



File # SAT-MOD-20201222-00150

Call Sign S2704 Grant Date March 18, 2021

(or other identifier)

Approved by OMB
3060-0678

Term Dates

From December 31, 2020 To November 30, 2024

Approved: Merissa L. Velez
Merissa L. Velez
Chief, Satellite Policy Branch

Date & Time Filed: Dec 22 2020 9:44:18:393PM
File Number: SAT-MOD-20201222-00150

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:
Request to modify authorization for Intelsat 5 (S2704)

1-8. Legal Name of Applicant

Name:	Intelsat License LLC, as debtor-in-possession	Phone Number:	703-559-7848
DBA Name:		Fax Number:	703-559-8539
Street:	7900 Tysons One Place	E-Mail:	susan.crandall@intelsat.com
City:	McLean	State:	VA
Country:	USA	Zipcode:	22101 -5972
Attention:	Susan H. Crandall		

ATTACHMENT TO GRANT
Intelsat License LLC, as debtor-in-possession
IBFS File No. SAT-MOD-20201222-00150

IBFS File No(s):	SAT-MOD-20201222-00150 ¹	<p>GRANTED – With Conditions</p>  <p>International Bureau Satellite Division</p>
Licensee/Grantee:	Intelsat License LLC, as debtor-in-possession (Intelsat)	
Call Sign:	S2704	
Satellite Name:	Intelsat 5	
Orbital Location: (required station-keeping tolerance)	137.0° W.L. (+/- 0.05 degrees east/west)	
Administration:	United States of America	
Nature of Service:	Fixed Satellite Service (FSS)	
Scope of Grant:	Modification of the authorization for Intelsat 5 to extend the license term of the satellite through November 30, 2024.	
Service Area(s):	Asia Pacific and Western United States. See IBFS File No. SAT-MOD-20180501-00036, Schedule S Tech Report.	
Frequencies:	3700-4200 MHz (space-to-Earth) 11.45-11.7 GHz (space-to-Earth) 5925-6425 MHz (Earth-to-space) 14.0-14.25 GHz (Earth-to-space) Telemetry, tracking, and command (TT&C) frequencies: 11.451 GHz, 11.452 GHz, 11.454 GHz (space-to-Earth); 13.999 GHz, 14.498 GHz (Earth-to-space)	
<p>Operations under this grant must comport with the legal and technical specifications set forth by the applicant or petitioner and with the Federal Communications Commission’s rules not waived herein. This grant is also subject to the following conditions:</p> <ol style="list-style-type: none"> 1. 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 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 Intelsat 5 at the 137.0° W.L. orbital location in compliance with all existing or future coordination agreements for this location. 		

¹ The application was placed on Public Notice as accepted for filing on January 22, 2021. See *Satellite Policy Branch Information, Space Station Applications Accepted for Filing*, Public Notice, Report No. SAT-01523 (Jan. 22, 2021).

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4. Intelsat must maintain the Intelsat 5 space station within an east/west longitudinal station-keeping tolerance of ± 0.05 degrees of the 137.0° W.L. orbital location.
5. The operations of Intelsat 5 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 137.0° W.L. orbital location. Intelsat must also comport with the maximum power limits indicated in existing or future coordination agreements at 137.0° W.L. Non-conforming operation must also be coordinated with respect to those operations of non-U.S.-licensed space stations within 6 degrees of 137.0° W.L. involving approved communications with U.S.-licensed earth stations.
6. The power flux-density (PFD) at the Earth's surface produced by the emissions from the Intelsat 5 space station in the 3700-4200 MHz (space-to-Earth) frequency band must not exceed the applicable power flux-density limits contained in 47 CFR § 25.208(a) of the Commission's rules, and in Article 21 of the ITU Radio Regulations.
7. The operations of Intelsat 5 in the 3700-4200 MHz band, within the contiguous United States, are subject to the terms of the *3.7-4.2 GHz Report and Order* (FCC 20-22), including Section 2.106, footnote NG182 and footnote NG457A, future actions in the proceeding, and actions on delegated authority taken in accordance with the Commission's Order (*see, e.g.*, Public Notice DA 20-578, released June 1, 2020, announcing accelerated clearing in the 3.7 – 4.2 GHz band).
8. The power flux-density at the Earth's surface produced by the emissions from the Intelsat 5 space station in the 11.45-11.7 GHz (space-to-Earth) frequency band must not exceed the applicable power flux-density limits contained in 47 CFR § 25.208(b) of the Commission's rules, and in Article 21 of the ITU Radio Regulations.
9. Operations in the 11.45-11.7 GHz (space-to-Earth) frequency band are subject to footnote US211 to the United States Table of Frequency Allocations, 47 CFR § 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.
10. Intelsat's request for an extension of waiver of footnote NG52 of the U.S. Table of Frequency Allocations, 47 CFR § 2.106, NG52, to use the 11.45-11.7 GHz band to offer domestic services on an unprotected, non-harmful interference basis in the United States IS GRANTED, as conditioned. We find that waiver does not undermine the purpose of the rule because the waiver involves only earth stations that are receive-only in the 11.45-11.7 GHz frequency band and thus are not capable of causing interference into fixed stations operating in this band. Furthermore, because Intelsat has agreed to accept any level of interference from fixed stations into receive earth stations in this band, fixed station operators will not be required to coordinate their station operations with Intelsat's earth stations' operations.² Under these circumstances, we determine that an additional coordination burden is not placed upon fixed station operators and their ability to expand service in the future would not be restricted in any manner.³
 - a. Intelsat's space-to-Earth transmissions in the 11.45-11.7 GHz band are to be conducted without interference protection from fixed stations to earth stations receiving these transmissions. This applies to fixed stations to which frequencies in the 11.45-11.7 GHz band have either been already assigned, or to which frequencies in the 11.45-11.7 GHz band may be assigned at a later date.

² See Legal Narrative, IBFS File No. SAT-MOD-20180501-00036.

³ *PanAmSat Licensee Corp. Application for Authority to Use the Extended Ku-Band Frequencies for Domestic Service*, Order and Authorization, 20 FCC Rcd 14642, 14646 (Sat. Div., Int'l Bur., 2005).

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b. Intelsat must inform its customers, in writing, including end-users receiving service from resellers accessing capacity on the Intelsat 5 space station, that domestic service in the 11.45-11.7 GHz band is being provided on an unprotected basis, and that the potential exists that future licensed fixed stations may cause harmful interference to unprotected receive earth stations in the 11.45-11.7 GHz band.

11. Intelsat's request for an extension of waiver of Section 25.210(f) of the Commission's rules, 47 CFR § 25.210(f), in connection with Intelsat 5's use of the 11.45-11.7 GHz and 14.0-14.25 GHz frequency bands, IS GRANTED. Section 25.210(f) requires that Fixed-Satellite Service (FSS) space stations employ full frequency re-use either through orthogonal polarization in the same beam and/or the use of spatially independent beams. The purpose of the rule is to ensure that space stations maximize the use of spectrum. Intelsat states that Intelsat 5 (previously known as PAS-9) was not designed to utilize orthogonal polarizations or spatially isolated beams in these bands, likely due to customer requirements and mass constraints of the satellite. The Intelsat 5 space station was previously authorized to operate in these frequencies, and given that the space station is nearing the end of its operational lifetime, we do not believe that grant of a waiver in this case would materially undermine the purpose of Section 25.210(f).
12. Operations of Intelsat 5 in the 14.47-14.5 GHz (Earth-to-space) frequency band is subject to the terms of footnote US342 to the U.S. Table of Frequency Allocations, 47 CFR § 2.106, US342, which urge applicants to take all practicable steps to protect the radio astronomy service from harmful interference.
13. Intelsat's request for an extension of waiver of Section 25.114(c)(4)(vi)(A) of the Commission's rules, 47 CFR § Section 25.114(c)(4)(vi)(A), IS GRANTED. Section 25.114(c)(4)(vi)(A) requires predicted space station antenna gain contour(s) for each transmit and each receive antenna beam and nominal orbital location requested. We previously granted Intelsat a waiver of this rule based on the technical demonstrations provided in a prior application.⁴ For the same reasons we find it appropriate to grant a continued waiver of this rule.
14. 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 Intelsat 5 disposal orbit.
15. The license term for Intelsat 5 (Call Sign S2704) is extended from December 31, 2020 to November 30, 2024.

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 CFR § 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:	March 18, 2021
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⁴ See IBFS File No. SAT-MOD-20140829-00097. With respect to Intelsat 5's TT&C bicone antenna and the uplink power control (ULPC) antenna, shown in Exhibits 2I, 2L, 2M and 2N to that application, Intelsat indicates that the satellite manufacturer did not provide the beam patterns for these antennas in the required form. We found, however, that Exhibits 2I, 2L, 2M and 2N, together with the descriptive characterization provided on pages 1 and 2 of the Engineering Statement in that application, fulfilled the requirements of Section 25.114(c)(4)(vi)(A).

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Approved:  Merissa L. Velez 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@wiley.law
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

<p>17c. Is a fee submitted with this application?</p> <p><input checked="" type="radio"/> If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R.Section 1.1114).</p> <p><input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee</p> <p><input type="radio"/> Other(please explain):</p>	
<p>17d.</p> <p>Fee Classification BFY – Space Station Modification(Geostationary)</p>	
<p>18. If this filing is in reference to an existing station, enter:</p> <p>(a) Call sign of station: S2704</p>	<p>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:</p> <p>(a) Date pending application was filed: (b) File number: SATMOD2018050100036</p>

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.</p> <p><input type="radio"/> Common Carrier <input checked="" type="radio"/> Non-Common Carrier</p>	<p>22. If earth station applicant, check all that apply.</p> <p><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:</p> <p><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).</p> <p><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.)</p> <p>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? Yes No

30. Is the applicant an alien or the representative of an alien? Yes No N/A

31. Is the applicant a corporation organized under the laws of any foreign government? Yes No 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? Yes No 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 hereby seeks to modify the authorization for Intelsat 5 to further extend the license term through November 2024.

Legal 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
Associate General Counsel, Intelsat US LLC

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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).

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