



File # SAT-LOI-20130319-00040

Call Sign S2902 Grant Date 12/12/13

(or other identifier)

From <sup>see</sup> conditions Term Dates To: \_\_\_\_\_

Approved by OMB  
3060-0678

Approved: *Stephen J. Duall*

Stephen J. Duall  
Chief, Satellite Policy Branch

Date & Time Filed: Mar 19 2013 2:00:00:113PM  
File Number: SAT-LOI-20130319-00040  
Callsign/Satellite ID: S2902

\*with conditions

APPLICATION FOR SATELLITE SPACE STATION AUTHORIZATIONS FCC 312 MAIN FORM FOR OFFICIAL USE ONLY	FCC Use Only
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APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:

Letter of Intent – Nominal 70 W.L.

1-8. Legal Name of Applicant			
Name:	ViaSat, Inc.	Phone Number:	760-476-2583
DBA Name:		Fax Number:	760-929-3941
Street:	6155 El Camino Real	E-Mail:	daryl.hunter@viasat.com
City:	Carlsbad	State:	CA
Country:	USA	Zipcode:	92009
Attention:	Mr. Daryl T. Hunter		

The Letter of Intent filed by ViaSat, Inc. (ViaSat), IBFS File No. SAT-LOI-20130319-00040,<sup>1</sup> to access the United States market using a proposed Ka-band geostationary orbit (GSO) space station, VIASAT-2 (Call Sign S2902), which will operate under the authority of the United Kingdom at the 69.9° W.L. orbital location, is GRANTED. Accordingly, ViaSat is granted access to the U.S. market to provide Fixed-Satellite Service (FSS) from the 69.9° W.L. orbital location using the 18.3-18.8 GHz and 19.7-20.2 GHz (space-to-Earth), and 28.35-28.6 GHz and 29.5-30.0 GHz (Earth-to-space) frequency bands on a primary basis; the 28.1-28.35 GHz and 28.6-29.1 GHz (Earth-to-space) frequency bands on a secondary basis; and the 18.8-19.3 GHz (space-to-Earth) frequency band on a non-conforming basis. VIASAT-2 will use the following center frequencies for telemetry, tracking, and command (TT&C) operations: 29500.5 MHz, 29503 MHz and 29999 MHz (Earth-to-space); and 19701 MHz, 19703 MHz and 20199 MHz (space-to-Earth). Communications between U.S.-licensed earth stations and the VIASAT-2 space station must be in accordance with the terms, conditions, and technical specifications set forth in ViaSat's Letter of Intent, the Federal Communications Commission's rules not waived herein, and are subject to the following conditions:

1. This grant does not include provision of any Direct-to-Home (DTH) service, Direct Broadcast Satellite (DBS), or Digital Audio Service (DARS) to, from, or within the United States.
2. VIASAT-2 must be maintained with an east/west longitudinal station-keeping tolerance of  $\pm 0.05$  degrees of the 69.9° W.L. orbital location.
3. Communications between U.S.-licensed earth stations and the VIASAT-2 space station must be in compliance with all existing and future space station coordination agreements reached between the United Kingdom and other Administrations.
4. ViaSat's request for a waiver of Footnote NG165 to Section 2.106 of the United States Table of Frequency Allocations, 47 C.F.R. § 2.106, to permit ViaSat to operate its GSO FSS VIASAT-2 space station in the 18.8-19.3 GHz (space-to-Earth) frequency band on a non-conforming basis is GRANTED. In the United States, the 18.8-19.3 GHz frequency band is designated for non-Federal, non-geostationary orbit (NGSO) FSS operations on a primary basis, with no designation for non-Federal GSO operations. The 18.8-19.3 GHz band is also allocated to Federal GSO and NGSO FSS operations on a primary basis. As a non-conforming user, ViaSat must accept any interference from any non-Federal NGSO FSS system, any Federal GSO FSS or NGSO FSS system, or any grandfathered co-primary fixed service stations authorized to use the 18.8-19.3 GHz frequency band. In addition, ViaSat must not cause harmful interference to any authorized non-Federal NGSO FSS system, any authorized Federal GSO FSS or NGSO FSS system, or any grandfathered co-primary fixed service stations, and must immediately cease operations upon notification of such harmful interference resulting from its operations.
5. ViaSat must coordinate its space-to-Earth operations in the 18.3-19.3 GHz and 19.7-20.2 GHz frequency bands with the U.S. Federal systems, including Federal operations to earth stations in foreign countries, in accordance with footnote US334 to the United States Table of Frequency Allocations, 47 C.F.R. § 2.106. In addition to meeting the terms of the coordination agreement, the non-conforming VIASAT-2 operations in the 18.8-19.3 GHz band must not cause harmful interference to, nor claim protection from, present and future Federal GSO and NGSO systems, non-Federal NGSO systems or any non-conforming services previously authorized on a non-harmful interference basis.

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<sup>1</sup> The application was accepted for filing on June 14, 2013. *Policy Branch Applications Accepted for Filing*, Public Notice, Report No. SAT-00954 (June 14, 2013). No comments were filed.

6. The power flux-density (PFD) at the Earth's surface produced by the emissions from the VIASAT-2 space station for all atmospheric conditions, and for all methods of modulation in the 18.3-19.3 GHz and 19.7-20.2 GHz frequency bands (space-to-Earth), must not exceed a level of -118 dBW/m<sup>2</sup>/MHz at any angle of arrival.<sup>2</sup>
7. ViaSat's request for partial waiver of Section 25.114(c) of the Commission's rules, 47 C.F.R. § 25.114(c) is dismissed as moot. ViaSat filed the required information with its application. Consequently, no waiver is required.
8. ViaSat's request for a waiver of Section 25.210(i) of the Commission's rules, 47 C.F.R. § 25.210(i), is GRANTED. Section 25.210 requires that space station antennas in the FSS be designed to meet a cross polarization isolation of 30dB within the primary coverage area of the antenna. We grant this waiver subject to the condition that VIASAT-2's operations must accommodate future satellite networks serving the United States that are two-degree compliant. Further, VIASAT-2 shall accept any interference to its non-compliant operations caused by space stations that comply with Section 25.210(i). *See Star One S.A. Petition for Declaratory Ruling to Add the Star One C1 Satellite at 65° W.L. to the Permitted Station List*, Order, 19 FCC Rcd 16334 (Sat. Div. 2004).
9. VIASAT-2's operations must not cause harmful interference to any non-Federal station authorized to operate on a primary basis in the 28.6-29.1 GHz frequency band, must accept any interference from these systems, and must terminate operations immediately upon notification of harmful interference.
10. The VIASAT-2 space station is added to the Ka-band Permitted List at the 69.9° W.L. orbital location for the 28.35-28.6 GHz and 29.5-30.0 GHz (Earth-to-space), and the 18.3-18.8 GHz and 19.7-20.2 GHz (space-to-Earth) frequency bands; however, until ViaSat has completed coordination pursuant to Footnote US334 to the United States Table of Frequency Allocations, 47 C.F.R. § 2.106, and both the FCC and the National Telecommunications and Information Administration have approved the coordination, U.S.-licensed earth stations shall not communicate with the VIASAT-2 space station in the 18.3-18.8 GHz and the 19.7-20.2 GHz frequency bands. *See Revision of Part 25 Establishment of a Permitted List Procedure for Ka-band Space Stations, Declaratory Order*, 25 FCC Rcd 1542 (2010).
11. This grant is based upon a finding that ViaSat is and will be subject to direct and effective regulation by the United Kingdom concerning orbital debris mitigation. This grant will become effective and remain effective only to the extent that launch and space operations are authorized by the United Kingdom Space Agency under the United Kingdom Outer Space Act. ViaSat must file evidence in the public record of this proceeding demonstrating grant of any such authorizations within five business days of action by the United Kingdom Space Agency.
12. VIASAT-2's use of the 28.10-28.35 GHz frequency band (Earth-to-space) is on a secondary basis and limited to gateway earth station operations only. This band is designated on a primary basis to the Local Multipoint Distribution Service (LMDS). *See Rulemaking to Amend Parts 1, 2, 21, and 25 of the*

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<sup>2</sup> Footnote US255 to the Table of Frequency Allocations, 47 C.F.R. § 2.106, requires that the PFD across the 200 megahertz of the 18.6-18.8 GHz band not exceed -95 dBW/m<sup>2</sup>. ViaSat proposes to operate the VIASAT-2 space station with a maximum PFD of -118 dBW/m<sup>2</sup>/MHz in this band. This level corresponds to a maximum PFD of -95 dBW/m<sup>2</sup>/200 MHz. Consequently, VIASAT-2's proposed operations meet the PFD limit in US255. VIASAT-2's operations also meet other PFD limits for transmitting Ka-band space stations. *See* 47 C.F.R. §§ 25.138(a)(6), 25.208(c), 25.208(d) and 25.208(e).


Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, Third Report and Order, FCC 97-378, 12 FCC Rcd 22310 (1997). Accordingly, VIASAT-2's operations must be on an unprotected, non-harmful interference basis relative to LMDS in accordance with 47 C.F.R. § 2.105(c)(2). VIASAT-2 must not cause harmful interference to, nor claim protection from, authorized LMDS stations in the 28.10-28.35 GHz frequency band that are presently assigned, or that may be assigned these frequencies in the future. Further, ViaSat must terminate operations immediately upon notification of such interference. In addition, ViaSat may not claim protection from interference from LMDS stations authorized to operate in this band.

13. This grant of market access for the VIASAT-2 space station at the 69.9° W.L. orbital location will be null and void with no further action on the Commission's part if the space station is not constructed, launched, and placed into operation in accordance with the milestone schedule in Section 25.164 and the bond requirement in Section 25.165 of the Commission's rules following the date of grant, as follows:

- a. ViaSat must file a bond with Commission in the amount of \$3 million, pursuant to the procedures set forth in 47 C.F.R. § 25.165, within 30 days of this grant of U.S. market access;
- b. Enter into a binding non-contingent contract to construct VIASAT-2 within one year (December 12, 2014);
- c. Complete critical design review within two years (December 12, 2015);
- d. Commence construction within three years (December 12, 2016);
- e. Launch and begin operations within five years (December 12, 2018).

14. ViaSat is afforded 30 days from the date of this action to decline this grant of U.S market access, as conditioned. Failure to respond within this period will constitute formal acceptance of this grant, as conditioned.

15. This action is taken pursuant to Sections 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, 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 and 1.115, may be filed within 30 days of the date of the public notice indicating that this action was taken.

 <b>GRANTED*</b> International Bureau *with conditions	<b>File #</b> <u>SAT-LOI-20130319-00040</u>
	<b>Call Sign</b> <u>S2902</u> <b>Grant Date</b> <u>12/12/13</u> (or other identifier)
	<b>From</b> <u>See conditions</u> <b>Term Dates</b> <u>To:</u>
	<b>Approved:</b> <u>Stephen J. Duall</u> Stephen J. Duall Chief, Satellite Policy Branch

9-16. Name of Contact Representative

Name:	John P. Janka	Phone Number:	202-637-2200
Company:	Latham & Watkins LLP	Fax Number:	202-637-2201
Street:	555 Eleventh Street NW Suite 1000	E-Mail:	john.janka@lw.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20004 -1304
Attention:	Mr. John P. Janka	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.

a.

- (N/A) a1. Earth Station  
 a2. Space Station

b.

- b1. Application for License of New Station  
(N/A) b2. Application for Registration of New Domestic Receive-Only Station  
(N/A) b3. Amendment to a Pending Application  
(N/A) b4. Modification of License or Registration  
(N/A) b5. Assignment of License or Registration  
(N/A) b6. Transfer of Control of License or Registration  
(N/A) b7. Notification of Minor Modification  
(N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite
- b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States  
 b10. Replacement Satellite Application - no new frequency bands  
 b11. Replacement Satellite Application - new frequency bands (Not eligible for streamlined processing)  
 b12. Petition for Declaratory Ruling to be Added to the Permitted List  
(N/A) b13. Other (Please specify)

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): Letter of Intent – No fee required

17c. Fee Classification    BNY – Space Station (Geostationary)

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

(a) Call sign of station:  
Not Applicable

19. If this filing is an amendment to a pending application enter:

(a) Date pending application was filed:

Not Applicable

(b) File number of pending application:

Not Applicable

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>Not Applicable</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 type="checkbox"/> a. C-Band (4/6 GHz)   <input type="checkbox"/> b. Ku-Band (12/14 GHz) <input checked="" type="checkbox"/> c. Other (Please specify upper and lower frequencies in MHz.)</p> <p>Frequency Lower: 18300                      Frequency Upper: 30000                      (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.

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

26. TYPE OF EARTH STATION FACILITY: Not Applicable

PURPOSE OF MODIFICATION

27. The purpose of this proposed modification is to: (Place an "X" in the box(es) next to all that apply.) Not Applicable

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? United Kingdom

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.)

ViaSat, Inc. files this Letter of Intent seeking to use a satellite under the authority of the United Kingdom to access the United States using portions of the Ka-band at the nominal 70 degrees W.L. orbital location.

Technical Annex

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

GXT Files

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.)		
<input type="radio"/> Individual <input type="radio"/> Unincorporated Association <input type="radio"/> Partnership <input checked="" type="radio"/> Corporation <input type="radio"/> Governmental Entity <input type="radio"/> Other (please specify)		
45. Name of Person Signing Daryl T. Hunter	46. Title of Person Signing Director, Regulatory Affairs	
47. Please supply any need attachments.		
1:	2:	3:
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).		

Completed Schedule S .

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