

S2381 SAT-MOD-20170523-00077  
Intelsat License LLC  
Galaxy 3C

IB2017001387



Date & Time Filed: May 23 2017 3:44:59:363PM  
File Number: SAT-MOD-20170523-00077

*with conditions*

File # SAT-MOD-20170523-00077\*  
\*See Also: SAT-AMD-20170613-00089  
Call Sign S2381 Grant Date 7/20/17  
(or other identifier)  
Term Dates  
From 7/20/17 To: 6/30/2026  
Approved by OMB  
3060-0678  
Approved: Kathryn J. Melley  
*Chief, Satellite Engrs. Br.*

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:  
Application to Modify Authorization for Galaxy 3C Satellite (S2381)


#### 1-8. Legal Name of Applicant

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

**ATTACHMENT TO GRANT**

Intelsat License LLC

IBFS File Nos. SAT-MOD-20170523-00077 and SAT-AMD-20170613-00089

<b>IBFS File No(s):</b>	SAT-MOD-20170523-00077, SAT-AMD-20170613-00089	<b>GRANTED – With Conditions</b>  <b>International Bureau Satellite Division</b>			
<b>Licensee/Grantee:</b>	Intelsat License LLC				
<b>Call Sign:</b>	S2381				
<b>Satellite Name:</b>	Galaxy 3C				
<b>Orbital Location: (required station- keeping tolerance)</b>	95.05° W.L. (+/- 0.05 degrees east-west station keeping)				
<b>Administration:</b>	United States of America				
<b>Nature of Service:</b>	Fixed-Satellite Service (FSS)				
<b>Scope of Grant:</b>	Extension of the authority to provide FSS via the Galaxy 3C space station at 95.05° W.L. through June 30, 2026.				
<b>Previous Grant(s):</b>	PanAmSat Licensee Corp. Application to Launch and Operate Galaxy III-C, IBFS File No. SAT-LOA-19980812-00082 (granted May 29, 2002); PanAmSat Licensee Corp., Galaxy III-C Modification, IBFS File No. SAT-MOD-20040405-0079 (granted June 15, 2004); PanAmSat Licensee Corp., Galaxy 3C Waiver, IBFS File No. SAT-MOD-20060303-00019 (granted Oct. 26, 2006).				
<b>Service Area(s):</b>	See IBFS File No. SAT-AMD-20170613-00089, Schedule S Tech Report at 5-25.				
<b>Frequencies:</b>	3700-4200.0 MHz (space-to-Earth) 5925-6675 MHz (Earth-to-space) 11.45-12.2 GHz (space-to-Earth) 13.75-14.5 GHz (Earth-to-space)				
<b>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:</b>					
<ol style="list-style-type: none"><li>1. Intelsat must operate Galaxy 3C at the 95.05° W.L. orbital location in accordance with any existing or future coordination agreements for this location.</li><li>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.</li><li>3. While at the 95.05° W.L. orbital location, Intelsat must maintain the Galaxy 3C spacecraft with an east/west longitudinal station-keeping tolerance of +/- 0.05 degrees.</li><li>4. The operations of Galaxy 3C 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 95.05° W.L. orbital location. Intelsat must also comport with the maximum power limits indicated in existing or future coordination agreements at 95.05° 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 95.05° W.L. involving approved communications with U.S.-licensed earth stations.</li><li>5. Operations of Galaxy 3C in the 6650-6675 MHz (Earth-to-space) and 14.47-14.5 GHz (Earth-to-space) frequency bands are subject to the terms of footnotes 5.149 and US342 to the United States Table of Frequency Allocations, 47 CFR § 2.106, 5.149, US342, which urge applicants to take all practicable steps to protect the radio astronomy service from harmful interference.</li><li>6. Operations of Galaxy 3C in the 6425-6675 MHz (Earth-to-space) frequency band is subject to Footnote 5.458 to the United States Table of Frequency Allocations, 47 CFR § 2.106, Footnote 5.458, which</li></ol>					

## ATTACHMENT TO GRANT

Intelsat License LLC

IBFS File Nos. SAT-MOD-20170523-00077 and SAT-AMD-20170613-00089

directs Intelsat to bear in mind the needs of the passive services when operating the Galaxy 3C space station.

7. Operations in the 11.45-11.7 GHz 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.
8. Intelsat's request for waiver of footnote NG52 of Section 2.106 is GRANTED as conditioned. Consistent with previous waivers granted to Galaxy 3C,<sup>1</sup> we find that, with respect to the domestic use of the 11.45-11.7 GHz band, waiver of footnote NG52 of Section 2.106 would not undermine the rule's purpose because receive-only earth stations are not capable of causing interference into fixed stations operating in the same frequency band. Furthermore, Intelsat cannot claim protection from interference caused to it by fixed stations operating in the 11.45-11.7 GHz frequency band.
  - a) Intelsat's space-to-Earth transmissions in the 11.45-11.7 GHz band that provide domestic service are on an unprotected, non-harmful interference basis relative to fixed stations and, as such, Intelsat must not cause harmful interference to, or claim protection from, 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. Intelsat must terminate operations in the 11.45-11.7 GHz band upon notification that its operations are causing harmful interference to fixed stations operating in this band, and must immediately inform the Commission, in writing, of such an event.
  - b) Intelsat is required to inform its customers, in writing, including end-users receiving service from resellers accessing capacity on the Galaxy 3C space station, that domestic service in the United States in the 11.45-11.7 GHz frequency band is being provided on an unprotected basis, and is therefore subject to interference from fixed stations authorized to operate in the 11.45-11.7 GHz frequency band.
9. The license term for Call Sign S2381 is extended from September 22, 2017, through June 30, 2026.
10. Intelsat's request for a waiver of sections 25.114(d)(14) and 25.283(c), 47 CFR §§ 25.114(d)(14) and 25.283(c) is GRANTED. Section 25.283(c) specifies that space stations must discharge all stored energy sources at end-of-life of the space station. Intelsat indicates that Galaxy 3C is an Intelsat Model 702 spacecraft and was launched on September 22, 2002. Intelsat states that due to its design, Galaxy 3C's two pressurant tanks were sealed by firing pyrotechnic valves shortly after launch and will not be vented to depletion at the spacecraft's end of life. Intelsat states that the total mass of remaining pressurant in each of the two tanks will be approximately 270 grams at end of life, with each tank volume being approximately 69 liters. We grant the requested waivers because Galaxy 3C was launched before Section 25.283(c) was adopted and compliance would require direct retrieval of the satellite, which is not currently possible. In making this determination, however, we note that the information Intelsat submitted for its waiver is not sufficient to support a finding that the intent of the rule would be satisfied by the described procedure for sealing the oxidizer tanks.
11. Upon expiration of the license term, Intelsat is responsible for the proper disposal of Galaxy 3C by moving it to a minimum altitude of 265.9 kilometers above the geostationary arc.<sup>2</sup>
12. 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 Galaxy 3C disposal orbit.

<sup>1</sup> See *PanAmSat Licensee Corp.*, Galaxy 3C Waiver, IBFS File No. SAT-MOD-20060303-00019 (granted Oct. 26, 2006).

<sup>2</sup> See Application Narrative at 3.

# ATTACHMENT TO GRANT

Intelsat License LLC

IBFS File Nos. SAT-MOD-20170523-00077 and SAT-AMD-20170613-00089

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:**

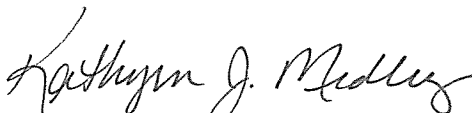
July 20, 2017

**Term Dates**

**From:** July 20, 2017

**To:** June 30, 2026

**Approved:**



Kathryn J. Medley  
Chief, Engineering Branch

9-16. Name of Contact Representative

<b>Name:</b>	Jennifer D. Hindin	<b>Phone Number:</b>	201-719-4975
<b>Company:</b>	Wiley Rein LLP	<b>Fax Number:</b>	202-719-7049
<b>Street:</b>	1776 K Stree, NW	<b>E-Mail:</b>	jhindin@wileyrein.com
<b>City:</b>	Washington	<b>State:</b>	DC
<b>Country:</b>	USA	<b>Zipcode:</b>	-
<b>Attention:</b>	Jennifer D. Hindin	<b>Relationship:</b>	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: S2381</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:  SATMOD2006030300019</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</p> <p><input type="checkbox"/> b. Mobile Satellite</p> <p><input type="checkbox"/> c. Radiodetermination Satellite</p> <p><input type="checkbox"/> d. Earth Exploration Satellite</p> <p><input type="checkbox"/> e. Direct to Home Fixed Satellite</p> <p><input type="checkbox"/> f. Digital Audio Radio Service</p> <p><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</p> <p><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)</p> <p><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

<p>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.</p>	<p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>
<p>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</p>	<p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>
<p>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.</p>	<p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>
<p>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.</p>	

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, pursuant to Section 25.117 of the rules of the Federal Communications Commission, hereby seeks to modify the authorization for Galaxy 3C (Call Sign S2381), a C- and Ku-band satellite operating at 95.05 W.L. Specifically, Intelsat seeks to extend the license term for the Galaxy 3C satellite, and a previously granted

Narrative & Exhibits

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 Corporation

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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).

# **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.**



**43. Description. (Summarize the nature of the application and the services to be provided).**

Intelsat License LLC, pursuant to Section 25.117 of the rules of the Federal Communications Commission, hereby seeks to modify the authorization for Galaxy 3C (Call Sign S2381), a C- and Ku-band satellite operating at 95.05 W.L. Specifically, Intelsat seeks to extend the license term for the Galaxy 3C satellite, and a previously granted waiver, through June 30, 2026.

Before the  
**Federal Communications Commission**  
Washington, DC 20554

In the Matter of

Intelsat License LLC

Application to Modify Authorization for  
Galaxy 3C (S2381)

File No. SAT-MOD- \_\_\_\_\_

**APPLICATION OF INTELSAT LICENSE LLC  
TO MODIFY AUTHORIZATION FOR GALAXY 3C**

Intelsat License LLC (“Intelsat”), pursuant to Section 25.117 of the rules of the Federal Communications Commission (“Commission” or “FCC”),<sup>1</sup> hereby seeks to modify the authorization for Galaxy 3C (Call Sign S2381), a C- and Ku-band satellite operating at 95.05° W.L.<sup>2</sup> Specifically, Intelsat seeks to extend the license term for the Galaxy 3C satellite, and a previously granted waiver,<sup>3</sup> through June 30, 2026.

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<sup>1</sup> 47 C.F.R. § 25.117.

<sup>2</sup> See PanAmSat Licensee Corp., Application to Launch and Operate Galaxy III-C, SAT-LOA-19980812-00082 (granted May 29, 2002); *as modified by* PanAmSat Licensee Corp., Galaxy III-C Modification, SAT-MOD-20040405-0079 (granted June 15, 2004); *as further modified by* PanAmSat Licensee Corp., Galaxy 3C Waiver, SAT-MOD-20060303-00019 (granted Oct. 26, 2006). See also *Policy Branch Information; Actions Taken*, Report No. SAT-00399, File No. SAT-MOD-20060303-0019 (Oct. 27, 2006) (Public Notice). The licenses originally held by PanAmSat Licensee Corp. were assigned in 2005 to Intelsat North America, which later changed its name to Intelsat Licensee LLC.

<sup>3</sup> Specifically, Intelsat seeks an extension of the previously granted waiver of 47 C.F.R. § 2.106, NG52 (formerly NG104). See *id.* Due to recent rule changes, Intelsat is not seeking waiver extension of footnote 2 of Section 202(a)(1) of the Commission rules, which has been eliminated. 47 C.F.R. § 202(a)(1) n. 2 (rule section at time of 2006 grant).

In accordance with the requirements of the Commission's rules,<sup>4</sup> 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 3C.<sup>5</sup> Consistent with Section 1.62 of the Commission's rules,<sup>6</sup> Intelsat will continue to operate the Galaxy 3C 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.

**I. REQUEST FOR EXTENSION OF LICENSE TERM**

Intelsat seeks to extend the license term for the Galaxy 3C satellite, and a previously granted waiver,<sup>7</sup> through June 30, 2026. The Galaxy 3C satellite was placed into service on September 22, 2002.<sup>8</sup> Pursuant to Sections 25.121(a) and (d)(1) of the Commission's rules, the license term for Galaxy 3C will expire on September 22, 2017.<sup>9</sup> This expiration date is well before the expected end of service life of the satellite, which was most recently estimated to be early 2023, assuming no inclined orbit operation; inclined orbit operation would extend Galaxy

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<sup>4</sup> 47 C.F.R. § 25.117(c).

<sup>5</sup> *See supra* n. 2. To the extent necessary, Intelsat requests a waiver of § 25.114(a)(1) of the Commission's rules, which requires submission of Schedule S. 47 C.F.R. § 25.114(a)(1). At the time of filing Galaxy 3C's prior application providing technical information, a Schedule S was not required. Given that this modification request seeks only to extend the satellite's license term and does not change any of the operational information previously provided to the FCC, there is good cause not to require Intelsat to provide a Schedule S.

<sup>6</sup> 47 C.F.R. § 1.62 (permitting continued operations by a licensee where there is a proper and timely pending application for renewal of the license).

<sup>7</sup> *See supra* n. 3.

<sup>8</sup> *See* Letter from Joseph A. Godles, Attorney for PanAmSat Licensee Corp., to Ms. Marlene H. Dortch, Federal Communications Commission, File No. SAT-LOA-19990812-00082 (March 3, 2003) (certifying that the Galaxy 3C spacecraft had been successfully placed into orbit).

<sup>9</sup> 47 C.F.R. §§ 25.121(a), (d)(1).

3C's expected end of service life an additional three to four years. In order to accommodate the planned inclined orbit operation of Galaxy 3C, Intelsat is requesting that the license term be extended through June 30, 2026. 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. 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 Galaxy 3C at the 95.05° W.L. orbital location. The Galaxy 3C satellite's subsystems and solar panels are functioning normally, and there are no single points of failure on Galaxy 3C 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.<sup>10</sup>

## **III. POST-MISSION DISPOSAL PLAN**

At the end of the Galaxy 3C mission, Intelsat will dispose of the satellite by moving it to an altitude of at least 265.9 kilometers above the geostationary arc. For that purpose, 7.2 kilograms of xenon propellant has been reserved.

In calculating the disposal orbit, Intelsat used simplifying assumptions as permitted under the Commission's *Orbital Debris Report and Order*.<sup>11</sup> The effective area to mass ratio ( $Cr \cdot A/M$ ) of the Galaxy 3C spacecraft is 0.028 m<sup>2</sup>/kg, resulting in a minimum perigee disposal

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<sup>10</sup> See e.g., *Policy Branch Information; Actions Taken*, Report No. SAT-01156, File No. SAT-MOD-20160219-00019 (May 6, 2016) (Public Notice) (granting license extension for Intelsat 1R, a station-kept satellite, based on the satellite's current projected end of service including future inclined orbit operation).

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

altitude under the Inter-Agency Space Debris Coordination Committee formula of 265.9 kilometers above the geostationary arc. Accordingly, the Galaxy 3C 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 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.

Additionally, at the completion of the mission and upon disposal of the spacecraft, Intelsat will ensure the removal of all stored energy on the spacecraft by depleting all propellant tanks, venting all pressurized systems and by leaving the batteries in a permanent discharge state.

#### **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

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Intelsat Corporation

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May 23, 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*.<sup>1</sup> In December 2009 and October 2011, the Commission also approved *pro forma* changes in Intelsat’s foreign ownership.<sup>2</sup> There have been no other material changes to Intelsat’s foreign ownership since the date of the *Intelsat-Serafina Order*.

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<sup>1</sup> *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 22,151 (2007).

<sup>2</sup> *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”),<sup>1</sup> based on the Bureau’s finding that PanAmSat had not satisfied applicable construction milestones.<sup>2</sup> 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.

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<sup>1</sup> 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).

<sup>2</sup> See *PanAmSat Licensee Corp.*, Memorandum Opinion and Order, 15 FCC Rcd 18720 (IB 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 22,151 (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, DA 12-768 (rel. May 16, 2012). This change of control has not yet been fully consummated.