

S2134 SAT-MOD-20170823-00121 IB2017002343
SES Americom, Inc.
AMC-2



File # SAT-MOD-20170823-00121

Call Sign S2134 Grant Date 10/18/17
(or other identifier)

Term Dates
From 12/30/17 To: 12/31/20

Approved by OMB
3060-0678

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

Date & Time Filed: Aug 23 2017 4:46:35:616PM
File Number: SAT-MOD-20170823-00121

*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 to Extend AMC-2 License (call sign S2134)

1-8. Legal Name of Applicant			
Name:	SES Americom, Inc.	Phone Number:	202-478-7143
DBA Name:		Fax Number:	202-478-7111
Street:	1129 20th Street NW Suite 1000	E-Mail:	petra.vorwig@ses.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20036 -
Attention:	Ms Petra A Vorwig		

ATTACHMENT TO GRANT
SES Americom, Inc.
IBFS File No. SAT-MOD-20170823-00121

IBFS File No(s):	SAT-MOD-20170823-00121	GRANTED – With Conditions  International Bureau Satellite Division
Licensee/Grantee:	SES Americom, Inc. (SES)	
Call Sign:	S2134	
Satellite Name:	AMC-2	
Orbital Location: (required station-keeping tolerance)	84.85° W.L. (+/- 0.01 degrees)	
Administration:	United States of America	
Nature of Service:	Direct-to-Home (DTH), Fixed-Satellite Service (FSS)	
Scope of Grant:	Modification of authorization for AMC-3 to extend license term from December 30, 2017, until December 31, 2020.	
Previous Grant(s):	<p>Modification of the authorization for the AMC-2 space station to specify operations at the 84.85° W.L. orbital location and to provide service in the conventional C-band. SAT-MOD-20170202-00011 (Mar. 30, 2017)</p> <p>Modification of the authorization for the AMC-2 space station to extend the license term to December 31, 2017, and to specify operations of AMC-2 at the 84.85° W.L. orbital location using the 11.7-12.2 GHz (space-to-Earth) and 14.0-14.5 GHz (Earth-to-space) frequency bands. SAT-MOD-20160329-00029 (June 23, 2016)</p> <p>Modification of the authorization for the AMC-2 space station at the 80.85° W.L. orbital location to permit reorientation of the satellite towards North America, rather than towards South America. SAT-MOD-20140207-00020 (Apr. 10, 2014)</p> <p>Modification of the authorization for the AMC-2 space station to specify operations at the 80.85° W.L. orbital location, instead of the previously authorized 19.2° E.L. orbital location. SAT-MOD-20130225-00024 (May 9, 2013)</p> <p>Modification of the authorization for the AMC-2 space station to specify operations at the 19.0° E.L. orbital location, rather than at 4.98° E.L. SAT-MOD-20120524-00087 (Jul 25, 2012)</p> <p>Modification of the authorization for the AMC-2 space station to specify operations at the 4.98° E.L. orbital location, rather than at its previously authorized location of 78.95° W.L. and to extend the license term of AMC-2 through May 31, 2016. SAT-MOD-20111025-00209 (Feb. 24, 2012)</p> <p>Modification of the authorization for the AMC-2 space station at the 78.95° W.L. orbital location to add operations in the 3700-4200 MHz and 5925-6425 MHz frequency band. SAT-MOD-20101215-00261 (Mar. 8, 2011)</p> <p>Modification of the authorization for the AMC-2 space station to specify operations the 78.95° W.L. orbital location rather than at the 101° W.L. orbital location. SAT-MOD-20100324-00056 (June 21, 2010).</p> <p>Modification of the authorization for the AMC-2 space station to specify operations at the 100.95° W.L. orbital location with an east-west station-keeping range of 0.15 degrees of longitude between 100.90° W.L. and 101.05° W.L. SAT-MOD-20080124-00030 (May 19, 2008)</p>	

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	<p>Modification of the authorization for the AMC-2 space station pursuant to the streamlined fleet management procedures under section 25.118(e) of the Commission's rules to relocate AMC-2 from the 105° W.L. orbit location to the 85° W.L. orbit location. SAT-MOD-20050527-00110 (May 27, 2005)</p> <p>Modification of the authorization for the AMC-2 space station to provide any necessary authority to provide direct-to-home services over a fixed-satellite service facility. SAT-MOD-20021108-00205 (Aug 15, 2002)</p> <p>Grant of authority for the AMC-2 space station. SAT-LOA-19940310-00008 (Oct. 31, 1995)</p>
Service Area(s):	North America, South America, Caribbean
Frequencies:	<p>3700–4200 GHz (space-to–Earth) 5925–6425 GHz (Earth-to-space) 11.7–12.2 GHz (space-to–Earth) 14.0–14.5 GHz (Earth-to-space)</p> <p>Telemetry, Tracking, & Command center frequencies (TT&C): Telemetry: 3700.5 MHz, 4199.5 MHz, 11.702 GHz, and 12.198 GHz Command: 6423.5 MHz</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:

1. SES Americom must comply with the applicable laws, regulations, rules and authorization process of any country in which it seeks to provide service.
2. SES Americom must operate AMC-2 at the 84.85° W.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 coordinations.
3. The operations of AMC-2 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 SES Americom coordinates any non-conforming operations with the operations of U.S.-licensed geostationary orbit space stations within 6 degrees of the 84.85° W.L. orbital location. SES Americom must also comport with the maximum power limits indicated in existing or future coordination agreements at 84.85° W.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 84.85° W.L. involving approved communications with U.S.-licensed earth stations.
4. Operation of AMC-2 in the 14.47-14.5 GHz (Earth-to-space) frequency band is 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.
5. On our own motion, we waive section 25.210(j) of the Commission's rules, 47 CFR § 25.210(j). Section 25.210(j) requires geostationary space stations to be maintained with +/- 0.05 degrees of their assigned orbital longitude in the east-west-direction, unless specifically authorized by the Commission to operate

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with a different longitudinal tolerance. SES proposes to save fuel by operating AMC-2 with an east-west station-keeping tolerance of +/- 0.1 degrees. SES also states that the proposed station-keeping volume for AMC-2 will not overlap with the station-keeping volume of any other spacecraft. We agree that increasing the station-keeping volume of the AMC-2 spacecraft will not adversely affect the operations of other spacecraft and conserve fuel. Accordingly, SES is authorized to operate the AMC-2 space station with an east-west station-keeping tolerance of +/- 0.1 degrees of 84.85° W.L., provided that no other spacecraft is located within the same station-keeping volume of AMC-2. This waiver and the operations it permits will terminate in the event a spacecraft is launched or relocated into a location such that its station-keeping volume would overlap AMC-2's +/- 0.1 degree station-keeping volume, but not overlap AMC-2's physical operations with those of other spacecraft. This waiver is limited to AMC-2 and does not extend to any replacement space craft.

6. On our own motion, we waive section 25.114(c)(4) of the Commission's rules, 47 CFR § 25.114(c)(4). Section 25.114(c)(4) requires that the predicated antenna gain contours for each transmit and receive antenna beam for geostationary satellite be provided in a GIMS-readable format. SES states that the satellite manufacturer does not provide global horn antenna data in the required format and, thus, SES has provided the information in Annex A of the Technical Amendment.¹
7. Section 25.114(c)(vi)(A) of the Commission's rules, 47 CFR §§ 25.114(c)(vi)(A), requires that space stations in a geostationary orbit specify the predicted space station antenna gain contour(s) for each transmit and receive antenna beam, except for beams where the contour at 8 dB below peak falls entirely beyond the edge of the visible Earth. The contour(s) should be plotted on an area map a 2 dB intervals down to the 10dB below the peak gain at 5 dB intervals between 10 dB and 20 dB below the peak gain, and the information must be in a GIMS-readable format. The information required was not prepared in accordance with the requirements of 47 CFR §§ 25.114(c)(vi)(A) because the space station manufacturer did not provide .gxt data for this antenna. We find, however, that the figure provided in Figure A-1 in Annex A to the Technical Appendix provides sufficient information of the global horn antenna to enable the Commission to determine whether the AMC-2 space station meets the Commission's technical requirements.²
8. On our own motion, we waive section 25.283(c) of the Commission's rules, 47 CFR § 25.283, with respect to oxidizer that will not be vented at the satellite's end of life. SES states that the tank containing this oxidizer was sealed shortly after the satellite's launch, and the satellite was launched on January 30, 1997, before section 25.283(c) was adopted. Accordingly, venting would require direct retrieval of the satellite, which is not currently possible.³

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).

¹ See IBFS File No. SAT-MOD-20160329-00029, Annex A, Technical Amendment (June 23, 2016).

² *Id.*

³ SES states that the nominal lifeline prediction previously approved for AMC-2 is still applicable. See Letter from Karis A. Hastings, Counsel for SES World Skies, to Marlene H. Dortch, Secretary, Federal Communications Commission, IBFS File No. SAT-MOD-20100324-00056 (July 20, 2010).

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SES Americom, Inc.
IBFS File No. SAT-MOD-20170823-00121

Action Date:	October 19, 2017	
Term Dates	From: December 30, 2017	To: December 31, 2020
Approved:	 Stephen J. Duall Chief, Satellite Policy Branch	

9-16. Name of Contact Representative

Name:	Karis A. Hastings	Phone Number:	202-599-0975
Company:	SatCom Law LLC	Fax Number:	
Street:	1317 F St NW Suite 400	E-Mail:	karis@satcomlaw.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20004-
Attention:		Relationship:	

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: S2134</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:</p> <p>(b) File number: SATMOD2017020200011</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 checked="" 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?	<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. Exhibit A

BASIC QUALIFICATIONS

35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules? Yes No
If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.

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.

Exhibit B

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.)

SES Americom, Inc. hereby requests modification of its license to operate its AMC-2 (Call Sign 2134) satellite to extend the license term to December 31, 2020. See attached narrative.

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
Petra A. Vorwig

-->

46. Title of Person Signing
Senior Legal & Regulatory Counsel

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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