

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

In the Matter of)	
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)	
2000 Biennial Regulatory Review --)	IB Docket No. 00-248
Streamlining and Other Revisions of Part 25 of)	
the Commission's Rules Governing the Licensing)	
of, and Spectrum Usage by, Satellite Network)	
Earth Stations and Space Stations)	

**REPLY COMMENTS OF THE
SATELLITE INDUSTRY ASSOCIATION**

May 7, 2001

SUMMARY

SIA supports the Commission's efforts to streamline regulations governing the provision of satellite communications services in the United States. Appropriate revisions to the FCC's earth station licensing rules will enhance the provision of existing satellite services and promote the introduction of next-generation satellite service to the public. In revising its earth station licensing regime, however, the Commission should ensure that procedural changes do not unintentionally burden or otherwise undermine authorized satellite operations.

In the *NPRM*, the Commission seeks comment on a number of proposed revisions to its non-routine earth station licensing rules, and on possible relaxation of the power and power density limits contained in Sections 25.134, 25.211 and 25.212 of the rules to reflect advances in technology. SIA believes these issues are closely interrelated, and that the procedural changes proposed in the *NPRM* should be evaluated in the context of substantive revisions to the Commission's earth station licensing rules. Accordingly, SIA has convened a group of satellite industry experts to examine technical issues associated with relaxing current earth station licensing requirements, and will submit the recommendations of this technical group to the Commission within 60 days.

As discussed in these Reply Comments, the Commission should adopt many of the earth station streamlining proposals set forth in the *NPRM*, including: (i) requiring non-routine earth station applicants to submit public notice language with their applications; (ii) extending the maximum earth station license term to 15 years; (iii) permitting multiple hub stations in VSAT networks; (iv) licensing temporary fixed VSAT stations in the conventional Ku-band; (v) revising the FCC's rules to permit VSAT licensees to access U.S. and foreign-licensed satellites, and to clarify that the FCC will license only VSAT facilities located in the United States;

(vi) streamlining various earth station filing forms and procedures; (vii) updating and clarifying earth station and space station licensing rules to reflect current Commission policy; and (viii) moving towards electronic filing of earth station applications.

With respect to the proposals concerning mobile earth terminals (“METs”), SIA believes that the Commission should eliminate any “bringing into use” requirement for blanket-licensed METs. Because a MET licensee may have no control over the implementation of the associated MSS satellite system, and because the subject METs cannot operate until the associated MSS satellite system is deployed, it is not appropriate to require a MET licensee to commence operations within a specified timeframe. SIA also does not support limitations on MET license renewals, or the MET reporting and implementation requirements proposed in the *NPRM*.

In addition, SIA opposes the proposed 3 dB power reduction for Ku-band VSAT earth stations using random access techniques, and any extension of this proposal to the C-band or Ka-band. The record of this proceeding establishes that this reduction in power is not necessary from a technical perspective, and could significantly undermine the commercial viability of VSAT networks and other planned satellite services. SIA also believes that the Commission should not limit the renewal of VSAT licenses to the number of earth stations installed at the time of renewal.

Finally, SIA urges the Commission to adopt other measures to streamline its earth station licensing process, including: (i) eliminating separate license requirements for receive-only earth stations seeking to access foreign satellites on the permitted satellite list; (ii) adopting a “grant stamp” procedure for *pro forma* earth station and space station assignment and transfer applications; and (iii) clarifying that only one earth station application is necessary to obtain an authorization for an earth station seeking to operate in more than one frequency band.

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**REPLY COMMENTS OF THE
SATELLITE INDUSTRY ASSOCIATION**

The Satellite Industry Association (“SIA”)¹ hereby submits its Reply Comments in the above-referenced proceeding.² SIA supports the Commission’s efforts to reduce the regulatory burdens associated with providing satellite communications services in the United States. Appropriate revisions to the Commission’s earth station licensing regime will enhance the provision of existing satellite services and promote the introduction of next-generation satellite service to the public.

¹ SIA is a national trade association representing the leading U.S. satellite manufacturers, service providers, and launch service companies. SIA serves as an advocate for the U.S. commercial satellite industry on regulatory and policy issues common to its members. With member companies providing a broad range of products and services, SIA represents the unified voice of the U.S. commercial satellite industry. SIA’s members include: ASTROLINK International LLC; The Boeing Company; Ellipso Inc.; Final Analysis Inc.; GE American Communications, Inc.; Globalstar, L.P.; Hughes Electronics Corp.; Lockheed Martin Corp.; Loral Space & Communications Ltd.; Motient Corp.; PanAmSat Corporation; Teledesic Corporation; TRW Inc.; and Williams Vyvx Services.

² See 2000 Biennial Regulatory Review – Streamlining and Other Revisions of Part 25 of the Commission’s Rules Governing the Licensing of, and Spectrum Use by, Satellite Network Earth Stations and Space Stations, *Notice of Proposed Rulemaking*, IB Docket No. 00-248 (rel. Dec. 14, 2000) (“*NPRM*”).

However, in revising its earth station licensing rules, the Commission should ensure that procedural changes do not unduly burden or otherwise undermine authorized satellite operations. Thus, the *NPRM*'s earth station licensing proposals must be measured not only against the potential benefits of streamlined processing, but also against the potential impact on existing and planned satellite services. In this way, the Commission can ensure that its revised rules and procedures promote new earth station operations and enhance the provision of existing and planned satellite services. SIA respectfully submits the following comments with these fundamental objectives in mind.

In addition, SIA acknowledges and appreciates the additional time granted by the Commission for filing reply comments in this proceeding.³ SIA members have worked diligently to develop the consensus recommendations included in these Reply Comments. SIA would note, however, that additional work is required to reach an industry consensus on certain technical issues associated with relaxing the Commission's earth station licensing requirements. Thus, while these Reply Comments address many of the issues raised in the *NPRM*, SIA anticipates submitting a further *ex parte* filing after it has examined these complex technical issues more thoroughly.

I. SIA Generally Supports Efforts to Streamline the Earth Station Licensing Process, But Believes that the Commission Should Proceed with Caution in Examining Issues Associated With Non-Routine Earth Stations

In the *NPRM*, the Commission seeks comment on a number of proposals to streamline the licensing of non-routine earth stations that would reduce the regulatory burdens on earth

³ See Motion for Extension of Time Granted in IB Docket No. 00-248, *Public Notice*, Report No. SPB-168 (April 19, 2001).

station applicants and hasten the review of non-routine earth station applications.⁴ The Commission also seeks comment on whether the power and power density limits contained in Sections 25.134, 25.211 and 25.212 of the Commission's rules should be relaxed to reflect advances in technology.⁵

SIA believes these issues are closely interrelated. The Commission has received more non-routine earth station applications in recent years because, among other factors, the FCC's earth station licensing requirements no longer reflect the current state of satellite and earth station technology. Accordingly, SIA agrees with many of the commenters that the Commission's earth station power limits and other technical requirements must be updated to take into account technological advances and new service requirements.⁶

Furthermore, appropriate revisions to existing earth station power limits and other licensing requirements could reduce the number of non-routine earth station applications filed with the Commission. This may alleviate the need to implement significant changes to the FCC's non-routine earth station application procedures. As a result, the procedural changes proposed in the *NPRM* should be evaluated in the context of broader, substantive revisions to the Commission's earth station licensing rules.

SIA believes, however, that substantive changes to the Commission's existing earth station licensing rules should only be made after thorough technical analysis. In this connection, SIA has convened a group of satellite industry experts that is in the process of examining a

⁴ See *NPRM* at ¶¶ 8-24, 31-36.

⁵ See *id.*, ¶¶ 39-40.

⁶ See Joint Comments of Hughes Network Systems, Hughes Communications, Inc. and Hughes Communications Galaxy, Inc. at 15-17 ("Hughes Comments"); Comments of Loral Space & Communications Ltd. at 10-11 ("Loral Comments"); Comments of GE American Communications, Inc. at 2 ("GE Americom Comments").

number of technical issues raised in the *NPRM* to provide consensus recommendations on relaxing earth station licensing requirements consistent with the Commission's 2° spacing policy. Specifically, the SIA technical group is examining issues including: (i) earth station power and power density limits; (ii) the appropriate off-axis angle to apply antenna performance requirements; (iii) antenna mispointing and satellite station keeping; (iv) the impact on interleaved satellites; (v) alternatives to the Adjacent Satellite Interference Analysis ("ASIA") to demonstrate compatibility with 2° spacing; and (vii) related earth station operational issues. SIA intends to submit further recommendations of this technical group to the Commission within 60 days.

The Commission recognizes that a consensus approach to the complex Ku-band GSO FSS and related issues under consideration in this proceeding may facilitate resolution of these issues and thus serve the public interest.⁷ Unfortunately, the brief extension of time granted for filing reply comments did not permit SIA members to analyze fully and reach a consensus on all of these important issues. Accordingly, SIA respectfully requests that the Commission accept and consider the *ex parte* submission of SIA's technical experts group in its ultimate resolution of the issues raised in this proceeding.

II. SIA Urges the Commission to Adopt a Number of the Earth Station Streamlining Measures Proposed in the *NPRM*

Although additional time is necessary for SIA to examine more fully the complex technical issues associated with relaxing current earth station power limits and other licensing requirements, SIA believes that the Commission can move forward with a number of its earth station streamlining proposals at this time.

⁷ See Motion for Extension of Time Granted in IB Docket No. 00-248, *Public Notice*, Report No. SPB-168 (April 19, 2001).

A. Public Notice Language

The FCC proposes to require non-routine earth station applicants to submit with their applications language describing their proposed operations that would appear in the public notice. Specifically, the FCC would require applicants to provide the following information:

(i) a detailed description of the service to be provided, including frequency bands and satellites to be used; (ii) the diameter of the earth station antenna; (iii) proposed power and power density levels; (iv) identification of any random access technique; and (v) identification of any rule(s) for which a waiver is requested.⁸ SIA supports the Commission's proposal. In addition, SIA agrees with PanAmSat that the Commission should expand the information to be submitted by the applicant to include: (i) antenna gain and cross-polarization data; (ii) the eastern and western boundaries of the orbital arc, or a list of individual satellites, that the applicant seeks to coordinate; and (iii) the modulation scheme for any random access technique to be employed.⁹ Including such information in the public notice will provide interested parties with sufficient information to determine whether to further investigate and/or file comments or a petition to deny.

In addition, SIA urges the Commission to consider adopting a requirement that non-routine earth station applicants must serve their antenna gain patterns on satellite operators within $\pm 6^\circ$ of each satellite with which the applicant seeks to communicate. Such a requirement would facilitate the coordination of proposed non-routine earth station operations, and would permit potentially affected satellite operators to evaluate and comment more rapidly on the interference impact of proposed non-routine operations.

⁸ See *NPRM* at ¶ 38.

B. Temporary Fixed Earth Stations

The Commission proposes to permit “routine” temporary fixed earth stations seeking to operate in the conventional Ku-band to begin operation on a provisional basis immediately upon placement of the application on public notice.¹⁰ However, SIA does not believe that there is any reason to treat routine Ku-band temporary fixed earth stations differently than other types of routine earth stations operating in satellite-only bands for purposes of provisional operation.¹¹ Thus, like PanAmSat, SIA believes that the appropriate “start date” for routine Ku-band temporary fixed earth station operating authority should be the end of the 30-day public comment period, and that such “automatic grant” should be limited to unopposed applications.¹² To the extent that circumstances warrant commencement of operations prior to that time, the Commission may authorize such operations pursuant to special temporary authorization (“STA”) as it does in other earth station contexts.

C. Extension of the Maximum Earth Station License Term

The Commission also proposes to extend the maximum earth station license term from 10 to 15 years.¹³ Like other commenters that addressed this issue, SIA strongly supports the Commission’s proposal.¹⁴ Extending the earth station licensing term to 15 years will bring the

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⁹ See Comments of PanAmSat Corporation at 9 (“PanAmSat Comments”).

¹⁰ See *NPRM* at ¶¶ 42-43.

¹¹ The statutory rationale set forth by the Commission applies with equal force to other types of earth stations.

¹² See PanAmSat Comments at 11.

¹³ See *NPRM* at ¶¶ 44-45.

¹⁴ See, e.g., Comments of ASTROLINK International LLC at 8-9 (opposing MET renewal proposal) (“Astrolink Comments”); Hughes Comments at 17-18.

term of earth station authorizations more in line with the increased operational lifetime of satellite systems, particularly GSO systems. The Commission also should extend the registration period for receive-only earth stations to 15 years to make the license term for such earth stations consistent with that of transmit/receive stations.

D. Mobile Earth Terminal (“MET”) Issues

1. Relaxing the Construction Completion Requirement For METs

The Commission proposes to require MET licensees to bring their satellite earth station *networks* into use (*i.e.*, commence operations with an associated MSS system) within one year of license grant, rather than requiring licensees to bring all METs authorized under their licenses into use within that time period.¹⁵ Globalstar USA, Inc. and Globalstar, L.P. (collectively “Globalstar”) recommend, however, that the proposal for a “bringing into use” date for MET networks be abandoned.¹⁶

Globalstar points out that eliminating this proposal is necessary because, among other reasons, different entities may hold the licenses for the space station constellation, the gateway earth stations and the MET blanket licenses associated with the same MSS satellite system.¹⁷ Moreover, there may be multiple MET licensees operating with the same system. As a result, the MET licensee may not control the implementation of the associated MSS satellites, and it would be inappropriate to condition the MET authorization on a requirement that is not within the licensee’s control. Furthermore, METs typically are designed to operate with specific MSS

¹⁵ See *NPRM* at ¶ 46. The Commission should clarify that the term “network” refers to the METs authorized for service under the blanket license, rather than any combination of the space stations or gateway earth stations which may or may not be licensed to the MET licensee.

¹⁶ See Comments of Globalstar at 3-4 (“Globalstar Comments”).

¹⁷ See *id.*

satellites in spectrum assignments coordinated by the space station licensee. Thus, authorizing MET construction more than one year prior to the commencement of operations does not implicate spectrum usage concerns because the terminals do not deter the use of spectrum by other systems operating in the same service. Also, the space station licensee can determine whether it is appropriate to authorize another service provider to access the system.

SIA believes that Globalstar's concerns are valid and raise policy issues that should be addressed by the Commission in the context of this proceeding.¹⁸ It is advisable to make the regulations governing MSS METs more consistent with the manner in which they are used.

The Commission's proposal for MSS METs constitutes a recognition that the existing earth station construction completion requirement embodied in Section 25.133(a) of the rules is not appropriate for a blanket MET license because not all the terminals are brought into use at the same time.¹⁹ As Globalstar has pointed out, there are other factors affecting when the METs are brought into service that may be beyond the control of the MET licensee. SIA recommends that the Commission should not apply any rule requiring an MET licensee to bring all authorized terminals into use within one year of license grant. Rather, the Commission should eliminate the construction completion requirement for MSS METs as proposed by Globalstar, or at least take into account the fact that bringing MSS METs into use may require that the specific service for

¹⁸ Moreover, SIA notes that issues potentially affecting the "bringing into use" of MSS METs, particularly METs that roam into the United States under a U.S. blanket license, remain pending in IB Docket No. 99-67. *See* Amendment of Parts 2 and 25 to Implement the Global Mobile Personal Communications by Satellite (GMPCS) Memorandum of Understanding and Arrangements, *Notice of Proposed Rulemaking*, 14 FCC Rcd 5871 (1999).

¹⁹ MET applicants generally request blanket authority to operate the total number of METs expected to be deployed over the entire license period, rather than merely during the first year of the license term.

which the METs are to be used must be available over the MSS system before the METs can be “brought into use.”

2. MET License Renewals

In the *NPRM*, the Commission proposes to renew MET licenses for only that number of earth stations already brought into operation at the time of license renewal.²⁰ SIA joins Globalstar, Motient Corp. and Astrolink in opposing this proposal.²¹ Indeed, the proposal is fundamentally inconsistent with the concept of a blanket license, at least as that term is used in the context of MSS systems.

As set forth in the FCC’s rules with respect to global MSS systems, MET blanket licenses cover METs authorized by the FCC to operate in the United States with a particular MSS system *and* METs licensed elsewhere for operation with the same MSS system that roam into the United States.²² As a result, the actual number of authorized terminals in use may vary from time to time.

In addition, the very fact that MET licensees seek renewal establishes a continuing need to operate the subject METs. It makes no sense to reduce the number of authorized METs at renewal, only to require an MSS MET licensee to reapply for a second authorization after renewal simply to deploy a few more identical METs if the number would have been covered by the initial authorization. MET blanket license holders should instead be permitted to increase or decrease the number of METs included in the blanket license based on their experience with

²⁰ See *NPRM* at ¶ 46.

²¹ See Globalstar Comments at 4-5; Motient Comments at 5; *see also* Astrolink Comments at 6-7.

²² See, e.g., 47 CFR §§ 25.135(d), 25.136(c).

actual usage and provision of service. In this way, the renewal of a MET authorization will allow for continued system growth and operational flexibility.

3. MET Reporting and Implementation Requirements

The Commission also seeks comments on whether there is any need to review the number of METs brought into operation at various points in the license term, and whether MET licensees should be required to bring a specified percentage of their authorized terminals into use within a certain period after they receive their authorizations.²³ Like Globalstar and Astrolink, SIA opposes the adoption of such reporting and implementation requirements.²⁴

No benefit would result from imposing the proposed reporting requirement on MET licensees. These terminals typically are licensed on a blanket basis in exclusive satellite spectrum and operate in accordance with an associated space station license and applicable service rules. In addition, the number of METs in operation generally would not affect the interference or general intra-service sharing environment. Thus, there is no need to monitor their deployment on an ongoing, per-system basis. Accordingly, SIA does not support the proposed MET reporting requirement.

Similarly, there is no benefit to be derived from requiring MET licensees to deploy a particular percentage of earth stations within a specified timeframe. As noted above, the intra-service sharing environment typically is not affected by the number of earth stations deployed. Moreover, this proposal would place a significant, artificial regulatory requirement on MET licensees rather than have market forces guide the deployment of such satellite systems. It also runs contrary to Commission initiatives to decrease regulation of satellite services and to

²³ See *NPRM* at ¶ 46.

²⁴ See *Globalstar Comments* at 5; see also *Astrolink Comments* at 7-8.

streamline earth station licensing. Therefore, SIA opposes the implementation of MET deployment requirements.

4. The Commission Should Relax the Construction Completion Requirements Applicable to Other Blanket-Licensed Satellite Earth Terminals

The same reasoning that supports the Commission's proposed relaxation of MET construction requirements (and its existing VSAT construction requirements) applies with equal force to other types of blanket-licensed earth stations. Like their MET and VSAT counterparts, Ka-band blanket earth station licensees will require the flexibility to deploy earth stations throughout their blanket license terms. Thus, for the reasons discussed in Section II.D.1, *supra*, the Commission should eliminate the construction completion requirements for blanket-licensed Ka-band earth stations.

E. VSAT Licensing Issues

1. SIA Opposes the Reduction of Power Limits for VSAT Networks Using Random Access Techniques

In the *NPRM*, the FCC proposes to revise Sections 25.134(a) and 25.212(d) to provide that the maximum transmitter power spectral density of a digital modulated carrier into any VSAT earth station shall not exceed $-14.0 - 10 \log(N)$ dB(W/4 KHz).²⁵ Section 25.134(a) would specify different values for "N" for systems using FDMA, TDMA, CDMA, or Aloha multiple access techniques. The Commission proposes to require a reduction in the power spectral density emitted by earth stations using Aloha random access techniques by 3 dB from the existing limits (*i.e.*, N=2 for Aloha systems). The Commission also invites comment on

²⁵ See *NPRM* at ¶¶ 51-56.

extending multiple access rules to C-band VSAT (“CSAT”) networks, and on revising the Ka-band blanket licensing rules to incorporate requirements for the Aloha access technique.²⁶

SIA opposes the proposed 3 dB power reduction for Ku-band VSAT earth stations using random access techniques, and any extension of this proposal to the C-band or Ka-band. As set forth in detail in the Hughes Comments, a drastic 3 dB reduction in power for earth stations employing random access techniques is not necessary from a technical perspective.²⁷ In addition, SIA believes that the proposed 3 dB reduction in power could significantly undermine the commercial viability of VSAT networks and other planned satellite services.

The SIA members and other companies joining in these Reply Comments represent every segment of the satellite industry, including earth station operators, satellite operators and equipment manufacturers. This broad cross-section of the satellite industry has not reported a single problem with the use of random access techniques and uniformly opposes the Commission’s proposed 3 dB reduction in power for earth stations using industry-standard access techniques. For example, GE Americom stated that it “supports allowing the use of random access techniques” and that its “experience has been that such operations have not resulted in unacceptable interference.”²⁸ Similarly, Loral indicated that it “is not aware of any reported incidents of unacceptable interference attributable to the operation of these networks at the current ‘blanket licensing’ levels”²⁹ and “believes this proposal may be unnecessary.”³⁰ In

²⁶ *See id.*, ¶ 57.

²⁷ *See* Hughes Comments at 18-22 and Appendix A.

²⁸ *See* GE Americom Comments at 4.

²⁹ *See* Loral Comments at 12.

³⁰ *See id.* at 11.

addition, Hughes indicated that the “Commission’s proposal would be a radical change to the existing rules and appears to be a solution to a problem that does not exist.”³¹

Moreover, any increase in the deployment of earth stations as a result of the Commission’s streamlining proposals would not cause an increased risk of interference attributable to random access techniques.³² Successful implementation of random access techniques requires that the probability of collision be kept low,³³ and initial analysis suggests that the probability of harmful interference is less than 1% (the criterion suggested by the Commission itself).³⁴ In order to maintain this negligible probability of collision, consumer terminals are spread out over a sufficient number of transponders so that customer-to-transponder ratios are approximately the same as they have been traditionally. Moreover, any additional increase in the number of terminals would merely result in fewer transmissions per second for each terminal, and not an increased number of collisions.³⁵ Thus, as stated by Spacenet/Starband, “the Commission’s proposed regulatory intrusion is unnecessary; the

³¹ See Hughes Comments at 22.

³² See, e.g., Hughes Comments at 21; see also Comments of Spacenet Inc. and StarBand Communications, Inc. (“Spacenet/Starband Comments”) at 37-38.

³³ As noted by Spacenet/Starband, “[n]etworks are designed to accommodate the expected maximum traffic, and incorporate some form of congestion control to prevent exceeding the design loading.” See Spacenet/Starband Comments at 37. Furthermore, unless “VSAT systems [are] designed so that the collision rate is reasonably low, . . . the service performance will be poor” and ultimately rendered “commercially unacceptable.” See Hughes Comments at 21; see also Spacenet/Starband Comments at 38. Therefore, in order to operate a commercially viable service, the loading of VSAT networks that use random access techniques generally will remain constant regardless of the number of terminals deployed.

³⁴ See *NPRM* at App. E, § III(E) (“under the conditions proposed by Spacenet (Poisson distribution with 38% channel load), we determine that a smaller than 1% probability of carrier collision would be acceptable as a good tradeoff.”).

³⁵ See Hughes Comments at 21.

industry's need to assure a service that is competitive with wireline and other terrestrial services will preclude excessive collisions.”³⁶

Furthermore, industry commenters agree that the Commission's proposed 3 dB reduction in power for networks using industry-standard access techniques would have a significant adverse impact on VSAT networks. As noted by Astrolink, a “3 dB reduction in power density or off-axis e.i.r.p. density levels would render many satellite links unusable, or at a minimum, seriously affect a system's achievable availability and capacity.”³⁷ Hughes confirmed that “VSAT networks do not have 3 dB, or in many cases even 1 dB, of *excess* link margin to be sacrificed for these purposes.”³⁸ Thus, the Commission's position that this lower power level “would provide a technically viable service”³⁹ is incorrect and unsupported.

One commenter, Aloha Networks, proposed an alternative theoretical approach to limiting the probability of collisions associated with random access transmissions.⁴⁰ SIA urges the Commission not to adopt the proposals made by Aloha Networks. As discussed in these Reply Comments and in every other industry comment addressing this issue, there is no demonstrable need to impose any regulation (either the Commission's proposals or those of Aloha Networks) to solve a problem that does not exist today and will not likely exist in the future.

Should the Commission nevertheless decide that the public interest requires it to place limits on the emissions from networks as a whole, SIA asks the Commission to implement such

³⁶ See Spacenet/StarBand Comments at 38.

³⁷ See Astrolink Comments at 12.

³⁸ See Hughes Comments at 22.

³⁹ See NPRM, ¶ 56.

⁴⁰ Comments of Aloha Networks, Inc. at 8-10.

regulation in the form of a limit on the average power radiated toward the target satellite by the network, as proposed by Hughes in its comments in the Spacenet Petition proceeding.⁴¹ This approach is the simplest possible, and for the reasons given in Hughes's comments in the Spacenet Petition proceeding and in Spacenet/StarBand's comments in this proceeding, would prevent unacceptable interference without unnecessarily complex regulations.

SIA notes that the foregoing alternative proposal is limited to earth stations employing random access techniques in the Ku-band only. The distinct operational environment and technical characteristics of satellite services in other frequency bands, such as the Ka-band, may preclude the importation of random access rules developed for Ku-band VSAT networks. Thus, if the Commission ultimately adopts the Hughes proposal for Ku-band VSATs, it should not extend these rules to technologies that have not yet been introduced.

In sum, SIA urges the Commission not to adopt its proposal to reduce the power for VSAT networks employing random access techniques. Industry comments overwhelmingly demonstrate that a rule embodying the proposed 3 dB reduction is unnecessary and would significantly and negatively impact the commercial viability of VSAT networks.

2. VSAT License Renewals

In its Comments, Hughes opposed the Commission's proposal to limit renewals of VSAT licenses to the number of units installed at the time of renewal, and to require operators who have not installed the full authorized number at the time of renewal to seek prior FCC approval to add

⁴¹ See Reply Comments of Hughes Network Systems, RM 9864 (June 14, 2000) (VSAT access schemes that allow collisions between remote stations on the inbound channels should be permitted under Section 25.134(a) of the FCC rules so long as (i) each remote station satisfies the antenna power density limit of paragraph (a) of that Section; (ii) the total average power radiated toward the target satellite by all of the remote stations in the network using an averaging
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more VSAT units.⁴² SIA agrees with Hughes and urges the Commission to abandon this proposal: it is impractical, will increase the burden on VSAT operators and the Commission's staff, and could delay the availability of services to new customers.

As the Commission is aware, VSAT operators are in the process of launching new, satellite-based Internet access systems for consumers and small businesses, which depend on the installation of large numbers of sub-meter satellite earth stations. To this end, they require authority to deploy a relatively large number of VSAT terminals in order to be able to provide service to new customers within a few days of their placing an order for service. In this environment, market demand controls the number of VSAT units very directly, and automatically limiting the number of authorized VSATs to those already in operation would seriously impair the operators' ability to grow our business after renewal. The Commission's proposal would entail the submission of unnecessarily duplicative applications to recover authority that had already been granted,⁴³ or would have adverse business implications that are not justified by any regulatory considerations.

Indeed, the Commission provided no rationale for its proposal. The very purpose of the FCC's blanket licensing policy is to allow for flexibility and system growth, to reduce administrative overhead for the Commission and licensee alike, and to prevent regulatory delays.⁴⁴ Limiting renewals to the number of installed VSATs would therefore defeat the main

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period of one second is less than that of a single remote station transmitting continuously; and (iii) the maximum duration of any individual collision is less than 100 milliseconds).

⁴² See *NPRM* at Appendix B, ¶ 50, Section 25.121(e)(3).

⁴³ See *Astrolink Comments* at 7.

⁴⁴ See *Motient Comments* at 4; *Globalstar Comments* at 4.

purpose of the policy and restrict the flexibility it has brought to licensees, and the proposal should not be adopted.⁴⁵

3. Multiple Hub Stations in a VSAT Network

The Commission proposes to revise Section 25.134 to permit multiple hub stations under a single VSAT license.⁴⁶ SIA supports the Commission's proposal. Permitting the operation of multiple hub stations under a single VSAT license will facilitate the deployment of advanced VSAT networks using diverse hub stations and would permit the deployment of back-up hub stations. This additional operational flexibility will enhance the ability of VSAT licensees to provide services to the public.

4. Temporary Fixed VSAT Stations

The Commission also seeks comment on licensing temporary fixed VSAT networks in the conventional Ku-band.⁴⁷ SIA agrees that there is no technical reason to prohibit temporary fixed earth station facilities to operate either as a VSAT hub or remote VSAT station in the conventional Ku-band. SIA believes that the Commission should permit such facilities to be licensed as a temporary fixed VSAT network or a part of a traditional VSAT network.

5. Foreign-Licensed Satellites and International VSAT Networks

The FCC proposes to revise Section 25.115(c) to permit applicants to request a Ku-band VSAT license to provide both domestic and international service, and to access both U.S. and foreign-licensed satellites. The FCC also proposes to license only those VSAT facilities located

⁴⁵ See Motient Comments at 4.

⁴⁶ See *NPRM* at ¶¶ 58-59.

⁴⁷ See *id.*, ¶¶ 60-61. The FCC does not propose to permit temporary fixed CSAT networks because of potentially complex coordination issues associated with that band.

in the United States.⁴⁸ SIA supports the Commission’s VSAT licensing proposals, which would make the Commission’s VSAT licensing rules consistent with the policies adopted in *DISCO I* and *DISCO II*. Furthermore, SIA agrees that VSAT facilities outside the United States are subject to regulation by the jurisdiction in which they are located.

F. SIA Supports the Commission’s Efforts to Streamline its Earth Station and Space Station Filing Forms and Procedures

1. Earth Station Filing Forms

The Commission proposes to adopt a streamlined version of existing FCC Form 312 (to be designated Form 312-EZ) that would permit routine C-band and Ku-band earth station applications to be completed more easily and processed pursuant to the Commission’s new “auto-grant” policy.⁴⁹ SIA generally supports the introduction of Form 312-EZ, and urges the Commission to permit applicants to use the new form to request routine earth station authorizations in other spectrum such as the Ka-band. In addition, the FCC proposes to rename Form 701 (Authorization of Additional Time to Construct) as Form 312-M (to signify milestone extension requests), and to rename Form 405 (Application for Renewals of Radio Station License in Specified Services) as Form 312-R (to signify renewal requests).⁵⁰ SIA does not object to renaming the aforementioned forms.

The Commission also proposes to adopt new Form 312-Schedule S to obtain data regarding space station applications in a standard format for inclusion in the FCC’s licensing database, and to assist the transition toward comprehensive electronic filing for the satellite

⁴⁸ See *id.* at ¶¶ 63-64.

⁴⁹ See *id.*, ¶¶ 63-64.

⁵⁰ See *id.*, ¶ 71.

industry.⁵¹ SIA supports the adoption of Form 312-Schedule S. However, in addition to providing the basic information requested by Form 312-Schedule S, satellite applicants should have the option of providing more detailed information (along with explanatory text and drawings) in the narrative portions of their applications.

2. Electronic Filing in Earth Station Application Proceedings

In the *NPRM*, the Commission proposes to accept only electronically filed applications for routine C-band and Ku-band earth station applications after June 1, 2002, to require electronic filing of applications for assignments and transfers of control, and to develop an Internet filing form that would be used to file electronically petitions to deny or comments.⁵² SIA generally supports the Commission's initiative to move towards electronic filing of routine C-band and Ku-band earth station applications (those eligible for the auto-grant process), transfer and assignment applications, and comments and petitions to deny. SIA believes that this initiative will reduce application processing time and hasten the provision of service to the public.

However, prior to mandating electronic filing, SIA urges the Commission to ensure that its electronic filing systems and procedures are sufficiently reliable to protect the procedural rights of electronic filers, particularly in time sensitive contexts such as the filing of pleadings or applications in a processing round. Many industry commenters in this proceeding have experienced difficulties in filing electronically in the last twelve months. In this connection, the Commission should provide in-time back-up filing procedures in the event of technical difficulties with its electronic filing system.

⁵¹ See *id.*, ¶¶ 72-75.

⁵² See *id.*, ¶¶ 76-77.

G. SIA Supports Other Miscellaneous Changes to the FCC’s Earth Station and Space Station Licensing Rules

The FCC proposes a number of clarifications to its earth station license modification requirements, including: (i) amending Sections 25.117 and 25.118 to clarify the distinction between major and minor modifications; (ii) eliminating the reference in Section 25.117(a)(1) to coordination under Article XIV(d) of the INTELSAT Agreement given the impending privatization of INTELSAT and the requirements of the ORBIT Act; and (iii) eliminating Section 25.117(a)(2), which originally was adopted to streamline review of transborder service applications.⁵³ SIA supports these clarifying changes.

The FCC also proposes to amend Section 25.117 to cross-reference its radiofrequency (“RF”) emission rules in the context of earth station modifications, such as adding transmitters at a particular site, to provide explicitly that the Commission’s RF emission rules apply to earth station modification applications.⁵⁴ SIA agrees that the RF emissions rules should apply to earth station modifications, and supports the proposed amendment.

In addition, the FCC proposes to amend Section 25.113 to state explicitly that prior authorization for construction of space stations and earth stations is not required.⁵⁵ In 1996, the Commission eliminated the requirement that space station and earth station operators obtain FCC authorization prior to commencing construction of their stations. SIA supports the Commission’s proposal to clarify its rules in accordance with this policy.

The FCC further proposes to amend Section 25.274(g) to clarify that earth station operators are permitted to contact the control centers for the satellite systems with which they

⁵³ See *id.*, ¶¶ 78-81.

⁵⁴ See *id.*, ¶¶ 82-83.

⁵⁵ See *id.*, ¶ 84.

communicate in cases of harmful interference, and to rely on the satellite operator to contact control centers of potentially interfering satellite systems to resolve the interference.⁵⁶ SIA believes that this is the standard industry practice and supports the proposed change.

In the *NPRM*, the FCC proposes to amend Sections 25.211 and 25.212 to state that the Commission may apply the power limits in those sections in other frequency bands to the extent that power limits have not been established elsewhere in Part 25.⁵⁷ Although the power limits developed for C-band and Ku-band may be relevant to neighboring frequency bands (*e.g.*, the extended C- and Ku-bands), SIA believes that such rules may be of limited value in other frequency bands with distinct service and operational characteristics.⁵⁸ In these circumstances, the Commission should adopt band-specific requirements, rather than merely adopting power levels developed for unrelated bands or services. Thus, SIA requests that the Commission clarify that it proposes to extend the power limits contained in Sections 25.211 and 25.212 of the rules only in the extended C- and Ku-bands for services similar to those for which the limits were developed.

The FCC also proposes to eliminate as unnecessary Section 25.144(a)(1) (eligibility requirement for specific digital audio radio service (“DARS”) applicants), Section 25.141 (licensing provisions for the radio-determination satellite service (“RDSS”)), Part 25, Subpart H (authorization to own stock in COMSAT), and references to the INTELSAT Agreement and

⁵⁶ *See id.*, ¶ 85.

⁵⁷ *See id.*, ¶ 86.

⁵⁸ *See* Astrolink Comments at 16.

Inmarsat Convention in Section 25.111(b) because the issues to which they relate are no longer relevant.⁵⁹ SIA supports these updates to the Commission's rules.

III. SIA Supports Initiatives Raised in the Initial Round of Comments and Other Earth Station Streamlining Measures

A. The Commission Should Eliminate Separate License Requirements For Receive-Only Earth Stations Seeking To Access Foreign Satellites on the Permitted Satellite List

The Commission requests comment on additional measures that can be implemented to streamline the earth station licensing process. Loral asks that the Commission eliminate the Section 25.131(j) requirement that a receive-only earth station operating with a non-U.S. licensed satellite on the Permitted Space Station List obtain a separate license for such operations.⁶⁰ SIA previously made this proposal in the FCC's *Secondary Markets* proceeding.⁶¹

SIA agrees that this provision appears inconsistent with the Commission's order on reconsideration in the *Non-U.S. Licensed Space Stations* proceeding, which determined that all U.S. earth stations with ALSAT licenses should be permitted to communicate with any non-U.S. satellite on the Permitted Satellite List without obtaining an additional authorization.⁶²

Accordingly, SIA again urges the Commission to eliminate or modify Section 25.131(j) to permit receive-only earth stations to communicate with non-U.S. satellites on the Permitted Satellite List without obtaining a separate license.

⁵⁹ See *NPRM*, ¶¶ 87-90.

⁶⁰ See Loral Comments at 15-16.

⁶¹ See Comments of the Satellite Industry Association, WT Dkt. No. 00-230, at 8-9 (Feb. 9, 2001) ("SIA Comments").

⁶² See Amendment of the Commission's Regulatory Policies to Allow Non-U.S. Licensed Space Stations to Provide Domestic and International Service in the United States, *First Order on Reconsideration*, 15 FCC Rcd 7207 (1999).

B. The Commission Should Modify Its *Pro Forma* Application Rules

In its comments, Loral also echoes SIA's previous proposal that the Commission eliminate the need for prior approval of *pro forma* transfers of control and assignments of authorizations.⁶³ As noted in SIA's prior comments, the Commission has used its authority to forbear from Section 310(d) requirements for *pro forma* transactions for certain wireless services.⁶⁴ In that proceeding, the Commission noted that its "approval of *pro forma* assignments and transfers is not needed because such transactions, by their nature, do not change the underlying ownership or control of licensees that the Commission has already reviewed and approved."⁶⁵ Such transactions are "considered presumptively in the public interest because no substantial change of control is involved."⁶⁶ Similarly, the Commission may forbear from Section 310(d) requirements for *pro forma* satellite and earth station applications.

Alternatively, in view of this precedent and given that the fundamental purpose of this rulemaking is to streamline earth station licensing, SIA respectfully requests that the Commission utilize automatic grant stamp procedures to authorize *pro forma* satellite and earth station transfers and assignments. The Commission currently uses this streamlined process for other types of applications, including applications for special temporary authority to operate satellites and earth stations, and for *pro forma* transfers of control and assignments of Section

⁶³ See Loral Comments at 16-18; see also SIA Comments at 6-8.

⁶⁴ See In re 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).

⁶⁵ *Id.* at ¶ 18.

⁶⁶ *Id.*

214 authorizations and certain undersea cable licenses.⁶⁷ This proposal would serve the public interest by conserving the Commission's administrative resources and hastening the grant of *pro forma* applications, which do not involve an actual change in ultimate control of a licensee or authorization.

C. The Commission Should Clarify that Only One Earth Station Application Is Necessary To Obtain an Authorization for an Earth Station To Operate in More than One Frequency Band

Finally, to further streamline earth station licensing, the Commission should clarify that it will require that only one application be filed when an applicant seeks an authorization for an earth station that will operate in more than one frequency band. The FCC's current rules do not adequately address this issue and, in some instances, the International Bureau has required separate license applications for authorization of a single antenna that will operate in different frequency bands.

In similar instances, the Commission generally has encouraged the use of one application where a single piece of equipment will operate in more than one frequency band. For example, the Commission has acknowledged the efficiency of hybrid satellites and, in recent processing rounds, has accepted and approved single space station applications for hybrid satellites that would operate in multiple frequency bands. Furthermore, to streamline the space station

⁶⁷ The International Bureau adopted a grant stamp procedure in 1994 for approving Section 214 *pro forma* transfers of control and assignments, and for approving requests for special temporary authority for international and domestic earth station operations. *See* International Bureau Launches New Procedures, *Public Notice*, 1994 FCC LEXIS 5792 (Nov. 21, 1994); *see also* Wireless Telecommunications Bureau and International Bureau Complete Review of Proposed Investment by Telefonos de Mexico, S.A. de C.V. in Parent of Cellular Communications of Puerto Rico, *Public Notice*, 15 FCC Rcd 1227 (1999).

application process, the Commission has even revised its rules to permit applicants to submit a single application for multiple space stations.⁶⁸

SIA urges the Commission to extend this streamlined application procedure to the earth station context, and clarify that only one application need be filed when an applicant seeks an authorization for an earth station to operate in more than one frequency band.

VI. Conclusion

For all the foregoing reasons, SIA respectfully requests that the Commission take action in this proceeding in a manner consistent with these Reply Comments.

Respectfully submitted,

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⁶⁸ See 47 C.F.R. § 25.114(a).

CERTIFICATE OF SERVICE

I, Vicki Lynne Lyttle, a legal secretary at Dow, Lohnes & Albertson, do hereby certify that on this 7th day of May, 2001, I caused copies of the foregoing "Reply Comments of The Satellite Industry Association" to be sent by first-class mail, postage prepaid, to the following:

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