to confirm its interpretation of the rules.¹³ Finally, Onsat claimed that, if permitted to go forward in developing C-band small aperture terminal earth station networks, it would be able to serve rural institutional customers with the most advanced communications in a cost-effective manner.¹⁴

5. On October 24, 2000 the Commission released the *FWCC/Onsat/Hughes NPRM* to jointly address the issues raised by Onsat and two other petitioners.¹⁵ In addition, the *FWCC/Onsat/Hughes NPRM* denied Onsat's petition for a declaratory order, but proposed to amend the Commission's rules to permit the licensing, under a single authorization and with prior coordination, of a limited class of small aperture terminal earth station networks in the C-band to communicate with geostationary satellites. Our proposal to license this service was based on our current licensing rules for VSATs in the Ku-band, with necessary modifications to reflect the prior frequency coordination required in the C-band because of FS/FSS co-primary frequency sharing in this band.¹⁶ To distinguish our licensing of these pre-coordinated C-band

¹¹ VSAT systems are networks of technically identical stations using very small aperture antennas that communicate via satellite with a relatively larger hub station. *In the Matter of Streamlining the Commission's Rules and Regulations for Satellite Application and Licensing Procedures*, Report and Order, 11 FCC Rcd 21581, 21592, FCC 96-425 (1996). See also *In the Matter of Routine Licensing of Large Networks of Small Antenna Earth Stations Operating in the 12/14 GHz Frequency Bands*, Declaratory Order (rel. April 9, 1986), available at 1986 WL 291567 (VSAT Order). VSAT systems are private networks in which the hub station controls all remote transmissions. As we observed in the *Tribal Lands NPRM*, VSAT networks eliminate the need to lay miles of terrestrial infrastructure and hence are especially cost-effective in sparsely populated areas. *Tribal Lands NPRM* at ¶ 14.

¹² Onsat Petition at 4, 9-10.

¹³ *Id.* at i, 9-10

¹⁴ Onsat Petition at 7.

¹⁵ *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 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 in 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 Rule Making, FCC 00-369, IB Docket No. 00-203 (2000) (*FWCC/Onsat/Hughes NPRM*). We will address in a future Report and Order in this proceeding the issues raised in the NPRM as a result of the request for declaratory ruling and petition for rulemaking filed by the Fixed Wireless Communications Coalition (FWCC) and the *ex parte* letter filed by Hughes Network Systems (Hughes). The decisions reached in this First R&O are not meant to prejudice, and will be subject to, the decisions reached in further R&Os in this proceeding dealing with the broader fixed service and fixed-satellite service sharing issues.

¹⁶ When the Commission first licensed VSAT networks in 1986, the multiple applicants for the service requested frequencies only in the 12/14 GHz band, at least in part because there were no co-primary terrestrial users of those

earth stations from the blanket licensing of VSATs in the Ku-band, we referred to the C-band networks addressed in the *FWCC/Onsat/Hughes NPRM* as C-band Small Aperture Terminals (CSATs). We received 29 comments and 35 reply comments to the *FWCC/Onsat/Hughes NPRM*.¹⁷ The commenters generally support the concept of streamlined licensing for CSAT earth terminals at C-band.¹⁸

III. DISCUSSION

A. Regulatory and Licensing Issues

6. **Rule Governing Applications.** Consistent with our past efforts to streamline the licensing process for networks of C-band earth stations,¹⁹ we amend Section 25.115 of the Commission's rules to specifically incorporate generic simplified processing procedures that will apply to any CSAT applicant that meets specified spectrum and space station licensing criteria that we adopt here. We note that the concept of "blanket licensing" generally refers to the licensing of a network of satellite earth stations in which the license covers the entire network of earth stations, there is no requirement to coordinate the individual earth stations that comprise the network, and therefore no reason for the Commission to know the locations of these stations. Because each individual earth station in the CSAT network will require coordination prior to bringing it into use, we will refer to the CSAT network licensing as a "streamlined licensing" procedure. While some CSAT applications that do not meet these specific criteria will still have to be considered on a case-by-case basis, we believe that the streamlined procedures adopted here will provide much needed relief while preserving the ability of satellite and terrestrial services to share the C-band in an equitable manner.

7. **Application Form.** We adopt our proposal to extend our existing earth station application rules to CSAT networks.²⁰ The existing FCC Form 312 can accommodate all the information we will require of CSAT applicants. Because all earth station applicants have used Form 312 for several years, the satellite industry, potentially affected terrestrial service

bands. See *VSAT Order*, 51 Fed. Reg. 15067 (April 22, 1986) The Commission stated that granting the applicants' requested blanket authorization procedures would result in more rapid use of the 12/14 GHz frequencies that had not been occupied. *VSAT Order* at ¶ 6. In addition, because this band was allocated solely to FSS on a primary basis, the Commission could grant one license to cover hundreds or thousands of Ku-band earth stations without regard to intra-band, inter-service coordination issues. The *VSAT Order* observed that while the lack of co-primary terrestrial users in the 12/14 GHz frequency bands eliminated the need for location and site-specific frequency exhibits, those exhibits would be necessary in the C-band where there are co-primary terrestrial users. *VSAT Order* at ¶ 1

¹⁷ See Appendix A. Only those commenters addressing issues raised in the Onsat Petition are listed.

¹⁸ See, Comsearch at 9; FWCC at 4; Home Box Office & Turner Broadcasting System, Inc. (HBO/TBS) at 2, 15; JFL Communications Inc. (JFL) at 2; Lockheed Martin (LMGT) at 9; Telesat Canada at 3; Bonneville Reply at 2.

¹⁹ See *Equatorial Communications Services*, Mimeo No. 2831 (March 31, 1984) and *In the Matter of GTE Spacenet Corporation Streamlined Licensing Procedures for 4/6 GHz Earth Stations*, 7 FCC Red 5217 (1992).

²⁰ 47 C.F.R. § 25.115 (Application for earth station authorizations.)

providers, and independent frequency coordinators are all familiar with Form 312 and the information it provides. As a result of the changes adopted here, lead applications for CSAT operating authority must be filed on FCC Form 312. The main portion of Form 312 and Schedule B shall be filed for each large hub station, and another Schedule B shall be filed for each representative type of small antenna station comprising the network. The lead application must also identify the requested spectrum to be used for communication channels, the satellites to be accessed, and the number of terminals comprising the CSAT network.

8. Form 312 lead applications will be identified in the Commission's weekly earth station Public Notice when accepted for filing. Once the lead application is granted, a licensee may add technically identical CSAT stations (up to the number specified in the lead authorization) and begin to operate the terminals under certain specific conditions. Before placing any earth station that is added to the CSAT network into operation, the earth station licensee must file Schedule B information and a coordination notification for that earth station with the Commission.²¹ This coordination notification must 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. We require electronic filing of Form 312, Schedule B applications to add technically identical small antenna earth stations to a previously authorized CSAT system.

9. **Fees.** We find that it is appropriate for the Commission to seek statutory authorization to require a new fee for small aperture terminal earth station networks in the C-band frequencies. Section 8(a) of the Communications Act of 1934²² directs the Commission to assess and collect application fees and Section 8(g) sets forth the specific fees the Commission must assess for filing applications to aid in recovering some of the administrative costs incurred in processing applications.²³ The fee structure in the Act does not include a fee for CSAT applications. Because the fee structure is statutory, an amendment to it to create a fee for this new service can be done only by legislative action. Under these circumstances, the Act directs the Commission to make "specific recommendations to Congress as to additional legislation which the Commission deems necessary or desirable."²⁴ Accordingly, we will request that Congress amend sections 8(a) and 8(g) of the Communications Act of 1934 to include a new fee for small aperture terminal earth station networks in the C-band frequencies.²⁵ In the interim, consistent with our rules, applicants for CSAT systems should submit all applicable fees with their

²¹ See ¶¶ 18-21 for a detailed discussion on frequency coordination.

²² 47 U.S.C. §§ 151 *et seq.* (Act).

²³ 47 U.S.C. § 158(a) and 47 U.S.C. § 158(g)

²⁴ 47 U.S.C. § 154(k)(4).

²⁵ See, e.g., 1998 Biennial Regulatory Review – Review of International Common Carrier Regulations, FCC 99-51 (rel. March 23, 1999) at ¶ 66 and n.132 (legislative request to eliminate separate, redundant application fee).

applications, although we note that CSAT systems may pose special circumstances that warrant a waiver of these fees.²⁶

10. **Licensing Provisions.** We amend Section 25.134 of the Commission's rules,²⁷ concerning the licensing of very small aperture terminals, to make it applicable to CSAT networks, as proposed in the *FWCC/Onsat/Hughes NPRM*. We find that routine processing will be possible for CSAT networks that meet both the antenna performance standards in our present Section 25.209, and that do not exceed the power levels currently identified in Sections 25.211(d) and 25.212(d) of our rules.²⁸ Applications seeking to exceed these limits will be required to provide the Commission with a technical analysis demonstrating an ability to operate on a non-harmful interference basis with adjacent fixed-satellite services or certification from the satellite operator that this operation has been successfully coordinated with adjacent satellite operators. We anticipate revisiting these rules in an earth station streamlining proceeding in the near future, and will consider at that time whether these power and antenna size limits can or should be amended to allow routine processing of these types of applications.

11. **Reporting Requirements.** We conclude that each CSAT licensee must submit annually to the Commission an updated list of all operational earth stations in its system. This list must provide a definitive portrait of each licensee's operational CSAT system once per year and allow the Commission to verify the validity of its database. The CSAT licensee's annual report must also contain a list of all earth stations deactivated during the year and an update of which of the satellites is providing service to the network at the time of the report. We find that this annual reporting requirement is necessary to provide the Commission and frequency coordinators the opportunity to maintain and crosscheck database records for accuracy, and that the reports will be useful in future frequency coordinations. The Commission will issue a public notice reflecting the stations that have been deactivated.

12. Although it was proposed in the *FWCC/Onsat/Hughes NPRM*,²⁹ we find it would not be in the public interest to require CSAT licensees to include in their individual annual reports a list of all earth stations planned for the next twelve months but not yet built. We had proposed this requirement in the context of database accuracy, but we have since determined that the administrative burden on the licensee and the Commission to maintain this data would be

²⁶ Under Section 8(d)(2) of the Act, the Commission may "waive or defer payment of a charge in any specific instance for good cause shown, where such action would promote the public interest." 47 U.S.C. § 158(d)(2). Section 1.1117 of the Commission's rules addresses petitions for waiver or deferral of application fees, which are considered on a per-application basis, but only after the fee has been paid by the entity seeking a waiver or deferral. 47 C.F.R. § 1.1117. The first entity seeking authority for a CSAT system under existing Commission rules filed its application with a fee of \$13,470, consisting of the following components under the existing fee structure: the VSAT system application fee is \$7,200 (47 CFR 1.1107.6); the application fee for a fixed transmit and receive system is \$4,320 (47 CFR 1.1107.4); and the fee for an individual transmit and receive (bi-directional) stations is \$1,950 (47 CFR 1.1107.3).

²⁷ 47 C.F.R § 25.134.

²⁸ See 47 C.F.R §§ 25.209, 25.211(d) and 25.212(d).

²⁹ NPRM at ¶ 96.

significant, and the perceived benefits would not outweigh that burden. Accordingly, we do not require operators to provide an estimate of all earth stations planned for the next twelve months.

B. Spectrum Issues

13. *Spectrum / Satellite Locations.* We amend the Commission's rules to provide for the streamlined licensing of CSAT networks that use no more than 40 MHz of C-band spectrum for each of no more than three satellite locations within the visible geostationary satellite arc.³⁰ We clarify that the proposal in the *FWCC/Onsat/Hughes NPRM* for a 20 MHz spectrum limit at three satellite locations was intended to mean no more than 20 MHz in each direction for each of the three satellites.³¹ That is, streamlined licensing is available only for requests for 20 MHz of uplink spectrum and 20 MHz of downlink spectrum for each of no more than three satellites. Additionally, the 20 MHz of spectrum does not have to be the same spectrum at each of the satellite locations, which could allow for the coordination of up to 60 MHz of spectrum in each of the uplink and downlink directions for each earth station. The specific spectrum authorized for each of the satellite locations depends on the spectrum available on the given satellite and the spectrum available during the process of frequency coordination.

14. We believe that the type of service proposed by Onsat and contemplated by these CSAT rules is in the public interest because it facilitates the provision of advanced broadband communications for Americans in rural, underserved areas. We also find that these changes will advance Commission policy and goals expressed in our *Tribal Lands* proceedings³² and other Commission initiatives that have sought to improve the delivery of broadband services to rural areas. As we observed in the *Tribal Lands NPRM*,³³ these types of satellite earth station networks employ cost-effective technology to reach sparsely populated areas and, thus, provide the opportunity to accelerate deployment of advanced telecommunications capabilities to all Americans.

15. With the exception of FWCC and HBO/TBS,³⁴ the commenters generally expressed concern that the proposed 20 MHz per direction, per satellite limit was too small to provide a viable service or to provide the necessary flexibility that operators desire.³⁵ Onsat noted that the 60 MHz that it is authorized to use is the minimum necessary to provide its service.³⁶ Others,

³⁰ We note that C-band earth station applicants seeking individual licensing for each earth station under our current rules, as opposed to applying for a single CSAT network license under the new rules, are not subject to the frequency and orbit limitations we have adopted for CSATs in this Order.

³¹ *NPRM* at paragraph 93.

³² See *Tribal Lands NPRM*, *supra* n.7, and *Tribal Lands Report and Order*, *supra* n. 10.

³³ *Tribal Lands NPRM* at ¶ 14.

³⁴ FWCC at 22-23; HBO/TBS at 5.

³⁵ LMGT at 9-10; Onsat at Introduction; Titan at 3-6; Bonneville reply at 2; Onsat reply at 2, 7-9.

³⁶ Onsat at 5, 19-20. (We note here that the 60 MHz described by Onsat was 60 MHz in each of the uplink and downlink directions)

including Onsat, suggested that there should be no fixed limit, but that each application should be judged on its own merits.³⁷ LMG T suggested that if a maximum bandwidth for CSAT terminals is to be adopted, perhaps 72 MHz would be more appropriate because it is the typical bandwidth available on an Intelsat satellite.³⁸ Titan also disagreed with the proposed limit of no more than three satellite locations, and stated that such a limitation on flexibility is a mistake and would stifle competition and the deployment of advanced telecommunications capabilities to all Americans.³⁹

16. While a number of the commenters have argued for flexibility in spectrum and satellite locations for the streamlined licensing of CSAT networks, none have identified any planned CSAT networks that could not work within the limits we are adopting in this Report and Order. As we noted in the NPRM, members of the fixed wireless community have communicated some concern that authorization of CSATs could add to coordination difficulties between the FS and FSS in the C-band.⁴⁰ FWCC initially opposed Onsat's petition for a declaratory order on the grounds that Onsat's proposed service would further exacerbate frequency coordination difficulties in the C-band.⁴¹ FWCC later withdrew its opposition after Onsat agreed to limit both the amount of C-band spectrum its proposed system would use and the number of orbital positions toward which its remote earth stations would be directed.⁴²

17. We find that if we apply our current policy of authorizing the entire 1000 MHz of C-band spectrum with access to all visible geostationary satellites (i.e., full band – full arc) under a streamlined licensing approach, this could have a significant effect on the ability of terrestrial fixed services to successfully coordinate spectrum for its use in the future. We find that the spectrum and satellite limits on CSAT licensing we are adopting in this proceeding (12% of the total spectrum available at C-band and a three satellite limit) are sufficient to meet the immediate known CSAT requirements. Moreover, we believe these criteria are an appropriate means to address the concerns raised by the FWCC while allowing CSAT systems such as Onsat to deploy. The procedures we adopt here fairly address the competing needs of both satellite and terrestrial services, and serve the public interest in accessing advanced telecommunications.

18. ***Frequency Coordination and Conditional Authorization.*** For those applicants wishing to take advantage of the streamlined licensing procedures for CSATs, we further amend the Commission's rules to require every technically identical earth station in any CSAT network to be coordinated under our existing rules for coordination of earth stations with terrestrial

³⁷ Titan at 4; Bonneville reply at 2; Onsat reply at 9.

³⁸ LMG T at 9-10.

³⁹ Titan at 6.

⁴⁰ NPRM at ¶ 93.

⁴¹ FWCC Comments to Onsat Petition at 1.

⁴² Letter from Mitchell Lazarus, Counsel for FWCC, to Magalie Salas, Secretary of the FCC, dated Feb. 14, 2000.

stations.⁴³ We find that, in order to authorize CSAT networks in the C-band frequencies, after the lead application is granted by the Commission, an operator must fully coordinate with co-primary terrestrial users of C-band frequencies each and every earth station facility that it intends to bring into use. This coordination must be accomplished prior to the time an applicant or licensee seeks to place an earth station in service. We expect that each applicant for streamlined licensing of CSAT earth terminals will request operating authority for a number of earth stations at the time it files its lead application, and subsequently coordinate and notify the Commission of each earth station coordinated in the authorized network in accordance with the lead license. That is, even though the CSAT lead license identifies the number of CSAT terminals comprising the network, each CSAT earth station will protect and will receive protection from other earth stations or terrestrial stations only after coordination of the CSAT earth station has been completed.

19. Except as described below, we conclude that a CSAT station may not operate until the coordination is completed, the Commission has been notified, and the 30-day comment period of the Public Notice has elapsed. We make special provision for operating under a conditional authorization during the comment period of the Public Notice if certain other conditions are met by the licensee. We also amend the rules to state that, if the Commission does not receive any negative, timely comments, upon expiration of the 30 day comment period, the Commission will issue a public notice that will permit the earth station to continue to operate under the permanent, lead authorization.

20. Although commenters generally agreed that the Commission should require coordination of each and every CSAT earth station authorized under the lead application prior to the earth station being brought into use, there was some disagreement regarding the propriety of prohibiting such stations from operating until the public had been given 30 days to comment on the request. Specifically, Onsat claimed that the 30-day comment period of the Public Notice is unnecessary because of the extensive frequency coordination process that each earth station must complete prior to filing.⁴⁴ Onsat also asserted that the proposed 30-day waiting period is inconsistent with the procedures followed by the Commission for licensing Ku-band VSAT systems.⁴⁵ Finally, Onsat argued for the adoption of rules that would provide a conditional authorization, similar to that available to C-band terrestrial fixed stations.⁴⁶ According to Onsat this “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 services.”⁴⁷ Comsearch and NSMA also suggested that the Commission allow CSAT terminals to operate on

⁴³ 47 C.F.R. § 25.203. The existing rules apply to all earth stations operating in frequency bands shared on a co-primary basis between terrestrial and satellite services.

⁴⁴ Onsat at i, 12-13.

⁴⁵ Onsat at i, 11-12.

⁴⁶ Onsat at 16-17.

⁴⁷ Onsat reply at 5-6.

a conditional basis following the successful completion of frequency coordination.⁴⁸ In support of their position, these commenters pointed to provisions in Part 101 of the Commission's rules that permit C-band terrestrial fixed stations to operate on a conditional basis following successful completion of frequency coordination.⁴⁹

21. We agree with Comsearch and NSMA and, with a few changes, we incorporate the substance of the Commission's Part 101 conditional licensing rules into Part 25 for application to CSAT streamlined licensing. We find that adopting the procedure of Part 101 into Part 25 will properly extend to streamline-licensed CSAT licensees substantially the same opportunities available to terrestrial fixed service licensees without any significant increase in the risk to terrestrial fixed systems. An applicant operating pursuant to this conditional authority assumes all risks associated with such operation, including the termination or modification of the conditional authority, and/or the subsequent dismissal or denial of its application.⁵⁰ In addition, the current rules in Part 101 that authorize conditional licensing for terrestrial fixed stations, as well as those that we are adopting here for CSATs in Part 25, make clear that such authority may be modified or cancelled at any time without hearing if, in the Commission's discretion, the need for such action arises.⁵¹ The new rules for "conditional authorization" of coordinated, streamlined licensed CSAT terminals are shown in Appendix B as a new section 25.115(c)(2)(vi).

22. ***Frequency Coordination Expiration.*** We conclude that a CSAT operator will have six months from the date of successful frequency coordination to file with the Commission the Schedule B of Form 312. We direct that, if an operator fails to file a lead application or a Schedule B within six months after it successfully completes coordination, the parties may assume that such frequency use is no longer desired, unless a second notification has been received within ten days prior to the end of the six month period. These renewal notifications must be sent to all parties originally notified. FWCC correctly notes that outside the CSAT context, an earth station applicant that coordinates, but then delays filing its application must renew the coordination after six months.⁵² FWCC observed that under our proposed rule for CSATs, however, there is no licensing event for each individual earth station that tolls the time period following the successful completion of frequency coordination.⁵³ We share the concern that this raises the possibility that a licensee might successfully coordinate multiple earth stations, but fail to promptly construct them and thus, warehouse spectrum that could be used by others. To avoid this problem, FWCC suggested that the Commission adopt a rule specifying that frequency coordination for a pre-licensed CSAT user terminal will be valid for only six

⁴⁸ Comsearch reply at 5; National Spectrum Managers Association (NSMA) reply at 5.

⁴⁹ *Id.*

⁵⁰ *See*, 47 CFR § 101.31(b).

⁵¹ *See*, 47 CFR § 101.31(b)(3).

⁵² *See*, 47 CFR § 101.103(d)(2)(xi)

⁵³ FWCC at 20.

months, and that the coordination will expire if the station does not notify the Commission within that period.⁵⁴ We agree with FWCC and conclude that an operator will have six months from the date of successful completion of coordination to notify the Commission, and that failure to do so will cause the coordination to lapse, thereby requiring a new coordination if the licensee wishes to bring that earth station into operation.

23. ***Period of Construction.*** We further conclude that construction of the earth station must be completed and the station must be brought into regular operation within twelve months from the date of permanent authorization, except as may be otherwise determined by the Commission for any particular application. We recognize that our streamlined licensing process for CSATs contains an initial lead authorization and a mechanism that provides for the subsequent notification of additional earth stations to the CSAT network. As a result, subsequent CSAT earth terminals will be coordinated, constructed, and brought into operation at various times after the lead authorization is granted. Therefore, the trigger to invoke Section 25.133(a) may be different for each terminal under the CSAT authorization. We find that the date of notification to the Commission for a particular CSAT earth station is a reasonable point at which to begin a due diligence period for construction of such a station. Accordingly, we conclude that, consistent with the Commission's current rules requiring an earth station to be brought into use within twelve months of licensing,⁵⁵ a CSAT operator will have one-year from the date of notification to the Commission to bring a proposed station into use. Failure to bring the CSAT earth station into use within this time period will cause the operator to lose the authorization for the earth station in question.

24. ***Location Restrictions.*** Finally, we will not restrict the location of CSAT operations. We noted in the *FWCC/Onsat/Hughes NPRM* that the required individual coordination with terrestrial users of C-band frequencies might, as a practical matter, effectively limit CSAT networks to rural areas where those frequencies are relatively underused.⁵⁶ We sought comment, therefore, on whether our rules should limit the CSAT service to rural areas, or, alternatively, whether our rules should allow CSAT network service wherever frequency coordination allows the installation of an earth station.⁵⁷ HBO/TBS, JFL, LMGT, and Onsat opposed limiting the authorization of CSATs to rural areas,⁵⁸ and we received no comments supporting the proposed limitation. The commenters generally argued that there would be no reason to deny authorization where it is possible to successfully complete the coordination of a CSAT terminal. We find that, because we limit the amount of spectrum available under a CSAT streamlined license, as well as limit the number of satellites with which a streamline-licensed CSAT terminal may communicate, the effect of these CSAT systems on the future growth of terrestrial fixed

⁵⁴ FWCC at 4.

⁵⁵ See, 47 CFR § 25.133(a)

⁵⁶ NPRM at ¶ 95.

⁵⁷ NPRM at ¶¶ 14, 95.

⁵⁸ HBO/TBS at 5; JFL at 2; LMGT at 10-11; Onsat reply at 9

communications systems should be minimal. Accordingly, we will not restrict the location of operation of a CSAT terminal after the successful completion of frequency coordination.

IV. CONCLUSION

25. This Order amends Part 25 of the Commission's rules⁵⁹ to permit, with prior coordination, the licensing of a limited class of small aperture terminal earth station networks in the C-band under a single authorization. This option is available only to operators whose applications identify no more than three discrete geostationary satellites to be accessed and a maximum of 20 MHz of spectrum in each direction at each of the satellites to be accessed. Among other things, these procedures require a CSAT applicant to complete frequency coordination for each individual earth station antenna, but will allow licensing for a system of coordinated technically-identical earth stations with simplified reporting to the Commission. The adoption of the rules in Appendix B will provide much needed relief in the implementation of networks of small aperture antenna terminals in the C-band. Although the streamlined procedures adopted here apply to only a limited class of systems in the C-band, the procedures are a recognition of the need to balance the requirements of the terrestrial and satellite systems that extensively share this spectrum. In addition, the relief provided by this Order will be particularly beneficial in speeding the delivery of earth station services, including broadband access, to rural Americans.

⁵⁹ 47 C.F.R. Part 25.

V. PROCEDURAL MATTERS

26. *Final Regulatory Flexibility Analysis.* Appendix C to this document contains the analysis required by the Regulatory Flexibility Act of 1980, 5 U.S.C. § 603.

VI. ORDERING CLAUSES

27. IT IS ORDERED, that pursuant to Sections 4(i), 7(a), 303(c), 303(f), 303(g), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. Sections 154(i), 157(a), 303(c), 303(f), 303(g), and 303(r), this First Report and Order is hereby ADOPTED.

28. Accordingly, IT IS ORDERED that Part 25 of the Commission's Rules IS AMENDED as set forth in Appendix B, effective thirty days after their publication in the Federal Register.

29. IT IS FURTHER ORDERED that the Commission's Consumer Information Bureau, Reference Information Center, SHALL SEND a copy of this First Report and Order, including the Final Regulatory Flexibility Analysis, to the Chief, Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Magalie Roman Salas
Secretary

APPENDIX A: COMMENTS ON ISSUES RAISED BY ONSATComments

Comsearch
Fixed Wireless Communications Coalition (FWCC)
Home Box Office & Turner Broadcasting System, Inc (HBO/TBS)
JFL Communications Inc. (JFL)
Lockheed Martin (LMGT)
Onsat network Communications, Inc. (Onsat)
Telesat Canada
Virtual Geosatellite, LLC

Reply Comments

Bonneville Satellite Company (Bonneville)
Comsearch
National Spectrum Managers Association (NSMA)
Onsat Network Communications, Inc. (Onsat)
Titan Wireless, Inc. (Titan)

APPENDIX B: Adopted Rules

For the reasons set forth in the preamble, part 25 of title 47 of the Code of Federal Regulations is amended as follows:

PART 25--SATELLITE COMMUNICATIONS

1. The authority citation for Part 25 continues to read as follows:

AUTHORITY: 47 U.S.C. 701-744. Interprets or applies sec. 303, 47 U.S.C. 303. 47 U.S.C. sections 154, 301, 302, 303, 307, 309 and 332, unless otherwise noted.

2. Section 25.115 is amended by redesignating paragraph (c) as (c)(1) and by adding a new paragraph (c)(2) to read as follows:

§ 25.115 Application for earth station authorizations.

* * * * *

(c)(2) Large Networks of Small Antennas operating in the 4/6 GHz frequency bands with U.S.-licensed or non-U.S. licensed satellites for domestic services (CSATs). Applications to license small antenna network systems operating in the standard C-Band, 3700-4200 MHz and 5925-6425 MHz frequency band shall be filed electronically on FCC Form 312, Main Form and Schedule B.

(c)(2)(i) An initial lead application providing a detailed overview of the complete network shall be filed. Such lead applications shall fully identify the scope and nature of the service to be provided, as well as the complete technical details of each representative type of small antenna (less than 4.5 meters) that will operate within the network. Such lead applications for a single CSAT system must identify:

- (A) no more than three discrete geostationary satellites to be accessed;
- (B) the amount of frequency bandwidth sought, up to a maximum of 20 MHz of spectrum in each direction at each of the satellites (The same 20 MHz of uplink and 20 MHz of downlink spectrum at each satellite would be accessible by all CSAT earth stations in the system. The 20 MHz of uplink and 20 MHz of downlink spectrum need not be the same at each satellite location);
- (C) the maximum number of earth station sites;

(c)(2)(ii) Following the issuance of a license for the lead application, the licensee shall notify the Commission of the complete technical parameters of each individual earth station site before that site is brought into operation under the lead authorization. Full frequency coordination of each individual site (e.g., for each satellite and the spectrum associated therewith) shall be completed prior to filing Commission notification. The coordination must be conducted in accordance with Section 25.203. Such notification shall be done by electronic filing and shall be consistent with the technical parameters of Schedule B of FCC Form 312.

(c)(2)(iii) Following successful coordination of such an earth station, if the earth station operator does not file a lead application or a Schedule B within six months after it successfully completes coordination, it will be assumed that such frequency use is no longer desired, unless a second notification has been received within ten days prior to the end of the six month period. Such renewal notifications must be sent to all parties concerned. If the lead application or Schedule B, or renewal notification, is not timely received, the coordination will lapse and the licensee must re-coordinate the relevant earth stations if it still wishes to bring them into operation.

(c)(2)(iv) Operation of each individual site may commence immediately after the public notice is released that identifies the notification sent to the Commission and if the requirements of subparagraph 25.115(c)(2)(vi) are met. Continuance of operation of each station for the duration of the lead license term shall be dependent upon successful completion of the normal public notice process. If any objections are received to the new station prior to the end of the 30 day comment period of the Public Notice, the licensee shall immediately cease operation of those particular stations until the coordination dispute is resolved and the CSAT licensee informs the Commission of the resolution. If the requirements of subparagraph (c)(2)(vi) are not met, operation may not commence until the Commission issues the public notice acting on the CSAT terminal authorization.

(c)(2)(v) Each CSAT licensee shall annually provide the Commission an updated list of all operational earth stations in its system. The annual list shall also include a list of all earth stations deactivated during the year and identification of the satellites providing service to the network as of the date of the report.

(c)(2)(vi) Conditional authorization.

(1) An applicant for a new CSAT radio station or modification of an existing CSAT station authorized under subparagraph (c)(2)(i) of this section in the 3700–4200; or 5925–6425 MHz bands may operate the proposed station during the pendency of its application after the release of the public notice accepting the notification for filing that complies with subparagraph (c)(2)(ii) of this section. The applicant, however, must first certify that the following conditions are satisfied:

- (i) The frequency coordination procedures of § 25.203 have been successfully completed;
- (ii) The antenna structure has been previously studied by the Federal Aviation Administration and determined to pose no hazard to aviation safety as required by subpart B of part 17 of this chapter; or the antenna or tower structure does not exceed 6.1 meters above ground level or above an existing man-made structure (other than an antenna structure), if the antenna or tower

has not been previously studied by the Federal Aviation Administration and cleared by the FCC; (iii) The grant of the application(s) does not require a waiver of the Commission's rules (with the exception of a request for waiver pertaining to fees); (iv) The applicant has determined that the facility(ies) will not significantly affect the environment as defined in § 1.1307 of this chapter; (v) The station site does not lie within 56.3 kilometers of any international border or within a radio "Quiet Zone" identified in § 1.924 of this chapter; and (vi) The filed application is consistent with the proposal that was coordinated pursuant to § 25.251.

(2) Conditional authority ceases immediately if the Schedule B is returned by the Commission because it is not accepted for filing.

(3) A conditional authorization pursuant to paragraphs (1) and (2) of this section is evidenced by retaining a copy of the Schedule B notification with the station records. Conditional authorization does not prejudice any action the Commission may take on the subject application(s) or the Schedule B notifications.

(4) Conditional authority is accepted with the express understanding that such authority may be modified or cancelled by the Commission at any time without hearing if, in the Commission's discretion, the need for such action arises. An applicant operating pursuant to this conditional authority assumes all risks associated with such operation, the termination or modification of the conditional authority, or the subsequent dismissal or denial of its application(s).

(5) The copy of the Schedule B notification form must be posted at each station operating pursuant to this section.

(c)(2)(vi) Period of Construction.

Construction of each earth station must be completed and the station must be brought into regular operation within twelve months from the date that action is taken to authorize that station to operate under the lead authorization, except as may be otherwise determined by the Commission for any particular application.

* * * * *

3. Section 25.134 is amended by revising the section title, by redesignating paragraph (a) as (a)(1) and adding an introductory heading, by adding a new paragraph (a)(2), and by adding a new heading to paragraph (b) to read as follows:

§ 25.134 Licensing provisions of Very Small Aperture Terminal (VSAT) and C-band Small Aperture Terminal (CSAT) networks.

(a)(1) *VSAT networks operating in the 12/14 GHz bands.* All applications for digital VSAT networks . . . * * *

(a)(2) *Large Networks of Small Antennas operating in the 4/6 GHz frequency bands.* All applications for digital and/or analog operations will be routinely processed provided the network employs antennas that are 4.5 meter or larger in diameter, that are consistent with §25.209, the power levels are consistent with §25.211(d) and §25.212(d), and frequency coordination has been satisfactorily completed. The use of smaller antennas or non-consistent power levels require the filing of an initial lead application (§25.115(c)(2)) that includes all technical analyses required to demonstrate that unacceptable interference will not be caused to any and all affected adjacent satellite operators by the operation of the non-conforming earth station.

(b) *VSAT networks operating in the 12/14 GHz bands.* Each applicant for digital and/or analog VSAT network . . . * * *

* * * * *

APPENDIX C: FINAL REGULATORY FLEXIBILITY ANALYSIS**Final Regulatory Flexibility Analysis**

As required by the Regulatory Flexibility Act (RFA)¹, an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities was incorporated in the *FWCC/Onsat/Hughes NPRM*.² The Commission sought written public comments on the proposals in the *FWCC/Onsat/Hughes NPRM* including comment on the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.³

A. Need for, and Objectives of, the Rules

In this *First Report and Order*, the Commission provides for a streamlined licensing procedure that will allow the licensing of large networks of small earth station terminals in the 4 and 6 GHz bands. These streamlined procedures will better enable the rapid delivery of earth station services, including broadband access, to rural Americans.

B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA.

No comments were submitted in direct response to the IRFA.

C. Description and Estimate of the Number of Small Entities To Which the Rules Will Apply

The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the adopted rules.⁴ The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."⁵ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.⁶ A small

¹ See 5 U.S.C. § 603. The RFA, *see*, 5 U.S.C. § 601 *et seq.*, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

² *See*, *FWCC/Onsat/Hughes NPRM* at Appendix D.

³ 5 U.S.C. § 604.

⁴ 5 U.S.C. § 603(b)(3).

⁵ *Id.* § 601(6).

⁶ 5 U.S.C. § 601(3). (incorporating by reference the definition of "small business concern" in 15 U.S.C. § 632). Pursuant to the RFA, the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after the opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes

business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).⁷ A small organization is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field."⁸

D. International Services

The Commission has not developed a definition of small entities applicable to licensees in the international services. Therefore, the applicable definition of small entity is generally the definition under the SBA rules applicable to Communications Services, Not Elsewhere Classified (NEC).⁹ This definition provides that a small entity is one with \$11.0 million or less in annual receipts.¹⁰ According to the Census Bureau, there were a total of 848 communications service providers, NEC, in operation in 1992, and a total of 775 had annual receipts of less than \$9.999 million.¹¹ The Census report does not provide more precise data.

1. Fixed Satellite Transmit/Receive Earth Stations. Currently there are over 2000 operational fixed satellite transmit/receive earth stations authorized for use in the C-band. We do not request or collect annual revenue information, and thus are unable to estimate the number of earth stations that would constitute a small business under the SBA definition.

2. Mobile Satellite Earth Station Feeder Links. There are currently no licenses for MSS earth station feeder links in the frequency bands addressed in this First Report and Order.

3. Space Stations (Geostationary). Commission records reveal that there are 6 space station licensees at C-band. We do not request nor collect annual revenue information, and thus are unable to estimate of the number of geostationary space stations that would constitute a small business under the SBA definition, or apply any rules providing special consideration for Space Station (Geostationary) licensees that are small businesses.

4. Space Stations (Non-Geostationary). There are currently no Non-Geostationary Space Station licensees at C-band.

such definition(s) in the Federal Register." 5 U.S.C. § 601(3).

⁷ Small Business Act, 15 U.S.C. § 632 (1996).

⁸ 5 U.S.C. § 601(4).

⁹ An exception is the Direct Broadcast Satellite Service (DBS), *infra*.

¹⁰ 13 C.F.R. § 120.121, SIC code 4899.

¹¹ 1992 *Economic Census Industry and Enterprise Receipts Size Report*, Table 2D, SIC code 4899 (U.S. Bureau of the Census data under contract to the Office of Advocacy of the Small Business Administration).

5. Direct Broadcast Satellites. There are currently no DBS licensees at C-band.

6. Auxiliary, Special Broadcast and other program distribution services. This service involves a variety of transmitters, generally used to relay broadcast programming to the public (through translator and booster stations) or within the program distribution chain (from a remote news gathering unit back to the station). At the frequencies under consideration in this proceeding there are no transmissions of this type directly to the public. The Commission has not developed a definition of small entities applicable to broadcast auxiliary licensees. Therefore, the applicable definition of small entity is the definition under the Small Business Administration (SBA) rules applicable to radio broadcasting stations (SIC 4832) and television broadcasting stations (SIC 4833). These definitions provide, respectively, that a small entity is one with either \$5.0 million or less in annual receipts or \$10.5 million in annual receipts. 13 C.F.R. § 121.201, SIC CODES 4832 and 4833. The numbers of these stations are very small. The FCC does not collect financial information on any broadcast facility and the Department of Commerce does not collect financial information on these auxiliary broadcast facilities. We believe, however, that most, if not all, of these auxiliary facilities could be classified as small businesses by themselves. We also recognize that most of these types of services are owned by a parent station which, in some cases, would be covered by the revenue definition of small business entity discussed above. These stations would likely have annual revenues that exceed the SBA maximum to be designated as a small business (as noted, either \$5 million for a radio station or \$10.5 million for a TV station). Furthermore, they do not meet the Small Business Act's definition of a "small business concern" because they are not independently owned and operated.

7. Microwave Services. Microwave services includes common carrier, private operational fixed, and broadcast auxiliary radio services. At present, there are over 8500 common carrier licensees, and approximately 1800 private operational fixed and broadcast auxiliary radio licensees in the microwave services at C-band. Inasmuch as the Commission has not yet defined a small business with respect to microwave services, we will utilize the SBA's definition applicable to radiotelephone companies -- i.e., an entity with no more than 1,500 persons. 13 C.F.R. § 121.201, SIC CODE 4812. We estimate, for this purpose, that all of the Fixed Microwave licensees (excluding broadcast auxiliary licensees) would qualify as small entities under the SBA definition for radiotelephone companies.

E. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

The Commission's existing rules in Part 25 on FSS operations contain reporting requirements for FSS systems, and we modify these reporting requirements to eliminate duplicative costs of filing multiple applications. In addition, we add an annual reporting requirement to indicate the number of satellite earth stations actually brought into service, those deactivated during the year, and a report of any changes in satellite location applicable to the CSAT network. The proposed streamlined licensing procedures do not affect small entities disproportionately and it is likely no additional outside professional skills are required to complete the annual report indicating the number of small antenna earth stations actually brought into service.

F. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

The *FWCC/Onsat/Hughes NPRM* solicited comment on several alternatives for streamlined licensing of CSATs at C-band. This *First Report and Order* considered comments offering alternatives, and has acted in response to stated concerns and suggestions, particularly those representing significant agreement or consensus by commenters. The decisions of this *First Report and Order* should positively impact both large and small businesses by providing a faster, more efficient, and less economically burdensome licensing procedure. The streamlined licensing service rules provide for consolidation of licensing for small antenna earth stations and a continued coordination requirement designed to ensure that these new satellite services will not cause harmful interference to existing terrestrial services. These rules substitute a single requirement to annually report the number of satellite earth stations brought into service in the last year, for the current requirement to individually license these earth stations. This change, discussed further above, should minimize the impact on Small entities.

G. Report to Congress

The Commission will send a copy of this *First Report and Order* including this FRFA, in a report to be sent to Congress pursuant to the Small Business Regulatory Enforcement Fairness Act of 1966, *see* 5 U.S.C. § 801 (a)(1)(A). In addition, the Commission will send a copy of the *First Report and Order*, including this FRFA, to the Chief Counsel for Advocacy of the Small Business Administration. A copy of this *First Report and Order* and FRFA (or summaries thereof) will also be published in the Federal Register. *See* 5 U.S.C. § 604(b).