

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of

Intelsat License LLC

Application to Modify Authorization
for Galaxy 28 (S2160)

File No. SAT-MOD- _____

**APPLICATION OF INTELSAT LICENSE LLC
TO MODIFY AUTHORIZATION FOR GALAXY 28**

Intelsat License LLC (“Intelsat”), pursuant to Section 25.117 of the Federal Communications Commission’s (“Commission” or “FCC”) rules,¹ hereby seeks to modify the authorization for Galaxy 28 (S2160),² a C- and Ku-band payload operating on a hybrid C/Ku/Ka-band spacecraft at 89.0° W.L.³ Specifically, Intelsat seeks to relocate Galaxy 28 by 0.3 degrees,

¹ 47 C.F.R. § 25.117.

² Galaxy 28 was formerly known as Intelsat Americas 8 (IA-8) and Telstar 8. See Letter from Susan H. Crandall, Intelsat, to Marlene H. Dortch, FCC, Notification of New Space Station Names (filed Jan. 8, 2007).

³ See *Application of Intelsat License LLC to Modify Authorization for Galaxy 28 (S2160)*, Public Notice Report No. SAT-01463, ICFS File No. SAT-MOD-20191126-00141 (May 1, 2020) (extending the license term of Intelsat’s C- and Ku-band authorization) (“*Galaxy 28 C/Ku-band Authorization*”). Viasat, Inc. (“Viasat”) previously operated Galaxy 28’s Ka-band payload pursuant to a separate U.S. license following a 2014 assignment; the Ka-band payload is currently unlicensed and not in use. See Letter from Cynthia J. Grady, Asst. Gen. Counsel, Intelsat US LLC, to Marlene H. Dortch, Sec’y, FCC, ICFS File No. SAT-MOD-20191126-00141 (Mar. 17, 2025); see also *Application of Viasat, Inc. to Extend Galaxy 28 Ka-band License Term*, Public Notice Report No. SAT-01500, ICFS File No. SAT-MOD-20200609-00069 (Sept. 25, 2020) (extending the license term of Viasat’s Ka-band authorization); Letter from Jarrett S. Taubman, VP & Deputy Chief Gov’t. Affairs and Regulatory Officer, Viasat, Inc., to Marlene H. Dortch, Sec’y, FCC, ICFS File No. SAT-MOD20191126-00141 (Mar. 12, 2025) (surrendering Viasat’s Galaxy 28 Ka-band license).

from 89.0° W.L. to 88.7° W.L.,⁴ and to further extend the license term through July 29, 2030, to better align with the satellite’s updated estimated end of service life.⁵ Additionally, Intelsat requests a waiver 47 C.F.R. § 25.114(d)(14)(ii) to allow for processing of the Galaxy 28 application without requiring Intelsat to supplement the previously approved orbital debris mitigation plan with a Debris Assessment Software (“DAS”) analysis due to the satellite’s age.

In accordance with the Commission’s rules, this application has been filed electronically as an attachment to FCC Form 312.⁶ Intelsat provides the technical information relating to the proposed modification on Schedule S and in narrative form in the attached Engineering Statement. All other information provided in previous applications remains unchanged and is incorporated by reference.⁷ Additionally, Intelsat will continue to operate Galaxy 28 in accordance with the Commission’s *C-band Order* and Footnote NG182 of the U.S. Table of

⁴ Intelsat is separately seeking Special Temporary Authority to drift the satellite 0.3 degrees from 89.0° W.L. to 88.7° W.L. while operating the C- and Ku-band communications payloads beginning in March 2025; Intelsat expects the duration of the drift to be one week. *Application of Intelsat License LLC for Special Temporary Authority*, Public Notice Report No. SAT-01904, ICFS File No. SAT-STA-20250317-00074 (Mar. 21, 2025).

⁵ The Commission’s rules permit modification applications in the 3700-4200 MHz band. 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.”); see also *Expanding Flexible Use of the 3.7 to 4.2 GHz Band*, Report and Order and Order of Proposed Modification, 35 FCC Rcd 2343, ¶ 152 n.422 (2020) (“*C-band Order*”) (codifying modified portions of the International Bureau’s June 21, 2018 freeze to “bar new applications for space station licenses and new petitions for market access concerning space-to-Earth operations” but not “applications for extension, cancellation, replacement, or modification of existing authorizations”).

⁶ 47 C.F.R. §§ 25.114, 25.117(b), (c).

⁷ See *Application of Intelsat License LLC to Modify Authorization for Galaxy 28 (S2160)*, ICFS File No. SAT-MOD-20191126-00141 (filed Nov. 26, 2019) (“Galaxy 28 C/Ku-band Modification Application”); *Application of Intelsat North America LLC to Request Waiver*, ICFS File No. SAT-MOD-20050422-00089 (filed Apr. 22, 2005).

Frequency Allocations.⁸

I. REQUEST TO RELOCATE GALAXY 28 TO 88.7° W.L.

Intelsat requests license authority to relocate the Galaxy 28 satellite to the 88.7° W.L. orbital location. Galaxy 28 is currently licensed to operate at 89.0° W.L.,⁹ where it shares a station-keeping ‘box’ with Galaxy 36 (S3148).¹⁰ The relocation of Galaxy 28 will provide orbital separation between Galaxy 28, which began inclined orbit operations in 2023,¹¹ and Galaxy 36, which is a station-kept satellite. Pursuant to Commission authorization,¹² Intelsat began relocating Galaxy 28 to 88.7° W.L. on March 26, 2025. Once on-station at 88.7° W.L., Intelsat requests authority to utilize the following frequencies:¹³

Frequencies:	3700-4200 MHz (space-to-Earth) 5925-6425 MHz (Earth-to-space) 11.7-12.2 GHz (space-to-Earth) 14.0-14.5 GHz (Earth-to-space) Telemetry, Tracking, and Command (“TT&C”) frequencies: 4195.0 MHz and 4199.5 MHz (space-to-Earth) 5926.5 MHz and 6423.5 MHz (Earth-to-space)
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⁸ Intelsat has sought reconsideration to allow its continued access to 500 MHz at its consolidated international TT&C/gateway sites on a protected basis to ensure C-band service continuity to customers on its international C-band satellites. See Intelsat License LLC, Petition for Reconsideration, GN Docket No. 18-122 (filed May 26, 2020).

⁹ *Galaxy 28 C/Ku-band Authorization*.

¹⁰ See *Application of Intelsat License LLC for Authority to Launch and Operate Galaxy 36, a Replacement Satellite with New Frequencies, at 89.0° W.L.*, Public Notice Report No. SAT-01691, ICFS File No. SAT-LOA-20220607-00058 (Jan. 6, 2023).

¹¹ Letter from Cynthia J. Grady, Asst. Gen. Counsel, Intelsat US LLC, and Daryl T. Hunter Chief Technical Officer, Regulatory Affairs, Viasat, Inc., to Marlene H. Dortch, Sec’y, FCC, ICFS File Nos. SAT-MOD-20191126-00141 and SAT-MOD-20200609-00069 (Jan. 12, 2023) (“Galaxy 28 IOO Notice”).

¹² See *supra* n.4.

¹³ Intelsat is not seeking authority to operate the Galaxy 28 satellite’s Ka-band payload and acknowledges that any future operation of the satellite’s Ka-band payload will require a new grant of authority.

II. REQUEST FOR FURTHER EXTENSION OF LICENSE TERM

Intelsat requests the Commission further extend the license term for the Galaxy 28 satellite through July 29, 2030, to better align with the satellite's remaining service life. The Galaxy 28 satellite was placed into service on July 29, 2005,¹⁴ and began inclined orbit operations in 2023.¹⁵ Pursuant to the license extension granted by the Commission in 2020, the current license term for Galaxy 28 expires on July 29, 2025.¹⁶ This expiration date is more than eight years before the expected end of life of the satellite, which was most recently estimated to be March 31, 2034.¹⁷ Consistent with the Commission's rules,¹⁸ Intelsat seeks to extend the license term by five years. Intelsat intends to request additional extension(s) of the license term in the future to better align the license term with the satellite's expected end of life.

III. WAIVER REQUEST OF SECTION 25.114(d)(14)(ii)

Intelsat requests waiver of Section 25.114(d)(14)(ii) of the Commission's rules, which requires a statement indicating whether the space station operator has assessed and limited the probability that the space station will become a source of debris by collision with small debris or

¹⁴ See Letter from Susan H. Crandall, Assistant Gen., Intelsat Global Service Corporation, to Marlene H. Dortch, Sec'y, FCC, ICFS File No. SAT-MOD-20050203-00019 (Aug. 9, 2005) ("Galaxy 28 Certification Letter").

¹⁵ Galaxy 28 IOO Notice.

¹⁶ *Application of Intelsat License LLC to Modify Authorization for Galaxy 28 (S2160)*, Stamp Grant, ICFS File No. SAT-MOD-20191126-00141 (granted Apr. 24, 2020).

¹⁷ Intelsat foreshadowed that "[t]o 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." Galaxy 28 C/Ku-band Modification Application at 3. Additionally, when Intelsat began inclined orbit operations on Galaxy 28 in 2023, the satellite's expected end-of-life was updated to February 2032. This date has since been refined to March 31, 2034. See Galaxy 28 IOO Notice.

¹⁸ See 47 CFR § 25.121(f)(1).

meteoroids that would cause loss of control and prevent disposal.¹⁹ It also requires the statement to include whether this probability for an individual space station is 0.01 (1 in 100) or less, as calculated using the National Aeronautics and Space Administration’s (“NASA”) DAS or a higher fidelity assessment tool.²⁰

Under Section 1.3 of the Commission’s rules, the Commission has authority to waive its rules “for good cause shown.”²¹ 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.²² In determining whether waiver is appropriate, the Commission should “take into account considerations of hardship, equity, or more effective implementation of overall policy.”²³ Waiver is therefore appropriate if special circumstances warrant a deviation from the general rule, and such a deviation will serve the public interest.

Good cause exists here to waive the orbital debris statement requirements in Section 25.114(d)(14)(ii). Galaxy 28 was launched on June 23, 2005,²⁴ and was procured, designed, and manufactured in the years prior. As previously required by the Commission, Intelsat 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. However, Intelsat does not have the information needed to use NASA’s DAS or other higher fidelity assessment tool to determine the exact probability of whether “the space station will become a source of debris by

¹⁹ 47 C.F.R. § 25.114(d)(14)(ii).

²⁰ *Id.*

²¹ *Id.* § 1.3; *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969).

²² *N.E. Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990).

²³ *WAIT Radio*, 418 F.2d at 1159.

²⁴ *See* Galaxy 28 Certification Letter.

collision with small debris or meteoroids that would cause loss of control and prevent disposal,” including if the probability is 0.01 or less. Intelsat has requested the information needed to use NASA’s DAS and will supplement its application if the information becomes available.

Waiver is appropriate in this case to avoid undue hardship. Even if Intelsat had the information necessary to complete the DAS analysis, the satellite has been on orbit for almost 20 years and cannot be retrieved and modified. As such, there is no way to further limit this risk in the event that a DAS analysis would result in an outcome probability above 0.01, and waiving Section 25.114(d)(14)(ii) will not affect the satellite’s risk of becoming a source of debris. Grant of waiver will also not impact the satellite’s previously approved orbital debris plans.

The Commission has granted similar waivers in the past for satellites that are on orbit and cannot be modified. For example, the Commission has regularly granted waiver of the Section 25.114(d)(14)(iii) requirement²⁵ that applicants address whether stored energy will be removed at the spacecraft’s end of life and accompanying Section 25.283(c) fuel venting requirement in cases where “compliance . . . is not achievable except through direct retrieval of the spacecraft” as the rule was promulgated after the satellite’s launch.²⁶ Waiver of the analysis and risk limitation required under Section 25.114(d)(14)(ii) here, which was promulgated after Galaxy 28’s launch, would serve the same purpose.

²⁵ When the 2020 orbital debris rules came into effect, these requirements were renumbered; the requirement appears as Section 25.114(d)(14)(ii) in grants issued before August 2024. See *Space Innovation; Mitigation of Orbital Debris in the New Space Age*, 89 Fed. Reg. 65217 (Aug. 9, 2024)

²⁶ *Application of Intelsat License LLC to Modify Authorization for Galaxy 11*, ICFS File Nos. SAT-MOD-20221230-00182, SAT-AMD-20240629-00146, Stamp Grant at ¶ 8 (granted Oct. 3, 2024). See also *Application Intelsat License LLC to Modify Authorization for Galaxy 15* (S2387), ICFS File No. SAT-MOD-20210205-00016, Stamp Grant at ¶ 7 (granted Jan. 28, 2022); *Application of Intelsat License LLC to Modify Authorization for Intelsat 1R* (S2368), ICFS File No. SAT-MOD-20240328-00067, Stamp Grant at ¶ 6 (granted May 7, 2024).

IV. POST MISSION DISPOSAL

Extending the license term of Galaxy 28 will not affect the satellite's previously approved post-mission disposal plan.²⁷ At the end of the Galaxy 28 mission, Intelsat will dispose of the satellite by moving it to an altitude of at least 300 kilometers above the geostationary arc.²⁸ For this purpose, Intelsat has reserved 89.2 kilograms of propellant.²⁹ Additional information regarding the orbital debris mitigation plan for Galaxy 28 is provided in the Engineering Statement accompanying this application.

V. PUBLIC INTEREST SHOWING

Grant of this modification application to relocate Galaxy 28 is in the public interest because it will allow Intelsat to continue to meet customer demand while providing greater orbital separation between satellites operating at the nominal 89° W.L. orbital location.

Additionally, grant of Intelsat's further license term extension will allow Intelsat to maximize the use of Galaxy 28, which has more than eight years of useful life remaining beyond the current license term. The Galaxy 28 satellite's subsystems and solar panels are functioning normally, and there are no single points of failure that would affect the ability to de-orbit the satellite. Additionally, the satellite's TT&C functions are operating normally, and all of the payload is operational. Further extending the license term also promotes the continued efficient use of orbital resources and is consistent with prior decisions by the Commission to extend satellite license terms.³⁰

²⁷ See Galaxy 28 C/Ku-band Modification Application at 3-4.

²⁸ *Id.*

²⁹ *Id.*

³⁰ See, e.g., *Application of Intelsat License LLC, as debtor-in-possession, to Modify Authorization for Galaxy 15*, ICFS File No. SAT-MOD-20210205-00016, Stamp Grant at ¶ 7 (granted Jan. 26, 2022) (granting an extension of the Galaxy 15 license term and previously

Finally, grant of this modification request will not result in an increased risk of harmful interference. At the 88.7° W.L. orbital location, Intelsat will operate Galaxy 28's communications payloads and TT&C frequencies in conformance with existing coordination agreements and the FCC's rules governing operations vis-à-vis adjacent locations.

VI. CONCLUSION

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

Respectfully submitted,

Intelsat License LLC

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March 27, 2025

granted waivers of Sections 25.114(d)(14)(ii) and 25.283(c) of the Commission's rules relating to the spacecraft's end of life processes).

Exhibit A

FCC Form 312, Response to Question 34: Foreign Ownership

The Commission previously approved Intelsat's ownership structure, including foreign ownership.¹ There have been no material changes to Intelsat's ownership since the *2022 Intelsat Order*.

¹ See *Intelsat S.A., as debtor-in-possession (Transferor) and New TopCo S.A. (Transferee)*, Order, IBFS File No. SAT-ASG-20210826-00117, IB Docket No. 21-375, DA-22-162 (rel. Feb. 16, 2022) ("*2022 Intelsat Order*").

Exhibit B

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

Intelsat License LLC is a Delaware limited liability company. The officers and directors/managers of Intelsat License LLC are as follows:

Officers:

Aaron Shourie, Chairman
José Toscano, Deputy Chairman
Michelle Bryan, General Counsel,
Chief Administrative Officer, and
Secretary
Mirjana Hervy, Director, Finance

Board of Managers:

José Toscano
Michelle Bryan
Aaron Shourie

The business address of all Intelsat License LLC officers and members of the Board of Managers is: 7900 Tysons One Place, McLean, Virginia 22102.

Intelsat License LLC is a Delaware limited liability company that is indirectly wholly owned by Intelsat S.A. (formerly named Intelsat Emergence S.A.). Specifically, Intelsat License LLC is wholly owned by Intelsat License Holdings LLC, 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 (Intelsat Genesis GP LLC, a Delaware limited liability company) and two limited partners (Intelsat Genesis Inc., a Delaware corporation, and Intelsat Jackson Holdings S.A., a Luxembourg company). Intelsat Genesis GP LLC is wholly owned by Intelsat Genesis Inc., which is wholly owned by Intelsat Jackson Holdings S.A. Intelsat Jackson Holdings S.A. is wholly owned by Intelsat Connect Finance S.à r.l., a Luxembourg company, which in turn is wholly owned by Intelsat (Luxembourg) S.à r.l., a Luxembourg company. Intelsat (Luxembourg) S.à r.l. is wholly owned by Intelsat Investments S.à r.l., a Luxembourg company, which in turn is wholly owned by Intelsat Holdings S.à r.l., a Luxembourg company. Intelsat 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.

Pacific Investment Management Company LLC (“PIMCO”), a Delaware limited liability company, serves as the manager or investment advisor for a number of investment funds and other investment vehicles that each hold less than 10% of the voting and non-voting equity interests in Intelsat S.A. However, to the best of Intelsat’s knowledge, as of October 13, 2023, the aggregate total of the voting and non-voting equity interests in Intelsat S.A. held by PIMCO-managed funds and certain parent entities of PIMCO exceeded 10%. Details regarding PIMCO are listed below.

Name:	Pacific Investment Management Company LLC
Address:	650 Newport Center Drive, Newport Beach, CA 92660
Citizenship:	United States, Delaware
Indirect Voting Interest:	Approximately 32.89%
Indirect Non-Voting Interest:	Approximately 32.89%