

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

In the Matter of

Intelsat License LLC, as debtor in possession

Application to Modify Authorization for  
Galaxy 16 (S2687)

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

**APPLICATION TO MODIFY AUTHORIZATION FOR GALAXY 16**

Intelsat License LLC, as debtor in possession (“Intelsat”), pursuant to Section 25.117 of the Federal Communications Commission’s (“Commission” or “FCC”) rules,<sup>1</sup> hereby seeks to modify the authorization for Galaxy 16 (S2687), a station-kept C- and Ku-band satellite operating at 99.0° W.L.<sup>2</sup> Specifically, Intelsat seeks to extend the license term for the Galaxy 16 satellite through December 31, 2028.<sup>3</sup>

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<sup>1</sup> 47 C.F.R. § 25.117.

<sup>2</sup> See *Policy Branch Information; Actions Taken*, Report No. SAT-00345, File No. SAT-RPL-200551118-00233 (Mar. 3, 2006) (Public Notice) (“*Galaxy 16 Authorization*”). The licenses originally held by PanAmSat Licensee Corp., including Galaxy 16, were assigned in 2005 to Intelsat North America, which later changed its name to Intelsat Licensee LLC. Due to recent rule changes, Intelsat is not seeking waiver extension for the following Commission rules: 47 C.F.R. §§ 25.210(i), and 25.114(d)(3) (rule sections as of the time of the 2006 grant).

<sup>3</sup> The Commission’s rules permit modification applications in the 3700-4200 MHz band and these applications are not subject to the FCC’s 2018 filing freeze on new fixed satellite service space station applications. See 47 C.F.R. § 2.106 n. NG182 (“In the band 3700-4200 MHz ... [a]pplications for extension, cancellation, replacement, or modification of existing space station authorizations in the band will continue to be accepted and processed normally.”); *International Bureau Announces Temporary Filing Freeze on New Fixed-Satellite Service Space Station Applications in the 3.7-4.2 GHz Band*, Public Notice, DA 18-640, 33 FCC Rcd 6119 (2018) (“The freeze does not apply to applications for modification of existing authorizations, relocations of existing space stations pursuant to the Commission’s fleet management policy, or to applications for replacement space stations.”); see also *Expanding Flexible Use of the 3.7 to*

In accordance with the Commission's rules,<sup>4</sup> this application has been filed electronically as an attachment to FCC Form 312 and Schedule S. Consistent with Section 1.62 of the Commission's rules, Intelsat will continue to operate the Galaxy 16 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.<sup>5</sup>

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

Intelsat seeks to extend the Galaxy 16 license term through December 31, 2028. Galaxy 16 was placed into service on August 14, 2006.<sup>6</sup> Pursuant to the conditions of its authorization, the license term for Galaxy 16 will expire on August 14, 2021.<sup>7</sup> This expiration date is well before the expected end of service life of the satellite, which was most recently estimated to be December 31, 2028, assuming no inclined orbit operation.<sup>8</sup> After the expiration of this first renewal term, Intelsat will seek an additional license term extension for any remaining expected service life of the spacecraft.

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*4.2 GHz Band*, Report and Order and Order of Proposed Modification, FCC 20-22, 35 FCC Rcd 2343, ¶ 115 n. 327 (2020).

<sup>4</sup> 47 C.F.R. § 25.117(c).

<sup>5</sup> 47 C.F.R. § 1.62.

<sup>6</sup> See Letter from Susan H. Crandall, Assistant General Counsel for Intelsat Corporation, to Marlene H. Dortch, Secretary, FCC, File No. SAT-RPL-20051118-00233 (Aug. 23, 2006).

<sup>7</sup> *PanAmSat Licensee Corp., G16 New License (at 99 WL) FINAL*, Stamp Grant, File No. SAT-RPL-20051118-00233, at Condition 5 (granted Aug. 8, 2006); see also 47 C.F.R. § 25.121(a)(1), (d)(1).

<sup>8</sup> The expected remaining life of the Galaxy 16 satellite is at least an additional seven and half years and thus Intelsat seeks an extension until December 31, 2028. The FCC's five year renewal period adopted in the *Orbital Debris Mitigation* proceeding is not yet in effect. See 47 C.F.R. § 25.121(b) (permitting applicants to seek renewals for up to 15 years); see also *Mitigation of Orbital Debris in the New Space Age*, Report and Order, 85 Fed. Reg. 52422, 52440 (Aug. 25, 2020).

## II. ORBITAL DEBRIS MITIGATION

Extending the license term of Galaxy 16 will not affect the satellite's post-mission disposal plan.<sup>9</sup> At the end of the Galaxy 16 mission, Intelsat intends to dispose of the satellite by moving it to an altitude of 296.1 kilometers (perigee) above the geostationary arc ("GEO").<sup>10</sup> For that purpose, Intelsat has reserved 60.8 kilograms of propellant.<sup>11</sup>

Additionally, Intelsat has assessed the probability of accidental explosions during and after completion of mission operations. Galaxy 16 is designed in a manner to minimize the potential for such explosions. Propellant tanks and thrusters are isolated using redundant valves and electrical power systems are shielded in accordance with standard industry practices.<sup>12</sup> At the completion of the mission and upon disposal of the spacecraft, Intelsat will ensure the removal of all stored energy on the spacecraft by depleting all propellant tanks, venting all

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<sup>9</sup> See *Galaxy 16 Authorization* at PanAmSat Orbital Debris Mitigation Plan.

<sup>10</sup> In calculating the disposal orbit, Intelsat has used simplifying assumptions as permitted under the Commission's *Orbital Debris Report and Order*. See *Mitigation of Orbital Debris*, Second Report and Order, 19 FCC Rcd 11567 (2004). The effective area to mass ratio ( $C_r^*A/M$ ) of the satellite is 0.04198, resulting in a minimum perigee disposal altitude under the Inter-Agency Space Debris Coordination Committee ("IADC") formula of at most 277.0 km above GEO. Intelsat herein updates the intended deorbit height of Galaxy 16 to be consistent with the calculated height under the IADC formula rather than the previous indication that Intelsat would deorbit Galaxy 16 to 300 km above GEO, in excess of IADC guidelines. See *Id.*, p. 2.

<sup>11</sup> The reserved fuel figure was determined by the spacecraft manufacturer and provided for in the propellant budget. To calculate this figure, the manufacturer used the "rocket equation," i.e., it plugged in the expected mass of the satellite at end of life and the required delta-velocity to achieve the desired orbit. Intelsat has assessed fuel gauging uncertainty and has provided an adequate margin of fuel reserve to address the assessed uncertainty in remaining propellant.

<sup>12</sup> *Galaxy 16 Authorization* at PanAmSat Orbital Debris Mitigation Plan, p. 1.

pressurized systems, isolating the batteries from the spacecraft bus, and turning off all active units.<sup>13</sup>

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

Grant of this modification application to extend the license term would serve the public interest by enabling customers to receive service from Galaxy 16 at the 99.0° W.L. orbital location beyond the current license term's August 14, 2021 expiration date. Furthermore, grant of the license term extension request will allow Intelsat to maximize the use of Galaxy 16, which has almost seven and a half years of useful life remaining beyond the current license term's August 14, 2021 expiration date, assuming no inclined orbit operations.

The Galaxy 16 satellite's subsystems and solar panels are functioning normally, and there are no single points of failure on Galaxy 16 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 prior decisions by the Commission to extend satellite license terms.<sup>14</sup>

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<sup>13</sup> *Id.*

<sup>14</sup> *See, e.g., Policy Branch Information; Actions Taken*, Report No. SAT-01199, File Nos. SAT-MOD-20160805-00079, SAT-MOD-20160816-00084, and SAT-MOD-20160906-00088 (Nov. 4, 2016) (Public Notice) (extending license terms of the Intelsat 904, Intelsat 902, and Intelsat 901 satellites, respectively).

#### IV. CONCLUSION

For the reasons set forth above, Intelsat respectfully requests that the Commission grant this modification application to extend the Galaxy 16 license term through December 31, 2028.

Respectfully submitted,

**Intelsat License LLC**

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July 21, 2021

## 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 and Intelsat License LLC, as debtor in possession, are as follows:

Officers:

David Tolley, Chairman  
José Toscano, Deputy Chairman  
Michelle Bryan, Secretary  
Mirjana Hervy, Director, Finance

Board of Managers:

David Tolley  
José Toscano  
Michelle Bryan

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

Intelsat License LLC and Intelsat License LLC, as debtor in possession, are Delaware limited liability companies that are indirectly wholly owned by Intelsat S.A. Specifically, Intelsat License LLC and Intelsat License LLC, as debtor in possession, are 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 managed by one general partner and two limited partners—Intelsat Genesis GP LLC, Intelsat Genesis Inc., and Intelsat Jackson Holdings S.A., respectively. Intelsat Genesis GP LLC is a Delaware limited liability company, which is a wholly owned by Intelsat Genesis Inc., a Delaware corporation.

Intelsat Genesis Inc. is a wholly owned subsidiary of 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 Luxembourg company, which in turn is wholly owned by Intelsat Holdings S.A., a Luxembourg company. Intelsat Holdings S.A. is wholly owned by Intelsat 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. is a publicly traded company. To the best of Intelsat’s knowledge, and with the exception of BC Partners Holdings Limited (“BCP”), described below, no person or entity holds a ten percent or greater ownership interest in Intelsat S.A. as of April 1, 2021.

Name: BCP  
Address: West Wing, Floor 2, Trafalgar Court, Les Banques, St Peter Port,  
Guernsey, Channel Islands  
Citizenship: Guernsey  
Indirect Interest: Approximately 34%<sup>3</sup>

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<sup>3</sup> The exact indirect interest held by BCP is subject to fluctuation as Intelsat S.A.’s stock is publicly traded.