

the Commission. If NRAO files an objection, Section 25.203(f) states that the Commission may take whatever action it deems appropriate.²⁸⁶ NRAO requests that we adopt coordination procedures to ensure that VSAT systems that are authorized to add hubs or remotes to their system without filing an additional application continue to protect NRAO's radio astronomy operations in the Quiet Zone, and proposes an amendment to Section 25.203(f).²⁸⁷

127. The Commission did not propose revisions to any of its rules governing VSAT remote earth stations, in effect since the 1980s, or the Quiet Zone notification requirement in effect since 1958. Thus, with respect to hub earth stations, this Order does not allow VSAT licensees to add hubs to their networks without filing a modification application specifying the location and the operating parameters of those hubs. Further, with regard to the request that we place a new coordination requirement on VSAT remote terminals, we believe that such a request is beyond the scope of the *Notice* and *Further Notice* in this proceeding. Accordingly, we will invite interested parties to comment on NRAO's proposal in the upcoming *Third Further Notice* in this proceeding. In view of the foregoing, we conclude that no revisions to Section 25.203(f) are warranted at this time.

C. Temporary Fixed VSAT Stations

128. *Background.* The *Notice* invited comment on whether to license temporary-fixed earth stations under VSAT network blanket licenses, either as hubs or as remote earth stations.²⁸⁸ A temporary-fixed or transportable earth station is one that can be transported from place to place, but operates only when stationary. Satellite news-gathering trucks are the most common type of temporary-fixed earth stations. This proposal was limited to temporary-fixed systems operating in the Ku-band because temporary-fixed stations in the C-band, which is allocated on a co-primary basis to both the fixed-satellite and terrestrial services, might raise potentially complex coordination issues.²⁸⁹ The *Notice* also invited comment on extending the technical requirements for VSAT hubs currently in our rules to temporary fixed VSAT hubs.²⁹⁰

129. *Discussion.* PanAmSat does not object to this proposal, provided that temporary-fixed VSAT hubs are required to comply with all Part 25 requirements.²⁹¹ Spacenet and Hughes

Commission's Rules and Regulations to Give Interference Protection to Frequencies Utilized for Radio Astronomy, Amendment of Part 3, 4, 5, 6, 7, 9, 10, 11, 16, 20, and 21 of the Commission's Rules and Regulations to Give Interference Protection to Frequencies Utilized for Radio Astronomy, *Report and Order*, Docket No. 11745, FCC 58-1111, 17 Rad. Reg. 1738 (1958) (*Quiet Zone Order*).

²⁸⁶ 47 C.F.R. § 25.203(f).

²⁸⁷ NRAO Reply at 2-3.

²⁸⁸ *Notice*, 15 FCC Rcd at 25148 (para. 60).

²⁸⁹ *Notice*, 15 FCC Rcd at 25148-49 (paras. 61-62). At the time of the *Notice*, the Commission had proposed rules allowing VSAT-like systems operating in the C-band, called "CSATs." The Commission has since adopted such rules. See *FWCC/Onsat First Report and Order*, 16 FCC Rcd 11511.

²⁹⁰ *Notice*, 15 FCC Rcd at 25148 (para. 61), citing 47 C.F.R. § 25.134(a), (b).

²⁹¹ PanAmSat Comments at 12.

also support this proposal.²⁹² Accordingly, we revise Section 25.277 to allow temporary-fixed Ku-band VSAT stations. We will impose the same fees on applications for temporary-fixed VSAT hubs and remote terminals as we currently apply to other VSAT hub and remote terminal license applications.²⁹³

130. Hughes, however, raises two issues with respect to temporary-fixed earth stations in VSAT networks. First, Hughes contends that the requirement in Section 25.277(e) of our rules that temporary-fixed earth stations cease operations immediately upon report of harmful interference should be limited to C-band earth stations.²⁹⁴ Second, Hughes asserts that it is inconsistent with precedent to require VSAT applicants to specify the number of temporary-fixed remote terminals they plan to have in their networks.²⁹⁵ As explained further below, Hughes is mistaken regarding both issues.

131. Hughes claims that Section 25.277(e) is based on a 1981 Order in which Western Tele-Communications, Inc. (WTCI) was granted a developmental authorization for temporary-fixed earth stations in the C-band, without a coordination requirement, but on a non-interference basis.²⁹⁶ Because the Ku-band is not shared on a co-primary basis with terrestrial operations as is the C-band, Hughes argues that Ku-band temporary-fixed earth stations should not be required to operate on a non-interference basis.²⁹⁷ When the Commission proposed rules for licensing temporary-fixed earth stations on a regular basis, however, it was concerned that such operations could cause adjacent satellite interference if the earth stations are poorly aligned.²⁹⁸ Therefore, the Commission proposed requiring all temporary-fixed earth stations to operate on a non-interference basis, in addition to requiring C-band temporary-fixed earth stations to coordinate with terrestrial wireless operations.²⁹⁹ The Commission later noted that the commenters supported these rules, and adopted them without extensive further discussion.³⁰⁰ Thus, we will continue to apply a non-interference requirement to Ku-band temporary-fixed earth stations.

²⁹² Spacenet Comments at 44; Hughes December 21, 2001 *Ex Parte* Statement at 1-2. See also SIA Reply at 17.

²⁹³ See 47 C.F.R. § 1.1107.

²⁹⁴ Hughes December 21, 2001 *Ex Parte* Statement at 2, citing 47 C.F.R. § 25.277(e).

²⁹⁵ Hughes December 21, 2001 *Ex Parte* Statement at 3.

²⁹⁶ Hughes December 21, 2001 *Ex Parte* Statement at 2, citing Western Tele-Communications, Inc., Mimeo No. 3640 (released Sept. 30, 1981).

²⁹⁷ Hughes December 21, 2001 *Ex Parte* Statement at 2.

²⁹⁸ Amendment of Part 25 of the Commission's Rules and Regulations to Reduce Alien Carrier Interference Between Fixed-Satellites at Reduced Orbital Spacings and to Revise Application Procedures for Satellite Communication Services, *Notice of Proposed Rulemaking*, CC Docket No. 86-496, 2 FCC Rcd 762, 765 (para. 34) (1986) (*Temporary-Fixed NPRM*).

²⁹⁹ See *Temporary-Fixed NPRM*, 2 FCC Rcd at 788, proposed Sections 25.307(d) and (e). Proposed Section 25.307(d) required coordination with all affected terrestrial licensees, and Section 25.307(e) required that temporary-fixed earth stations operate on a non-interference basis.

³⁰⁰ Amendment of Part 25 of the Commission's Rules and Regulations to Reduce Alien Carrier Interference Between Fixed-Satellites at Reduced Orbital Spacings and to Revise Application

132. In addition, Hughes observes that earth stations in place for less than six months are permitted but not required to be licensed as temporary-fixed earth stations.³⁰¹ Hughes further maintains that requiring VSAT applicants to specify the number of temporary-fixed earth stations in their VSAT networks is inconsistent with that flexibility.³⁰² We disagree. Currently, earth station applicants are free to apply for either a regular FSS earth station license or a temporary-fixed earth station license when they plan to keep their earth station in place for six months or less. By requiring VSAT licensees to state in their applications the number of earth stations in their networks to be licensed as temporary-fixed earth stations, we are simply treating them consistently with other VSAT licensees.

D. VSAT Hub EIRP Limit

133. *Background.* In the *Further Notice*, the Commission observed that several commenters had recommended interpreting the EIRP limit of 78.3 dBW for VSAT hubs in Sections 25.134(a) and (b) of the Commission's rules as a per-carrier limit rather than an aggregate limit of all carriers.³⁰³ The Commission explained that it had considered and rejected earlier requests to interpret this as a per-carrier limit.³⁰⁴ The Commission explained further that, when it adopted this EIRP limit, in 1986, it determined that an aggregate EIRP limit higher than 78.3 dBW could cause unacceptable interference.³⁰⁵

134. Although the Commission recognized in the *Further Notice* that it might be reasonable to increase the hub EIRP limit to reflect new technology, it also found that none of the commenters had provided a sufficient basis for doing so.³⁰⁶ Therefore, the Commission invited

Procedures for Satellite Communication Services, *Second Report and Order and Further Notice of Proposed Rulemaking*, CC Docket No. 86-496, 8 FCC Rcd 1316, 1324 (para. 51) (1993) (*Temporary-Fixed Further NPRM*). These rule sections were renumbered from Sections 25.301(d) and (e) to Sections 25.277(d) and (e), respectively, but otherwise adopted as proposed.

³⁰¹ Hughes December 21, 2001 *Ex Parte* Statement at 3, *citing* Maritime Telecommunications Network, Inc., *Order*, 15 FCC Rcd 23210, 23220 (paras. 24-25) (Int'l Bur., 2000) (*MTN Order*). An earth station may be licensed as a temporary-fixed earth station if it will remain at a given location for six months or less. 47 C.F.R. § 25.277(a). However, the license term of a temporary-fixed earth station is the same as term for other earth stations; 15 years. 47 C.F.R. § 25.121.

³⁰² Hughes December 21, 2001 *Ex Parte* Statement at 3.

³⁰³ *Further Notice*, 17 FCC Rcd at 18628 (para. 119), *citing* SIA December 10, 2001 *Ex Parte* Statement at 30; Hughes Comments at 27; Spacenet Reply at 14.

³⁰⁴ *Further Notice*, 17 FCC Rcd at 18628 (para. 120), *citing* Streamlining the Commission's Rules and Regulations for Satellite Application and Licensing Procedures, *Report and Order*, IB Docket No. 95-117, 11 FCC Rcd 21581, 21593 (para. 29) (1996) (*1996 Streamlining Order*).

³⁰⁵ *See* Streamlining the Commission's Rules and Regulations for Satellite Application and Licensing Procedures, *Notice of Proposed Rulemaking*, IB Docket No. 95-117, 10 FCC Rcd 10624, 10628 n.26, *citing* Routine Licensing of Large Networks of Small Antenna Earth Stations Operating in the 12/14 GHz Frequency Bands, *Declaratory Order*, 1986 WL 291567, at para. 14 (Com. Car. Bur., released Apr. 9, 1986), *summarized at* 51 Fed. Reg. 15067 (Apr. 22, 1986) (*1986 VSAT Order*).

³⁰⁶ *Further Notice*, 17 FCC Rcd at 18628-29 (para. 120).

interested parties to provide additional information demonstrating with particularity that a per-carrier 78.3 dBW EIRP limit would not cause unacceptable interference.³⁰⁷

135. *Discussion.* SIA observes that, when the Commission adopted the aggregate 78.3 dBW EIRP hub limit in 1986, it assumed that the hub was accessing only a single transponder under clear sky conditions.³⁰⁸ SIA argues further that a VSAT operator can now access multiple transponders from a single antenna.³⁰⁹ In those cases, according to SIA, the per-carrier input power spectral density limit of -14.0 dBW/4 kHz currently in Section 25.134 is a tighter limit than the aggregate EIRP hub limit of 78.3 dBW, and that, therefore, the 78.3 dBW limit is unnecessary and possibly confusing.³¹⁰ Similarly, Spacenet also maintains that the off-axis antenna gain performance standards in Section 25.209 and the input power spectral density standards in Sections 25.134 and 25.212 are sufficient to define the interference environment, and that treating the 78.3 dBW limit as a per carrier limit would not affect this environment.³¹¹

136. We find SIA's and Spacenet's arguments to be persuasive. Unlike 1986, when the 78.3 dBW hub limit was adopted, VSAT operators can now access multiple transponders from a single earth station antenna. Such operators must comply with the -14.0 dBW/4 kHz input power density currently in Section 25.134, which applies to all transmissions,³¹² and that limit makes the 78.3 dBW aggregate EIRP limit superfluous. Therefore, we will eliminate this aggregate limit from Section 25.134, and rely only on the -14.0 dBW/4 kHz input power density limit.

E. Non-U.S.-Licensed Satellites and International VSAT Networks

137. *Background.* In the *Notice*, the Commission observed that Section 25.115(c) limits conventional Ku-band VSAT networks to domestic service.³¹³ We also pointed out that this limitation is inconsistent with our *DISCO I* policy of permitting all U.S.-licensed fixed satellite systems to offer both domestic and international services,³¹⁴ and our *DISCO II* policy of allowing non-U.S.-licensed satellites to provide both domestic and international services in the United States.³¹⁵ Accordingly, we proposed revising Section 25.115(c) to allow applicants to apply for

³⁰⁷ *Further Notice*, 17 FCC Rcd at 18629 (para. 120).

³⁰⁸ SIA Further Comments at 22. *See 1986 VSAT Order* at para. 14.

³⁰⁹ SIA Further Comments at 22.

³¹⁰ SIA Further Comments at 22.

³¹¹ Spacenet Further Comments at 21-22.

³¹² 47 C.F.R. § 25.134(a)(1).

³¹³ *Notice*, 15 FCC Rcd at 25149 (para. 63), *citing* 47 C.F.R. § 25.115(c).

³¹⁴ *Notice*, 15 FCC Rcd at 25149 (para. 63), *citing* Amendment to the Commission's Regulatory Policies Governing Domestic Fixed Satellites and Separate International Satellite Systems, *Report and Order*, IB Docket No. 95-41, 11 FCC Rcd 2429 (1996) (*DISCO I*). International service is service to or from points in the United States from or to points outside of the United States.

³¹⁵ *Notice*, 15 FCC Rcd at 25149 (para. 63), *citing DISCO II*, 12 FCC Rcd 24094.

licenses for Ku-band VSAT networks for both domestic and international services, and to access both U.S.-licensed and non-U.S.-licensed satellites.³¹⁶

138. *Discussion.* Spacenet supports this proposal.³¹⁷ No one opposed it. Accordingly, we revise Section 25.115(c) as proposed.³¹⁸ Also as proposed in the *Notice*, VSAT network operators providing international service to and from the United States must comply with the power limitations and licensing procedure set forth in Section 25.134.³¹⁹ In addition, VSAT operators communicating with non-U.S.-licensed satellites will be required to comply with any conditions placed on the satellites' entry into the U.S. market.³²⁰ We will license only those VSAT facilities located in the United States.³²¹ VSAT network facilities in other nations, and the space stations with which they communicate, would be required to comply with the licensing requirements, if any, of the nations where they are located.³²²

139. Finally, we emphasize that Section 25.271 of the Commission's rules require all satellite and earth station licensees to be able to shut off immediately upon notification of harmful interference.³²³ Accordingly, we must place certain requirements on international VSAT system operators to ensure that they can comply with this requirement. Specifically, we require international VSAT system operators to maintain a control point within the United States, or to maintain a point of contact within the United States available 24 hours a day, 7 days a week, with the ability to shut off any earth station within the VSAT network immediately upon notification of harmful interference. We will not license international VSAT system operators that do not meet these requirements unless we require the VSAT network to be operated on a non-interference basis as a condition on the license, and the operator informs the Commission of all

³¹⁶ *Notice*, 15 FCC Rcd at 25149 (para. 64).

³¹⁷ Spacenet Comments at 46. *See also* SIA Reply at 17-18.

³¹⁸ *See Notice*, 15 FCC Rcd at 25149 (para. 64).

³¹⁹ *See Notice*, 15 FCC Rcd at 25149 (para. 64).

³²⁰ For example, one way of authorizing a non-U.S.-licensed satellite to enter the U.S. market is to place the satellite on the Permitted List. The Permitted List also includes conditions with which earth stations must comply when communicating with non-U.S.-licensed satellites on the Permitted List. For instance, pursuant to the World Trade Organization (WTO) Agreement on Basic Telecommunications Services (WTO Basic Telecom Agreement), the United States made market access commitments for fixed satellite services, but did not make market access commitments for DBS, Direct-to-Home (DTH) service, and Digital Audio Radio Service (DARS), and took a most favored nation (MFN) exemption for these services as well. We generally preclude non-U.S.-licensed satellite operators on the Permitted List from providing these services in the United States under this exemption. To obtain access to the U.S. market without these conditions, the non-U.S.-licensed satellite operator would have to submit an additional ECO-SAT analysis with respect to DBS, DTH, and DARS. For more on the ECO-SAT test, see *DISCO II*, 12 FCC Rcd at 24112-13 (para. 40).

³²¹ *See Notice*, 15 FCC Rcd at 25149 (para. 64).

³²² *See Notice*, 15 FCC Rcd at 25149 (para. 64).

³²³ 47 C.F.R. § 25.271(c)(3).

the VSAT terminals within the United States. We amend Section 25.271 to make these requirements clear.³²⁴

F. VSAT Licenses for Organizations with Multiple Members

140. The *Notice* invited comment on a proposal to establish VSAT-style blanket licensing for earth station networks, such as the Alaska Bush network or the National Public Radio (NPR) network, in which there are several individual earth station licensees that each belong to the same organization.³²⁵ While the Commission did not anticipate that this proposal would raise any technical issues, it found that it might need to resolve legal issues regarding the entity responsible for complying with Commission rules before instituting such a procedure.³²⁶ No one commented on this proposal, or indicated how we might resolve the inherent legal issues. Accordingly, we are not in a position to change our policy of licensing each earth station in a network made up of multiple members at this time.

VI. MISCELLANEOUS

A. Elliptical Earth Station Antennas

141. *Background.* In the *Notice*, the Commission proposed adding a number of definitions to Section 25.201 of the rules, including "equivalent antenna diameter."³²⁷ Instead of adopting this definition, however, SIA recommends revising Sections 25.211 and 25.212 to prescribe earth station power limits based on the antenna's "dimension parallel to the GSO plane"³²⁸ rather than "equivalent antenna diameter." Thus, SIA is implicitly recommending that we base our review of elliptical antennas exclusively on the length of the major axis rather than

³²⁴ These requirements are also consistent with the ESV rules for adopted in the *ESV Order*. *ESV Order* at para. 50.

³²⁵ *Notice*, 15 FCC Rcd at 25149-50 (para. 65). The Alaska Bush network is a large network of technically similar earth stations that provide digital telephony to many remote villages in Alaska. The NPR network is a large network of technically similar earth stations that provide for the collection and distribution of broadcast quality analog audio programming. The individual earth stations operating in the network are licensed to the various radio stations and universities that comprise the NPR network.

³²⁶ The Commission stated that this approach would be feasible only if it could place responsibility for complying with Commission rules on the umbrella organization holding the blanket license rather than individual members of the organization, but noted that we have recently adopted similar rules for Guard Band Managers, who were licensed to lease spectrum in the 700 MHz band to terrestrial wireless operators. *Notice*, 15 FCC Rcd at 25150 (para. 65), *citing* Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, *Second Report and Order*, WT Docket No. 99-168, 15 FCC Rcd 5299 (2000).

³²⁷ *See Notice*, 15 FCC Rcd at 25183 (App. B, Section 25.201(b)(7)). In the *Notice*, the Commission proposed defining the equivalent diameter for a rectangular aperture antenna with length, l , and width, w , to be $[(l \times w)/\pi]^{1/2}$. *Notice*, 15 FCC Rcd at 25183 (App. B, Section 25.201(b)(7)). In Appendix B to this *Order*, we correct this definition to read $[4(l \times w)/\pi]^{1/2}$.

³²⁸ When viewed from any point on the earth's surface, satellites near each other in the GSO appear to lie approximately in one plane. The antenna gain pattern equation in Section 25.209(a)(1) applies to side lobes within that GSO orbital plane.

its surface area.³²⁹ According to SIA, a Ku-band elliptical antenna with an equivalent antenna diameter of 1.0 meters often has better side lobe gain performance than a circular 1.2 meter antenna.³³⁰ No one else commented on these issues.

142. *Discussion.* We will not adopt SIA's proposal. Section 25.209 has antenna gain contour requirements both within the GSO orbital plane and outside that plane. This is because emissions in side lobes outside the GSO orbital plane have the potential to cause harmful interference to NGSO satellite systems. SIA's proposal would eliminate any size requirements for elliptical earth station antennas outside of the GSO orbital plane. We will not adopt a rule that could lead to an unlimited increase in the risk of harmful interference to NGSO satellite systems.³³¹ Accordingly, we will adopt a definition of "equivalent antenna diameter" in Part 25 of our rules, as the Commission proposed in the *Notice*.

B. Station Keeping and Interleaved Satellites

143. *Background.* In the *Notice*, the Commission cited two issues that might weigh against adopting a streamlined procedure for smaller-than-routine earth station applications. The first issue was whether such a procedure might result in an increase in harmful interference to satellites that drift too far away from their assigned orbit location, in violation of the Commission's station-keeping requirements.³³² The second was whether the procedure might adversely affect two-degree-compliant U.S.-licensed satellites that are interleaved with non-U.S.-licensed satellites providing service to South America.³³³ The Commission tentatively concluded, however, that neither of these issues warranted rejection of its proposed streamlined non-routine earth station procedures, and invited comment.³³⁴

144. *Discussion.* Parties filing comments in response to the *Notice* did not address these issues directly, however. Instead, commenters who proposed starting the antenna gain pattern at a greater off-axis angle argued that neither the station-keeping nor the interleaved-satellite issue

³²⁹ SIA December 10, 2001 *Ex Parte* Statement at 24, cited in *Further Notice*, 17 FCC Rcd at 18634 (para. 133).

³³⁰ SIA Further Comments at 25. SIA also corrects a typographical error in the last equation for equivalent diameter. SIA Further Comments at 24-25.

³³¹ In the Ku-band, NGSO FSS satellite systems are required to accept interference from GSO FSS systems. See *Ku-band NGSO Order*, 16 FCC Rcd at 4128 (para. 73). However, in that Order, the Commission also noted that it is beneficial to NGSO FSS systems to limit the signal energy radiated by GSO FSS earth stations, thereby placing an upper bound on the level of uplink interference that they must tolerate. *Ku-band NGSO Order*, 16 FCC Rcd at 4185-86 (para. 237). In that Order, the Commission also concluded that the the Part 25 rules adequately limit the interference that NGSO operators must accept. *Ku-band NGSO Order*, 16 FCC Rcd at 4185-86 (para. 237). Because SIA's proposal would eliminate any size requirements for elliptical earth station antennas outside of the GSO orbital plane, we will not adopt this proposal at this time. However, in the *Sixth Report and Order*, we relax the earth station antenna gain requirements within 3° of the GSO orbital arc. See *Sixth Report and Order* at para. 38.

³³² *Notice*, 15 FCC Rcd at 25138 (para. 27), citing 47 C.F.R. § 25.210(j)(1).

³³³ *Notice*, 15 FCC Rcd at 25138-39 (paras. 28-29).

³³⁴ *Notice*, 15 FCC Rcd at 25138-39 (paras. 27-29).

justify rejection of those proposals. The Commission reviewed those comments in the *Further Notice*,³³⁵ and tentatively agreed.³³⁶ The Commission again invited comment on its analysis in the *Further Notice*.³³⁷ In response, SIA agrees with the Commission that neither the possibility of failure to maintain station-keeping tolerances nor interleaved satellites warrant consideration when deciding whether to revise the earth station antenna gain envelope.³³⁸ Consequently, we find that these issues do not by themselves warrant rejection of any revisions to the antenna gain pattern envelope proposed in this proceeding. Accordingly, we will not address these issues further when we consider antenna gain pattern issues in a future Order.³³⁹

145. As an alternative proposal, Spacenet suggests creating a sub-classification of ALSAT earth station license that would authorize the earth station to communicate only with satellites that are at least two degrees away from adjacent satellites.³⁴⁰ We find that this is unnecessary. Section 25.210(j)(1) requires GSO satellites to be able to remain within 0.05° of their assigned orbital locations.³⁴¹ Satellites that meet this requirement should not experience any increase in unacceptable interference as a result of the changes in antenna gain patterns adopted here. Satellites that do not meet this requirement are in violation of a Commission rule and are not able to enjoy the same protection from interference as satellites that comply with our rules. Moreover, interleaved satellites are not likely to cause interference into each other's systems provided that they maintain the proper geographic spatial isolation. Further, we would not allow an interleaved non-U.S.-licensed satellite less than 2° away from a U.S. satellite authorized to serve the United States to obtain "ALSAT" status, since doing so would cause harmful interference to U.S. operations. Therefore, we will not separately classify the satellites that routine earth stations in the conventional C-band and Ku-band can access, as Spacenet suggests.

C. Radiation Hazards from Co-located Antennas

146. In the *Notice*, the Commission observed that the National Environmental Policy Act of 1969 (NEPA) requires agencies of the Federal Government to evaluate the effects of their actions on the quality of the human environment.³⁴² To satisfy in part its responsibilities under

³³⁵ *Further Notice*, 17 FCC Rcd at 10777-78 (paras. 33-34).

³³⁶ *Further Notice*, 17 FCC Rcd at 10778 (para. 36).

³³⁷ *Further Notice*, 17 FCC Rcd at 10778 (para. 36).

³³⁸ SIA Further Comments at 8. *See also* Spacenet Further Comments, Att. A at 23-25.

³³⁹ The 0.05° on both sides of an assigned nominal orbit location is often referred to as the "stationkeeping box." On occasion, when the Commission has authorized two or satellite licensees to collocate their satellites at a particular orbital location, one of those licensees were required to operate its satellite outside the stationkeeping box. In these cases, it has been determined that that particular satellite can be allowed to operate outside the stationkeeping box without causing harmful interference to other two-degree-compliant satellites. Accordingly, we conclude here that we can treat these satellites the same as satellites licensed to operate within the stationkeeping box, and that these satellites do not constitute a reason to reject any of the proposals in the *Notice* and *Further Notice*.

³⁴⁰ Spacenet Further Comments at 23-24.

³⁴¹ 47 C.F.R. § 25.210(j)(1).

³⁴² *Notice*, 15 FCC Rcd at 25154 (para. 82), *citing* National Environmental Policy Act of

NEPA, the Commission has adopted Maximum Permissible Exposure (MPE) limits for radiofrequency (RF) radiation emitted by Commission-regulated transmitters and facilities.³⁴³ Section 1.1307(b)(3)(i) requires applicants proposing additional transmitters, facilities, or modifications to a licensed facility to submit an environmental assessment if the resulting emissions causes the power density in a geographic area to exceed the RF exposure limits specified in the Commission's rules by five percent.³⁴⁴

147. The *Notice* proposed revising Section 25.117 of the Commission's rules to state explicitly that earth station licensees seeking modification of their licenses must comply with the RF emission rules.³⁴⁵ SIA supports the Commission's proposal,³⁴⁶ and no one filed any opposition. Accordingly, we will revise Section 25.117 as shown in Appendix B of this Order to cross-reference the RF emission rules.

D. Construction Authorization

148. In 1996, the Commission eliminated the requirement that space station operators and earth station operators obtain authorization prior to beginning construction of their stations.³⁴⁷ The *Notice* stated that the 1996 revisions to Section 25.113 that implement this decision are potentially confusing, and proposed revising Section 25.113 to make it clearer.³⁴⁸ SIA supports the Commission's proposal.³⁴⁹ We adopt the revisions to Section 25.113 proposed in the *Notice* to make clear that satellite and earth station operators are not required to obtain authorization prior to construction of their facilities.³⁵⁰

E. Satellite Control Responsibilities to Resolve Harmful Interference

149. *Background.* Section 25.274 of the Commission's rules sets forth procedures for resolving harmful interference. In cases where an earth station receives interference, and determines that the source is not a terrestrial operator or another earth station communicating with

1969, 42 U.S.C. § 4321 *et seq.*

³⁴³ *Notice*, 15 FCC Rcd at 25154-55 (para. 82), citing 47 C.F.R. § 1.1310; Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation, *Report and Order*, ET Docket No. 93-62, 11 FCC Rcd 15123 (1996); *Second Memorandum Opinion and Order*, 12 FCC Rcd 13494 (1997).

³⁴⁴ *Notice*, 15 FCC Rcd at 25155 (para. 82), citing 47 C.F.R. § 1.1307(b)(3)(i).

³⁴⁵ *Notice*, 15 FCC Rcd at 25155 (para. 83), citing 47 C.F.R. § 25.113(b) (new earth station license applications); 47 C.F.R. § 25.116(b)(2) (amendments to pending license applications).

³⁴⁶ SIA Reply at 20.

³⁴⁷ *Notice*, 15 FCC Rcd at 25155 (para. 84), citing 1996 *Streamlining Order*, 11 FCC Rcd at 21583-85 (paras. 6-9) (space station construction); 21590-91 (para. 23) (earth station construction).

³⁴⁸ *Notice*, 15 FCC Rcd at 25155 (para. 84).

³⁴⁹ SIA Reply at 20.

³⁵⁰ We note, however, that we still generally require parties to obtain licenses before they operate their facilities.

the satellite system with which it is communicating, Section 25.274(c) directs the earth station operator to contact the control center of the satellite system, who then make "reasonable efforts to determine the source of the problem."³⁵¹ Section 25.274(g) states that "a representative of the earth station suffering undue interference" has the responsibility to contact the control center of the satellite system or systems suspected of causing the interference.³⁵² If Section 25.274(g) is not read in conjunction with Section 25.274(c), it may appear that earth station operators suffering interference must directly contact the suspected system's control center.³⁵³ This is not the case. Allowing a satellite operator to function as the affected earth station operator's representative can help facilitate a solution because satellite operators must maintain a good working relationship with each other in order to resolve coordination issues that come up from time to time. Accordingly, the Commission sought comment on revising Section 25.274(g) to clarify that earth station operators are permitted to contact the control centers for the satellite systems with which they communicate in cases of harmful interference, and to rely on its own satellite system operators to contact the control centers of the potentially interfering satellite systems and resolve the interference.³⁵⁴

150. *Discussion.* Spacenet and Globalstar support revising Section 25.274 as the Commission proposed.³⁵⁵ Furthermore, as the Commission explained in the *Notice*, these revisions do not change the rights and responsibilities of parties in disputes regarding harmful interference, but rather helps clarify those rights and responsibilities.³⁵⁶ Accordingly, we adopt those revisions.³⁵⁷ In addition, Globalstar requests that we revise Section 25.274(e). Currently, this rule states that "[w]here the operations of the suspect earth station are the source of the interference, the licensee of that earth station shall take all measures necessary to eliminate the interference." Globalstar recommends replacing the word "eliminate" with "resolve" in Section 25.274(e) because interference may not be able to be eliminated in all cases.³⁵⁸ Globalstar also recommends reversing the order of Section 25.274(f) and (g) to make clear that, in non-severe cases, an earth station operator should contact the Commission only when good faith efforts to resolve the interference have failed.³⁵⁹ We conclude that the revisions proposed by Globalstar also help clarify Section 25.274, and we therefore adopt them.³⁶⁰

³⁵¹ 47 C.F.R. § 25.274(c).

³⁵² 47 C.F.R. § 25.274(g).

³⁵³ *Notice*, 15 FCC Rcd at 25155-56 (para. 85).

³⁵⁴ *Notice*, 15 FCC Rcd at 25155-56 (para. 85).

³⁵⁵ Globalstar Comments at 7; Spacenet Comments at 46-47. *See also* SIA Reply at 20-21.

³⁵⁶ *Notice*, 15 FCC Rcd at 25155-56 (para. 85).

³⁵⁷ In cases where an earth station operator alleging harmful interference prefers to contact directly the control center of another satellite operator, it is free to do so.

³⁵⁸ Globalstar Comments at 7.

³⁵⁹ Globalstar Comments at 7.

³⁶⁰ In addition, we replace references to "undue interference" in Section 25.274 with "harmful interference." The intent of this revision is to modernize the language of Section 25.274, not to make any substantive change.

F. Extension of Rules to Other FSS Bands

1. Power Limits

151. In the *Notice*, the Commission explained that Sections 25.211 and 25.212 establish power limits for the conventional C-band and Ku-band, but do not explicitly include or exclude other FSS bands.³⁶¹ The Commission proposed amending Sections 25.211 and 25.212 to state explicitly that the Commission may apply the power limits in those sections to any other frequency band, to the extent that power limits for that band have not been established elsewhere in Part 25.³⁶² Since that time, the Commission has adopted default service rules in another proceeding, for use in frequency bands in which the Commission has not adopted any service rules.³⁶³ Therefore, we find that the default power limits proposed in the *Notice* are no longer necessary.

2. Other FSS Requirements

152. Globalstar requests that we do not apply the following proposals to frequency bands other than conventional C- and Ku-bands:³⁶⁴ (1) streamlined procedure for non-routine earth station license applications;³⁶⁵ (2) relaxed power level limits for conventional Ku-band earth stations;³⁶⁶ (3) streamlined procedure for routine Ku-band temporary-fixed earth station license applications;³⁶⁷ and (4) proposed revisions to VSAT rules.³⁶⁸ Globalstar argues, for example, that the technical parameters for the conventional C- and Ku-bands are based on two-degree-spacing, and should not be extended to the L-band.³⁶⁹ We agree with Globalstar. With one exception, the proposals cited by Globalstar were limited to the conventional C- and Ku-bands.³⁷⁰ We do not have any basis for applying those rules to other frequency bands.

³⁶¹ *Notice*, 15 FCC Rcd at 25156 (para. 86); citing 47 C.F.R. §§ 25.211, 25.212.

³⁶² *Notice*, 15 FCC Rcd at 25156 (para. 86).

³⁶³ 47 C.F.R. § 25.217; Amendment of the Commission's Space Station Licensing Rules and Policies, *First Report and Order*, IB Docket No. 02-34, 18 FCC Rcd 10760, 10783-86 (paras. 51-54) (2003) (*First Space Station Reform Order*).

³⁶⁴ Globalstar Comments at 2-3.

³⁶⁵ Section III., *supra*.

³⁶⁶ Section IV.B., *supra*.

³⁶⁷ Section IV.C., *supra*.

³⁶⁸ Section V., *supra*.

³⁶⁹ Globalstar Comments at 2-3.

³⁷⁰ The one exception is that the Commission invited comment on applying our proposed rules for random access techniques to Ka-band blanket earth station licenses. *See Notice*, 15 FCC Rcd at 25148 (para. 57). Here, we assure Globalstar that the Commission did not propose or seek comment on applying any VSAT rules to the L-band.

153. In response to Globalstar's concern, we have revised all the references to the C-band and Ku-band in Part 25 to make clear which requirements apply only to the conventional C-band and Ku-band, and which requirements also apply to the extended C-band and Ku-band. Those rule revisions are not intended to change any current requirement, but merely to clarify existing requirements. These rule revisions are set forth in Appendix B.³⁷¹

G. Half-Power Beam Width

154. *Background.* In the *Further Notice*, the Commission observed that several frequency bands in the Table of Frequency Allocations are shared between government and non-government operations.³⁷² When an earth station applicant seeks authority to operate in such a shared band, the Commission must coordinate with the National Telecommunications and Information Administration (NTIA). This coordination requires the half-power beam width of the earth station antenna. Our rules currently do not require applicants to submit half-power beam width. As a result, we often must request the applicant to provide this information, delaying completion of coordination and our action on the application. Therefore, the Commission proposed requiring applicants for earth station authority in shared government-non-government bands to provide information on half-power beam width.³⁷³

155. *Discussion.* SIA supports this information requirement, but only for the 13.75-14.0 GHz band. SIA claims that this is the only band for which the Commission needs this information to complete NTIA coordination.³⁷⁴ We disagree with SIA. Several frequency bands in addition to the 13.75-14.0 GHz band require coordination between the NTIA and the Commission.³⁷⁵ We need half-power beam width to coordinate earth stations in those shared bands. Therefore, we will require all earth station applicants seeking to operate in shared government/non-government bands to provide half-power beam width information as an attachment to their applications.

H. General Part 25 Modifications

156. The *Notice* also considered several miscellaneous revisions to Part 25, such as updating cross-references and defining new terms in Section 25.201.³⁷⁶ The Commission did not

³⁷¹ Sections 25.201, 25.210, 25.211, and 25.212 contain revised references to the C-band. Sections 25.115, 25.133, 25.134, 25.201, 25.209, 25.211, and 25.212 contain revised references to the Ku-band.

³⁷² *Further Notice*, 17 FCC Rcd at 18636 (para. 138).

³⁷³ *Further Notice*, 17 FCC Rcd at 18636 (para. 138).

³⁷⁴ SIA Further Comments at 26 and n. 21.

³⁷⁵ Examples of these frequency bands are the 3600-3650 MHz, 5850-5925 MHz, and 8025-8400 MHz band, and the "Little LEO" bands: 137-137.025 MHz, 137.175-137.825 MHz, and 400.15-401 MHz. In addition, earth stations in the 3650-3700 may need to be coordinated with government operations, depending on where they are located. For all shared government/non-government bands requiring coordination, see 47 C.F.R. § 2.106.

³⁷⁶ *Notice*, 15 FCC Rcd at 25157 (para. 90).

discuss or list all these proposed revisions individually, but instead set them out in Appendix B of the *Notice*. No one expressed any opposition to those revisions,³⁷⁷ and we adopt them as they were proposed in Appendix B of the *Notice*.³⁷⁸ In addition, in the *Further Notice*, the Commission invited comment on revising Section 25.161(b)³⁷⁹ so that the reference to the license renewal requirements is "Section 25.121(e) rather than "Section 25.120(e)." It also proposed revising Section 25.203(g)(1)³⁸⁰ so that the reference to FCC monitoring stations is "Section 0.121(b)" rather than "Section 0.121(c)."³⁸¹ SIA supports correcting these cross-references.³⁸² Accordingly, we adopt these rule revisions as proposed.

157. The Commission also invited commenters to make additional proposals and suggestions for streamlining our rules.³⁸³ We consider those proposals below.

1. Extension of ALSAT Authority

158. Loral recommends extending ALSAT authority to all routinely authorized earth stations currently in operation.³⁸⁴ "ALSAT" authority allows the earth station to communicate with all U.S.-licensed satellites, and all U.S.-licensed satellites on the Permitted List, subject to any service restrictions or technical conditions placed on that satellite. Routine earth station operators are free to request ALSAT authority at the time they file their applications, and they are free to modify their licenses to add ALSAT authority at any time they desire. Except in isolated cases to implement a change in Commission policy,³⁸⁵ we have not questioned any earth station operator's business decision to refrain from obtaining operating authority for which it may be eligible. We see no policy justification to depart from that practice in this case.

2. Size of Area of Gateway Antenna Complex

159. About one week before the Commission adopted the *Notice*, it adopted rules governing non-geostationary orbit (NGSO) fixed-satellite service (FSS) systems operating in the

³⁷⁷ Astrolink generally supports all the proposals in Section VII. of the *Notice*. Astrolink Comments at 14-15.

³⁷⁸ See *Notice*, 15 FCC Rcd at 25174-90 (App. B).

³⁷⁹ 47 C.F.R. § 25.161(b).

³⁸⁰ 47 C.F.R. § 25.203(g)(1).

³⁸¹ *Further Notice*, 17 FCC Rcd at 18636 (para. 139), citing 47 C.F.R. §§ 25.161(b), 25.203(g)(1).

³⁸² SIA Further Comments at 26.

³⁸³ *Notice*, 15 FCC Rcd at 25157 (para. 91).

³⁸⁴ Loral Comments at 13.

³⁸⁵ See *DISCO I*, 11 FCC Rcd at 2437 (para. 55); *DISCO II First Reconsideration Order*, 15 FCC Rcd at 7215 (para. 19).

Ku-band.³⁸⁶ In that Order, the Commission adopted a definition of "gateway" earth stations that requires a single complex of multiple gateway earth stations to be located within an area of one second of latitude by one second of longitude.³⁸⁷

160. Globalstar suggests relaxing the requirement that a separate license must be issued for each fixed gateway antenna that is more than one second in latitude or longitude from the lead licensed gateway antenna.³⁸⁸ Globalstar explains that it usually places multiple antennas in a remote, relatively small geographic area, and that the frequency coordination with terrestrial services conducted by Globalstar accounts for all the antennas in that area.³⁸⁹

161. We will not adopt Globalstar's suggestion. While Globalstar may place multiple antennas in a relatively small geographic area,³⁹⁰ it is not clear that all gateway earth station operators do. The purpose of the one-second rule is to ensure that all the antennas included in a given license are included in the coordination of the licensed facilities with terrestrial wireless operators. Accordingly, we reaffirm our conclusion that the one-second requirement is needed to facilitate coordination with potentially affected terrestrial wireless and microwave operators.³⁹¹

3. *Pro Forma* Transfers of Control

162. Loral and Hughes advocate a notification process or a grant-stamp procedure for *pro forma* transfers of control and assignments.³⁹² We have already streamlined our procedures for *pro forma* transfers of control. Applicants are required only to complete the Main Form and Schedule A of Form 312. We do not provide notice and opportunity for comment on *pro forma* transfer of control applications. In addition, we act on *pro forma* transfer of control applications in "action taken" public notices rather than by Order. Neither Loral nor Hughes have explained how a notification process or a grant-stamp procedure would able us to act on *pro forma* transfer of control applications any faster than we do now.

³⁸⁶ *Ku-band NGSO Order*, 16 FCC Rcd 4096.

³⁸⁷ *Ku-band NGSO Order*, 16 FCC Rcd at 4112 (para. 30).

³⁸⁸ Globalstar Comments at 6-7.

³⁸⁹ Globalstar Comments at 6-7.

³⁹⁰ Globalstar Comments at 6-7.

³⁹¹ *Ku-band NGSO Order*, 16 FCC Rcd at 4112 (para. 30).

³⁹² Loral Comments at 16-18, *citing* Federal Communications Bar Association's Petition for Forbearance from Section 310(d) of the Communications Act Regarding Non-Substantial Assignments of Wireless Licenses and Transfers of Control Involving Telecommunications Carriers and Personal Communications Industry Association's Broadband Personal Communications Services Alliance's Petition for Forbearance for Broadband Personal Communications Services, *Memorandum Opinion and Order*, 13 FCC Rcd 6293 (1998); Hughes Reply at 19. *See also* SIA Reply at 23-24.

4. Other Issues

163. Currently, Section 25.132 establishes antenna performance verification standards for all earth station antennas.³⁹³ SIA notes that the Commission codified separate antenna performance verification standards for Ka-band earth station antennas in another rule.³⁹⁴ Accordingly, as SIA suggests, we revise Section 25.132 to cross-reference the Ka-band earth station antenna performance verification standards.

164. GCI recommends limiting routine processing to digital carriers because they are more efficient than analog carriers.³⁹⁵ For several years, licensees have been voluntarily transitioning from analog to digital transmissions for business reasons. GCI has not shown that regulatory intervention into that transition is warranted. Furthermore, if continued analog transmissions were an unacceptably inefficient use of spectrum, it would be more reasonable to address that issue directly by prohibiting analog transmissions than it would to discourage analog transmissions indirectly by adopting an unnecessary procedure for analog licenses.

I. Scope of Rulemaking Authority Under Section 11

165. Spacenet notes that Section 11 directs the Commission to "repeal or modify any regulation . . . no longer in the public interest," and claims that this precludes us from considering any proposal to strengthen any substantive requirement in this Order.³⁹⁶ Initially, we note that we have not adopted any more burdensome requirements in this Order. Further, nothing in Section 11 affects the Commission's broad discretion to determine whether and when to initiate rulemakings,³⁹⁷ and, after notice and opportunity for comment, to adopt new rules or revise existing rules in a reasoned manner.

VII. CONCLUSION

166. In this Order, we have established a streamlined procedure for reviewing non-routine earth station applications. We have increased the Ku-band downlink EIRP density limit for routine processing of Ku-band earth stations from 6 to 10 dBW/4 kHz. Furthermore, we modify, relax, or clarify several of our Part 25 rules, including the rules governing VSAT systems, METs, and temporary-fixed earth stations.

³⁹³ 47 C.F.R. § 25.132.

³⁹⁴ SIA November 5, 2001 *Ex Parte* Statement, Att. 1 at 1-2. *See* 47 C.F.R. §§ 25.138(d), (e).

³⁹⁵ GCI Further Comments at 4.

³⁹⁶ Spacenet Comments at 5-6.

³⁹⁷ *See* *WWHT v. FCC*, 656 F.2d 807 (D.C. Cir. 1981). *See also* *Telecommunications Resellers Assn. v. FCC*, 141 F.3d 1193, 1197 n.6 (D.C. Cir. 1998) (Commission has discretion to initiate rulemaking even in case where the court found that a rulemaking was not "necessary" to implement a statutory requirement).

VIII. PROCEDURAL MATTERS

167. *Final Regulatory Flexibility Analysis.* As required by the Regulatory Flexibility Act (RFA),³⁹⁸ an Initial Regulatory Flexibility Analysis (IRFA) was incorporated into the *Notice and Further Notice.*³⁹⁹ The Commission sought written public comments on the possible significant economic impact of the proposed policies and rules on small entities in the *Notice*, including comments on the IRFA. No one commented specifically on the IRFA. Pursuant to the RFA,⁴⁰⁰ a Final Regulatory Flexibility Analysis is contained in Appendix E.

168. *Paperwork Reduction Act.* This Order contains new and modified information collection(s). The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection(s) contained in this NPRM, as required by the Paperwork Reduction Act of 1995, Public Law No. 104-13. Public and agency comments are due 60 days from date of publication of the NPRM in the Federal Register. Comments should address: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law No. 107-198, *see* 44 U.S.C. § 3506(c)(4), we seek specific comment on how we might "further reduce the information collection burden for small business concerns with fewer than 25 employees."

169. A copy of any comments on the information collections contained herein should be submitted to Judy Boley Herman, Federal Communications Commission, Room 1-C804, 445 12th Street, SW, Washington, DC 20554, or via the Internet to jbHerman@fcc.gov and to Kristy L. LaLonde, OMB Desk Officer, Room 10234 NEOB, 725 17th Street, N.W., Washington, DC 20503, via the Internet to Kristy.L.LaLonde@omb.eop.gov, or via fax at 202-395-5167.

170. *Privacy Impact Assessment.* The Commission has performed a Privacy Impact Assessment as required by the Privacy Act, as amended by the E-Government Act of 2002.⁴⁰¹ The Commission has determined that this information collection does not affect individuals or households; thus, there are no impacts under the Privacy Act.

IX. ORDERING CLAUSES

171. Accordingly, IT IS ORDERED, pursuant to Sections 4(i), 7(a), 11, 303(c), 303(f), 303(g), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 157(a), 161, 303(c), 303(f), 303(g), 303(r), that this Fifth Report and Order in IB Docket No. 00-248 is hereby ADOPTED.

³⁹⁸ See 5 U.S.C. § 603.

³⁹⁹ *Notice*, 15 FCC Rcd at 25212-15 (App. G); *Further Notice*, 17 FCC Rcd at 18642-45 (App. C).

⁴⁰⁰ See 5 U.S.C. § 604.

⁴⁰¹ 5 U.S.C. § 552a.

172. IT IS FURTHER ORDERED that Part 25 of the Commission's rules IS AMENDED as set forth in Appendix B.

173. IT IS FURTHER ORDERED that the Chief, International Bureau is delegated authority to develop a list of approved non-routine earth station antennas as set forth in this Order above.

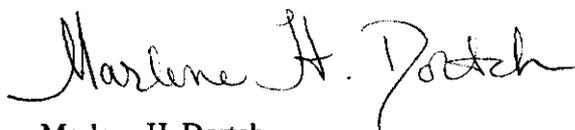
174. IT IS FURTHER ORDERED that the provisions of this Order will be effective 30 days after a summary of this Order is published in the Federal Register, except for the new information collection requirements.

175. This Report and Order contains information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13, that are not effective until approved by the Office of Management and Budget. The Federal Communications Commission will publish a document in the Federal Register following approval of the information collection by the Office of Management and Budget (OMB) announcing the effective date of those rules.

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

177. IT IS FURTHER ORDERED that CC Docket No. 86-496 is TERMINATED.

FEDERAL COMMUNICATIONS COMMISSION



Marlene H. Dortch
Secretary

APPENDIX A

Parties filing PleadingsComments (March 26, 2001)

1. Aloha Networks, Inc. (Aloha Networks)
2. Andrew Corporation
3. Astrolink International LLC (Astrolink)
4. GE American Communications, Inc. (GE Americom)
5. Globalstar USA, Inc. and Globalstar, L.P. (Globalstar)
6. Hughes Network Systems, Hughes Communications, Inc., and Hughes Communications Galaxy, Inc. (together, Hughes)
7. Loral Space & Communications Ltd. (Loral)
8. Motient Services, Inc. (Motient)
9. New Skies Satellites N.V. (New Skies)
10. PanAmSat Corporation (PanAmSat)¹
11. Spacenet, Inc., and StarBand Communications, Inc. (together, Spacenet)
12. Telesat Canada (Telesat)
13. WorldCom, Inc. (WorldCom)

Replies (May 7, 2001)

1. Aloha Networks²
2. Astrolink
3. Comtech Mobile Datacom Corp. (CMDCC)
4. GE Americom
5. Hughes
6. National Radio Astronomy Observatory (NRAO)
7. OnSat Network Communications, Inc. (Onsat)
8. PanAmSat
9. Satellite Industry Association (SIA)
10. Spacenet
11. Telesat

Further Comments (March 10, 2003)

1. Aloha Networks, Inc. (Aloha Networks)
2. General Communication, Inc. (GCI)
3. QUALCOMM, Incorporated (Qualcomm)
4. SIA
5. Spacenet

¹ On April 10, 2001, PanAmSat corrected certain minor errors and re-filed its comments.

² On May 9, 2001, Aloha Networks corrected certain minor errors and re-filed its reply.

Further Replies (April 8, 2003)

1. Aloha Networks
2. Qualcomm
3. SIA
4. Spacenet
5. Telesat

Ex Parte Statements

1. Letter from Joseph A. Godles, Attorney for PanAmSat Corporation, to Magalie Roman Salas, Secretary, FCC (dated Oct. 22, 2001) (PanAmSat October 22, 2001 *Ex Parte* Statement).
2. Letter from Richard DalBello, Executive Director, Satellite Industry Association, to Magalie Roman Salas, Secretary, FCC (dated Nov. 5, 2001) (SIA November 5, 2001 *Ex Parte* Statement).
3. Letter from Dori K. Bailey of Latham and Watkins, to Magalie Roman Salas, Secretary, FCC (dated Dec. 11, 2001) (SIA November 19, 2001 *Ex Parte* Statement).³
4. Letter from Joseph A. Godles, Attorney for PanAmSat Corporation, to Magalie Roman Salas, Secretary, FCC (dated Nov. 20, 2001) (PanAmSat November 20, 2001 *Ex Parte* Statement).
5. Letter from Dori K. Bailey of Latham and Watkins, to Magalie Roman Salas, Secretary, FCC (dated Dec. 11, 2001) (SIA December 10, 2001 *Ex Parte* Statement).
6. Letter from Dori K. Bailey of Latham and Watkins, to Magalie Roman Salas, Secretary, FCC (dated Dec. 21, 2001) (Hughes December 21, 2001 *Ex Parte* Statement).
7. Surreply of the Satellite Industry Association to the Reply Comments of Telesat Canada and Qualcomm, Incorporated (dated Oct. 3, 2003) (SIA October 3, 2003 *Ex Parte* Statement).
8. Letter from Jacob S. Farber, Attorney for Aloha Networks, Inc., to Marlene H. Dortch, Secretary, FCC (dated Nov. 14, 2003) (Aloha Networks November 14, 2003 *Ex Parte* Statement).
9. Letter from Lewis J. Paper, Attorney for Aloha Networks, Inc., to Marlene H. Dortch, Secretary, FCC (dated Feb. 3, 2004) (Aloha Networks February 3, 2004 *Ex Parte* Statement).
10. Letter from Richard DalBello, President, Satellite Industry Association, to Marlene H. Dortch, Secretary, FCC (dated Mar. 23, 2004) (SIA March 23, 2004 *Ex Parte* Statement).
11. Letter from Dean R. Brenner, Attorney for Qualcomm Incorporated, to Marlene H. Dortch, Secretary, FCC (dated Mar. 31, 2004) (Qualcomm March 31, 2004 *Ex Parte* Statement).
12. Letter from Carlos M. Nalda, Attorney for The Boeing Company, to Marlene H. Dortch, Secretary, FCC (dated Apr. 14, 2004) (Boeing April 14, 2004 *Ex Parte* Statement).
13. Letter from Carlos M. Nalda, Attorney for The Boeing Company, to Marlene H. Dortch, Secretary, FCC (dated Apr. 19, 2004) (Boeing April 19, 2004 *Ex Parte* Statement).
14. Letter from Jacob S. Farber, Attorney for Aloha Networks, Inc., to Marlene H. Dortch, Secretary, FCC (dated May 12, 2004) (Aloha Networks May 12, 2004 *Ex Parte* Statement).

³ Although SIA made this oral *ex parte* presentation to Commission staff on November 19, 2001, it did not file a written summary of its *ex parte* presentation until December 11, 2001. Section 1.1206(b)(2) of the Commission's rules requires persons making oral *ex parte* presentations that include new data or arguments to summarize the new information in writing and file it with the Commission no later than one business day after the *ex parte* presentation. 47 C.F.R. § 1.1206(b)(2). In the *Further Notice*, the Commission determined that it need not determine what action, if any, is warranted with respect to SIA's late-filed *ex parte* statement, as the proposals in the November 19, 2001 *Ex Parte* Statement are the same as those in the SIA November 5, 2001 *Ex Parte* Statement and the SIA December 10, 2001 *Ex Parte* Statement. *Further Notice*, 17 FCC Rcd at 18590 n.29.

15. Letter from Joseph A. Godles, Attorney for PanAmSat Corporation, to Marlene H. Dortch, Secretary, FCC (dated Nov. 19, 2004) (PanAmSat November 19, 2004 *Ex Parte* Statement).
16. Letter from Joseph A. Godles, Attorney for PanAmSat Corporation, to Marlene H. Dortch, Secretary, FCC (dated Feb. 1, 2005) (SIA February 1, 2005 *Ex Parte* Statement).

APPENDIX B

Rule Changes

For the reasons discussed above, the Federal Communications Commission amends title 47 of the Code of Federal Regulations, part 25, 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 Sections 4, 301, 302, 303, 307, 309, and 332 of the Communications Act, as amended, 47 U.S.C. Sections 154, 301, 302, 303, 307, 309, 332, unless otherwise noted.

2. Amend §25.109 by revising paragraph (c) to read as follows:

§25.109 Cross-reference.

(c) Ship earth stations in the Maritime Mobile Satellite Service, see 47 CFR part 80.

3. Amend § 25.113 by revising the section heading and paragraph (a), and removing and reserving paragraph (b) to read as follows:

§ 25.113 Station licenses and launch authority.

(a) Construction permits are not required for satellite earth stations. Construction of such stations may commence prior to grant of a license at the applicant's own risk. Applicants must comply with the provisions of 47 CFR 1.1312 relating to environmental processing prior to commencing construction.

(b) [Reserved].

4. Amend § 25.115 by revising paragraphs (a)(1) and (c)(1) to read as follows:

§ 25.115 Application for earth station authorizations.

(a)(1) Transmitting earth stations. Commission authorization must be obtained for authority to operate a transmitting earth station. Applications shall be filed electronically on FCC Form 312, Main Form and Schedule B, and include the information specified in Section 25.130, except as set forth in paragraph (a)(2).

(c)(1) Large Networks of Small Antennas operating in the 11.7-12.2 GHz and 14.0-14.5 GHz frequency bands with U.S.-licensed or non-U.S.-licensed satellites for domestic or international services. Applications to license small antenna network systems operating in the 11.7-12.2 GHz and 14.0-14.5 GHz frequency band under blanket operating authority shall be filed on FCC Form 312 and Schedule B, for each large (5 meters or larger) hub station, and Schedule B for each representative type of small antenna (less than 5 meters) operating within the network.

* * * * *

5. Amend § 25.117 by adding paragraph (g), to read as follows:

§25.117 Modification of station license.

* * * * *

(g) In cases where an earth station licensee proposes additional transmitters, facilities, or modifications, the resulting transmissions of which can reasonably be expected to cause the power density to exceed the RF exposure limits specified in Part 1, Subpart I of the Commission's rules by five percent, the licensee must submit an environmental assessment pursuant to Section 1.1307(b)(3)(i) of the Commission's rules as an attachment to its modification application.

6. Amend § 25.118 by revising paragraph (a)(5) to read as follows:

§25.118 Modifications not requiring prior authorization.

(a) * * *

(5) Earth station operators may change their points of communication without prior authorization, provided that the change results from a space station license modification described in paragraph (e) of this Section, and the earth station operator does not re-point its antenna. Otherwise, any modification of an earth station license to add or change a point of communication will be considered under § 25.117 of this part.

* * * * *

7. Amend § 25.130 by revising paragraph (a) and adding paragraph (f) to read as follows:

§ 25.130 Filing requirements for transmitting earth stations.

(a) Applications for a new or modified transmitting earth station facility shall be submitted on FCC Form 312, Main Form and Schedule B, accompanied by any required exhibits, except for those earth station applications filed on FCC Form 312EZ pursuant to Section 25.115(a) of this Chapter. All such earth station license applications must be filed electronically through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of Part 1, Subpart Y of this Chapter. Additional filing requirements for ESVs are described in §§ 25.221 and 25.222 of this Chapter. In addition, applicants not required to submit applications on Form 312EZ, other than ESV applicants, must submit the following information to be used as an "informative" in the public notice issued under § 25.151 as an attachment to their application: