

Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of

Intelsat License LLC

Application for Authority to Launch and Operate Galaxy 15R, a Replacement Satellite With New Frequencies, at 133.0° W.L. (227.0° E.L.)

File No. SAT-LOA-_____

**APPLICATION FOR AUTHORITY TO LAUNCH AND OPERATE
GALAXY 15R, A REPLACEMENT SATELLITE WITH NEW FREQUENCIES,
AT 133.0° W.L.**

Intelsat License LLC (“Intelsat”), pursuant to Section 25.114 of the Federal Communications Commission’s (“FCC” or “Commission”) rules,¹ hereby applies to launch and operate a C-band replacement satellite with new Ku-band frequencies, to be known as Galaxy 15R, at the 133.0° W.L. orbital location. Galaxy 15R is scheduled for launch in 2Q 2022 and, after traffic transition, will replace the Galaxy 15 satellite (call sign S2387), which is currently operating at 133.0° W.L.² Galaxy 15R will operate on a non-common carrier basis.³

¹ 47 C.F.R. § 25.114.

² See *Policy Branch Information; Actions Taken, Public Notice*, Report No. SAT-00233, SAT-LOA-19991207-00119 (Aug. 13, 2004) (“Galaxy 15 Authorization”). The licenses originally held by PanAmSat Licensee Corp. were assigned in 2005 to Intelsat North America, which later changed its name to Intelsat License LLC.

³ Section 310(b) is not applicable to this license because Galaxy 15R, like all other satellites licensed to Intelsat, will operate on a non-common carrier basis. See *Applications of The News Corp. Ltd. and The DIRECTV Group, Inc. (Transferors) and Constellation, LLC, Carlyle PanAmSat I, LLC, Carlyle PanAmSat II, LLC, PEP PAS, LLC and PEOP PAS, LLC (Transferees) for Authority to Transfer Control of PanAmSat Licensee Corp.*, Public Notice, 19 FCC Rcd 15424, 15425, fn.5 (Int’l Bur. 2004).

As demonstrated below, Intelsat is legally and technically qualified to launch and operate its proposed replacement satellite with new frequencies. Moreover, grant of this application will serve the public interest by ensuring continuity of service to customers in C-band at the 133.0° W.L. orbital location and by adding new Ku-band capacity at the location. In accordance with the Commission's requirements,⁴ this application has been filed electronically as an attachment to FCC Form 312 and Schedule S.

I. INTELSAT IS QUALIFIED TO HOLD THE AUTHORIZATION REQUESTED HEREIN

A. Legal Qualifications

Intelsat is legally qualified to hold the space station authorization requested in this application. The information provided in the attached Form 312 demonstrates Intelsat's compliance with the Commission's basic legal qualifications. In addition, Intelsat already holds multiple Commission satellite licenses, and its legal qualifications are a matter of record before the Commission.⁵

B. Technical Qualifications

In the attached Form 312, Schedule S, and Engineering Statement, Intelsat demonstrates that it is technically qualified to hold the authorization requested herein. Specifically, Intelsat provides the information currently required by Section 25.114 of the Commission's rules.⁶ In

⁴ 47 C.F.R. § 25.114(c).

⁵ See *Constellation, LLC, Carlyle PanAmSat I, LLC, Carlyle PanAmSat II, LLC, PEP PAS, LLC, and PEOP PAS, LLC, Transferors and Intelsat Holdings, Ltd., Transferee, Consolidated Application for Authority to Transfer Control of PanAmSat Licensee Corp. and PanAmSat H-2 Licensee Corp.*, Memorandum Opinion and Order, 21 FCC Rcd 7368, 7381 ¶ 23 (2006) (“The Commission previously has determined that PanAmSat and Intelsat are qualified to hold licenses.”).

⁶ 47 C.F.R. § 25.114(c).

addition, the Engineering Statement provides information demonstrating Intelsat’s compliance with the Commission’s orbital debris mitigation rules.⁷

C. Operational Frequencies

The following chart shows the frequencies that will be used by the Galaxy 15R satellite at 133.0° W.L. and the frequencies that are currently used by the Galaxy 15 satellite at that location.

	Galaxy 15	Galaxy 15R
3700-4200 MHz	✓	✓
5925-6425 MHz	✓	✓
10950-11200 MHz		✓
11450-11700 MHz		✓
11700-12200 MHz		✓
13750-14500 MHz		✓

All of the existing frequencies licensed on Galaxy 15 are also on Galaxy 15R. In addition, Galaxy 15R supports additional frequencies in the 10950-11200 MHz, 11450-11700 MHz, 11700-12200 MHz, and 13750-14500 MHz bands that are not on the Galaxy 15 satellite.⁸

D. Request for Waiver of Footnote NG52 of the U.S. Table of Allocations

Intelsat requests waiver of Footnote NG52 of the U.S. Table of Allocations, which restricts the use of the 10950-11200 MHz and 11450-11700 MHz frequency bands by the non-federal fixed satellite service in the geostationary orbit to international systems only.⁹ A number of Galaxy 15R beams that utilize the 10950-11200 MHz and 11450-11700 MHz bands provide coverage to the United States and its territories.

⁷ 47 C.F.R. § 25.114(d)(14). *See also Mitigation of Orbital Debris*, Second Report and Order, 19 FCC Rcd 11567 (2004).

⁸ These Ku-band frequencies are not currently licensed to or approved for market access by any other operator. *See* FCC, Approved Space Station List, <https://www.fcc.gov/approved-space-station-list> (last revised May 19, 2017).

⁹ *See* 47 C.F.R. § 2.106, fn. NG52. Footnote NG52 was formerly footnote NG104.

Under Section 1.3 of the Commission’s rules, the Commission has authority to waive its rules “for good cause shown.”¹⁰ 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.¹¹ In determining whether waiver is appropriate, the Commission should “take into account considerations of hardship, equity, or more effective implementation of overall policy.”¹²

Good cause exists to waive the international only requirements for the 10950-11200 MHz and 11450-11700 MHz frequency bands on Galaxy 15R. The purpose of NG52 is to limit the number of the fixed satellite service earth stations with which the co-primary fixed service (“FS”) would need to coordinate.¹³ A waiver of the Table of Allocations is generally granted “when there is little potential interference into any service authorized under the Table of Frequency Allocations and when the nonconforming operator accepts any interference from authorized services.”¹⁴ 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

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

¹¹ *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990).

¹² *WAIT Radio*, 418 F.2d at 1159.

¹³ *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, 1971*, Report & Order, 26 RR 2d 1257, 1263-65 (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”).

¹⁴ *See The Boeing Company*, Order and Authorization, 16 FCC Rcd 22645, 22651 (Int’l Bur. & OET 2001) (citing *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 (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, 13956 (Int’l Bur. 1996) (authorizing service to fixed terminals in bands allocated the mobile satellite service).

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.¹⁵

With respect to the 10950-11200 MHz and 11450-11700 MHz bands, grant of the requested waiver satisfies these criteria and would be consistent with precedent.¹⁶ The earth stations operating in both these bands with Galaxy 15R will not transmit and Intelsat agrees to accept any level of interference into those earth stations from fixed service stations in the band. Intelsat will provide services in the 10950-11200 MHz and 11450-11700 MHz frequency bands 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 fixed service stations and therefore will not need to be coordinated with fixed service 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 NG52.¹⁷ Intelsat will inform its customers in writing, including any customers receiving end-user services from resellers accessing capacity on Galaxy 15R, of the potential for interference from fixed service operations in the 10950-11200 MHz and 11450-11700 MHz bands.

E. Milestone and Bond Requirements

Galaxy 15R will be subject to the milestone and bond posting requirements set forth in Sections 25.164 and 25.165 of the Commission’s rules because the 10950-11200 MHz, 11450-11700 MHz, 11700-12200 MHz, and 13750-14500 MHz frequencies are included on Galaxy 15R

¹⁵ EchoStar 83° Waiver, ¶ 13.

¹⁶ See, e.g., *DIRECTV Enterprises, LLC*, File No. SAT-MOD-20170221-00019 at condition no. 10 (stamp grant reissued May 11, 2017).

¹⁷ See, e.g., *Intelsat North America Request for Waiver*, File No. SAT-MOD-20050610-00122, at condition no. 3 (stamp grant issued Sept. 30, 2005); EchoStar 83° Waiver, ¶ 13.

but are not on the Galaxy 15 satellite it is replacing.¹⁸

II. GRANT OF THIS APPLICATION WILL SERVE THE PUBLIC INTEREST

Grant of this application is consistent with the Commission's policy regarding satellite replacements. Section 25.165(e) of the Commission's rules defines a "replacement space station" as one that is (1) "authorized to operate at an orbital location which is $\pm 0.15^\circ$ of the assigned location of a GSO space station to be replaced"; (2) is "authorized to operate in the same frequency bands, and with the same coverage area as the space station to be replaced"; and (3) "is scheduled to be launched so that it will be brought into use at approximately the same time as, but no later than, the existing space station is retired."¹⁹ In this case, Intelsat holds a replacement expectancy for the C-band frequencies at the 133.0° W.L. orbital location because the Commission authorized Intelsat to operate Galaxy 15 at that location.²⁰ Galaxy 15R will operate on the same C-band frequencies and at the same orbital location as the satellite being replaced, and will be brought into use prior to retirement of the existing satellite.

Further, the Commission recognizes a "replacement expectancy" in orbital locations in order to protect the large investments made by satellite operators. The agency has stated,

[G]iven the huge costs of building and operating satellite space stations, there should be some assurance that operators will be able to continue to serve their customers. The Commission has therefore stated that, when the orbit location remains available for a U.S. satellite with the technical characteristics of the proposed replacement satellite, it will generally authorize the replacement satellite at the same location.²¹

¹⁸ 47 C.F.R. §§ 25.164 and 25.165.

¹⁹ *Id.* § 25.165(e).

²⁰ *See* Galaxy 15 Authorization, *supra* n.2.

²¹ *Columbia Communications Corporation Authorization to Launch and Operate a Geostationary C-band Replacement Satellite in the Fixed-Satellite Service at 37.5° W.L.*, Memorandum Opinion and Order, 16 FCC Rcd 20176, ¶ 7 (Int'l Bur. 2001) (*citing Assignment of*

Grant of this application is therefore merited, consistent with the Commission's long standing policy.

In addition, grant of this application will serve the public interest by ensuring continuity of service to consumers from the 133.0° W.L. orbital location. Intelsat stands ready to deploy a replacement satellite to the 133.0° W.L. orbital location before Galaxy 15 reaches the end of its useful life or is relocated. The Commission has stated that granting replacement applications ensures that service will be provided to consumers as efficiently as possible because the current licensee will be familiar with the service requirements and, given its experience, should be able to deploy a replacement satellite in the shortest possible time.²²

Finally, the Galaxy 15R satellite will allow Intelsat to expand its service offering in the region, for the benefit of consumers, by adding new Ku-band capacity at the location. This expansion of capacity will serve the public interest.

IV. ITU COST RECOVERY

Intelsat is aware that processing fees are currently charged by the International Telecommunication Union ("ITU") for satellite filings, and that Commission applicants are responsible for any and all fees charged by the ITU.²³ Intelsat is aware of and unconditionally

Orbital Locations to Space Stations in Domestic Fixed-Satellite Service, Memorandum Opinion and Order, 3 FCC Rcd 6972, n.31 (1988) and *GE American Communications, Inc.*, Order and Authorization, 10 FCC Rcd 13775, ¶ 6 (Int'l Bur. 1995)).

²² See *Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Bands*, 18 FCC Rcd 11030, ¶ 83 (2003) ("Repairing or even replacing a malfunctioning satellite, for all its complexity, requires less time than designing and constructing a new system. Even in the worst case where a satellite is destroyed, a licensee can ordinarily replace a lost satellite with a ground spare at the next available launch window, or procure a technically identical satellite in an expedient manner since it would have already completed the complex design process.").

²³ See *Implementation of ITU Cost Recovery Charges for Satellite Network Filings*, Public Notice, 16 FCC Rcd. 18732 (2001).

accepts this requirement and responsibility to pay any ITU cost recovery fees associated with the ITU filings that the Commission makes on behalf of Intelsat for the satellite proposed in this application, as well as any ITU filings associated with any satellite system for which Intelsat may request authorization at a later date.

V. USE OF THE 10950-11200 MHz, 11450-11700 MHz, AND 13750-14000 MHz FREQUENCY BANDS

Intelsat understands that operations in the 10950-11200 MHz, 11450-11700 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 11450-11700 MHz frequency band, Intelsat accepts the following condition:

- Intelsat's use of the 11450-11700 MHz band (space-to-Earth) is subject to 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, consistent with footnote US74.

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.
- 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 15R space station in the 13750-13800 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 ("FAS") to minimize

interference to the National Aeronautics and Space Administration 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 15R space station in the 13750-14000 MHz band (Earth-to-space) shall comply with footnote US356 of 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 (“e.i.r.p.”). Operations of any earth station located outside the United States and its possessions communicating with the Galaxy 15R 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.
- Operators of earth stations accessing the Galaxy 15R space station in the 13750-14000 MHz band are encouraged to cooperate voluntarily with the National Aeronautics and Space Administration (“NASA”) in order to facilitate continued operation of NASA's Tropical Rainfall Measuring Mission (“TRMM”) satellite.

VI. CONCLUSION

Based on the foregoing, Intelsat respectfully requests that the Commission grant this replacement satellite application with new frequencies.

Respectfully submitted,

/s/ Susan H. Crandall

Susan H. Crandall
Associate General Counsel
Intelsat Corporation

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

May 24, 2017

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 December 2009 and October 2011, the Commission also approved *pro forma* changes in Intelsat’s foreign ownership.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 22151 (2007).

² *See Intelsat North America LLC, Intelsat LLC, PanAmSat Licensee Corp., PanAmSat H-2 Licensee Corp., and Intelsat New Dawn Company, Ltd., Applications for Pro Forma Transfer of Control*, File Nos. SAT-T/C-20091125-00128, SAT-T/C-20091125-00124, SAT-T/C-20091125-00127, SAT-T/C-20091125-00125, SAT-T/C-20091125-00126, SES-T/C-20091125-01505, SES-T/C-20091125-01502, SES-T/C-20091125-01506, SES-T/C-20091125-01504 and SES-T/C-20091125-01503 (granted Dec. 3, 2009); *Intelsat Application for Pro Forma Transfer of Control*, File Nos. SAT-T/C-20110810-00160, SAT-T/C-20110811-00161, SES-T/C-20110811-00948, SES-T/C-20110812-00963 (granted Oct. 13, 2011), and 0004825139 (granted Oct. 19, 2011).

Exhibit B
FCC Form 312, Response to Question 36: Cancelled Authorizations

Intelsat License LLC (“Intelsat”) has never had an FCC license “revoked.” However, on June 26, 2000, the International Bureau “cancelled” two Ka-band satellite authorizations issued to a former Intelsat entity, PanAmSat Licensee Corp. (“PanAmSat”),¹ based on the Bureau’s finding that PanAmSat had not satisfied applicable construction milestones.² In that same order, the Bureau denied related applications to modify the cancelled authorizations. PanAmSat filed an application for review of the Bureau’s decision, which the Commission denied, and subsequently filed an appeal with the United States Court of Appeals for the District of Columbia Circuit, which was dismissed in January 2003 at PanAmSat’s request. Notwithstanding the fact that the Bureau’s action does not seem to be the kind of revocation action contemplated by question 36, Intelsat is herein making note of the decision in the interest of absolute candor and out of an abundance of caution. In any event, the Bureau’s action with respect to PanAmSat does not reflect on Intelsat’s basic qualifications, which are well-established and a matter of public record.

¹ All licenses previously held by PanAmSat Licensee Corp. have been assigned to Intelsat License LLC. See IBFS File Nos. SAT-ASG-20101203-00252 (granted Dec. 23, 2010), SES-ASG-20101203-0150 (granted Dec. 20, 2010), and SES-ASG-20101206-01502 (granted Dec. 20, 2010).

² See *PanAmSat Licensee Corp.*, Memorandum Opinion and Order, 15 FCC Rcd 18720 (Int’l Bur. 2000).

Exhibit C
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 Jackson Holdings S.A., a Luxembourg company. Intelsat Jackson Holdings S.A. 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. Intelsat Investments S.A. 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.'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 22151 (2007) ("*Intelsat-Serafina Order*"); *Intelsat Application for Pro Forma Transfer of Control*, File Nos. SAT-T/C-20110810-00160, SAT-T/C-20110811-00161, SES-T/C-20110811-00948, SES-T/C-20110812-00963 (granted Oct. 13, 2011), and 0004825139 (granted Oct. 19, 2011) ("*Intelsat Pro Forma*"). On May 16, 2012, the International Bureau granted an application to transfer control of Intelsat pursuant to a public offering of newly issued voting shares by Intelsat, subsequent voting share sales by current shareholders and possible private placements of newly issued voting shares. *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 5226 (Int'l Bur. 2012). This change of control has not yet been fully consummated.