

Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of

Comprehensive Review of Licensing and
Operating Rules for Satellite Services

IB Docket No. 12-267

COMMENTS OF INTELSAT LICENSE LLC

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I. INTRODUCTION AND SUMMARY

Intelsat License LLC (“Intelsat”) is pleased to comment in response to the above-captioned Further Notice of Proposed Rulemaking (“*FNPRM*”),¹ in which the Federal Communications Commission (“FCC” or “Commission”) continues to consider simplifying and improving Part 25 of its rules governing the licensing and operation of space stations and earth stations.²

Intelsat is a leading provider of fixed satellite services (“FSS”) worldwide and holds more U.S. satellite licenses than any other satellite company. All other things being equal, Intelsat would prefer to operate as a U.S. licensee. However, in the current competitive and regulatory environment, Intelsat is forced to consider non-U.S. licensing because existing rules handicap U.S. licensees in the International Telecommunication Union (“ITU”) system.

¹ See *Comprehensive Review of Licensing and Operating Rules for Satellite Services*, Further Notice of Proposed Rulemaking, IB Docket No. 12-267, FCC 14-142 (Sept. 30, 2014) (“*FNPRM*”).

² As a member of the Satellite Industry Association (“SIA”), Intelsat joins SIA’s comments filed separately in this proceeding.

Intelsat thus welcomes the Commission’s ongoing efforts to modify Part 25 of its rules to “improve the efficiency of satellite licensing or operating rules and make them less burdensome.”³ Doing so is necessary to maintain the United States’ position as the preeminent satellite licensing regime. Eliminating unnecessary and burdensome administrative requirements would better enable satellite and earth station operators to provide flexible and high quality services to customers.

As the *FNPRM* recognizes, the Commission’s existing rules are not sacrosanct. When policies related to the making ITU filings and licensing U.S. satellites were developed, the satellite communications world was profoundly different. Current U.S. regulations were premised on a world in which INTELSAT IGO was the dominant global provider (with the U.S. serving as the notifying Administration) and, as such, they focused on domestic satellite operations. Today, there is worldwide competition and satellite systems that benefit from filing and licensing Administrations around the globe are authorized to serve the U.S. Virtually all foreign Administrations take full advantage of the ITU’s policies. With the United States’ licensing regime competing in a global world, continuing to restrict the benefit of ITU protections to U.S. licensees is counterproductive and detrimental to U.S. interests.

Intelsat fully supports the FCC’s proposal to permit prospective satellite licensees to submit Advanced Publication of Information (“API”) and Coordination Request (“CR”) filings to the Commission for transmission to the ITU in advance of filing their FCC satellite applications and according consequent licensing priority to notifying licensees who subsequently pursue licensing applications. Additionally, Intelsat proposes certain modifications to the FCC’s milestone requirements to protect highly confidential technical material and reduce

³ *FNPRM*, ¶ 4.

administrative burdens while maintaining the efficacy of these requirements in deterring warehousing and speculation. In view of the continued need to prevent speculation, Intelsat opposes any modification of the Commission’s current bond requirements. Intelsat also urges the FCC to eliminate its two-degree spacing rule. If the FCC maintains the rule, Intelsat proposes revisions to resolve both the later entrant and the follow-on problems caused by its current interpretation and clarify the scope and applicability of the rule to ensure it is not used to harm U.S. licensees. Finally, Intelsat supports modification of certain technical rules to increase efficiency and eliminate redundancy in application and licensing requirements.

II. ITU FILINGS FOR GSO FSS SPACE STATIONS

A. Prospective Licensees Should Have the Option to Provide the FCC With API and CR Information for Transmission to the ITU in Advance of Filing an FCC Satellite Application

Intelsat commends the Commission for recognizing the delay and attendant risk in the agency’s current procedure for submitting filings for GSO FSS space stations to the ITU only upon simultaneous receipt of an FCC satellite application. The current rules do, in fact, “deter interested parties from filing space station applications with the Commission.”⁴ The current procedure inappropriately “requires U.S. operators to disclose their plans publicly before an API is filed,” and “enables competitors to claim jump by submitting conflicting filings to the ITU through other administrations before the U.S. files an API on an applicant’s behalf.”⁵ Moreover, under the current process, applicants cannot submit an API unless they invest in both application fees and the engineering effort to produce extensive technical exhibits necessary to file a space station application with the FCC. As a result, by the time a U.S. operator possesses the

⁴ *Id.* ¶ 7.

⁵ *Id.* ¶ 9 (internal quotations omitted).

information required for a U.S. space station license application, another Administration could file an API on behalf of a foreign operator, thereby allowing the foreign operator to claim ITU coordination priority over the U.S. operator.

Intelsat thus agrees with the FCC's tentative conclusion that it "would serve the public interest for the Commission to adopt an optional procedure in which submission of APIs and Coordination Requests to the Commission for filing with the ITU for GSO space station operation in non-planned FSS bands would be a first step in an optional two-step license application process," with "[m]ore detailed information of the kind included currently in license applications . . . due later."⁶ By permitting prospective licensees to submit API and CR filings to the Commission for transmission to the ITU in advance of filing their FCC satellite applications, the agency will improve access to spectrum for U.S.-licensed space systems. Absent this opportunity, U.S. operators not yet ready to file the detailed information required for an FCC satellite application increasingly have been and will continue to be forced to use other Administrations for their ITU filings. Equally, U.S. operators have been deterred from filing FCC space station licensing applications knowing their actions are public prior to ITU notification, which allows ITU priority to be appropriated by another Administration.

Intelsat disagrees with the Commission's proposal "not . . . to follow this procedure with respect to planned band operation."⁷ Acknowledging the difference between ITU submissions for FSS planned and non-planned bands is important.⁸ However, Intelsat encourages the FCC to promptly submit planned band filings to the ITU in advance of receiving a satellite application.⁹

⁶ *Id.* ¶ 13.

⁷ *Id.*

⁸ *See id.* ¶ 6 n.5 ("FSS operation in planned bands is subject to a Plan in Appendix 30B of the ITU Radio Regulations that specifies the necessary characteristics of FSS stations and the

In addition to supporting the FCC’s tentative decision to submit filings to the ITU in advance of receiving a satellite license application, Intelsat offers the following additional suggestions to improve the interface between FCC regulation and the ITU process:

- **Confidentiality.** Intelsat agrees that the FCC should keep confidential the ITU information it receives from a satellite company for some initial period of time. The *FNPRM* proposes that such ITU information be kept confidential “until the Commission submits the filings to the ITU.”¹⁰ Intelsat recommends that the FCC instead maintain confidentiality of the frequencies and orbital location until the ITU publishes the API. This longer period of confidentiality is required to ensure that competitors cannot use the information the FCC makes public in an attempt to gain ITU priority by filing through another Administration. Thus, the longer confidentiality period would place operators filing through the United States on equal footing with operators filing through another Administration.
- **Timeliness.** The FCC should make every effort to forward all filings to the ITU as expeditiously as possible—ideally the next business day. Prompt FCC transmission of the filings to the ITU will best position the United States to obtain access to spectrum on behalf of its U.S. satellite operators. Additionally, the Commission should continue—as it does now—to allow U.S. operators to submit an ITU CR either together with or sometime after the API, consistent with the latter’s period of validity.
- **Subsequent, Potentially Conflicting ITU Filings.** The Commission should forward to the ITU all APIs and CRs even if they have potentially conflicting orbital locations, frequencies or coverage. Limiting Commission oversight at the API and CR phase will level the international playing field with other Administrations¹¹ and encourage more operators to seek U.S. licenses. Intelsat agrees with the FCC that “the information

procedures under which these characteristics can be modified and frequency assignments brought into use in those bands. These procedures are different from those that apply to operations in non-planned FSS bands.”).

⁹ *Id.* ¶ 13. Given that the licensing process for satellite networks in the Direct Broadcast Satellite (“DBS”) service currently is in flux and there is a freeze on new applications, Intelsat takes no position on whether new procedures should apply to DBS.

¹⁰ *Id.*

¹¹ *See, e.g.,* Bundesnetzagentur (Germany), Administrative Order 8/2005: Procedure for filing satellite systems with the International Telecommunication Union and assigning German orbit and frequency usage rights, *available at* http://www.bundesnetzagentur.de/cln_1421/EN/Areas/Telecommunications/Companies/FrequencyManagement/FrequencyAssignment/SatelliteCommunications/ablvfgorder82005_Basepage.html?nn=323878.

included in a request for filing of an API and Coordination Request would not enable the Commission to determine” mutual exclusivity with respect to, *inter alia*, a “previously filed request for filing of an API and Coordination Request.”¹² The FCC’s role at the API and CR submission phase is—and should remain—to assist timely delivery of spectrum requests to the ITU. Any attempt to examine an API or CR for mutual exclusivity with prior U.S. ITU filings would burden the agency’s resources and create delay. Furthermore, the U.S. may benefit from a subsequent ITU filing even if it is mutually exclusive with a prior ITU filing should the first ITU filing be abandoned or have a bring-into-use date that cannot be satisfied.

- ***Retaining the Option to Utilize the Current Procedure.*** Intelsat agrees that the filing of an API in advance of filing an FCC satellite application should be “optional.”¹³ A U.S. operator should be permitted to follow the current procedure of filing a full FCC satellite license application simultaneous with or before submitting the related ITU filing information for an API and CR.¹⁴
- ***No Fee for ITU Filings.*** The *FNPRM* asks whether a request that the FCC submit an API or CR to the ITU should be subject to filing fees under Part 1, Subpart G of the Commission’s rules.¹⁵ No fee is necessary because the Commission’s role with APIs and CRs should be limited to receipt and delivery. Simply put, the tasks (especially those associated with forwarding an API) should require little agency processing and do not warrant a filing fee.¹⁶

B. The Commission’s Space Station Application Process Should Protect U.S. Interests in the ITU Process

The *FNPRM* asks “whether submission of a letter request for filing of an API and Coordination Request with a simplified description of the satellite network and a cost-recovery declaration, as suggested by Intelsat, should suffice to secure a position in a first-come, first-

¹² *FNPRM*, ¶ 14.

¹³ *Id.* ¶ 13.

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ To the extent the FCC does impose a fee, the Commission should ensure that it is minimal and does not affect the agency’s ability to keep the frequency and location information confidential until such time as the ITU filing is published.

served space station application queue.”¹⁷ Intelsat supports this.¹⁸ Intelsat recommends that the FCC align its domestic satellite licensing process with the ITU process as much as possible. Aligning the two processes best serves the public interest with transparency and predictability in securing spectrum necessary to launch and operate satellites. Toward this end, Intelsat offers the following implementation ideas that complement existing policies adopted in the *Space Station Licensing Reform Order*.¹⁹

Position in the First-Come, First-Served Space Station Application Queue. When the ITU publishes receipt of an API from the U.S. Administration, the FCC should update the International Bureau Filing System’s “Satellite Q Report”²⁰ to reflect the API filing. Intelsat recommends sending the API to the ITU by the following business day, and once published by the ITU, giving the API filing a queue/date-time that corresponds to [12:00:00:000AM of the ITU “date of receipt”]. For example, the Satellite Q Report for an API filing for C-band frequencies at 75.0° W.L. submitted to the FCC on January 29, 2015, and published April 15, 2015, by the ITU with a date of receipt of April 1, 2015, would look as follows:

#	FILE NUMBER	CALL SIGN / SAT ID	APPLICANT NAME	DATE-TIME FILED	QUEUE DATE-TIME	GSO/ NGSO	ORBIT LOC	FREQUENCY BANDS (MHz)	Date of Filing Accepted for Public	CURRENT STATUS
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¹⁷ *FNPRM*, ¶ 15.

¹⁸ To be clear, however, the FCC need not require the submission of an API and Coordination Request filing simultaneously. Rather, an operator should be permitted to submit an API to the FCC for filing with the ITU, and at a later date submit a Coordination Request for filing with the ITU. Under the new policy, APIs and CRs could be submitted separately or simultaneously at the operator’s discretion.

¹⁹ See *Amendment of the Commission's Space Station Licensing Rules and Policies*, First Report and Order and Further Notice of Proposed Rulemaking in IB Docket No. 02-34, and First Report and Order in IB Docket No. 02-54, 18 FCC Rcd 10760 (2003) (“*2003 Space Station Rules Amendment*”).

²⁰ The International Bureau Filing System’s “Satellite Q Report” is found at: <http://licensing.fcc.gov/myibfs/qReportExternal.do>.

									Notice	
6			Intelsat License LLC		April 1, 2015 12:00:00:000AM	GSO	75.0 W	3700.0-4200.0 5925.0-6425.0		API – awaiting application

Six-Month Deadline for CR. As a first measure designed to mitigate operator delay and deter speculation, the Commission should require an operator to file its CR within six months of the API date of receipt in order to maintain a satellite queue position based on the API date of receipt. Six months after the API date of receipt is the earliest date of receipt that the ITU may assign to a CR. Continuing the example above, the queue date/time would remain unchanged if the operator submits a CR filing for C-band frequencies at 75.0° W.L. with an ITU date of receipt of October 1, 2015²¹ (which corresponds to six months after the ITU date of receipt of the API). Only the “Current Status” column would be updated:

#	FILE NUMBER	CALL SIGN / SAT ID	APPLICANT NAME	DATE-TIME FILED	QUEUE DATE-TIME	GSO/ NGSO	ORBIT LOC	FREQUENCY BANDS (MHz)	Date of Filing Accepted for Public Notice	CURRENT STATUS
6			Intelsat License LLC		April 1, 2015 12:00:00:000AM	GSO	75.0 W	3700.0-4200.0 5925.0-6425.0		CR- awaiting application

If, on the other hand, an operator does not file a CR within six months of the ITU date of receipt of the API, the operator should lose its queue position based on the API and receive a new queue position based on the date of its CR filing, if any. Using the example above (API date of receipt on April 1, 2015), a CR with an ITU date of receipt of November 3, 2015, would change the date reflected in the Satellite Q Report:

#	FILE NUMBER	CALL SIGN / SAT ID	APPLICANT NAME	DATE-TIME FILED	QUEUE DATE-TIME	GSO/ NGSO	ORBIT LOC	FREQUENCY BANDS (MHz)	Date of Filing Accepted for Public Notice	CURRENT STATUS
6			Intelsat License LLC		Nov 3, 2015 12:00:00:000AM	GSO	75.0 W	3700.0-4200.0 5925.0-6425.0		CR- awaiting application

²¹ In the event that the ITU rejects a portion of the CR as filed, then only the accepted portion of the CR would have its status updated to “CR-Awaiting Application.”

Changes in Orbital Location at Time of CR. The *FNPRM* acknowledges that the ITU Radio Regulations permit Administrations to shift the orbital location indicated in the API by up to six degrees in either direction when a CR is filed with the ITU.²² Intelsat agrees with the Commission’s proposal that U.S. operators also should be permitted to shift a proposed orbital location by up to six degrees in either direction when filing an ITU CR.²³ Intelsat submits that if the orbital location indicated in an applicant’s CR differs from that indicated in the API, the position in the Commission’s space station application process for the new orbital location should be updated to [12:00:00:000AM of the ITU date of receipt of the CR].²⁴ Using the example above, a change in orbital location to 71.0° W.L. for a CR with an ITU date of receipt of October 1, 2015, may be reflected in the Satellite Q Report as follows:

#	FILE NUMBER	CALL SIGN / SAT ID	APPLICANT NAME	DATE-TIME FILED	QUEUE DATE-TIME	GSO/ NGSO	ORBIT LOC	FREQUENCY BANDS (MHz)	Date of Filing Accepted for Public Notice	CURRENT STATUS
8			Intelsat License LLC		October 1, 2015 12:00:00:000AM	GSO	71.0 W	3700.0-4200.0 5925.0-6425.0		CR – awaiting application

Importantly, if the CR does not change the orbital locations or frequencies contained in the API (and it has been filed within six months of the ITU date of receipt of the API), the queue date-time would remain based on the API date of receipt.

Two-Year Deadline for FCC Satellite Application. Intelsat appreciates that the FCC proposes to adopt Intelsat’s suggestion that operators be required to submit a complete satellite

²² FNPRM, ¶ 15.

²³ *Id.*

²⁴ The *FNPRM* contemplates that a changed orbital position would necessitate the electronic filing of a “modified API and Coordination Request with the Commission.” *Id.* Intelsat notes that the BR does not currently require the submission of a modified API in this case. Instead, the BR produces the document on its own initiative.

application with the Commission within two years after ITU receipt of the API.²⁵ Intelsat recommends that upon failure to submit a complete satellite application within two years, the agency should strike the operator's position in the Satellite Q Report corresponding to the ITU filing. Like the six-month CR deadline proposed above, such a two-year period balances allowing an operator more time to finalize its satellite's design with ensuring that operators do not unduly delay moving forward with a satellite application. It also conforms precisely to the ITU process, which requires a CR to be filed no later than two years from the ITU's receipt of an API.²⁶ Moreover, nothing about the proposed two-year window would prevent a second operator from submitting ITU or FCC applications behind a first applicant that it suspects of speculating. Indeed, though only the first entity could be *granted* within the two-year window, nothing would prevent the Commission from simultaneously *processing* both applications.²⁷

Three Strikes Rule. The *FNPRM* also invites comment on “whether failure to meet the proposed application-filing deadline should count as a missed milestone for purposes of the ‘three-strikes’ rule in Section 25.159(d).”²⁸ Intelsat believes that a failure to file an FCC satellite application within two years of the ITU's receipt of an API would be materially different from an operator's “established pattern of missing milestones” after having sought and obtained licenses

²⁵ *Id.* ¶ 14.

²⁶ ITU filings are assets of the filing Administration, not operators. Thus, Intelsat recommends that the United States provide other U.S. operators the right—but not the obligation—to accept abandoned ITU filings, subject to acceptance of future ITU cost recovery fees.

²⁷ In like manner, nothing would prevent the Commission from granting Special Temporary Authority for the second applicant to operate if the first is not yet operating.

²⁸ *FNPRM*, ¶ 18.

for particular satellites that Rule 25.159 is meant to address.²⁹ Here, under the proposed procedure, an applicant cannot know the priority of its requested U.S. API filing relative to filings made in other jurisdictions until the necessary time it takes for the ITU to publish. As a result, the planned use of an orbital location by a committed satellite operator may become impractical after an API is filed but before the operator must file a license application. This means that the proposed ITU filing process necessarily contains for operators a “speculative” aspect that differs from the licensed, but unbuilt, applications that the three strikes rule is meant to deter.³⁰ Moreover, an applicant currently may withdraw an application at any time without penalty (other than loss of a filing fee); it should be no different merely because the API and application are separated.

Mutual Exclusivity. The *FNPRM* proposes that “[i]t would be the responsibility of the party requesting the ITU filing to ensure that there are no mutual exclusivity issues” that “could result in denial of the [subsequently-filed FCC] application.”³¹ Intelsat agrees that the Commission is not—and should not be—responsible for determining mutual exclusivity. Just like an entity filing a satellite application, it is each applicant’s risk to determine when filing an API whether previously licensed or applied-for space stations or ITU filings would have a preclusive effect on the ultimate grant of its FCC satellite application. However, in the special case where the preclusive effect becomes publicly known only upon ITU and FCC publication of

²⁹ *ATCONTACT Communications, LLC*, Order, 25 FCC Rcd 7567, ¶ 34 (2010).

³⁰ *2003 Space Station Rules Amendment* at 10836.

³¹ *FNPRM*, ¶ 14.

a previously filed API, the second party filing an FCC satellite application should be permitted to withdraw and receive a refund of any filing fee paid for its now lower priority application.³²

Preventing Warehousing. Intelsat shares the FCC’s “concern about the need to prevent warehousing.”³³ The two measures described above provide ample protection against speculation. First, failure to file a CR within six months of the ITU’s receipt of an API nullifies the Satellite Q position obtained based on the API date of receipt and allows priority to shift to a second entity submitting an API or full satellite application. Second, failure to file an FCC application within two years of ITU’s receipt of an API would void the applicant’s FCC Satellite Q position.

Additionally, Intelsat believes that the existing obligation to accept and pay ITU cost recovery fees provides sufficient assurances to the Commission that an operator only seeks ITU filings for legitimate business reasons and not to warehouse spectrum. Through Decision 482, the ITU Council has determined the cost recovery principles and fees for satellite network filings.³⁴ These fees are not insubstantial and depend on the number of forms of coordination and units, which are the number of frequency assignments, classes of station, and emissions.³⁵

³² Such a policy is consistent with Commission rules and precedent. *See* 47 C.F.R. § 1.1115(d); *Lockheed Martin Corp. Application for Review*, Memorandum Opinion and Order, 25 FCC Rcd 457, ¶¶ 9, 21 (2010). Moreover, while Intelsat argues that no filing fees should be associated with a request for the FCC to submit an API or CR to the ITU, see Section II.A above, to the extent the agency levies filing fees on such requests, a party withdrawing a request also should have its filing fees refunded.

³³ *FNPRM*, ¶ 16.

³⁴ *See* Falou Dine, Akim, *Cost Recovery for Satellite Network Filings*, ITU, at 2 (Sept. 2013), available at <http://www.itu.int/en/ITU-R/space/workshops/RRS-13-Africa/Documents/Costrecovery.pdf>.

³⁵ *Id.* at 6, 10.

For a conventional GSO FSS full C- and Ku-band constellation, the maximum cost recovery fee for a CR is ChF 33,467, or about \$36,500.³⁶

The obligation to submit timely CRs and satellite applications plus the ITU’s cost recovery measures will effectively curtail warehousing during the two-year FCC application filing window. Most importantly, they do so while making the U.S. Administration an attractive filing Administration vis-à-vis other countries. For these reasons, Intelsat does not believe that a bond imposed at the time a satellite company requests an API—and thus secures a position in the Satellite Q—“would be the most effective way of deterring warehousing.”³⁷

III. THE FCC SHOULD MODIFY, NOT ELIMINATE, MILESTONE REQUIREMENTS

A. Milestones Are Necessary to Prevent Warehousing

The Commission’s current milestone obligations are designed to ensure that satellite licensees put geostationary slots and licensed spectrum to “their most valuable use.”³⁸ In recent proceedings, however, commenters suggested the Commission administer its milestone policy “through less burdensome means.”³⁹ In particular, milestones requiring licensees to “complete the critical design review of the licensed satellite system” within two years of the license grant and “begin construction of the satellite” within three years of the license grant⁴⁰ often involve

³⁶ *Id.* at 13. The ITU cost recovery figures are in Swiss Francs. As of this date, the exchange rate is approximately 1 Swiss Franc = \$1.09.

³⁷ *FNPRM*, ¶ 16.

³⁸ *Id.* ¶¶ 19-20.

³⁹ *Id.* ¶ 28.

⁴⁰ 47 C.F.R. § 25.164.

disclosure of a voluminous amount of highly confidential information.⁴¹ To address these issues, the *FNPRM* contains a range of possible revisions to the process of evaluating milestone compliance, including accepting certifications as proof of milestone compliance, making milestones voluntary, or eliminating milestones altogether.⁴²

Although Intelsat agrees that the Commission's current approach to milestone review is cumbersome, maintaining some form of milestone requirement is necessary to prevent speculation and warehousing of the limited orbital locations and frequencies available for satellite licensing. The Commission's long-standing milestone rules are key to ensuring that scarce spectrum resources are not squandered by entities without concrete plans or sufficient financing to construct, launch, and operate satellites. Indeed, the Commission's cancellation of satellite authorizations that missed milestones underscores the continued need for milestones.⁴³ In sum, although the Commission should consider less burdensome compliance review mechanisms such as Intelsat proposes below, it should not eliminate, or make optional, its satellite construction milestones.

⁴¹ See Comments of the Boeing Company, IB Docket No. 12-267, at 2 (filed Jan. 14, 2013) ("Boeing Comments").

⁴² *FNPRM*, ¶¶ 28-29.

⁴³ See, e.g., *EchoStar Corporation, Certifications of Milestone Compliance, EchoStar Corporation, Application to Authorize Operations of the EchoStar 8 Satellite at the 86.5° W.L. Orbital Location*, Memorandum Opinion and Order, 26 FCC Rcd 10442 (2011); *Spectrum Five LLC, Petition for Declaratory Ruling to Extend or Waive Construction Milestone*, Memorandum Opinion and Order, 26 FCC Rcd 10448 (2011); *ATCONTACT Communications, LLC, For Authority to Launch and Operate a Non-Geostationary Orbit Fixed-Satellite System in the Ka-band Frequencies*, Order, 24 FCC Rcd 10929 (2009).

B. Milestone Demonstration Requirements Should Be Simplified to Protect Confidentiality of Technical Materials and Reduce Administrative Burdens

Rather than eliminate the milestone regime, the Commission should simplify its requirements for demonstrating compliance with the critical design review (“CDR”) and construction milestones. Though the Commission originally prescribed three options for demonstrating CDR compliance,⁴⁴ the International Bureau frequently requests licensees to submit copious amounts of data in the form of a CDR report to prove the CDR milestone has been met. Commenters have identified three key problems with this approach. First, satellite CDR reports are replete with highly confidential and proprietary information, including trade secrets. Carefully guarding the confidentiality of CDR reports is critically important to both manufacturers and licensees—and for good reason.⁴⁵ Second, CDR reports are typically voluminous, causing great administrative burdens for both the licensees filing the reports and Commission staff reviewing them. Indeed, the sheer size of the CDR reports often leads to a lengthy milestone review process.⁴⁶ The Commission’s time-consuming review process

⁴⁴ See Boeing Comments at 4-5. When originally adopting the CDR milestone, the Commission envisioned licensees submitting simple evidence of milestone compliance. Specifically, the Commission explained that:

Evidence of compliance with this milestone may include (1) evidence of a large payment of money, required by most construction contracts at the time of the spacecraft CDR; (2) affidavits from independent manufacturers; and (3) evidence that the licensee has ordered all the long lead items needed to begin physical construction of the spacecraft.

2003 Space Station Rules Amendment at 10833.

⁴⁵ As satellite manufacturers have explained, the rapid development of new technology and manufacturing processes are hallmarks of the highly competitive satellite manufacturing industry.

⁴⁶ See Reply Comments of Intelsat License LLC, IB Docket No. 12-267, at 5 (filed Feb. 13, 2013) (“Intelsat Reply Comments”); Comments of ORBCOMM Inc., IB Docket No. 12-267, at 11-12 (filed Jan. 14, 2013) (“ORBCOMM Comments”) (noting that significant delays have

perpetuates uncertainty and increases costs as licensees continue to carry higher surety bonds while awaiting Commission approval.⁴⁷ Finally, requiring applicants to submit full CDR reports conflicts with the goal of FCC process reform generally and this rulemaking specifically, which is to *reduce* administrative burdens on applicants, licensees, and the Commission.⁴⁸

The Commission can address these concerns, while still furthering the underlying goals of the milestone rules, by clarifying its milestone demonstration requirements. In particular, the Commission should accept a detailed certification as evidence of compliance with the CDR.

Such a certification should provide “concrete evidence” of milestone compliance by including:

1. the CDR meeting agenda;
2. the CDR meeting minutes (redacted as necessary to reflect confidential information), including identification of participants;
3. a statement of when and for how long the CDR team met;
4. a statement that the satellite’s planned coverage area, orbital location, and frequencies conform to the licensed satellite;⁴⁹ and
5. signatures attesting to the accuracy of the certification from *both* the satellite licensee and the satellite’s manufacturer.

Similarly, for the commencement of construction milestone, the certification should include:

become the hallmark of the Commission’s milestone review process); *FNPRM*, ¶ 28 (acknowledging that “a considerable amount of time” may pass before Commission staff completes its milestone review).

⁴⁷ See Comments of the Satellite Industry Association, IB Docket No. 12-267, at 15 (filed Jan. 14, 2013) (“SIA Comments”).

⁴⁸ See *FNPRM*, ¶ 2.

⁴⁹ This more limited technical certification would be sufficient to show that the satellite being designed and constructed corresponds to the satellite system set forth in the licensee’s initial license application. *Id.* ¶ 24.

1. a picture of the satellite's communications panel or primary structure;
2. a statement of the percentage of satellite contract paid to date; and
3. signatures attesting to the accuracy of the certification from *both* the satellite licensee and the satellite's manufacturer.

Requiring the certifications to come from both the manufacturer, who has independent knowledge of the work performed under the satellite contract, *and* the licensee, who is subject to the FCC's rules and requirements, will provide the Commission with ample assurance that the relevant milestone has been met. Moreover, such an approach will return the practice to the Commission's original policy of requiring simple, straightforward evidence of milestone completion that is reasonably objective and easy to review.⁵⁰ Simplified milestone filing requirements would, in turn, allow expedited Commission review of licensees' compliance with milestones. What is more, the Commission would reduce the risk of disclosure of highly confidential technical materials during the milestone review process. In sum, accepting more detailed certifications would strike the appropriate balance between ensuring that licensees are progressing toward satellite launch and requiring concrete evidence of that progress.

IV. THE FCC SHOULD NOT ALTER EXISTING POST-LICENSING BOND REQUIREMENTS

The Commission's long-standing bond requirements are a critical to its efforts to prevent speculation and warehousing.⁵¹ Although the Commission's bond requirements have served the Commission's purposes well—deterring warehousing over the years—the Commission

⁵⁰ See *2003 Space Station Rules Amendment* at 10833. Indeed, Boeing noted that the Bureau does not appear to have ever used a CDR milestone showing to cancel a satellite license prior to the deadline for the subsequent Commencement of Construction milestone. See Boeing Comments at 7-8.

⁵¹ 47 C.F.R. § 25.165. Under the Commission's rules, the recipient of a new license for a GSO space station must file a \$3 million surety bond and the recipient of a new license for an NGSO constellation must file a \$5 million surety bond. *FNPRM*, ¶ 21.

nevertheless proposes a complex range of possible revisions to its current rules.⁵² For example, the Commission proposes calculating bond amounts based on the Gross Domestic Product Chain-type Price Index (GDP-CPI) and invites comment on the merits of adopting an ascending bond structure.⁵³ Under the proposed ascending bond, the amount paid by a licensee surrendering a space station authorization would increase progressively, *pro rata*, in proportion to the time that elapsed since the license was granted.⁵⁴ The Commission’s rationale for the ascending bond is that “it is better for a satellite licensee to surrender a license soon after receiving it” rather than holding the license—and wasting it—for several years.⁵⁵

Intelsat supports preserving the existing bond structure as-is, for several reasons. As commenters have explained, the bond requirement imposes real and significant costs that satellite licensees must plan for in advance.⁵⁶ Tying bond amounts to a shifting price index would inject uncertainty for licensees that require stability when anticipating and incorporating bonds into their financial plans and burden licensees with the need to either continuously modify bonds or over-bond at the threshold. Moreover, it is difficult to see how small variations in bond amounts based on the GDP-CPI would add to anti-warehousing deterrence. There is no evidence that current, static bond requirements have failed to deter warehousing. Thus, the Commission should preserve its current fixed-rate approach to the required bond amounts.

⁵² *FNPRM*, ¶¶ 31-34.

⁵³ *Id.*

⁵⁴ *Id.* ¶ 32.

⁵⁵ *Id.*

⁵⁶ *See, e.g.*, ORBCOMM Comments at 18; Intelsat Reply Comments at 5.

Second, the Commission should not institute an ascending bond system. The current bond structure has worked well, ensuring that the market is not marred by speculation and warehousing. An ascending bond, necessitating a reduction in the initial bonding requirement, would increase the potential for speculation during the first few years of a license grant. For example, requiring an initial bond of only \$750,000 rather than \$3,000,000 before a licensee meets the first milestone could encourage entities without the financial wherewithal to construct, launch, and operate a satellite to obtain a license—tying up valuable spectrum that could be put to more efficient uses. What is more, the ascending bond scheme would not preclude the possibility that a series of financially unstable licensees could gain access to the spectrum (and squander it) for short one or two year increments at the low-cost bond amounts. In other words, even if a “satellite licensee . . . surrender[s] a license soon after receiving it,” the ascending bond could easily perpetuate a protracted cycle of waste if spectrum is funneled through a series of entities that do not have the financing to actually provide satellite service.⁵⁷

In sum, the Commission’s existing bond requirements ensure that spectrum and orbital resources are put to their highest and best use. Indeed, the Commission’s current bond rules prevent upfront speculation by threatening a significant initial forfeiture and rewarding licensees who demonstrate good faith intent by meeting milestones. Moreover, the bond rules importantly encourage licensees to proceed to launch quickly by reducing the bond amount as each milestone is met. Thus, altering the bond scheme may well be a solution in search of a problem.

V. THE FCC SHOULD ELIMINATE, OR AT LEAST MODIFY, THE TWO-DEGREE SPACING POLICY

Intelsat appreciates the Commission seeking comments on elimination or modification of the two-degree spacing policy. As noted in the *FCC Process Reform Report*, the Commission’s

⁵⁷ *FNPRM*, ¶ 32.

two-degree spacing rule was adopted in 1983 to “maximize the number of [GSO FSS] satellites in orbit and allow for competitive entry of new operators” consistent with then-existing satellite technology.⁵⁸ Today, efficient use of the orbital arc is achieved through operator-to-operator agreements and coordination consistent with international procedures set by the ITU. Indeed, as the FCC recognizes in the current *FNPRM*, space station applicants routinely “deviate from parameters assumed for purposes of [the two-degree spacing] interference analysis when permitted under the terms of subsequent coordination agreements.”⁵⁹ The U.S. two-degree spacing policy therefore is outdated and in conflict with current international coordination standards.

As a result, the two-degree spacing policy now undermines the ability of U.S. satellite licensees to offer the types of higher-powered mobility services demanded by today’s consumers. For instance, providing mobility services to entities such as airlines is a growing sector within the satellite industry, but requires power levels greater than set forth in the two-degree spacing policy. When adopting the policy, the Commission emphasized that it “should not encumber the ability of licensees to respond to changing user needs nor delay new services.”⁶⁰ Yet, recently, some satellite operators seek to manipulate the two-degree spacing policy in ways that make existing services offered to users with very small earth station antennas vulnerable to harmful interference, thus hindering the provision of innovative new services.

⁵⁸ *Report on FCC Process Reform*, Public Notice, GN Docket No. 14-25, DA 14-199A2 (Staff Working Group, Feb. 14, 2014) (“*Process Reform Report*”). See *FNPRM*, ¶ 40.

⁵⁹ *FNPRM*, ¶ 38. The *FNPRM* then explains that “under current rules and practice, operating authority may be obtained, based on coordination agreements, for a GSO FSS system that does not conform to technical limits for two-degree compatibility.” *Id.* ¶ 39.

⁶⁰ *Licensing of Space Stations in the Domestic Fixed-Satellite Service and Related Revisions*, Report and Order, 48 FR 40233 (1983).

First, as the Commission acknowledges in paragraph 45 of the *FNPRM*, later entrants can use the FCC’s two-degree spacing policy to cause unacceptable interference to an existing U.S.-licensed operator’s non-two-degree-compliant services, even where such operations were previously fully coordinated (the “later entrant” problem). In such a case, a later-in-time operator obtains a U.S. license or market access authorization and uses it as leverage in coordination discussions to seek to force an adjacent operator to “power down” any non-two-degree-compliant services. Second, operators seek to thwart a U.S.-licensee’s ability to coordinate increased power levels for a follow-on service or satellite (the “follow-on” problem). Here, operators claim that the two-degree spacing policy entitles them protection at a two-degree power level as a starting point for international coordination regardless of ITU priorities. Such tactics can frustrate or even prevent U.S.-licensed operators from offering innovative new services that demand power at higher than two-degree levels—even when the U.S.-licensed operator has international priority rights at the ITU.

The two-degree policy also burdens and slows the FCC’s satellite approval process. In tentatively concluding that the two-degree policy “continues to be useful,” the Commission asserts in the *FNPRM* that it “facilitates expeditious application processing and reduces cost and paperwork burdens.”⁶¹ Intelsat’s experience, however, suggests otherwise. The two-degree policy has required more paperwork and recently provoked so many comments and petitions to deny that it now actually *delays* application processing.⁶² To be sure, the Commission is

⁶¹ *FNPRM*, ¶¶ 44-45.

⁶² See, e.g., SES AMERICOM, INC. Application for Modification of AMC-1 Fixed-Satellite Space Station License, File No. SAT-MOD-20140730-00089, Comments of Intelsat License LLC (filed Oct. 20, 2014) (asking the FCC to ensure that SES’s proposed operation at 47.5° W.L. with a U.S.-licensed satellite does not alter SES’ well established ITU coordination obligations at this location); Intelsat License LLC, Application to Modify Authorization for Intelsat 5 Application for Special Temporary Authority, File Nos. SAT-MOD-20140829-00097

proposing to replace the two-degree interference analysis at time of application with a certification, which would help reduce some of the paperwork.⁶³ The central problem, however, will remain unresolved—parties will continue to seek carefully worded conditions concerning power levels or coordination obligations or will oppose certifications where they once opposed interference analyses.

A. The FCC Should Eliminate the Two-Degree Spacing Policy

Eliminating the two-degree spacing policy would best remedy the competitive harm unfairly imposed on U.S. licensees and align U.S. licensing with the ITU coordination process. The two-degree spacing policy is a U.S. licensing limitation that other Administrations do not impose. The mere existence of the policy creates a licensing imbalance that favors non-U.S. operators who do not face similar constraints from their licensing Administrations. Worse yet, the two-degree spacing policy can be leveraged to impair the United States' priority spectrum rights at the ITU.⁶⁴ This particularly disadvantages U.S. interests when applied to U.S.-licensed satellites that do not even primarily serve the United States. The FCC should permit U.S.-

and SAT-STA-20140502-00047, Response of Intelsat License LLC at 3-4 (filed Sept. 29, 2014) (explaining that Section 25.140(a) of the Commission's rules does not require Intelsat to give adjacent non-U.S.-licensed operators more interference protection when replacing technically equivalent satellites.); Petition of SES Satellites (Gibraltar) Limited For Declaratory Ruling to Add the NSS-703 Satellite at 47.05° W.L. to the Commission's Permitted Space Station List, File No. SAT-PPL-20101103-00230, Reply Comments of Intelsat License LLC (filed Mar. 28, 2011) (replying to suggestion by SES Gibraltar that it needed only to comply with two-degree spacing requirements rather than ITU priority obligations).

⁶³ *FNPRM*, ¶ 51.

⁶⁴ Although foreign-licensed operators with U.S. market access have been quick to argue that they can impose two-degree levels on U.S. licensees that have higher ITU priority (thus downgrading the value of the U.S. filing), it is unclear how it would work in reverse. In other words, if the foreign-licensed operator had the higher priority filing, does the United States believe that it can strip another Administration of the benefits of that other Administration's treaty-based priority as a condition of market access?

licensed satellites to operate up to and consistent with the limits of their ITU priority, not constrain them, or allow them to constrain others, with two-degree spacing limitations.

Without the problems associated with the two-degree spacing policy, U.S.-licensed operators would employ a coordination process governed by ITU priority, which is entirely consistent with the approaches of other Administrations.⁶⁵ Operators are accustomed to reaching agreements amongst themselves; eliminating the two-degree policy merely improves this process by removing an outmoded requirement that disadvantages U.S. licensees, undermines the ITU priority system, and hampers innovation. In contrast, if this problem is allowed to persist, U.S. licensees will continue to be at a competitive disadvantage vis-à-vis their non-U.S. counterparts, which can better assess the risks associated with operating at any given location because they know before operating what the respective ITU priorities are with respect to that location. Intelsat reiterates that if U.S. policies continue to confer a competitive disadvantage on U.S. licensees, the current trend of operators electing to operate under licenses from other Administrations will continue.⁶⁶

⁶⁵ For instance, Germany's federal agency RegTP uses ITU priority date to determine domestic priority. *See* Administrative Order 8/2005, *supra* n.11.

⁶⁶ As Intelsat reported in its comments regarding the Commission's regulatory fees *FNPRM*, at least 50 non-U.S.-licensed satellites had been granted U.S. market access through petitions for declaratory ruling as of June 2013. Comments of Intelsat License LLC, *Procedures for Assessment and Collection of Regulatory Fees*, MD Docket No. 12-201, at 5 (filed June 19, 2013). Specifically, Intelsat reported 36 satellites on the C- and Ku-band Permitted Space Station List, 7 on the Ka-band Permitted Space Station List, and 7 on the ISAT List. *Id.* In the first half of 2014, the number of applications for new U.S. licenses granted or pending was roughly equal to the number of applications for U.S. market access by foreign-licensed operators granted or pending. Comments of Intelsat License LLC, *Assessment and Collection of Regulatory Fees for Fiscal Year 2014*, MD Docket No. 14-92, at 5 (filed July 7, 2014).

B. If Not Eliminated, the FCC Should Modify the Two-Degree Spacing Policy

If not eliminated altogether, Intelsat urges the FCC to modify the two-degree spacing policy so that it no longer undermines ITU priority or serves as an arbitrary operational limit that hinders innovative customer services. While the FCC’s proposal set forth in paragraph 47 is a step in the right direction, assuming the FCC retains the existing two-degree limitations, Intelsat recommends instead that the Commission revise Section 25.140 as set forth below.

1. The FNPRM’s Paragraph 47 Proposal is a Good Start but Does Not Fully Solve Problems with the Current Two-Degree Spacing Policy

Intelsat appreciates the Commission’s proposal to modify the two-degree spacing policy to offer protection rights for a U.S. licensed operator’s existing non-two-degree-compliant services (“paragraph 47”). Specifically, the Commission wrote:

The primary question presented by Intelsat’s comments is whether the Commission should, instead, require a new entrant to coordinate co-frequency, co-coverage operation with a U.S.-licensed operator that has been providing non-two-degree-compliant GSO FSS services without causing unacceptable interference, consistently with any previous coordination required by the ITU Radio Regulations and Commission rules or policies. If we were to adopt such a policy, should coordination priority and protection rights between U.S. licensees, or operators with U.S. market access, be based on ITU filing priority, as Intelsat recommends, or should it be based on FCC application filing dates?⁶⁷

Codifying the paragraph 47 proposal in Section 25.140 would go a long way toward solving the later entrant problem (although not the follow-on problem). There is a disconnect, however, between the idea set forth in paragraph 47 and its proposed implementation in Appendix C of the *FNPRM*.⁶⁸ Appendix C introduces an altered version of Appendix A that uses the term

⁶⁷ *FNPRM*, ¶ 47. Paragraph 47 further invited comments on requiring prior notification of nonconforming operation. Such notifications are unnecessary and would burden Commission resources.

⁶⁸ See *FNPRM* at Appendix C, ¶ 1 (“Appendix C Proposal”). This version was proffered as an alternative to the proposed revision in Appendix A. See *id.* at Appendix A, ¶ 19 (“Appendix A Proposal”).

“previously authorized” in place of “authorized.”⁶⁹ Under the rule proposed in either Appendix, an operator must conform to two-degree power limits “unless the non-conforming uplink and/or downlink operation is coordinated with operators of authorized [or previously authorized] co-frequency space stations” within six degrees.⁷⁰ This coordination is a prerequisite to obtaining a license or authorization to provide services. In this context, “authorized” and “previously authorized” both mean “authorized before the applying operator receives a license or authorization.” The two proposed revisions are therefore functionally the same.

Moreover, the proposed revisions to Sections 25.140 and 25.220 set forth in Appendix A and Appendix C merely codify the existing policy. The revisions to Section 25.140 require newer operators to set power at pre-determined, two-degree levels unless the non-conforming operations are coordinated with operators of already-authorized co-frequency space stations.⁷¹ This “one-way” approach is silent as to whether the newer operator can force the already-authorized operator to conform to two-degree levels and therefore power down any non-two-degree-compliant services. As such, the revisions merely restate existing obligations, and fail to address the problems discussed above that the two-degree policy creates. Similarly, the

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *Id.* Under the Commission’s revised Section 25.140, part (a)(3)(i) states the following: “With respect to proposed operation in the conventional or extended C-band, certification that downlink EIRP density will not exceed 1 dBW/4kHz for digital transmissions or 8 dBW/4kHz for analog transmissions and that EIRP density from associated uplink operation will not exceed applicable envelopes in § 25.218 or § 25.221(a) unless the non-conforming uplink and/or downlink operation is coordinated with operators of previously authorized co-frequency space stations at assigned locations within 6 degrees of the orbital location of the proposed space station.” See Appendix C Proposal. Parts (a)(3)(ii) and (a)(3)(iii) impose the same requirements—using different power limits—for the Ku- and 20/30 GHz bands, respectively. See *id.*

Commission's revisions to Section 25.220 retained subsection (d)(2), which codifies the two-degree policy for earth station uplinks.⁷²

To implement Appendix C in a manner that would solve the later entrant problem as the Commission suggests in paragraph 47, Intelsat proposes adding the following language (numbered as Section 25.140(b)):⁷³

Notwithstanding the foregoing, an entity with the second-in-time license or authorization cannot require previously authorized holders of licenses or authorizations to reduce power in any prior-in-time coordinated service, even if that service is non-conforming.⁷⁴

This would help remove the uncertainty operators currently face regarding their future ability to provide previously coordinated services. It would not remedy, however, the follow-on problem currently presented by the Commission's two-degree spacing problem.

⁷² Section 25.220(d)(2) reads: "The operator of an earth station licensed pursuant to this section must reduce EIRP density toward a subsequently launched two-degree-compliant space station receiving in the same uplink band at a position within 6 degrees of the earth station's target satellite if the non-conforming earth station operation has not been coordinated with the operator of the new satellite. The earth station operator must reduce EIRP density to levels at or within relevant routine limits toward a two-degree-compliant space station receiving in the same uplink band at a position more than 6 degrees away from the target satellite if operation of the co-frequency space station is adversely affected by the non-conforming earth station operation, unless the non-conforming operation is permitted under a coordination agreement with the operator of the co-frequency satellite." *FNPRM* at Appendix A, ¶42.

⁷³ Section (b) as it appears in the Commission's Appendix A and Appendix C proposals would become Section 25.140(c).

⁷⁴ The language "prior-in-time coordinated service" covers all agreements that have been signed, whether or not currently operational.

2. Should the Commission Maintain Two-Degree Spacing, It Should Adopt the Proposal Intelsat Sets Forth in Appendix 1

To remedy effectively both the later entrant and follow-on problems with the current two-degree spacing policy, Intelsat proposes adoption of Section 25.140 as set forth in Appendix 1, hereto (“Intelsat’s Appendix 1 Proposal”). Intelsat’s Appendix 1 Proposal removes downlink power limits and revises Sections 25.140(a)(2) and (3) to provide:

In addition to the information required by § 25.114, an applicant for GSO FSS space station licenses or authorizations shall certify that it will attempt to coordinate (including operator-to-operator, where appropriate) with all operators of co-frequency, co-coverage space stations and services at orbital locations within 6 degrees of the applicant’s orbital location. In doing so, holders of licenses or authorizations shall make every possible effort to overcome the difficulties, in a manner acceptable to the parties involved. Priority in any such coordination efforts shall be based on the date of receipt at the International Telecommunication Union of the applicable Coordination Request filing.⁷⁵

Intelsat’s Appendix 1 Proposal solves both the later entrant and the follow-on problems because it aligns all coordination efforts, including as between two U.S. licensees, with the ITU system. Under this revised rule, there are no “new entrants” or power limit baselines for negotiation—there is merely higher or lower ITU priority. ITU priority will govern all coordination negotiations, and the obligation to attempt these negotiations will exist both at the time of application to the Commission and with regard to all future operations within six degrees.⁷⁶ Intelsat’s Appendix 1 rule also includes a parallel obligation to the ITU Radio Regulation’s requirement to “make every possible effort” to overcome the difficulties of coordination.⁷⁷

⁷⁵ See Intelsat Comments, Appendix 1.

⁷⁶ Intelsat’s Appendix 1 Proposal therefore would require coordination not only with subsequently launched satellites, but also subsequently initiated services on existing satellites.

⁷⁷ Cf. ITU Radio Regulations § 9.53, available at http://www.itu.int/dms_pub/itu-s/oth/02/02/S02020000244501PDFE.pdf.

By requiring U.S. licensees to coordinate with each other based on CR date priority, Intelsat’s Appendix 1 mimics the ITU priority system among sovereigns. Intelsat’s Appendix 1 ensures the U.S. system comports with international rules in a manner consistent with other Administrations and prevents operators from manipulating the U.S. two-degree policy to harm the public interest.

Under Intelsat’s Appendix 1 Proposal, the rights of two U.S. licensees vis-à-vis their ITU filings would be no different from the rights of foreign licensees. If two U.S. licensees face difficulty reaching an agreement, the Commission will—just as it does when a U.S. licensee fails to coordinate with a foreign-licensed operator—continue to process Notifications in order to get the frequency assignments into the Master International Frequency Register (“MIFR”).⁷⁸

Aligning the process for reaching U.S.-to-U.S. agreements with the ITU’s coordination procedures requires a consequential change to Section 25.111(b). Under the current FCC rule, operators only have protection from interference if “ITU procedures are timely completed or, with respect to individual Administrations, coordination agreements are successfully completed.”⁷⁹ Operators may be subject to additional terms and conditions if they cannot coordinate.⁸⁰ Intelsat proposes adding a new subsection (b)(2):

No protection from interference caused by radio stations authorized by this Administration is guaranteed unless operator-to-operator agreements involving U.S. licensees are successfully completed. A license for which such agreements have not been completed may be subject to additional terms and conditions consistent with ITU priority.⁸¹

⁷⁸ Cf. ITU Radio Regulations § 11.41.

⁷⁹ 47 CFR § 25.111(b).

⁸⁰ *Id.*

⁸¹ See Intelsat Comments, Appendix 1.

This revision applies the existing conditions regarding coordination between sovereigns to the case of U.S. licensees that cannot reach agreement.

Finally, Intelsat's Appendix 1 clarifies the scope of Section 25.140. The *FNPRM* establishes that the paragraph 47 approach would apply to both U.S. licensees and foreign operators seeking to serve U.S. markets.⁸² The current and proposed revised rules, however, are addressed to "license applicants," making it entirely unclear whether the rule in fact applies to non-U.S.-licensed operators serving U.S. markets.⁸³ To address this unintended consequence, Intelsat recommends amending the title of Section 25.140 to include applications for market access.⁸⁴ In sum, should the Commission maintain a two-degree spacing policy, Intelsat recommends using the proposed rules set forth in Appendix 1.

⁸² See *FNPRM*, ¶ 47 (discussing how to determine, under the Paragraph 47 approach, "coordination priority and protection rights between U.S. licensees, or operators with U.S. market access").

⁸³ The confusion is increased by language elsewhere in the rules appearing to equate licensing with Letters of Intent. See 47 C.F.R. § 25.137(e) (treating additional Letters of Intent by non-U.S.-licensed satellite operators seeking to serve the U.S. as amendments filed by U.S. space station applicants for purposes of determining order for consideration of other pending applications).

⁸⁴ The full title of any proposed revised Section 25.140 should be: "Further requirements for license or authorization applications for geostationary satellite space stations in the Fixed Satellite Service and the 17/24 GHz Broadcasting-Satellite Service." See Appendix 1.

VI. CHANGES TO PART 25 TECHNICAL RULES

A. The Commission Should Not Expand the Definition of the Permitted List

The Commission should reject the proposal to redefine the Permitted Space Station List to include the extended C- and Ku-bands.⁸⁵ The FCC has previously considered and rejected inclusion of the extended bands on the Permitted List, finding that:

the earth station license modification procedure is very important in cases in which the non-U.S.-licensed satellite operator plans to operate in the extended C-band or extended Ku-band, because those operations often require coordination with terrestrial service providers and other service providers.⁸⁶

The FCC should maintain its case-by-case consideration of requests for operations in these bands because they remain subject to more extensive coordination requirements. Intelsat's own U.S. satellite licenses routinely include several conditions requiring additional coordination for use of the extended bands.⁸⁷ The presence of such conditions on U.S. licenses underscores the need for additional FCC scrutiny for operations in these bands, making them inappropriate for inclusion on the Permitted List.

B. The FCC Should Streamline Grant for Non-substantial Satellite Relocation or Beam Repositioning

Intelsat supports amending Section 25.117 to provide for automatic grant, 35 days after the date of public notification of acceptance for filing, of unopposed applications for space

⁸⁵ *FNPRM*, ¶ 126.

⁸⁶ *See 2003 Space Station Rules Amendment* at 10881.

⁸⁷ *See, e.g.,* Authority to Launch and Operate Intelsat 30 Satellite at 95.1 W.L., File No. SAT-LOA-20121025-00187 (stamp grant Aug. 14, 2014; corrected grant Oct. 30, 2014); Authority to Launch and Operate Intelsat 20, A Replacement Satellite With New Frequencies, at 68.5 E.L., SAT-LOA-20111024-00208 (stamp grant Jul. 26, 2012); Application to Launch and Operate Intelsat 22, A Replacement Satellite With New Frequencies, at 72.1 E.L., File No. SAT-LOA-20110929-00193 (stamp grant Mar. 15, 2012).

station license modifications to permit (1) relocation of a satellite by no more than ± 0.15 degrees from its currently licensed orbital location and (2) repositioning of the boresight(s) of a GSO space station antenna beam by up to 0.3 angular degrees from the initially authorized position.⁸⁸ Satellite operators provide extensive technical information in an application for a satellite's initial authorized location. Minor changes to the satellite's licensed orbital location or beam position are unlikely to cause harmful interference. Adoption of this proposal will increase a licensee's flexibility to respond to customer requirements and preserve scarce FCC resources.⁸⁹

Intelsat does not believe a safe flight profiles certification is required in order to permit autogrant of applications for minor modifications. Under current FCC rules, satellite operators are aware of the need to avoid any risk of collision, and would not operate a satellite within the same station-keeping box of another satellite without careful coordination.

Should the FCC determine that a safe flight profiles certification is required, Intelsat suggests adopting the following standard language, which previously has been accepted by the Commission:

[The satellite operator] has assessed and limited the probability of the space station becoming a source of debris as a result of collisions with large debris or other operational space stations. The satellite will not be located at the same orbital location as another satellite or at an orbital location that has an overlapping station-keeping volume with another satellite. Further, [the satellite operator] is not aware of any other FCC licensed system, or any other system applied for and under consideration by the FCC, having an overlapping station-keeping volume with [the satellite] at [orbital location]. Finally, [the satellite operator] is not

⁸⁸ *FNPRM*, ¶ 146.

⁸⁹ Intelsat previously proposed autogrant of applications proposing rotation of one or more beams at the satellite's initially authorized orbital location by no more than 0.3 degrees in any direction relative to the satellite's initially authorized beam position. *Id.* Intelsat has reconsidered this proposal and no longer believes it is required.

aware of any system with an overlapping station-keeping volume with [the satellite] that is the subject of an ITU filing and that is either in orbit or progressing towards launch.

C. The FCC Should Change Fleet Management to Increase Flexibility

Intelsat also supports the proposed simplification of the fleet management rule⁹⁰ to broaden the utility of the rule without increasing the risk of harmful interference. The current rule permits relocation upon 30 days prior notice only when moving a spacecraft to a *precise* orbital location assigned to the same licensee. The limitations of this rule prevent space station operators from locating satellites at slightly offset orbital locations to ensure effective operation or to coordinate the collocation of space stations.

Intelsat supports the FCC's proposal to modify the fleet management rule to allow satellite operators to relocate licensed spacecraft without prior approval to an orbital location within ± 0.15 degrees of another orbit location assigned to the same licensee.⁹¹ Should operation offset from a licensee's precise orbital location affect coordination agreements, the licensee would not be able to certify compliance with coordination agreements and could not file pursuant to fleet management procedures, absent new agreements. Consequently, amendment of the rule to permit relocation to within ± 0.15 degrees or an authorized orbital location rather than a precise orbital location will enhance the utility of the rule without increasing the risk of harmful interference.

Intelsat does not support a requirement for a safe flight profile certification for fleet management notifications. Such a certification is particularly unnecessary with respect to the fleet management rule because an operator already is required to certify that "it has completed

⁹⁰ 47 C.F.R. § 25.118(e).

⁹¹ *FNPRM*, ¶ 153.

any necessary coordination of its space station at the new location with other potentially affected space station operators, including coordination of station-keeping volume.”⁹² Should the Commission determine that an additional certification is required, Intelsat proposes the following language:

[The satellite operator] has assessed and limited the probability of the space station becoming a source of debris as a result of collisions with large debris or other operational space stations. The satellite will not be located at the same orbital location as another satellite or at an orbital location that has an overlapping station-keeping volume with another satellite. Further, [the satellite operator] is not aware of any other FCC licensed system, or any other system applied for and under consideration by the FCC, having an overlapping station-keeping volume with [the satellite] at [orbital location]. Finally, [the satellite operator] is not aware of any system with an overlapping station-keeping volume with [the satellite] that is the subject of an ITU filing and that is either in orbit or progressing towards launch.]

D. The FCC Should Modify Pro Forma Application Rules for Satellites and Earth Stations.

Under the FCC’s current rules, satellite and earth station licensees must file applications and obtain prior FCC approval for all pro forma changes in control.⁹³ As the Commission is aware, pro forma changes in control often have little, if any, effect on an FCC licensee. A pro forma change, by its very nature, does not alter the ultimate control of a licensee. Indeed, very often a pro forma change involves only a change to an intermediate holding company in a licensee’s ownership structure, and it is difficult to imagine a scenario in which such a minor adjustment would have any effect on the manner in which an FCC licensee provides communications services. Nevertheless, for a licensee such as Intelsat—which holds almost 50

⁹² 47 C.F.R. § 25.118(e)(5).

⁹³ 47 C.F.R. § 25.119.

satellite licenses and hundreds of earth station licenses—this change would require the Intelsat to file and FCC staff to review and process multiple applications. Furthermore, Intelsat is required to pay almost \$500,000 in filing fees for such applications that have no material effect on an FCC licensee.

The FCC proposes to exercise its forbearance authority to avoid the prior approval requirements for pro forma transfers of control of common carrier earth and space stations.⁹⁴ Intelsat does not object to the elimination of application requirements for common carriers, but notes that this modification will do very little to alleviate the burden on many licensees who, like Intelsat, only hold non-common carrier licenses. Intelsat urges the FCC to seek Congressional approval to modify the statutory requirements for non-common carriers.

Even without statutory changes, the agency does have authority to implement and interpret what constitutes a change in control requiring FCC prior authorization. The FCC should eliminate the need to file applications for changes that have no effect on an FCC licensee and waste scarce Commission resources. Indeed, as noted above, it is difficult to see how changes in a licensee’s intermediate holding structure, with no ultimate change in control, has any effect on an FCC licensee that would warrant FCC review. As such, Intelsat urges the FCC to follow the governing laws of states or foreign Administrations to determine whether a change in business form (*i.e.*, a conversion from a corporation to an LLC) is a pro forma change that requires an assignment or transfer of control filing. Many states and foreign Administrations classify a change in an entity’s business form as a continuation of the existing entity.⁹⁵ If the

⁹⁴ *FNPRM*, ¶ 157.

⁹⁵ For example, under Delaware law “[w]hen a corporation has been converted to another entity or business form . . . the other entity or business form shall, for all purposes of the laws of the State of Delaware, be deemed to be the same entity as the corporation. . .” Del. Code Ann. tit. 8, § 266(h); *see also* Del. Code Ann. tit. 8, § 265(f) (“When another entity has been converted to

governing local law does not recognize a change in business form as creating a new entity, the FCC should not consider such conversions to be a change in control under the Commission's rules.

E. The FCC Should Revise Its Section 25.202(g) TT&C Restriction

The Commission seeks comment about whether to amend Section 25.202(g) to allow satellite operators to transmit TT&C signals in portions of the assigned bands other than the edges.⁹⁶ Section 25.202(g) requires U.S. domestic satellites to conduct TT&C at either or both edges of the allocated band(s).⁹⁷ Intelsat supports the FCC's proposal to modify Section 25.202(g), with some minor changes to the Commission's proposed text.

As Intelsat previously noted, the purpose of the TT&C band-edge requirement is not clear.⁹⁸ There is no such restriction on the placement of TT&C for non-U.S. licensed satellites, with which many U.S.-licensed satellite operators have coordinated.⁹⁹ Nevertheless, non-U.S. licensed satellites and U.S. licensed satellites still achieve coordination and are able to control

a corporation of this State . . . the corporation of this State shall, for all purposes of the laws of the State of Delaware, be deemed to be the same entity as the converting other entity. . ."). Delaware law also makes clear that the "rights privileges, powers and interest in property of the [entity] that has converted, as well as the debts, liabilities, and duties of such [entity], shall not be deemed, as a consequence of the conversion, to have been transferred to the other entity or business form to which such [entity] has converted. . ." Del. Code Ann. tit 8, § 266(h).

⁹⁶ *FNPRM*, ¶ 187.

⁹⁷ *See* 47 C.F.R. § 25.202(g).

⁹⁸ Comments of Intelsat License LLC, *Comprehensive Review of Licensing and Operating Rules for Satellite Services*, IB Docket No. 12-267 at 14-15 (filed January 14, 2013).

⁹⁹ *Applications of INTELSAT LLC; For Authority to Operator, and to Further Construct, Launch, and Operate C-band and Ku-band Satellites that Form a Global Communications System in Geostationary Orbit*, Memorandum Opinion Order and Authorization, 15 FCC Rcd 15,460, 15,500 (¶¶ 98-100) (2000) ("Intelsat Licensing Order") (granting waiver to use center-band TT&C).

their satellites without apparent harmful interference. Moreover, TT&C carriers occupy relatively small bandwidths (approximately one megahertz for each command carrier and 500 kHz for each telemetry carrier) and, therefore, would not necessarily adversely impact communication frequencies.

Intelsat proposes the following revisions to the proposed new Section 25.202(g)(2):

Additional, ~~non-emergency~~ telemetry, tracking, and command signals may be transmitted in frequencies within the assigned bands that are not at a band edge if such transmissions cause no more interference and require no greater protection from harmful interference than the communications traffic on the satellite network or if such transmissions have been coordinated with operators of authorized co-frequency space stations at assigned locations within 6 degrees of the orbital location of the proposed space station.

Intelsat's proposed revisions will provide satellite operators with flexibility, while continuing to protect adjacent co-frequency satellites from harmful interference.

F. The FCC Should Eliminate the Section 25.210(i) Cross-Polarization Isolation Requirements

Intelsat supports the FCC's proposal to modify Section 25.210(i) to eliminate the requirement for FSS space station antennas to provide cross-polarization isolation of at least 30 dB within the primary coverage area.¹⁰⁰ The requirement is unnecessary, because it primarily protects against self-interference, and operators already optimize cross-polarization interference to optimize their link budgets. In previous comments, SIA advocated eliminating the requirement, stating that "cross-polarization isolation is relevant only for self-interference considerations, and in cases where multiple satellites using the same frequencies are located at or around a single orbital location."¹⁰¹ Further, manufacturers often are unable to provide 30 dB

¹⁰⁰ *FNPRM*, ¶ 181.

¹⁰¹ Comments of the Satellite Industry Association, *Comprehensive Review of Licensing and Operating Rules for Satellite Services*, IB Docket No. 12-267 at 55 (filed January 14, 2013).

isolation, and hence the FCC regularly grants waivers to that requirement.¹⁰² Should the FCC decide to retain a requirement, Intelsat urges the Commission at least to decrease the required isolation to 20 dB to be compatible with the majority of isolation values achieved.

VII. CONCLUSION

In view of the foregoing, Intelsat urges the FCC to adopt Intelsat's proposed revisions to Part 25 of the Commission's rules.

Respectfully submitted,

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¹⁰² See, e.g., *Star One S.A. Petition for Declaratory Ruling to Add the Star One C1 Satellite at 65° W.L. to the Permitted Space Station List*, Order, 19 FCC Rcd 16,334, 16,339 (¶ 12) (2004); *New Skies Satellites N.V.; Petition for Declaratory Ruling*, Order, 17 FCC Rcd 10,369, 10,376-377 (¶ 19) (2002); *Intelsat Licensing Order*, 15 FCC at 15,503 (¶ 109) (2000).

Appendix 1

Section 25.140 Revision from FNPRM Appendix A Proposal in Redline

19. In § 25.140, revise paragraphs (a) and (b)(3) to read as follows:

§ 25.140 Further requirements for license or authorization applications for geostationary space stations in the Fixed-Satellite Service and the 17/24 GHz Broadcasting-Satellite Service.

~~(a)(1)~~ In addition to the information required by § 25.114, an applicant for GSO FSS space station ~~operation involving transmission of analog video signals must certify that the proposed analog video operation has been coordinated with~~ licenses or authorizations shall certify that it will attempt to coordinate (including operator-to-operator, where appropriate) with all operators of authorized co-frequency, co-coverage space stations and services at orbital locations within 6 degrees of the requested orbit applicant's orbital location. In doing so, holders of licensees or authorizations shall make every possible effort to overcome the difficulties, in a manner acceptable to the parties involved. Priority in any such coordination efforts shall be based on the date of receipt at the International Telecommunication Union of the applicable Coordination Request filing. In addition, the applicant shall provide:

~~(2) In addition to the information required by § 25.114, an applicant for a GSO FSS space station at an orbital location less than 2 degrees from the assigned location of an authorized co-frequency GSO space station must either certify that the proposed operation has been coordinated with the operator of the co-frequency space station or submit an interference analysis demonstrating the compatibility of the proposed system with the co-frequency space station. Such analysis must include, for each type of radio frequency carrier, the link noise budget, modulation parameters, and overall link performance analysis. (See Appendices B and C to Licensing of Space Stations in the Domestic Fixed-Satellite Service, FCC 83-184, and the following public notices, copies of which are available in the Commission's EDOCS database: DA 03-3863 and DA 04-1708.) The provisions in this paragraph do not apply to proposed analog video operation, which is subject to the requirement in paragraph (a)(1).~~

~~(3) In addition to the information required by § 25.114, applicants for GSO FSS space stations must provide the following for operation other than analog video operation:~~

~~(i1)~~ With respect to proposed operation in the conventional or extended C-band, certification ~~that downlink EIRP density will not exceed 1 dBW/4kHz for digital transmissions or 8 dBW/4kHz for analog transmissions and~~ that EIRP density from associated uplink operation will not exceed applicable envelopes in § 25.218 or § 25.221(a) unless the non-conforming uplink ~~and/or downlink~~ operation is coordinated with operators of authorized co-frequency space stations at assigned locations within 6 degrees of the orbital location of the proposed space station.

~~(ii2)~~ With respect to proposed operation in the conventional or extended Ku-band, certification ~~that downlink EIRP density will not exceed 10 dBW/4kHz for digital transmission or 17 dBW/4kHz for analog transmission and~~ that associated uplink operation will not exceed applicable EIRP density envelopes in § 25.218, § 25.222, § 25.226, or § 25.227 unless the non-conforming uplink ~~and/or downlink~~ operation is coordinated with operators of authorized co-

frequency space stations at assigned locations within 6 degrees of the orbital location of the proposed space station.

(iii) With respect to proposed operation in the 20/30 GHz band, certification that the proposed space stations will not generate power flux-density at the Earth's surface in excess of -118 dBW/m²/MHz and that associated uplink operation will not exceed applicable EIRP density envelopes in § 25.138(a) unless the non-conforming uplink ~~and/or downlink~~ operation is coordinated with operators of authorized co-frequency space stations at assigned locations within 6 degrees of the orbital location of the proposed space station.

~~(iv) With respect to proposed operation in other FSS bands, an interference analysis demonstrating compatibility with any previously authorized co-frequency space station at a location two degrees away or certification that the proposed operation has been coordinated with the operator(s) of the previously authorized space station(s). If there is no previously authorized space station at a location two degrees away, the applicant must submit an interference analysis demonstrating compatibility with a hypothetical co-frequency space station two degrees away with the same receiving and transmitting characteristics as the proposed space station.~~

Section 25.140 Revision from FNPRM Appendix A Proposal Clean

19. In § 25.140, revise paragraphs (a) and (b)(3) to read as follows:

§ 25.140 Further requirements for license or authorization applications for geostationary space stations in the Fixed-Satellite Service and the 17/24 GHz Broadcasting-Satellite Service.

(a) In addition to the information required by § 25.114, an applicant for GSO FSS space station licenses or authorizations shall certify that it will attempt to coordinate (including operator-to-operator, where appropriate) with all operators of co-frequency, co-coverage space stations and services at orbital locations within 6 degrees of the applicant's orbital location. In doing so, holders of licenses or authorizations shall make every possible effort to overcome the difficulties, in a manner acceptable to the parties involved. Priority in any such coordination efforts shall be based on the date of receipt at the International Telecommunication Union of the applicable Coordination Request filing. In addition, the applicant shall provide:

(1) With respect to proposed operation in the conventional or extended C-band, certification that EIRP density from associated uplink operation will not exceed applicable envelopes in § 25.218 or § 25.221(a) unless the non-conforming uplink operation is coordinated with operators of authorized co-frequency space stations at assigned locations within 6 degrees of the orbital location of the proposed space station.

(2) With respect to proposed operation in the conventional or extended Ku-band, certification that associated uplink operation will not exceed applicable EIRP density envelopes in § 25.218, § 25.222, § 25.226, or § 25.227 unless the non-conforming uplink operation is coordinated with operators of authorized co-frequency space stations at assigned locations within 6 degrees of the orbital location of the proposed space station.

(3) With respect to proposed operation in the 20/30 GHz band, certification that the proposed space stations will not generate power flux-density at the Earth's surface in excess of -118 dBW/m²/MHz and that associated uplink operation will not exceed applicable EIRP density envelopes in § 25.138(a) unless the non-conforming uplink operation is coordinated with operators of authorized co-frequency space stations at assigned locations within 6 degrees of the orbital location of the proposed space station.

Section 25.111 Revision in Redline

(b) Applicants and licensees of radio stations governed by this part must provide the Commission with the information required for Advance Publication, Coordination, and Notification of frequency assignment filings, including due diligence information, pursuant to the Radio Regulations of the International Telecommunication Union.

(1) No protection from interference caused by radio stations authorized by other Administrations is guaranteed unless ITU procedures are timely completed or, with respect to individual Administrations, coordination agreements are successfully completed. A license for which such procedures have not been completed may be subject to additional terms and conditions required for coordination of the frequency assignments with other Administrations.

(2) No protection from interference caused by radio stations authorized by this Administration is guaranteed unless operator-to-operator agreements involving U.S. licensees are successfully completed. A license for which such agreements have not been completed may be subject to additional terms and conditions consistent with ITU priority.

Section 25.111 Revision Clean

(b) Applicants and licensees of radio stations governed by this part must provide the Commission with the information required for Advance Publication, Coordination, and Notification of frequency assignment filings, including due diligence information, pursuant to the Radio Regulations of the International Telecommunication Union.

(1) No protection from interference caused by radio stations authorized by other Administrations is guaranteed unless ITU procedures are timely completed or, with respect to individual Administrations, coordination agreements are successfully completed. A license for which such procedures have not been completed may be subject to additional terms and conditions required for coordination of the frequency assignments with other Administrations.

(2) No protection from interference caused by radio stations authorized by this Administration is guaranteed unless operator-to-operator agreements involving U.S. licensees are successfully completed. A license for which such agreements have not been completed may be subject to additional terms and conditions consistent with ITU priority.