

S2408 SAT-MOD-20160805-00079 IB2016001816  
Intelsat License LLC  
INTELSAT-904



File # SAT-MOD-20160805-00079  
Call Sign S2408 Grant Date 11/03/16  
(or other identifier)  
From see conditions Term Dates To: 12/31/19  
Approved: Stephen J. Duall

Approved by OMB  
3060-0678

Date & Time Filed: Aug 5 2016 4:06:52:973PM  
File Number: SAT-MOD-20160805-00079

\*with conditions

*Stephen J. Duall*  
Stephen J. Duall  
Chief, Satellite Policy Branch

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


APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:  
Request to Modify Authorization for Intelsat 904 Satellite (Call Sign S2408)

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 No. SAT-MOD-20160805-00079

<b>IBFS File No(s):</b>	SAT-MOD-20160805-00079	<p><b>GRANTED – With Conditions</b></p>  <p><b>International Bureau Satellite Division</b></p>
<b>Licensee/Grantee:</b>	Intelsat License LLC	
<b>Call Sign:</b>	S2408	
<b>Satellite Name:</b>	Intelsat 904	
<b>Orbital Location: (required station-keeping tolerance)</b>	45.1 ° E.L. (+/- 0.05 degrees east/west)	
<b>Administration:</b>	United States of America	
<b>Nature of Service:</b>	Fixed Satellite Service	
<b>Scope of Grant:</b>	Modification of the authorization for the Intelsat 904 space station to specify operations at the 45.1° E.L. orbital location, instead of Intelsat 904's currently authorized location of 55.6° W.L. Intelsat 904's license term is also extended from March 27, 2017, through December 31, 2019.	
<b>Service Area(s):</b>	See Item S6 of Schedule S and accompanying .gxt files	
<b>Frequencies:</b>	3625-3700 MHz(space-to-Earth) 3700-4200 MHz (space-to-Earth) 5850-5925 MHz (Earth-to-space) 5925-6425 MHz (Earth-to-space) 10.95-11.2 GHz (space-to-Earth) 11.45-11.7 GHz (space-to-Earth) 14.0-14.5 GHz (Earth-to-space)  Telemetry, Tracking & Command center frequencies: 3947.5 MHz, 3948.0 MHz, 3952.0 MHz, and 3952.5 MHz (space-to-Earth) 6173.7 MHz and 6176.3 MHz (Earth-to-space)	
<p><b>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></p> <ol style="list-style-type: none"> <li>1. Intelsat must maintain full operational control of the Intelsat 904 space station at all times.</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. Intelsat must operate Intelsat 904 at the 45.1 ° E.L. orbital location in compliance with all existing or future coordination agreements for this location.</li> <li>4. While at the 45.1 ° E.L. orbital location, Intelsat must maintain the Intelsat 904 spacecraft with an east/west longitudinal station-keeping tolerance of +/- 0.05 degrees.</li> <li>5. The United States remains the licensing administration of the Intelsat 904 spacecraft and its communications payloads for purposes of International Telecommunication Union (ITU) Radio Regulation 18.1 and is the administration responsible for the operations of Intelsat 904. Intelsat will operate Intelsat 904 at the 45.1° E.L. orbital location pursuant to Germany's EUROPESTAR-BSS-45E and EUROPESTAR-45E-A filings. The U.S. Administration will not object to use of the Intelsat 904 satellite by the German Administration for claiming bringing into use or continuing the use of orbital assignments at 45.1° E.L. This grant does not in any way express a view concerning, or agreement as to, the validity or lack of validity of any ITU filing at or in the vicinity of the 45.1° E.L. orbital location.</li> <li>6. The operations of Intelsat 904 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</li> </ol>		

**ATTACHMENT TO GRANT**  
Intelsat License LLC  
IBFS File No. SAT-MOD-20160805-00079

non-conforming operations with the operations of U.S.-licensed geostationary orbit space stations within 6 degrees of the 45.1° E.L. orbital location. Intelsat must also comport with the maximum power limits indicated in its application. Non-conforming operation must also be coordinated with respect to those operations of non-U.S.-licensed space stations within 6 degrees of 45.1° E.L. involving approved communications with U.S.-licensed earth stations.

7. Intelsat's request that the waivers of Sections 25.202(g), 25.210(a)(1), 25.210(a)(3), 25.210(i)(1), and 25.211(a) of the Commission's rules, 47 CFR §§ 25.202(g), 25.210(a)(1), 25.210(a)(3), 25.210(i)(1), and 25.211(a), previously granted to Intelsat 904 at the 60.0° E.L. orbital location continue to apply to its operations at the 45.1° E.L. orbital location is granted.<sup>1</sup>

8. Intelsat's request for waiver of Section 2.106, footnotes US245 and NG185 of the Commission's rules, 47 CFR §§ 2.106, US245 and NG185, is granted. Neither footnote US245, which states that the 3600-3650 MHz use of the non-Federal FSS is limited to international inter-continental systems and is subject to case-by-case electromagnetic compatibility analysis, nor footnote NG185, which states that the 3650-3700 MHz use of the non-Federal FSS is limited to international inter-continental systems, apply to the operation of Intelsat 904 at the 45.1° E.L. orbital location, because Intelsat 904 will not "see" the U.S. from this location, and thus cannot interfere with U.S. domestic operations.

9. Intelsat's request for waiver of Section 25.140(a) of the Commission's rules, 47 CFR § 25.140(a), which requires Intelsat to provide a two-degree interference analysis for the C-band transmissions on the Intelsat 904 satellite, is moot. Intelsat states that Intelsat 904's transmissions in the C-band will comply with the levels contained in Sections 25.212(c) and (d) and Section 25.140(a)(3)(i) and (ii) of the Commission's rules, 47 CFR §§ 25.212(c) and (d) and 25.140(a)(3)(i) and (ii), as modified pursuant to a recent Commission-level order streamlining Part 25 rules governing satellite communications,<sup>2</sup> unless higher levels are coordinated with affected adjacent satellite operators within 6 degrees of the 45.1° E.L. orbital location. Thus, Intelsat 904's operations meet the requirements of the new rule and do not require a waiver.<sup>3</sup>

10. Intelsat's requests waiver of Sections 25.164 and 25.165, 47 CFR §§ 25.164 and 25.165, which set forth milestone and bond posting requirements for all of the frequencies on the Intelsat 904 satellite that are not currently on an FCC-licensed satellite at the 45.1° E.L. orbital location. Since Intelsat 904 is already in orbit and operating, and will commence its drift to 45.1° E.L. in the near future under a request for special temporary authority granted today,<sup>4</sup> a waiver of these rules is granted.

11. Intelsat's use of the 10.95-11.2 GHz and 11.45-11.7 GHz frequency bands is 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.

12. Pursuant to footnote US342 of the United States Table of Frequency Allocations, 47 CFR § 2.106, services operating in the 14.47-14.50 GHz band shall take all practicable steps to protect the radio

<sup>1</sup> See Application of Intelsat LLC to Modify Intelsat 904 License, File No. SAT-MOD-20011221-00140 (grant stamp dated Mar. 22, 2002).

<sup>2</sup> *Comprehensive Review of Licensing and Operating Rules for Satellite Services*, Second Report and Order, 30 FCC Rcd 14713, 14756-77, paras. 118-119 (2015) (*Part 25 Second R&O*), wherein the information requirements of 47 CFR § 25.140(a) were changed and proposed GSO FSS operations in the conventional or extended C-bands are now covered in 47 CFR § 25.140(a)(3).

<sup>3</sup> *Id.* Furthermore, we have already indicated that Intelsat's operation of Intelsat 904 must comport with the applicable uplink and downlink limits in 47 CFR § 25.140(a)(3). See condition 6, *supra*.

<sup>4</sup> IBFS File No. SAT-STA-20160722-00065 (grant stamp, Nov. 3, 2016).

**ATTACHMENT TO GRANT**  
Intelsat License LLC  
IBFS File No. SAT-MOD-20160805-00079

astronomy service from harmful interference.


13. This authorization to provide Fixed Satellite Services at the 45.1° E.L. orbital location will become effective when the Intelsat 904 space station commences operations at 45.1° E.L. Intelsat must notify the Commission, in writing, when Intelsat 904 commences operations at the 45.1° E.L. orbital location under this authorization within three (3) business days of commencement of such operations.

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 issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 2.106, and is effective immediately. Petitions for reconsideration under Section 1.106 or applications for review under Section 1.115 of the Commission's rules, 47 C.F.R. § § 1.106, 1.115, may be filed within 30 days of the date of the public notice indicating that this action was taken.

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).

<b>Action Date:</b>	November 3, 2016	
<b>Term Dates</b>	<b>From:</b> see conditions	<b>To:</b> December 31, 2019

**Approved:**  
  
Stephen J. Duall  
Chief, Satellite Policy Branch

9-16. Name of Contact Representative

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

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:  
S2408

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:

SATMOD2001122100140

TYPE OF SERVICE

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:

- a. Fixed Satellite
- b. Mobile Satellite
- c. Radiodetermination Satellite
- d. Earth Exploration Satellite
- e. Direct to Home Fixed Satellite
- f. Digital Audio Radio Service
- g. Other (please specify)

21. STATUS: Choose the button next to the applicable status. Choose only one.

- Common Carrier     Non-Common Carrier

22. If earth station applicant, check all that apply.

- Using U.S. licensed satellites
- Using Non-U.S. licensed satellites

23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities:

- Connected to a Public Switched Network     Not connected to a Public Switched Network     N/A

24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all applicable frequency band(s).

- a. C-Band (4/6 GHz)     b. Ku-Band (12/14 GHz)
- c. Other (Please specify upper and lower frequencies in MHz.)

Frequency Lower:    Frequency Upper: (Please specify additional frequencies in an attachment)

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

EngineeringStatement

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 ('Intelsat'), pursuant to Section 25.117 of the rules of the Federal Communications Commission, hereby seeks to modify the authorization for the Intelsat 904 satellite (Call Sign S2408). Specifically, this modification application seeks authority to relocate Intelsat 904 to, and operate the satellite at, 45.1 E.L., pursuant to the

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

Beams

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. Gen. Counsel, Intelsat Corporation

→

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**

The public reporting for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PERM, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to PRA@fcc.gov. PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

Remember – You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-0678.

**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 ('Intelsat'), pursuant to Section 25.117 of the rules of the Federal Communications Commission, hereby seeks to modify the authorization for the Intelsat 904 satellite (Call Sign S2408). Specifically, this modification application seeks authority to relocate Intelsat 904 to, and operate the satellite at, 45.1 E.L., pursuant to the International Telecommunication Union filing of the German Administration held by EUROPE\*STAR Gesellschaft fur Satellitenkommunikation mbH, a joint venture that is 51 percent owned by a sister entity of Intelsat, PanAmSat Europe Corporation. Intelsat also seeks to extend the license term for Intelsat 904 through December 31, 2019.