

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 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)	

REPLY COMMENTS OF TITAN WIRELESS, INC.

Titan Wireless, Inc. (“Titan”) hereby submits its reply comments in response to comments filed in the Notice of Proposed Rulemaking (“NPRM”) issued in the above-captioned proceeding.¹ These reply comments are confined to the question of C-band blanket licensing.

¹ *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; 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; 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*

Titan joins many of the commenters, such as Lockheed Martin Global Telecommunications, Inc., JFL Communications, Inc., Virtual Geosatellite, LLC, Home Box Office and Turner Broadcasting System, Inc., and Telesat Canada, in supporting the Commission’s proposal “to amend Part 25 of the Commission’s Rules to allow the licensing, under a single authorization and with prior coordination, of C-band small aperture terminal earth station networks” (“CSATs”).² Titan believes that such steps would greatly further the Commission’s basic goals to provide advanced telecommunications to all Americans³ and to “eliminate outdated and cumbersome regulations, reduce unnecessary paperwork, and increase efficiency.”⁴ Importantly, however, the success of this proposal will depend on the degree of flexibility afforded CSAT applicants and the details of its implementation. In particular, the restrictions advocated by members of the fixed service community would threaten to leave this initiative a still-born.

Streamlining licensing procedures for CSAT networks would not only allow residents of rural areas, such as Native American reservations, to receive important telecommunications services including broadband, it would also increase business opportunities for providers such as Titan, and promote competition between communications providers, a

Concerning Deployment of Geostationary Orbit FSS Earth Stations in the Shared Portion of the Ka-band, IB Docket No. 00-203, Notice of Proposed Rulemaking, FCC 00-369 (rel. Oct. 24, 2000) 65 Fed. Reg. 70541 (Nov. 24, 2000).

² NPRM at ¶ 13.

³ NPRM at ¶ 81 (citing *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)).

⁴ *In the Matter of Streamlining the Commission’s Rules and Regulations for Satellite Application and Licensing Procedures*, IB Docket No. 95-117, Report and Order, 11 FCC Rcd. 21581, 21582, ¶ 1. (1996) (“Streamlining R & O”); see also *id.* ¶ 2 (“Streamlined regulation will help the U.S. Satellite industry to continue to expand and compete in the world-wide telecommunications market. The revised rules we adopt today free satellite service

concept encouraged by the Commission and the Telecommunications Act of 1996. These benefits would not be fully achieved, however, if the Commission places cumbersome restrictions, such as those offered by fixed service commenters, on CSAT licensing and operations. The inexorable economics of service to rural areas mean that, to succeed, a provider needs support and operational flexibility, both by means of regulatory incentives and by means of its ability to also provide service to non-rural areas. The proposals to limit CSAT blanket licenses to 20 MHz over three orbital slots would simply not allow the bandwidth and flexibility necessary to provide the type of broadband services to rural areas that are sorely needed to bridge the digital divide. Further limitations restricting blanket licensing of all CSAT networks to rural areas only (as opposed to allowing blanket licensing wherever coordination is feasible) exacerbate the extreme hardships already faced by companies attempting to provide service to rural areas. In sum, while Titan applauds the Commission's initiatives in this rulemaking proceeding, Titan offers certain discrete comments to ensure that the Commission's objectives are met in a manner consistent with the public interest.

I. BACKGROUND

Titan is engaged in community telephone and data communications, largely focusing on the development of rural telephony services.⁵ Titan's technology enables it to serve remote communities at a substantially lower cost per household than would be required by the development of a wireline system. As noted to the Commission previously,⁶ Titan has developed

providers from unnecessary regulatory burdens, and, enable them to respond more quickly to customers' needs.").

⁵ Titan Wireless, Inc.'s website is <http://wireless.titan.com/>.

⁶ Comments of Titan Wireless (filed Dec. 20, 1999), *In the Matter of Federal-State Joint Board on Universal Service: Promoting Deployment and Subscriberhip in Unserved and*

a Very Small Aperture Terminal (“VSAT”) system that is tailored to serving remote areas either on a stand-alone basis or in conjunction with a fixed wireless system, and has deployed the system in many developing countries. Depending on the particular case, the solutions offered by Titan will consist of a combination of satellite and terrestrial technologies, and will extend to broadband capabilities, including Internet, Worldwide Web access and VSAT Asymmetric Digital Subscriber Lines, and both fixed and mobile service applications. Measures such as blanket licensing of small C-band dishes are extremely important to the success of satellite-based solutions for underserved areas. Currently, Titan’s C-band product works in the United States in the following frequency band: 5925 to 6425 MHz for uplink to the satellite and 3700 to 4200 MHz for downlink from the satellite.⁷

II. THE PROPOSED 20 MHZ LIMIT SHOULD BE REVISED

Titan is pleased that the Fixed Wireless Communications Coalition (“FWCC”) supports the adoption of blanket licensing of technically-identical remote earth-station terminals to permit operators to configure their C-band systems quickly without the expense and administrative effort involved in licensing individual earth stations.⁸ Titan does not, however, support proposals by Onsat or the FWCC to coordinate only 20 MHz of spectrum.⁹ Titan does not concur that this limitation is an appropriate limitation that can be applied generally to other prospective CSAT applicants.

Underserved Areas, Including Tribal and Insular Areas, CC Docket No. 96-45, Further Notice of Proposed Rulemaking, FCC 99-204 (rel. Sept. 3, 1999).

⁷ NPRM at ¶ 1, n.2 (“The C-band generally refers to frequencies at 3700-4200 and 5925-6425 MHz.”).

⁸ Comments of the FWCC (filed Jan. 8, 2001) (“FWCC Comments”) (citing NPRM at ¶¶ 87-97).

⁹ NPRM at ¶14, n.17; FWCC Comments at 22.

A 20 MHz limit not only hinders the rate at which data can be sent and received by narrowing the pipeline, but it also limits a CSAT network's flexibility, and therefore ability to meet consumer demands.¹⁰ Given a wider range of available spectrum, CSAT network operators have more leeway in managing traffic as well as devising cost-effective technical solutions that address their customers' needs. Moreover, it seems unnecessary to impose a limit on the spectrum available to CSAT providers, when extensive frequency coordination must nevertheless take place.¹¹ Indeed, the limit would *hinder* coordination; one of the most-used techniques of coordination involves frequency segmentation, which requires flexibility and is rendered that much more difficult by a 20 MHz limit. Finally, a 20 MHz limit might discourage increased competition by dissuading potential commercial entities from entering into a market that is not only congested, but excessively constrained by artificial barriers. In sum, decreasing the amount of spectrum that earth station networks in the C-band may use would hinder efforts to bridge the digital divide by bringing truly broadband services to rural areas, would have a chilling effect as opposed to fostering competition, and would pose unnecessary operational and coordination difficulties for CSAT networks.

¹⁰ See, e.g., Rosston & Steinberg, *Using Market-Based Spectrum Policy to Promote the Public Interest*, 50 Fed. Comm. L.J. 87, 99 (Dec. 1997) ("In order for competition to bring consumers the highest valued services in the most efficient manner, we believe competing users of spectrum need flexibility to respond to market forces and demands. ... Flexibility eliminates artificial market entry barriers by enabling spectrum users to respond quickly to changing public demands for new and different services, as well as enabling users to introduce innovative services and technologies rapidly without administrative costs or delays."); see also Reply of GE American Communications, Inc. Wireless (filed Jul. 27, 1999), *In the Matter of Request for Declaratory Ruling on Partial-Band Licensing of Earth Stations in the Fixed Satellite Service that Share Terrestrial Spectrum; Petition for Rule Making to Set Loading Standards for Earth Stations in the Fixed Satellite Service that Share Terrestrial Spectrum*, RM-9649 ("[F]lexibility is critical to earth station operators in order to permit them to respond to customer demands and to restore service in the event of an outage.").

III. THE ORBITAL SLOT LIMIT SHOULD BE ELIMINATED

Titan further disagrees with the notion of limiting the flexibility of CSAT networks by requiring that they communicate with no more than three satellite locations within the visible geostationary satellite arc.¹² Once again, Titan feels that such a limitation on flexibility is a mistake, and would greatly stifle competition and the deployment of advanced telecommunications capability to all Americans.¹³

IV. CSAT NETWORK SERVICE SHOULD BE ALLOWED WHEREVER FREQUENCY COORDINATION ALLOWS THE INSTALLATION OF AN EARTH STATION

To date, many rural areas have remained unserved largely because the return-on-investment rate is very low for serving sparse economically-deprived areas. A rural service provider needs support, both by means of regulatory incentives and by means of its ability to also provide service to non-rural areas in order to offset fixed costs for providing service to rural areas. A narrow rule limiting CSAT service to rural areas does not actually serve the best interests of the rural-area residents themselves and may ironically defeat the regulatory goal of bringing more services to rural areas. The Commission should enable CSAT service providers to

¹¹ See NPRM at ¶ 17 (“An earth station applicant, prior to filing with the Commission, must coordinate its proposed frequency usage with existing terrestrial users and with applicants that have filed for terrestrial station authorizations.”).

¹² See NPRM at ¶ 93; FWCC Comments at 22.

¹³ See Reply Comments of ATC Teleports, Inc. on Request for Declaratory Ruling and Petition for Rulemaking (filed Jul. 27, 1999), *In the Matter of Request for Declaratory Ruling on Partial-Band Licensing of Earth Stations in the Fixed Satellite Service that Share Terrestrial Spectrum; Petition for Rule Making to Set Loading Standards for Earth Stations in the Fixed Satellite Service that Share Terrestrial Spectrum*, RM-9649, (“[E]arth station operators need full-band earth station licensing to permit access to multiple satellites and satellite transponders based on varying customer needs. Imposing earth station loading requirements would be unduly restrictive and would greatly increase the regulatory burdens associated with earth station licensing.”); see also NPRM at ¶ 13 (“One of the Commission’s chief goals is to

offset some of their fixed costs by providing service to non-rural areas where coordination is feasible.

This type of flexible policy carries little to no risk and provides several benefits. The Commission wisely notes that the required individual coordination with terrestrial users of C-band frequencies may, as a practical matter, effectively limit CSAT networks to rural areas where those frequencies are relatively underused.¹⁴ Furthermore, blanket CSAT licensing would not only allow residents of rural areas, such as Native American reservations, to receive important telecommunications services including broadband; it would also increase business opportunities for providers such as Titan, and promote competition between communications providers, a concept encouraged by the Commission and the Telecommunications Act of 1996.¹⁵ These benefits would not be fully achieved if the Commission limits blanket licensing of all CSAT networks to rural areas only (as opposed to allowing blanket licensing wherever coordination is feasible).

V. THE PROPOSED APPLICATION PROCESS IS CUMBERSOME

To ensure the advancement of communications technology and its increased availability to the public, the Commission is constantly striving to streamline the way the

foster wide access to electronic commerce and data through the Internet and other networks, particularly in underserved areas.”).

¹⁴ NPRM at ¶ 95.

¹⁵ *See, e.g., Chairman Kennard Urges Industry To Take Lead In Providing Universal Access*, FCC News Release, December 4, 2000 (“[T]he quickest route to universal access was through competitive telecommunications offerings, with business taking the lead to expand access to everyone. ... Competition will increase services and decrease prices, and it will stimulate investors to build your nation’s infrastructure, so that you can more fully participate in the new global economy.”).

communications industry is regulated.¹⁶ In accordance with this policy, the Commission seeks comment on “any alternative [application procedure] that expedites the processing and minimizes the administrative burden on both the Commission and the CSAT licensee while providing adequate notice to the affected parties.”¹⁷

Titan feels that the application procedure currently proposed is cumbersome and that further streamlining would better achieve the Commission’s initiative. Titan agrees with the Commission that the application process should be modeled on the licensing authorized for GTE’s construction and authorization of up to 30,000 small aperture 4/6 GHz earth stations.¹⁸ However, the process outlined in the NPRM seems to differ slightly than the one authorized in 1992, in that two different Public Notices would be required under the NPRM’s proposal. Titan feels that this is redundant, and that eliminating the NPRM’s initial Public Notice requirement would be more financially efficient and would speed up the deployment of advanced telecommunications. Thus, the process should simply entail completion of frequency coordination for each individual station before bringing it into service, and then submission of this information to the Commission to be put on public notice.

¹⁶ See *Streamlining R&O*, 11 FCC Rcd. at 21605, ¶ 59 (“We have eliminated outmoded data collection and duplicative paperwork requirements. These changes will help consumers by helping satellite operators who must satisfy real-time consumer demand in a global market. The changes we are making are intended to enhance the growth and development of the U.S. Satellite industry as it continues to compete with other national and international telecommunications providers.”); see also *id.*, n.79 (“By reducing regulatory burden, these streamlining measures eliminate some market entry barriers and facilitate the participation of small businesses in the communications marketplace.”) (citing Section 257 of the Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996)).

¹⁷ NPRM at ¶ 89.

¹⁸ NPRM at ¶ 87; see also *In the Matter of GTE Spacenet Corporation Streamlined Licensing Procedures for 4/6 GHz Earth Stations*, 7 FCC Rcd. 5217, 5217, ¶ 3 (rel. Aug. 17, 1992).

To address the Commission's concern that adequate notice be given (even with the removal of the first Public Notice requirement), one need only look to the dynamics of the coordination process.¹⁹ The application process that Titan supports will still provide adequate notice to the affected parties since, in effect, the frequency coordination process is itself triggered by notification of the applicant's intentions to potentially affected users.²⁰

Titan opposes FWCC's proposal to further erode CSAT effectiveness by limiting the validity of CSAT coordinations for six months.²¹ FWCC suggests that if a CSAT user terminal does not commence operation within six months of its coordination, the CSAT licensee loses its coordination priority over FS facilities coordinated in the mean time.²² CSAT networks often require numerous user terminals for efficient use, and CSAT operators have strong economic incentives to commence operations on all of its coordinated terminals as quickly as possible. Full roll-out, however, can take significantly longer than six months; these are complicated network installations in remote areas. Accordingly, the Commission should not entertain FWCC's proposal to further restrict CSAT operations.

¹⁹ See Dan Collins, *Primer on Frequency Coordination Procedures*, NATIONAL SPECTRUM MANAGERS ASSOCIATION, Issue 1 (May 1987) <<http://www.nsma.org/primer.html>> (“[T]he coordination process must be basically cooperative in nature.”).

²⁰ See, e.g., Comsearch, *Microwave Frequency Engineering and Coordination Services Detailed Information*, <http://www.comsearch.com/microwave/svc-frequency_coordination-det.jsp> (last visited December 5, 2000) (“Notification: Comsearch circulates the technical parameters of your proposed system to all existing and proposed licensees in your area and frequency band of operation, as required in the prior coordination process. By FCC Rule, recipients are given 30 days to respond”); see also *In the Matter of GTE Spacenet Corporation Streamlined Licensing Procedures for 4/6 GHz Earth Stations*, 7 FCC Rcd. 5217, 5218, Appendix A.

²¹ FWCC Comments at 23.

²² *Id.*

VI. CONCLUSION

Titan supports the Commission's proposal to allow blanket licensing of CSATs. However, we believe that this initiative can be achieved without imposing restrictions on the amount of C-band spectrum that a CSAT network may use, or limiting the number of orbital slots with which a station may communicate, confining application of this policy to only rural areas. Titan recommends continued access to the entire C-band and visible geostationary arc, with the understanding that well-organized coordination should take place. Titan feels that, with respect to these two issues, the FCC's current "full-band" policies still serve the public interest and should not be changed: "This full-band policy is intended to provide earth stations the flexibility to change the communication paths to other satellite locations and transponder use assignments to meet operational requirements."²³ Any rule changes limiting spectrum and orbital slots would inhibit efficient and equitable use of spectrum in the shared FS/FSS frequency bands. Titan also urges the Commission to further streamline the coordination process and refrain from adopting unnecessary or unreasonable hindrances.

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²³ NPRM at ¶ 19.

CERTIFICATE OF SERVICE

I, Omer C. Eyal, hereby certify that on this 9th day of February 2001 a true and correct copy of the foregoing Reply Comments of Titan Wireless, Inc. was served via first-class mail, postage pre-paid upon the following:

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