

Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of

Intelsat License LLC, as debtor in possession

Amendment to Application to Modify
Authorization for Galaxy 14 (S2385)

File No. SAT-AMD-_____

**AMENDMENT TO APPLICATION TO
MODIFY AUTHORIZATION FOR GALAXY 14**

Intelsat License LLC, as debtor in possession (“Intelsat”), pursuant to Section 25.116 of the Federal Communications Commission’s (“Commission” or “FCC”) rules,¹ hereby amends its pending application to modify the authorization for the Galaxy 14 satellite (S2385) to extend the license term.² Specifically, Intelsat amends its Application to add a request for authorization to redeploy Galaxy 14 to, and operate the satellite at, 32.9° E.L., add a waiver request, and to amend its request to extend the license term of the Galaxy 14 satellite.

In accordance with the requirements of the Commission’s rules, this application has been filed electronically as an attachment to FCC Form 312.³ Intelsat provides the technical information relating to the proposed modification on Schedule S and in narrative form, as

¹ 47 C.F.R. § 25.116.

² See *Intelsat License LLC, as debtor in possession, Application to Modify Authorization for Galaxy 14*, File No. SAT-MOD-20201229-00152 (filed Dec. 29, 2020) (requesting authorization to extend the Galaxy 14 license term through February 28, 2023) (“Application”).

³ 47 C.F.R. § 25.116(e).

contained in the attached Engineering Statement, pursuant to Section 25.116 of the Commission's rules.⁴ Consistent with Section 1.62 of the Commission's rules,⁵ Intelsat will continue to operate Galaxy 14 pursuant to the terms and conditions of its license until such time as the Commission makes a determination with respect to its Application, as amended herein.

I. PROPOSED AMENDMENT REQUESTING AUTHORIZATION TO RELOCATE GALAXY 14 TO 32.9° E.L.

Intelsat requests authority to drift to, and operate Galaxy 14 at, 32.9° E.L. Galaxy 14 currently is licensed to operate at 125.0° W.L.⁶ On August 15, 2020, Intelsat launched Galaxy 30 (S3016),⁷ which will replace Galaxy 14 at 125.0° W.L. Following Galaxy 30's arrival at 125.0° W.L. and the completion of traffic transfer from Galaxy 14, Intelsat intends to redeploy Galaxy 14 to the 32.9° E.L. orbital location.⁸ Galaxy 14 will replace Galaxy 25 (S2154) at 32.9° E.L.⁹

Intelsat began Galaxy 14's drift to 32.9° E.L. on February 16, 2021, and the drift is

⁴ *Id.*

⁵ 47 C.F.R. § 1.62.

⁶ *See Policy Branch Information; Actions Taken*, Report No. SAT-00340, File No. SAT-MOD-20051206-00261 (Jan. 27, 2006) (Public Notice).

⁷ *See Satellite Policy Branch Information; Actions Taken*, Report No. SAT-01359, File No. SAT-AMD-20180410-00026 (Nov. 16, 2018) (Public Notice).

⁸ The satellite's proposed C-band coverage at 32.9° E.L. does not cover the contiguous United States.

⁹ *See Satellite Policy Branch Information; Actions Taken*, Report No. SAT-01517, File No. SAT-STA-20201008-00123 (Dec. 11, 2020) (Public Notice); *see also Satellite Policy Branch Information; Space Station Applications Accepted for Filing*, Report No. SAT-01532, File No. SAT-MOD-20201215-00144 (Feb. 26, 2021) (Public Notice).

expected to take approximately 4-5 months.¹⁰ During the drift of the Galaxy 14 satellite, Intelsat will utilize only the satellite’s telemetry, tracking, and control (“TT&C”) frequencies and will follow industry practices for coordinating TT&C transmission during the relocation process. Galaxy 14’s TT&C frequencies are as follows: 6420.5 MHz in the uplink; and 4198 MHz and 4199.875 MHz in the downlink.

Once at 32.9° E.L., Galaxy 14 will be nominally collocated with Intelsat 28 (S2751), which is licensed to operate at 32.8° E.L.,¹¹ and temporarily collocated with Galaxy 25 at 32.9° E.L. during traffic transition. The specific communications frequencies associated with the Galaxy 14, Intelsat 28, and Galaxy 25 satellites are as follows:

	Galaxy 14	Intelsat 28	Galaxy 25¹²
3625-3700 MHz		✓	
3700-4200 MHz	✓	✓	✓
5850-5925 MHz		✓	
5925-6425 MHz	✓	✓	✓
6425-6500 MHz		✓	
10950-11200 MHz		✓	
11450-11700 MHz		✓	
14000-14500 MHz		✓	

¹⁰ See *Satellite Policy Branch Information; Actions Taken*, Report No. SAT-01530, File No. SAT-STA-20210127-00015 (Feb. 12, 2021) (Public Notice) (requesting 60 days of STA to drift to 32.9° E.L.). See also *Satellite Policy Branch Information; Space Station Applications Accepted for Filing*, Report No. SAT-01525, File No. SAT-STA-20210106-00003 (Jan. 29, 2021) (Public Notice) (requesting 180 days of STA to drift to 32.9° E.L.).

¹¹ See *Policy Branch Information; Actions Taken*, Report No. SAT-00769, File No. SAT-MOD-20101029-00228 (Apr. 1, 2011) (Public Notice).

¹² Galaxy 25 is also capable of operating in the 11.7-12.2 GHz and 14.0-14.5 GHz bands. Intelsat did not seek authority to operate Galaxy 25 in Ku-band at 32.9° E.L. See *supra* at n. 9.

II. REQUEST FOR TECHNICAL WAIVER

Intelsat requests waiver, to the extent necessary, of Sections 25.114(d)(14)(ii) and 25.283(c) of the Commission's rules, which require that spacecraft are able to vent pressurized systems at end of life.¹³ Under Section 1.3 of the Commission's rules, the Commission has authority to waive its rules "for good cause shown."¹⁴ 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.¹⁵ In determining whether waiver is appropriate, the Commission should "take into account considerations of hardship, equity, or more effective implementation of overall policy."¹⁶ As shown below, there is good cause for the requested waiver.

Section 25.114(d)(14)(ii) of the Commission's rules requires an applicant to demonstrate that it will vent any pressurized system at the spacecraft's end of life and Section 25.283(c) requires that excess propellant be vented at the end of a satellite's life.¹⁷ Galaxy 14 is a Northrop Grumman Space Systems (formerly Orbital Sciences) Star 2.2 spacecraft, launched in 2005, that

¹³ A 2015 revision to rule 25.283(c) which removed the word "all" from the text of the rule, permitting a *de minimis* residual amount of fuel that cannot be vented to remain in the fuel tanks after decommissioning, may obviate the need to grant waiver in this instance. *Comprehensive Review of Licensing and Operating Rules for Satellite Services*, Report and Order, 30 FCC Rcd 14713, ¶¶ 359-60 (2015) (corrected by *Comprehensive Review of Licensing and Operating Rules for Satellite Services*, Erratum, 31 FCC Rcd 5160 (2016)).

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

¹⁵ *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990).

¹⁶ *WAIT Radio*, 418 F.2d at 1159.

¹⁷ 47 C.F.R. §§ 25.114(d)(14)(ii) & 25.283(c).

was not designed to vent all pressurized systems.¹⁸ The Galaxy 14 satellite has two oxidizer tanks with a total remaining pressure of 1859.5 kPa at a temperature of 22.6° C. After orbit raising was completed, the oxidizer tanks were permanently isolated from the propulsion system by firing two pyrotechnic valves at beginning of on-orbit life. As a result, these tanks cannot be vented at end of life.

Waiver is appropriate in this case because the satellite was under construction before Section 25.283(c) was adopted and entered into effect¹⁹ and compliance would require direct retrieval of the spacecraft, which is not currently possible.²⁰ Furthermore, grant would not undermine the purpose of these rules, which is to reduce the risk of accidental explosion and post de-orbit debris. With the exception of the two sealed oxidizer tanks, Intelsat will ensure that all active units on the Galaxy 14 satellite are turned off and that all pressurant tanks are depleted. In addition, the satellite's manufacturer, Northrop Grumman, designed the Galaxy 14 spacecraft so that risk of accidental explosion causing additional orbital debris is minimal. This risk is

¹⁸ See Letter from Karis A. Hastings, Counsel to SES Americom, Inc., to Marlene H. Dortch, Secretary, FCC, IB Docket No. 02-54 (Oct. 29, 2009) (providing a list of satellites and spacecraft models, on behalf of the Satellite Industry Association, that are currently on-orbit and are unable to fully comply with the requirements of rule 25.283(c), including Galaxy 14).

¹⁹ The Commission granted Intelsat's predecessor, PanAmSat, authority to launch the Galaxy 14 satellite on February 19, 2004, and the satellite was launched and began operations on January 3, 2006. See *Policy Branch Information; Actions Taken*, Report No. SAT-00192, File No. SAT-LOA-19991207-00117 (Aug. 13, 2004) (Public Notice); Letter from Joseph A. Godles, Attorney for PanAmSat Licensee Corp., to Ms. Magalie R. Salas, FCC, File No. SAT-MOD-20051206-00261 (Feb. 20, 2004). The Commission's orbital debris mitigation rule requiring discharge of all propellant, Section 25.283(c), was adopted in an order released on June 21, 2004—months after the Commission granted the initial Galaxy 14 authorization. Further, the satellite was already under construction by the time the rule became effective. *2004 Debris Mitigation Order; Mitigation of Orbital Debris*, 69 Fed. Reg. 54581-54589 (Sept. 9, 2004); *Mitigation of Orbital Debris*, Final Rule, 70 Fed. Reg. 59276 (Oct. 12, 2005).

²⁰ See, e.g. n. 22 *infra*.

minimized because the pressure in the tanks will be very low at end of life of the satellite, especially after the spacecraft is powered down and the temperature in the tanks drops. The tanks have also been designed so that they leak before they burst. And even if a leak were to occur, there would not be sufficient energy in the gas stream to structurally damage the spacecraft and generate debris. Moreover, a leak would not significantly perturb the satellite's orbit because the expulsion of the pressurant gas would cause the spacecraft to tumble and the change in the spacecraft's velocity (i.e., the thrust) would be randomly distributed, with the resulting impact on the satellite orbit's apogee and perigee being very small.

Grant of the waiver is also supported on hardship grounds. The oxidizer tanks on the Galaxy 14 satellite were permanently sealed off following the completion of launch transfer orbit and consequently cannot be vented at the satellite's end of life. Galaxy 14 is an in-orbit spacecraft. As such, a design change cannot be accomplished at this time. Avoiding such hardship is particularly appropriate where, as here, the licensee acted in good faith. Specifically, the Galaxy 14 satellite was licensed and under construction prior to the rule requiring discharge of remaining fuel at end of life coming into effect.²¹ Under these circumstances, good cause exists to waive Sections 25.114(d)(14)(ii) and 25.283(c).²²

III. LICENSE EXTENTION

In its Application, Intelsat seeks to extend the license term of Galaxy 14 through February 28, 2023. On February 5, 2021, Galaxy 14 began inclined orbit operations and the

²¹ *Id.*

²² The FCC has previously waived Section 25.283(c) of its rules when the action taken to seal the tank was taken prior to the adoption of this rule, and compliance would require direct retrieval of the spacecraft. *See, e.g., Application of Intelsat License LLC to Modify Authorization for Intelsat 10 Satellite (Call Sign S2382)*, Stamp Grant, File No. SAT-MOD-20130322-00052, Condition 13 (Oct. 23, 2013).

updated expected end of life of the satellite, accounting for inclined orbit operations, is February 2024.²³ For the reasons set forth in the Application, Intelsat respectfully requests that the Commission extend the license term of the Galaxy 14 satellite through February 29, 2024.

IV. INTELSAT ACCEPTS SECTION 316 PETITION CONDITIONS

Intelsat understands and accepts that its license to operate Galaxy 14 at 32.9° E.L. will be conditioned as follows:

- Intelsat shall remain a signatory to the Public Services Agreement between Intelsat and the International Telecommunications Satellite Organization (“ITSO”) that was approved by the ITSO Twenty-Fifth Assembly of Parties, as amended.
- No entity shall be considered a successor-in-interest to Intelsat under the ITSO Agreement for licensing purposes unless it has undertaken to perform the obligations of the Public Services Agreement approved by the Twenty-fifth Assembly of Parties, as amended.²⁴

V. PUBLIC INTEREST SHOWING

Grant of this Application, as amended, is in the public interest because it will allow Intelsat to redeploy Galaxy 14 once Galaxy 30 is placed into service at the nominal 125° W.L. orbital location in order to provide additional capacity for customers at the nominal 33° E.L. orbital location beyond the current license term’s expiration date.

²³ See Letter from Cynthia J. Grady, Intelsat US LLC, to Ms. Marlene Dortch, FCC, File Nos. SAT-MOD-20051206-00261; SAT-MOD-20201229-00152 (Feb. 8, 2021).

²⁴ See *Petition of the International Telecommunications Satellite Organization under Section 316 of the Communications Act, as Amended*, Order of Modification, 23 FCC Rcd 2764, 2769-71 ¶¶ 11-13 (2008). Intelsat has filed a request to modify these conditions, which remains pending before the Commission. See *Request by Intelsat License LLC, as Debtor-in-Possession, for Modification of License Conditions Relating to the International Telecommunications Satellite Organization*, DA 20-1478, IB Docket No. 20-417, IBFS File No. SAT-MS-20201118-00139 (rel. Dec. 14, 2020).

Grant of this relocation request will not result in an increased risk of harmful interference. As noted above, Intelsat will operate only 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. Intelsat will operate Galaxy 14's communications payload and TT&C frequencies at 32.9° E.L. in conformance with existing coordination agreements and the FCC's rules governing operations vis-à-vis adjacent locations.

VI. REQUEST FOR GRANT WITHOUT MILESTONES OR A BOND

Because Galaxy 14 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 under Sections 25.164(a) and 25.165 of the Commission's rules.²⁵

VII. CONCLUSION

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

Respectfully submitted,

Intelsat License LLC

By: /s/ Susan H. Crandall

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²⁵ 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*.¹ In 2012, the International Bureau authorized the transfer of control of Intelsat.² There have been no other material changes to Intelsat’s foreign ownership since the date of the *Intelsat-Serafina Order*.

¹ *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).

² *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 January 26, 2021.

Name: BCP
Address: Heritage Hall, Le Marchant Street, St Peter Port,
Guernsey, Channel Islands
Citizenship: Guernsey
Indirect Interest: Approximately 34%¹

¹ The exact indirect interest held by BCP is subject to fluctuation as Intelsat S.A.’s stock is publicly traded.