

S2960 SAT-MOD-20191226-00153 IB2019004338
Intelsat License LLC



File # SAT-MOD-20191226-00153

Call Sign S2960 Grant Date 07/27/20
(or other identifier)

Approved by OMB
3060-0678

Term Dates
From 01/01/2020 To: 12/31/2024

Date & Time Filed: Dec 26 2019 3:26:22:766PM
File Number: SAT-MOD-20191226-00153

Approved: [Signature]

* With Conditions


FCC APPLICATION FOR SPACE AND EARTH STATION:MOD OR AMD – MAIN FORM	FCC Use Only
FCC 312 MAIN FORM FOR OFFICIAL USE ONLY	

APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:
Modification of Authorization to Extend License Term of JCSAT-RA (S2960)

1-8. Legal Name of Applicant			
Name:	Intelsat License LLC	Phone Number:	703-559-7848
DBA Name:		Fax Number:	703-559-8539
Street:	c/o Intelsat US LLC 7900 Tysons One Place	E-Mail:	susan.crandall@intelsat.com
City:	McLean	State:	VA
Country:	USA	Zipcode:	22102 -5972
Attention:	Susan H Crandall		

ATTACHMENT TO GRANT
Intelsat License LLC
IBFS File No. SAT-MOD-20191226-00153

IBFS File No(s):	SAT-MOD-20191226-00153	<p>GRANTED – With Conditions</p>  <p>International Bureau Satellite Division</p>
Licensee/Grantee:	Intelsat License LLC	
Call Sign:	S2960	
Satellite Name:	JCSAT-RA	
Orbital Location: (required station-keeping tolerance)	169.0° E.L. ¹	
Administration:	United States of America	
Nature of Service:	Fixed-Satellite Service (FSS)	
Scope of Grant:	Modify the authorization for JCSAT-RA, a C- and Ku-band space station operating at 168.9° E.L., in order to extend its license term through December 31, 2024.	
Previous Grant(s):	Grant of authority to operate the JCSAT-RA space station at the 169.0° E.L. orbital location to provide fixed-satellite service (FSS) and to conduct telemetry, tracking and command operations necessary to drift JCSAT-RA from the 128.0° E.L. orbital location to the 169.0° E.L. orbital location, and maintain it upon its arrival at that location, IBFS File No. SAT-LOA-20160411-00035 (granted July 12, 2018).	
Service Area(s):	C-band: Asia and Hawaii. Ku-band: Japan, Asia, and Global. <i>See</i> Section S6, Schedule S Tech Report and Engineering Statement at 2 of IBFS File No. SAT-LOA-20160411-00035.	
Frequencies:	3940-4200 MHz (space-to-Earth) 6225-6485 MHz (Earth-to-space) 12.2-12.75 GHz (space-to-Earth) 13.8-14.5 GHz (Earth-to-space) Telemetry, tracking, & command center frequencies: 4199.55 MHz (space-to-Earth) (Beacon) 12.2485 GHz (space-to-Earth) (Beacon) 12.7472 GHz (space-to-Earth) (Beacon) 12.74835 GHz (space-to-Earth) 12.74975 GHz (space-to-Earth) 13.9935 GHz (Earth-to-space) 14.496 GHz (Earth-to-space)	
<p>Unless otherwise specified herein, operations under this grant must comport with the legal and technical specifications set forth by the applicant or petitioner and with Federal Communication Commission’s rules not waived herein. This grant is also subject to the following conditions:</p> <ol style="list-style-type: none"> Intelsat must prepare the necessary information, as may be required, for submission to the International Telecommunication Union (ITU) to initiate and complete the advance publication, coordination, due diligence, and notification process of this space station, in accordance with the ITU Radio Regulations. Intelsat will be held responsible for all cost-recovery fees associated with ITU filings. No protection from interference caused by radio stations authorized by other administrations is guaranteed unless coordination and notification procedures are timely completed or, with respect to individual administrations, coordination agreements are successfully completed. Any radio station authorization for 		

¹ Although JCSAT-RA is licensed to operate at 169.0 E.L., it is currently operating at 168.9° E.L. pursuant to special temporary authority. *See* IBFS File No. SAT-STA-20191226-00154. However, Intelsat is not seeking permanent authority to operate at the 168.9° E.L. orbital location.

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which coordination has not been completed may be subject to additional terms and conditions as required to effect coordination of the frequency assignments of other administrations. See 47 CFR § 25.111.

2. In connection with the provision of service in any particular country, Intelsat is obliged to comply with the applicable laws, regulations, rules, and licensing procedures of that country.
3. Intelsat must operate JCSAT-RA at the 169.0° E.L. orbital location in compliance with all existing or future coordination agreements for this location. In the absence of a coordination agreement, such communications must comply with applicable provisions of the ITU Radio Regulations as the Commission cannot guarantee the success of the required coordination.
4. While at the 169.0° E.L. orbital location, Intelsat must maintain the JCSAT-RA space station with an east/west longitudinal station-keeping tolerance of +/- 0.05 degrees.
5. The Commission has exchanged letters with the Telecommunications Regulatory Authority of Japan to ensure a mutual understanding regarding the operations of the JCSAT-RA space station. The letters are attached to the grant in IBFS File No. SAT-LOA-20160411-00035 and the understandings and factual basis for those understandings are a material consideration for that grant of authority.
6. The operation of JCSAT-RA and associated earth stations must comport with the applicable uplink and downlink limits in 47 CFR § 25.140(a)(3) of the Commission's rules, unless Intelsat coordinates any non-conforming operations with the operations of U.S.-licensed geostationary orbit space stations within 6 degrees of the 169.0° E.L. orbital location. Non-conforming operation must also be coordinated with respect to those operations of non-U.S.-licensed space stations within 6 degrees of 168.9° E.L. involving approved communications with U.S.-licensed earth stations.
7. Intelsat's requests for waiver of sections 25.210(a)(3), and 25.210(i)(1) of the Commission's rules, 47 CFR §§ 25.210(a)(3), and 25.210(i)(1), are moot. Section 25.210(a)(3) requires that space stations in the FSS used for domestic service in the 3700-4200 MHz and 5925-6425 MHz frequency bands be capable of switching polarization sense upon ground command. Section 25.210(i)(1) requires space station antennas in the FSS to be designed to meet a cross-polarization isolation of at least 30 dB within the primary coverage area of the antenna. Sections 25.210(a)(3) and 25.210(i)(1) were eliminated as part of a recent Commission-level order streamlining Part 25 rules governing satellite communications.
8. The power flux-density (PFD) at the Earth's surface produced by the emissions from the JCSAT-RA space station, in the 3940-4200 MHz and 12.2-12.75 GHz frequency bands (space- to-Earth), must not exceed the applicable power flux-density limits contained in No.21.16 in Article 21 of the ITU Radio Regulations.
9. Intelsat's request for a continued waiver of 47 CFR § 2.106 of the Commission's rules to allow the use of the 12.2-12.7 GHz frequency band (space-to-Earth) on an unprotected, non-interference basis IS GRANTED. The 12.2-12.7 GHz frequency band is allocated to the Broadcasting-Satellite Service (BSS) in ITU Region 2 and the United States. Intelsat states that JCSAT-RA will have incidental coverage of U.S. territory and possessions in or bordering the Pacific Ocean. JCSAT-RA's operations shall be on a non-interference and non-protected basis within the United States and its territories located in ITU Region 2. Additionally, JCSAT-RA will protect terrestrial station operations by complying with ITU PFD limits specified in No. 21.16 of the ITU Radio Regulations. As a non-conforming user of the 12.2-12.7 GHz band in ITU Region 2, JCSAT-RA must not cause harmful interference to existing and future authorized users who are operating in accordance with the Table of Allocations in ITU Region 2 and must accept interference from such authorized users. Waiver is justified because FSS operations in these bands are consistent with No. 5.492 of the ITU Radio Regulations and there are no U.S. BSS satellites transmitting from orbital locations within 15.8 degrees of the 169.0° E.L. orbital location.

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10. Intelsat's request for a continued waiver of 47 CFR § 2.106 of the Commission's rules to permit the provision of FSS within Region 2 and the United States in the 12.7-12.75 GHz frequency band (space-to-Earth) IS GRANTED², subject to the following conditions:
 - a. Intelsat shall not cause any harmful interference to existing and future authorized users operating in accordance with the U.S. Table of Frequency Allocations and shall accept any interference from authorized users, including CARS operators, BAS operators, Private Operational Fixed Point-to-Point Service (OFS) operators and Common Carrier Local TV Transmission Service (LTTS) operators;
 - b. In the event of harmful interference to any authorized services operating in accordance with the ITU Table of Frequency Allocations resulting from Intelsat's use of the 12.7-12.75 GHz band in Region 2, Intelsat shall immediately cease operations in that band;
 - c. Intelsat is required to inform its customers in writing, including end-users receiving service from resellers accessing capacity on JCSAT-RA, that service:
 - i.) shall be discontinued should a report of harmful interference resulting from this service occur;
 - ii.) is being provided pursuant to authority subject to a non-harmful interference basis, and that the customers therefore are not protected from harmful interference resulting from services that are allocated to this frequency band;
 - d. In the event that Intelsat receives any report of harmful interference, Intelsat shall inform the Commission of this and provide details of how it has been resolved;
 - e. To further protect services in this band, the power flux density limits (PFD) at the surface of the Earth for transmissions from the satellite in the band 12.7-12.75 GHz shall not exceed the limits specified in No. 21.16 of the ITU Radio Regulations, Table 21-4.³
11. In the 13.8-14.0 GHz (Earth-to-space) frequency band, receiving space stations in the FSS must not claim protection from radiolocation transmitting stations operating in accordance with footnote US356 to the United States Table of Frequency Allocations, 47 CFR § 2.106, US356.
12. Operations of any earth station in the United States and its possessions communicating with the JCSAT-RA space station in the 13.8-14.0 GHz (Earth-to-space) frequency band must comply with footnote US356 to the United States Table of Frequency Allocations, 47 CFR § 2.106, US356, which specifies a mandatory minimum antenna diameter of 4.5 meters and recommended 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 JCSAT-RA space station in the 13.8-14.0 GHz (Earth-to-space) frequency band must be consistent with No. 5.502 to the ITU Radio Regulations, which specifies a mandatory minimum antenna diameter of 1.2 meters for earth stations of a geostationary satellite orbit network and specifies mandatory power limits.
13. Operations of JCSAT-RA in the 14.47-14.5 GHz (Earth-to-space) frequency band is subject to the terms of footnote US342 to the United States Table of Frequency Allocations, 47 CFR § 2.106, US342 and No.

² See 47 C.F.R. § 2.106. The 12.7-12.75 GHz frequency band (Earth-to-space) is allocated to the Fixed Service, Mobile Service, and Fixed-Satellite Service (Earth-to-space) in ITU Region 2 and the United States. Intelsat states that JCSAT-RA will operate in the 12.7-12.75 GHz frequency bands in the space-to-Earth direction, which is in accordance with the ITU Region 3 allocation. See Engineering Statement at 6 in IBFS File No. SAT-LOA-20160411-00035.

³ Article 21.16 of the International Radio Regulations imposes power flux density (PFD) limits on satellite downlink transmissions in this band in ITU Regions 1 and 3 in order to protect terrestrial services. As JCSAT-RA's non-conforming downlink transmissions in Region 2 are also in a terrestrial service band, we impose the same PFD limits on JCSAT-RA's Region 2 downlink transmissions in this band.

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5.149 of the ITU Radio Regulations, which urge applicants to take all practicable steps to protect the radio astronomy service from harmful interference.

14. Prior to commencing operations with the JCSAT-RA space station, Intelsat must file with the Commission the information required by section 25.172 of the Commission's rules, 47 CFR § 25.172.
15. The license term for Call Sign S2960 is extended from December 31, 2019, through December 31, 2024.
16. Within 30 days of completion of the end-of-life maneuvers, Intelsat shall send a letter to the Chief, Satellite Division, International Bureau, indicating the apogee and perigee of the JCSAT-RA disposal orbit.

Licensee/grantee is afforded thirty (30) days from the date of release of this action to decline the grant as conditioned. Failure to respond within this period will constitute formal acceptance of the grant as conditioned.


This action is taken pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective upon release.

Station licenses are subject to the conditions specified in Section 309(h) of the Communications Act of 1934, as amended, 47 U.S.C. § 309(h).

Action Date:	February 27, 2020
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Term Dates	From: January 1, 2020	To: December 31, 2024
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Approved:


John W. Whaley
Acting Chief, Satellite Policy Branch

9-16. Name of Contact Representative

Name:	Jennifer D. Hindin	Phone Number:	202-719-4975
Company:	Wiley Rein LLP	Fax Number:	202-719-7049
Street:	1776 K Street NW	E-Mail:	jhindin@wileyrein.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20006-
Attention:		Relationship:	Legal Counsel

CLASSIFICATION OF FILING

17. Choose the button next to the classification that applies to this filing for both questions a. and b. Choose only one for 17a and only one for 17b.

- a1. Earth Station
- a2. Space Station

- (N/A) b1. Application for License of New Station
- (N/A) b2. Application for Registration of New Domestic Receive-Only Station
- b3. Amendment to a Pending Application
- b4. Modification of License or Registration
- b5. Assignment of License or Registration
- b6. Transfer of Control of License or Registration
- b7. Notification of Minor Modification
- (N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite
- (N/A) b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States
- (N/A) b10. Other (Please specify)
- (N/A) b11. Application for Earth Station to Access a Non-U.S. satellite Not Currently Authorized to Provide the Proposed Service in the Proposed Frequencies in the United States
- (N/A) b12. Application for Database Entry
- b13. Amendment to a Pending Database Entry Application
- b14. Modification of Database Entry

17c. Is a fee submitted with this application?

If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).

Governmental Entity Noncommercial educational licensee

Other (please explain):

17d.

Fee Classification BFY – Space Station Modification (Geostationary)

18. If this filing is in reference to an existing station, enter:

(a) Call sign of station:
S2960

19. If this filing is an amendment to a pending application enter both fields, if this filing is a modification please enter only the file number:

(a) Date pending application was filed:

(b) File number:

SATLOA2016041100035

TYPE OF SERVICE

<p>20. NATURE OF SERVICE: This filing is for an authorization to provide or use the following type(s) of service(s): Select all that apply:</p> <p><input checked="" type="checkbox"/> a. Fixed Satellite <input type="checkbox"/> b. Mobile Satellite <input type="checkbox"/> c. Radiodetermination Satellite <input type="checkbox"/> d. Earth Exploration Satellite <input type="checkbox"/> e. Direct to Home Fixed Satellite <input type="checkbox"/> f. Digital Audio Radio Service <input type="checkbox"/> g. Other (please specify)</p>	
<p>21. STATUS: Choose the button next to the applicable status. Choose only one. <input type="radio"/> Common Carrier <input checked="" type="radio"/> Non-Common Carrier</p>	<p>22. If earth station applicant, check all that apply. <input type="checkbox"/> Using U.S. licensed satellites <input type="checkbox"/> Using Non-U.S. licensed satellites</p>
<p>23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities: <input type="radio"/> Connected to a Public Switched Network <input type="radio"/> Not connected to a Public Switched Network <input checked="" type="radio"/> N/A</p>	
<p>24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all applicable frequency band(s). <input checked="" type="checkbox"/> a. C-Band (4/6 GHz) <input checked="" type="checkbox"/> b. Ku-Band (12/14 GHz) <input type="checkbox"/> c. Other (Please specify upper and lower frequencies in MHz.) Frequency Lower: Frequency Upper: (Please specify additional frequencies in an attachment)</p>	

TYPE OF STATION

25. CLASS OF STATION: Choose the button next to the class of station that applies. Choose only one.

- a. Fixed Earth Station
- b. Temporary--Fixed Earth Station
- c. 12/14 GHz VSAT Network
- d. Mobile Earth Station
- e. Geostationary Space Station
- f. Non-Geostationary Space Station
- g. Other (please specify)

26. TYPE OF EARTH STATION FACILITY:

- Transmit/Receive Transmit-Only Receive-Only N/A

"For Space Station applications, select N/A."

PURPOSE OF MODIFICATION

27. The purpose of this proposed modification is to: (Place an 'X' in the box(es) next to all that apply.)

- a — authorization to add new emission designator and related service
- b — authorization to change emission designator and related service
- c — authorization to increase EIRP and EIRP density
- d — authorization to replace antenna
- e — authorization to add antenna
- f — authorization to relocate fixed station
- g — authorization to change frequency(ies)
- h — authorization to add frequency
- i — authorization to add Points of Communication (satellites & countries)
- j — authorization to change Points of Communication (satellites & countries)
- k — authorization for facilities for which environmental assessment and radiation hazard reporting is required
- l — authorization to change orbit location
- m — authorization to perform fleet management
- n — authorization to extend milestones
- o — Other (Please specify)

ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307? If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. 1.1308 and 1.1311, as an exhibit to this application. A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, or major amendments. Yes No

ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aeronautical en route or aeronautical fixed radio station services are not required to respond to Items 30–34.

29. Is the applicant a foreign government or the representative of any foreign government?	<input type="radio"/> Yes <input checked="" type="radio"/> No
30. Is the applicant an alien or the representative of an alien?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> N/A
32. Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> N/A

33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

Yes No N/A

34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote.

BASIC QUALIFICATIONS

35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules?
If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.

Yes No

36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explanation of circumstances.

Yes No

37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explanation of circumstances.

Yes No

38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances

Yes No

39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If yes, attach as an exhibit, an explanation of the circumstances.

Yes No

40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, address, and citizenship of those stockholders owning a record and/or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer.

41. By checking Yes, the undersigned certifies, that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application"; for these purposes.

Yes No

42a. Does the applicant intend to use a non-U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate. If No, proceed to question 43.

Yes No

42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station?

43. Description. (Summarize the nature of the application and the services to be provided). (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

Intelsat License LLC seeks authority to extend the license term, and previously-granted waiver, for JCSAT-RA (S2960) through December 31, 2024.

Narrative

43a. Geographic Service Rule Certification

By selecting A, the undersigned certifies that the applicant is not subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25.

A

By selecting B, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will comply with such requirements.

B

By selecting C, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will not comply with such requirements because it is not feasible as a technical matter to do so, or that, while technically feasible, such services would require so many compromises in satellite design and operation as to make it economically unreasonable. A narrative description and technical analysis demonstrating this claim are attached.

C

CERTIFICATION

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

44. Applicant is a (an): (Choose the button next to applicable response.)

- Individual
- Unincorporated Association
- Partnership
- Corporation
- Governmental Entity
- Other (please specify)

45. Name of Person Signing
Susan H. Crandall



46. Title of Person Signing
Assoc. General Counsel, Intelsat US LLC

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT
(U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION
(U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

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THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.

Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of

Intelsat License LLC

Application to Modify Authorization for
JCSAT-RA

Call Sign S2960

File No. _____

**APPLICATION OF INTELSAT LICENSE LLC
TO MODIFY AUTHORIZATION FOR JCSAT-RA**

Intelsat License LLC (“Intelsat”), pursuant to Section 25.117 of the rules of the Federal Communications Commission (“Commission” or “FCC”),¹ hereby seeks to modify the authorization for the JCSAT-RA satellite (Call Sign S2960), a C- and Ku-band satellite licensed at the 169.0° E.L. orbital location² and currently operating at 168.9° E.L. pursuant to special temporary authority.³ Specifically, Intelsat seeks to extend the license term for the JCSAT-RA satellite, and a previously granted waiver, through December 31, 2024.

In accordance with Section 25.117(c) of the FCC’s rules, this application has been filed electronically as an attachment to FCC Form 312.⁴ Intelsat incorporates by reference the information previously provided regarding the operations of JCSAT-RA.⁵ Consistent with

¹ 47 C.F.R. § 25.117.

² See *Policy Branch Information; Actions Taken*, Public Notice, Report No. SAT-01330, Call Sign S2960, File No. SAT-LOA-20160411-00035 (July 13, 2018).

³ See *Policy Branch Information; Actions Taken*, Public Notice, Report No. SAT-01426, Call Sign S2960, File No. SAT-STA-20190920-00097 (Nov. 8, 2019).

⁴ 47 C.F.R. § 117(c).

⁵ See Intelsat License LLC, Application for Authority to Drift and to Operate JCSAT-RA, an In-Orbit Satellite, at 169.0° E.L., Call Sign S2960, File No. SAT-LOA-20160411-00035

Section 1.62 of the Commission's rules, Intelsat will continue to operate the JCSAT-RA 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.⁶

I. REQUEST FOR EXTENSION OF LICENSE TERM

Intelsat seeks to extend the license term for the JCSAT-RA satellite, as well as the previously granted waiver of Section 2.106 concerning operations in the 12.2-12.7 GHz and 12.7-12.75 GHz bands, through December 31, 2024. JCSAT-RA was launched on August 21, 2009 by SKY Perfect JSAT Corporation ("JSAT") under the licensing administration of Japan. Intelsat acquired control of JCSAT-RA in 2017 through a commercial agreement with JSAT. Intelsat re-flagged the satellite to the authority of the United States and obtained FCC approval to operate the satellite at 169.0° E.L. through December 31, 2019.⁷ Intelsat subsequently received Commission approval to drift JCSAT-RA to, and operate the satellite at, 168.9° E.L. through the end of its license term.⁸ This expiration date is well before the expected end of maneuver life of the satellite, which was most recently estimated to be the end of 2024. Should the satellite's projected end-of-service life be further extended in the future, Intelsat will seek an additional license extension.

(filed Apr. 11, 2016); Intelsat License LLC, Application for Extension of Special Temporary Authority to Operate JCSAT-RA at 168.9° E.L., Call Sign S2960, File No. SAT-STA-20190920-00097 (filed Sept. 20, 2019) ("Application for JCSAT-RA License").

⁶ 47 C.F.R. § 1.62.

⁷ *See supra* n.2.

⁸ *See supra* n.3.

II. PUBLIC INTEREST SHOWING

Grant of this modification application to extend the license term will serve the public interest by enabling customers to continue receiving service from JCSAT-RA beyond the current license term expiration date of December 31, 2019. The JCSAT-RA satellite subsystems and solar panels are functioning normally, and there are no single points of failure on JCSAT-RA 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 recent decisions by the Commission to extend satellite license terms.⁹

III. POST-MISSION DISPOSAL PLAN

If Intelsat remains the licensee of JCSAT-RA at the end of the satellite's maneuver life, it will dispose of the satellite by moving it to an altitude of 272 kilometers above the geostationary arc.¹⁰ For that purpose, 10.2 kilograms of hydrazine have been reserved. The reserved fuel figure was determined by the spacecraft manufacturer and provided for in the propellant budget. This figure was calculated taking into account the expected mass of the satellite at the end of life and the required delta-velocity to achieve the desired orbit. The fuel gauging uncertainty has been taken into account in these calculations.

⁹ See e.g., *Policy Branch Information; Actions Taken*, Public Notice, Report No. SAT-01383, Call Sign S2253, File No. SAT-MOD-20181231-00095 (Apr. 19, 2019) (granting license extension for Galaxy 11, based on the satellite's current projected end of service).

¹⁰ Intelsat's orbital debris statement in its 2016 licensing application incorrectly stated JCSAT-RA will be disposed by moving it to an altitude of 300 kilometers above the geostationary arc, but correctly provided the minimum perigee disposal altitude under the Inter-Agency Space Debris Coordination Committee ("IADC") formula, which was at most 272 kilometers. See Application for JCSAT-RA License, Engineering Statement at 6-7. Intelsat herein updates the post-mission disposal height of JCSAT-RA to correlate with the height calculated using the IADC formula.

In calculating the disposal orbit, simplifying assumptions have been used as permitted under the Commission's Orbital Debris Report and Order.¹¹ For reference, the effective area to mass ratio (Cr*A/M) of the JCSAT-RA spacecraft is 0.037 m²/kg, resulting in a minimum perigee disposal altitude under the IADC formula of at most 272 kilometers above the geostationary arc. Accordingly, the JCSAT-RA planned disposal orbit complies with the FCC's rules.

IV. CONCLUSION

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

Respectfully submitted,

Intelsat License LLC

By: /s/ Susan H. Crandall

Jennifer D. Hindin
Madeleine M. Lottenbach
WILEY REIN LLP
1776 K Street, NW
Washington, DC 20006

Susan H. Crandall
Associate General Counsel
Intelsat US LLC

Cynthia J. Grady
Senior Counsel
Intelsat US LLC

December 26, 2019

¹¹ *Mitigation of Orbital Debris*, Second Report and Order, 19 FCC Rcd 54581 (2004).

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 Hery, 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.