

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 (Call Sign S2160),² a C- and Ku-band satellite³ operating at 89.0° W.L.⁴ Specifically, Intelsat seeks to extend the license term for the Galaxy 28 satellite through July 2028.⁵

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 In 2014, the Ka-band payload on Galaxy 28 was assigned to ViaSat, Inc. *See Policy Branch Information; Actions Taken*, Report No. 01009, File No. SAT-ASG-20130515-00070 (Apr. 11, 2014) (“*ViaSat Assignment*”). Intelsat expects ViaSat, Inc. will extend their Ka-band license separately.

⁴ *See Policy Branch Information; Actions Taken*, Report No. 00300, File No. SAT-MOD-20050422-00089 (Jun. 17, 2005) (“*Galaxy 28 2005 Application*”). Intelsat North America later changed its name to Intelsat Licensee LLC. Letter from Jennifer D. Hindin to Marlene H. Dortch, *Notification of Consummation of Pro Forma Assignment and Transfer of Control and Name Change*, File No. SAT-ASG-20101203-00252 (filed Jan. 18, 2011).

⁵ Due to rule changes since 2005, Intelsat is not seeking a waiver extension for Section 25.210(i) of the Commission’s rules. *See Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, 33 FCC Rcd 5576, ¶ 20 n.73 (2018) (modifying the cross-polarization isolation

In accordance with the Commission's rules, this application has been filed electronically as an attachment to FCC Form 312. Intelsat incorporates by reference the information previously provided regarding the operations of Galaxy 28⁶ and, because this is the first technical modification the satellite's authorization since 2005, provides a Schedule S. Consistent with Section 1.62 of the Commission's rules,⁷ Intelsat will continue to operate the Galaxy 28 satellite pursuant to the terms and conditions of its expiring license until the Commission acts on this request.

I. REQUEST FOR EXTENSION OF LICENSE TERM

Intelsat seeks to extend the license term for the Galaxy 28 satellite through July 2028. The Galaxy 28 satellite was placed into service on July 29, 2005.⁸ Pursuant to Sections 25.121(a) and (d)(1) of the Commission's rules,⁹ the license term for Galaxy 28 will expire on July 29, 2020. 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 2023, assuming no inclined-orbit operation. Inclined orbit operation will extend Galaxy 28's expected end of service life an additional five years. To accommodate the planned inclined-orbit operation of Galaxy 28, Intelsat requests the

requirement in Section 25.210(i) to make clear that it applies only to 17/24 GHz BSS space-to-Earth transmissions); 47 C.F.R. § 25.210(i).

⁶ *See Galaxy 28 2005 Application.*

⁷ 47 C.F.R. § 1.62.

⁸ *See Letter from Susan H. Crandall, Assistant General Counsel for Intelsat Global Service Corporation, to Ms. Marlene H. Dortch, Federal Communications Commission, File No. SAT-MOD-20050203-00019 (Aug. 9, 2005).*

⁹ 47 C.F.R. §§ 25.121(a), (d)(1).

Commission extend the license term through July 2028.¹⁰ 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.

II. POST-MISSION DISPOSAL PLAN

Extending the license term of Galaxy 28 will not affect the satellite's post-mission disposal plan. 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 and has reserved 84.50 kilograms of propellant for this purpose.

In calculating the disposal orbit, Intelsat used simplifying assumptions as permitted under the Commission's *Orbital Debris Report and Order*.¹¹ The effective area to mass ratio ($C_r \cdot A/M$) of the Galaxy 28 spacecraft is 0.043 m²/kg, resulting in a minimum perigee disposal altitude under the Inter-Agency Space Debris Coordination Committee formula of 300 kilometers above the geostationary arc. Accordingly, the Galaxy 28 planned disposal orbit complies with the FCC's rules.

The reserved fuel figure was determined by the spacecraft manufacturer and provided for in the propellant budget. This figure was calculated considering the expected mass of the

¹⁰ The Commission is currently considering a five-year limit per license extension in its *Orbital Debris Proceeding*. See *Mitigation of Orbital Debris in the New Space Age*, Notice of Proposed Rulemaking and Order on Reconsideration, 33 FCC Rcd 11352, ¶ 66 (Nov. 19, 2018) ("Orbital Debris NPRM"). As Intelsat has informed the Commission, in some countries, such as Brazil, landing rights are limited to the duration of the initial U.S. license term plus the length of a single extension. Comments of Intelsat License LLC, IB Docket No. 18-313, at 10-11 (filed Apr. 5, 2019). As explained in more detail below, a license extension of less than eight years would inadvertently negatively affect Intelsat's ability to obtain landing rights for Galaxy 28 in South America.

¹¹ *Mitigation of Orbital Debris*, Second Report and Order, 19 FCC Rcd 11567 (2004).

satellite at the end of life and the required delta-velocity to achieve the desired orbit. The fuel gauging uncertainty has also been considered in these calculations.

At the completion of the mission and upon disposal of the spacecraft, to the extent possible, Intelsat will ensure the removal of stored energy on the spacecraft by depleting all propellant tanks, venting all pressurized systems, leaving the batteries in a permanent discharge state, and by ensuring that all active units on the Galaxy 28 satellite are turned off.

III. PUBLIC INTEREST SHOWING

Grant of this modification application to extend the license term would serve the public interest by enabling customers to continue receiving service from Galaxy 28 at the 89.0° W.L. orbital location beyond the current license term's July 29, 2020 expiration date. The Galaxy 28 satellite's subsystems and solar panels are functioning normally, and there are no single points of failure on Galaxy 28 that would result in an inability to de-orbit the satellite. 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.¹²

Extension of the satellite's license term through July 2028 is necessary to ensure that Intelsat may continue to provide service to customers until the expected end of Galaxy 28's service life and is consistent with Commission precedent.¹³ Galaxy 28 provides service to customers in Brazil. Under Brazilian law, landing rights are granted for the term specified in the

¹² See *Policy Branch Information; Actions Taken*, Report No. SAT-01401, File No. SAT-MOD-20190429-00032 (July 12, 2019) (Public Notice) (announcing grant of Intelsat's application seeking a seven-year license extension for Intelsat 10-02, a station-kept satellite with landing rights in Brazil, based on the satellite's current projected end of service including future inclined-orbit operation).

¹³ *Id.*

original license, with allowances for one renewal. Landing rights for Galaxy 28 are therefore limited to July 29, 2020, the initial license expiration date, plus the length of one extension. Should the Commission limit extension to less than the requested term, Intelsat likely would be required to undergo a new and lengthy approval process, provide a renewed coordination analysis of satellite network filings, and submit additional licensing and spectrum fees in order to continue serving Brazil with Galaxy 28. Accordingly, limiting license extension to anything less than the estimated end of operational life—including expected inclined orbit operations—would inadvertently put at risk Galaxy 28’s existing landing rights in Brazil and would be contrary to the public interest.¹⁴

IV. CONCLUSION

For the reasons set forth above, Intelsat respectfully requests that the Commission extend the Galaxy 28 license term through July 2028.

Respectfully submitted,

Intelsat License LLC

By: /s/ Susan H. Crandall

Susan H. Crandall
Associate General Counsel
Intelsat US LLC

Cynthia J. Grady
Senior Counsel
Intelsat US LLC

Jennifer D. Hindin
WILEY REIN LLP
1776 K Street, N.W.
Washington, D.C. 20006

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¹⁴ See Comments of Intelsat License LLC, IB Docket No. 18-313, at 10-11 (filed Apr. 5, 2019) and Comments of the Satellite Industry Association, IB Docket No. 18-313, at 6-7 (filed Apr. 5, 2019).

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 *2018 Pro Forma*.

¹ 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 22151 (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) ("*2018 Pro Forma*").

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:

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 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 indirectly wholly owned by Intelsat S.A. Specifically, Intelsat License LLC 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 Luxembourg 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. 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 October 16, 2019.

Name: BCP
Address: Heritage Hall, Le Marchant Street, St Peter Port, Guernsey, Channel Islands
Citizenship: Guernsey
Indirect Interest: Approximately 39-40%¹

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