

Before the  
**Federal Communications Commission**  
Washington, DC 20554

In the Matter of

Intelsat License LLC

Application to Modify Authorization for  
Galaxy 11 (S2253)

File No. SAT-MOD- \_\_\_\_\_

**APPLICATION OF INTELSAT LICENSE LLC  
TO MODIFY AUTHORIZATION FOR GALAXY 11**

Intelsat License LLC (“Intelsat”), pursuant to Section 25.117 of the rules of the Federal Communications Commission (“Commission” or “FCC”),<sup>1</sup> hereby seeks to modify the authorization for the Galaxy 11 satellite (Call Sign S2253). Specifically, this modification application seeks authority to relocate Galaxy 11 to, and operate the satellite at, 93.1° W.L. in inclined orbit, and to extend the satellite’s license term through July 2025. Intelsat also seeks authority to operate Galaxy 11 in 10950-11200 MHz and 13750-14000 MHz at 93.1° W.L., pursuant to an International Telecommunication Union (“ITU”) satellite network filing by the German Administration. Intelsat requests that the Commission state its non-objection to the use of Galaxy 11 to bring into use and operate against the ITU filings of the German Administration for the 10950-11200 MHz and 13750-14000 MHz bands at the nominal 93° W.L. orbital location.

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<sup>1</sup> 47 C.F.R. § 25.117.

In accordance with the requirements of the Commission's rules,<sup>2</sup> this application has been filed electronically as an attachment to FCC Form 312. Pursuant to Section 25.114 of the Commission's rules,<sup>3</sup> Intelsat provides the technical information relating to the proposed modification on Schedule S and in narrative form, as contained in the attached Engineering Statement.

Consistent with Section 1.62 of the Commission's rules,<sup>4</sup> Intelsat will continue to operate the Galaxy 11 satellite pursuant to the terms and conditions of its expiring license until such time as the Commission makes a determination with respect to this request.

**I. REQUEST TO RELOCATE GALAXY 11 TO 93.1° W.L.**

Intelsat requests authority to drift Galaxy 11 to, and operate the satellite in inclined orbit at, 93.1° W.L. Galaxy 11 is currently operating at 44.9° E.L.<sup>5</sup> Galaxy 11 will be redeployed to 93.1° W.L. upon successful transfer of traffic to Intelsat 38 and receipt of Commission approval.<sup>6</sup> Galaxy 11 is expected to complete traffic transfer and begin drifting to 93.1° W.L. in February 2019, and Intelsat expects the drift to take approximately six months. Additionally, Intelsat expects to begin inclined orbit operations during the satellite's drift to 93.1° W.L.

During the drift of Galaxy 11, Intelsat will utilize only the satellite's telemetry, tracking,

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<sup>2</sup> 47 C.F.R. § 25.117(b), (c).

<sup>3</sup> 47 C.F.R. § 25.114.

<sup>4</sup> 47 C.F.R. § 1.62 (permitting continued operations by a licensee where there is a proper and timely pending application for renewal of the license).

<sup>5</sup> *See Policy Branch Information; Actions Taken*, Report No. SAT-01201, File No. SAT-MOD-20160803-00077 (Nov. 18, 2016) (Public Notice).

<sup>6</sup> Intelsat 38 is a Ku-band satellite authorized by Azerbaijan and is also known as Azerspace-2.

and command (“TT&C”) frequencies and will follow industry practices for coordinating TT&C transmissions during the relocation process. The satellite’s specific TT&C frequencies are as follows: 14000.5 MHz and 14498.5 MHz in the uplink; and 11701.0 MHz and 11702.0 MHz in the downlink.

Galaxy 25 (Call Sign S2154) is currently operating at 93.1° W.L.<sup>7</sup> and will be redeployed to a new location in 2019. Once located at 93.1° W.L., Galaxy 11 will operate on the communications frequencies identified in the chart below. The chart also lists the frequencies currently used by Galaxy 25 at the nominal 93.1° W.L. orbital location.

	<b>Galaxy 11</b>	<b>Galaxy 25</b>
3700-4200 MHz	✓	✓
5925-6425 MHz	✓	✓
10950-11200 MHz	✓	
11700-12200 MHz	✓	✓
13750-14000 MHz	✓	
14000-14500 MHz	✓	✓

## **II. REQUEST FOR EXTENSION OF LICENSE TERM**

Intelsat seeks to extend the license term for the Galaxy 11 satellite through July 2025. Based on a license extension granted in 2014, the license term for Galaxy 11 will expire on January 30, 2019.<sup>8</sup> This expiration date is well before the expected end of service life of the satellite, which was most recently estimated to be the end of 2025, assuming the beginning of

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<sup>7</sup> See *Policy Branch Information; Actions Taken*, Report No. SAT-01203, File No. SAT-MOD-20161004-00097 (Dec. 9, 2016) (Public Notice).

<sup>8</sup> See *Policy Branch Information; Actions Taken*, Report No. SAT-01050, File No. SAT-MOD-20121018-00184, SAT-AMD-20140429-00042, SAT-AMD-20140617-00069 (Oct. 31, 2014) (Public Notice).

inclined-orbit operation in February 2019. To the extent the satellite's projected end of service life is extended in the future, Intelsat will seek an additional extension of the license term.

### **III. PUBLIC INTEREST SHOWING**

Grant of this modification application to relocate and extend the license term of Galaxy 11 is in the public interest because it will allow Intelsat to provide service continuity at the nominal 93.1° W.L. orbital location well beyond the current license term's January 30, 2019 expiration date.

Grant of this relocation request will not result in increased risk of harmful interference. As noted above, Intelsat will operate only at the above-listed TT&C frequencies during the drift and will coordinate its TT&C transmissions with operators of satellites in the drift path. Should any interference occur during the drift, Intelsat will take all reasonable steps to eliminate such interference. Once on station at 93.1° W.L., Intelsat will operate Galaxy 11's communications payload and TT&C frequencies in conformance with existing coordination agreements and the FCC's rules governing operations vis-à-vis adjacent locations.

Additionally, grant of this modification application to extend the license term will serve the public interest by enabling customers to receive service from Galaxy 11 and by maximizing the use of on-orbit resources. The Galaxy 11 satellite's subsystems and solar panels are functioning normally, and there are no single points of failure on Galaxy 11 that would result in an inability to de-orbit the satellite. Additionally, the satellite's TT&C functions are operating normally and most of the payload is operational. Extending the license term will promote the continued efficient use of orbital resources and is consistent with recent decisions by the Commission to extend satellite license terms.<sup>9</sup>

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<sup>9</sup> See e.g., *Policy Branch Information; Actions Taken*, Report No. SAT-01156, File No. SAT-MOD-20160219-00019 (May 6, 2016) (Public Notice) (announcing grant of Intelsat's

#### IV. WAIVER REQUEST

To the extent necessary, Intelsat requests that the waivers previously granted for Galaxy 11 be extended to Galaxy 11 at 93.1° W.L. Specifically, to the extent necessary, Intelsat seeks an extension of the previously granted waivers of 47 C.F.R. §§ 25.114(d)(14)(ii) and 25.283(c) for the reasons previously stated.<sup>10</sup> The FCC revised rule 25.283(c) to remove the word “all” and thus permit a *de minimis* residual amount of fuel that cannot be vented, which may obviate the need to extend the previously granted waiver.

Additionally, Intelsat requests waiver of Section 2.106, Footnote NG52 of the U.S. Table of Allocations, which restricts the use of the 10700-11700 MHz band by the non-federal Fixed Satellite Service (“FSS”) in the geostationary orbit to international systems only.<sup>11</sup> Under Section 1.3 of the Commission’s rules, the Commission has authority to waive its rules “for good cause shown.”<sup>12</sup> Good cause exists if “special circumstances warrant a deviation from the general rule and such deviation will serve the public interest” better than adherence to the general rule.<sup>13</sup> In determining whether waiver is appropriate, the Commission should “take into account considerations of hardship, equity, or more effective implementation of overall policy.”<sup>14</sup> Additionally, a waiver of the Table of Allocations is generally granted “when there is

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application seeking extension of license for Intelsat 1R, a station-kept satellite, based on the satellite’s current projected end of service including future inclined-orbit operation).

<sup>10</sup> See *Policy Branch Information; Actions Taken*, Report No. SAT-01201, File No. SAT-MOD-20160803-00077 (Nov. 18, 2016) (Public Notice).

<sup>11</sup> 47 C.F.R. § 2.106, fn. NG52.

<sup>12</sup> 47 C.F.R. § 1.3; *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969).

<sup>13</sup> *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990).

<sup>14</sup> *WAIT Radio*, 418 F.2d at 1159.

little potential interference into any service authorized under the Table of Frequency allocations and when the nonconforming operator accepts any interference from authorized services.”<sup>15</sup>

Good cause exists to waive the international-only requirements for the 10950-11200 MHz frequency band on Galaxy 11. The purpose of NG52 is to limit the number of the FSS earth stations with which the co-primary FS would need to coordinate.<sup>16</sup> The International Bureau has found that waiving NG52 would not undermine the purpose of the rules if the party seeking a waiver: (1) will be utilizing earth stations that are receive-only in these bands and thus “not capable of causing interference into FS stations” operating in the bands; and (2) agrees to “accept any level of interference from FS stations” in these bands.<sup>17</sup>

With respect to the 10950-11200 MHz band, grant of the requested waiver satisfies these criteria and would be consistent with precedent.<sup>18</sup> The earth stations operating in this band on Galaxy 11 will not transmit and Intelsat agrees to accept any level of interference into those earth

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<sup>15</sup> See *The Boeing Company*, Order and Authorization, 16 FCC Rcd 22645, 22651 (Int’l Bur. & OET 2001); *Application of Fugro-Chance, Inc. for Blanket Authority to Construct and Operate a Private Network of Receive-Only Mobile Earth Stations*, Order and Authorization, 10 FCC Rcd 2860, 2860 (Int’l Bur. 1995) (authorizing MSS in the C-band); see also *Application of Motorola Satellite Communications, Inc. for Modification of License*, Order and Authorization, 11 FCC Rcd 13952, 13952-13956 (Int’l Bur. 1996) (authorizing service to fixed terminals in bands allocated the mobile satellite service).

<sup>16</sup> See *Amendment of Part 2 of The Commission’s Rules to Conform, to the Extent Practicable, with the Geneva Radio Regulations, as Revised by the Space WARC*, Geneva, Report and Order, 26 RR 2d 1257, ¶¶ 35-38 (1973). See also *EchoStar KuX Corporation Application for Authority to Construct, Launch and Operate a Geostationary Satellite Using the Extended Ku-band Frequencies in the Fixed-Satellite Service at the 83° W.L. Orbital Location*, Order and Authorization, 20 FCC Rcd 919, ¶ 9 (Int’l Bur. 2004) (“EchoStar 83° Waiver”).

<sup>17</sup> EchoStar 83° Waiver, ¶ 13.

<sup>18</sup> See, e.g., *DIRECTV Enterprises, LLC, Fleet Management Notice for SKY-B1 Satellite*, Stamp Grant, File No. SAT-MOD-20170221-00019, Condition 10 (May 11, 2017).

stations from FS stations in the band. Intelsat will provide services in the 10950-11200 MHz frequency band only on a non-interference/non-protected basis. Accordingly, the earth stations operating in these bands pose no interference concerns with respect to co-frequency FS stations and therefore will not need to be coordinated with FS stations located within United States and its territories.

Intelsat also agrees to abide by the customer notification requirements that the International Bureau has previously imposed when granting waivers of NG52.<sup>19</sup> Intelsat will inform its customers in writing, including any customers receiving end-user services from resellers accessing capacity on Galaxy 11, of the potential for interference from FS operations in the 10950-11200 MHz band.

**V. 10950-11200 MHz AND 13750-14000 MHz FREQUENCY BANDS**

Intelsat understands that operations in the 10950-11200 MHz and 13750-14000 MHz frequency bands are subject to certain limitations and obligations, which Intelsat accepts and will fulfill. Specifically, for operations in the 10950-11200 MHz frequency band, Intelsat accepts the following condition:

- Operations in the 10950-11200 MHz frequency band shall comply with the terms of footnote US211 to the United States Table of Frequency Allocations, 47 C.F.R. § 2.106, US211, which urges applicants for airborne or space station assignments to take all practicable steps to protect radio astronomy observations in the adjacent bands from harmful interference.

For operations in the 13750-14000 MHz band, Intelsat accepts the following conditions:

- In the 13750-14000 MHz band (Earth-to-space), receiving space stations in the fixed-satellite service shall not claim protection from radiolocation transmitting stations operating in accordance with the United States Table of Frequency Allocations.

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<sup>19</sup> See, e.g., *id.*; *Intelsat North America Request for Waiver*, Stamp Grant, File No. SAT-MOD-20050610-00122, Condition 3 (Sept. 30, 2005); *EchoStar 83° Waiver*, ¶ 13.

- Pursuant to footnote US337 of the United States Table of Frequency Allocations, 47 C.F.R. § 2.106, any earth station in the United States and its possessions communicating with the Galaxy 11 space station in the 13750-14000 MHz band (Earth-to-space) is required to coordinate through National Telecommunications and Information Administration's ("NTIA") Interdepartment Radio Advisory Committee's ("IRAC") Frequency Assignment Subcommittee to minimize interference to the National Aeronautics and Space Administration ("NASA") Tracking and Data Relay Satellite System, including manned space flight.
- Operations of any earth station in the United States and its possessions communicating with the Galaxy 11 space station in the 13750-14000 MHz band (Earth-to-space) shall comply with footnote US356 to United States Table of Frequency Allocations, 47 C.F.R. § 2.106, US356, which specifies a mandatory minimum antenna diameter of 4.5 meters and a non-mandatory minimum and maximum equivalent isotropically radiated powers ("EIRP"). Operations of any earth station located outside the United States and its possessions communicating with the Galaxy 11 space station in the 13750-14000 MHz band (Earth-to-space) shall be consistent with footnote 5.502 to the ITU Radio Regulations, which allows a minimum antenna diameter of 1.2 meters for earth stations of a geostationary satellite orbit network and specifies mandatory power limits.
- Operations of any earth station in the United States and its possessions communicating with the Galaxy 11 space station in the 13750-14000 MHz band (Earth-to-space) shall comply with footnote US357 to United States Table of Frequency Allocations, 47 C.F.R. § 2.106, US357, which specifies that a required maximum EIRP density of emissions not exceeded 71 dBW in any 6 MHz band for communications with a space station in geostationary-satellite orbit. Operations of any earth station located outside the United States and its possessions communicating with the Galaxy 11 space station in the 13750-14000 MHz band (Earth-to-space) shall comply with footnote 5.503 to the ITU Radio Regulations, which specifies a required maximum EIRP density of emissions (limit is dependent on antenna diameter) for communications with a space station in geostationary-satellite orbit.
- Operators of earth stations accessing the Galaxy 11 space station in the 13750-14000 MHz band are encouraged to cooperate voluntarily with the NASA in order to facilitate continued operation of NASA's Tropical Rainfall Measuring Mission ("TRMM") satellite.



## VI. MILESTONE AND BOND REQUIREMENTS

Because Galaxy 11 is already in-orbit and operating, grant of this modification application is not subject to milestone conditions, and Intelsat is not required to post a bond<sup>20</sup> under Sections 25.164(a) and 25.165 of the Commission's rules.<sup>21</sup>

## VII. CONCLUSION

For the reasons set forth above, Intelsat respectfully requests that the Commission grant this modification application.

Respectfully submitted,

Intelsat License LLC

By: /s/ Susan H. Crandall

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<sup>20</sup> See *Loral Skynet Network Services, Inc.*, 21 FCC Rcd 14,365 (Int'l Bur. 2006) ("Because Telstar 18 is in-orbit and operating, Loral is not required to post a bond.").

<sup>21</sup> See 47 C.F.R. §§ 25.164(a) and 25.165.

## Exhibit A

### FCC Form 312, Response to Question 34: Foreign Ownership

The Commission previously approved foreign ownership in Intelsat License LLC (“Intelsat”), in the Intelsat-Serafina Order.<sup>1</sup> In 2012, the International Bureau authorized the transfer of control of Intelsat.<sup>2</sup> There have been no other material changes to Intelsat’s foreign ownership since the date of the Intelsat-Serafina Order.

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<sup>1</sup> *Intelsat Holdings, Ltd. and Serafina Holdings Limited, Consolidated Application for Consent to Transfer of Control of Holders of Title II and Title III Authorizations*, Memorandum Opinion and Order, 22 FCC Rcd 22,151 (2007).

<sup>2</sup> *In the Matter of Intelsat Global Holdings, S.A., Applications to Transfer Control of Intelsat Licenses and Authorizations from BC Partners Holdings Limited to Public Ownership*, Order, 27 FCC Rcd 5,226 (2012). The transfer of control was fully consummated on June 14, 2018. See Letter from Jennifer D. Hindin, Counsel for Intelsat, to Marlene H. Dortch, FCC, IB Docket No. 11-205 (filed June 14, 2018).

**Exhibit B**  
**FCC Form 312, Response to Question 40:**  
**Officers, Directors, and Ten Percent or Greater Shareholders**

The officers and directors/managers of Intelsat License LLC are as follows:

Officers:

Jacques Kerrest, Chairman  
Franz Russ, Deputy Chairman  
Michelle Bryan, Secretary  
Mirjana Hervy, Director, Finance

Board of Managers:

Jacques Kerrest  
Franz Russ  
Michelle Bryan

The business address of all Intelsat License LLC officers and members of the Board of Managers is: 4 rue Albert Borschette L-1246 Luxembourg.

Intelsat License LLC is a Delaware limited liability company that is wholly owned by Intelsat License Holdings LLC, also a Delaware limited liability company. Intelsat License Holdings LLC is wholly owned by Intelsat Ventures S.à r.l., a Luxembourg company, which is in turn wholly owned by Intelsat Alliance LP, a Delaware limited partnership. Intelsat Alliance LP is indirectly wholly owned by Intelsat Jackson Holdings S.A., a Luxembourg company. Intelsat Jackson Holdings S.A. is wholly owned by Intelsat Connect Finance S.A., a Luxembourg company, which in turn is wholly owned by Intelsat Envision Holdings LLC, a Delaware limited liability company. Intelsat Envision Holdings LLC is wholly owned by Intelsat (Luxembourg) S.A., a Luxembourg company. Intelsat (Luxembourg) S.A. is wholly owned by Intelsat Investments S.A., a Luxemburg company, which in turn is wholly owned by Intelsat Holdings S.A., a Luxembourg company. Intelsat Holdings S.A. is wholly owned by Investment Holdings S.à r.l., a Luxembourg company. Intelsat Investment Holdings S.à r.l. is wholly owned by Intelsat S.A., a Luxembourg company. Each of these entities may be contacted at the following address: 4 rue Albert Borschette, L-1246 Luxembourg.

Intelsat S.A.'s ownership was approved by the Commission as part of the *Intelsat-Serafina Order* and the recent Intelsat Pro Forma and is incorporated by reference. *See Intelsat Holdings, Ltd. and Serafina Holdings Limited, Consolidated Application for Consent to Transfer of Control of Holders of Title II and Title III Authorizations*, Memorandum Opinion and Order, 22 FCC Rcd 22,151 (2007) ("*Intelsat-Serafina Order*"); *Intelsat Application for Pro Forma Transfer of Control*, File Nos. SAT-T/C-20180627-00048, SAT-T/C-20180627-00049, SES-T/C-20180627-01430, SES-T/C-20180627-01436, SES-T/C-20180627-01433 (granted June 29, 2018), 0008216564 (granted June 28, 2018) and 0037-EX-TU-2018 (granted June 29, 2018).