

Intelsat 90.9° W.L.

Approved by OMB
3060-0678

Call Sign: S2662
SAT-LOA-20050210-00031
SAT-AMD-20080617-00123
SAT-AMD-20051118-00238
SAT-AMD-20080114-00008
SAT-AMD-20080701-00138

Date & Time Filed: Nov 18 2005 4:33:26:916PM
File Number: SAT-AMD-20051118-00238


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:
Intelsat IA-10 Amendment to Pending Application

1-8. Legal Name of Applicant

Name:	Intelsat North America LLC	Phone Number:	202-944-7848
DBA Name:		Fax Number:	202-944-7860
Street:	c/o Intelsat Global Svc. Corp. 3400 International Drive, N.W.	E-Mail:	susan.crandall@intelsat.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20008 -3006
Attention:	Susan H Crandall		



GRANTED
International Bureau

File # _____

Call Sign: S2662 Grant Date: 7/28/09

(or other identifier)

From: _____ Term Dates: _____ To: See conditions

Approved: [Signature] Chief, Satellite Division

w/tn conditions

Intelsat North America LLC
SAT-LOA-20050210-00031; SAT-AMD-20051118-00238;
SAT-AMD-20080114-00008; SAT-AMD-20080617-00123;
and SAT-AMD-20080701-00138

Call Sign: S2662

Attachment – Conditions of Authorization

July 28 2009

Intelsat North America LLC's (Intelsat's) request for authority to construct, launch, and operate a 17/24 GHz Broadcasting-Satellite Service (BSS) space station, Galaxy BSS-1, at the 90.9° W.L. orbital location, Call Sign S2662, which is offset 0.10° from the 91° W.L. orbital location specified in Appendix F to the *17/24 GHz BSS Report and Order*, FCC 07-76, 22 FCC Rcd 8842 (rel. May 4, 2007) at a reduced power and without full interference protection is GRANTED.¹ Accordingly, Intelsat is authorized to use the 24.75-25.25 GHz frequency band (Earth-to-space) and the 17.3-17.8 GHz frequency band (space-to-Earth), with the 17.7-17.8 GHz (space-to-Earth) frequency band limited to international service only. Intelsat's authorization is subject to the terms, conditions, and technical specifications set forth in its applications, this Attachment, and the Federal Communications Commission's rules.

1. Intelsat North America LLC may operate its Galaxy BSS-1 space station up to power flux density (PFD) levels that are reduced from those specified in 47 C.F.R. §§ 25.208(c) and 25.208(w) in accordance with the following calculation methodology: For a given location on the surface of the Earth at which the required PFD reduction value needs to be determined, calculate the topocentric angular separation ' ϕ ' of the 87° W.L. and 91° W.L. geostationary orbital locations, and the corresponding off-axis gain $G_{CO1}(\phi)$ of the antenna specified in Section 25.224(a)(1) at that angular separation. For the same location on the surface of the Earth, also calculate the topocentric angular separation of the 87° W.L. and 90.9° W.L. geostationary orbital locations, and the gain of the antenna ' $G_{CO2}(\phi)$ ' specified in Section 25.224(a)(1) at that angular separation. Then, perform the subtraction $G_{CO2}(\phi) - G_{CO1}(\phi)$. The result is the required reduction in the PFD from the value specified in the applicable subsection of Section 25.208(c), or in Section 25.208(w).² Intelsat North America LLC's Galaxy BSS-

¹ The application was placed on Public Notice as accepted for filing on July 2, 2008. Policy Branch Information, Satellite Space Applications Accepted for Filing, *Public Notice*, Report No. SAT-00535 (rel. July 2, 2008). Comments were filed by Pegasus Development DBS Corporation (Pegasus), SES Americom Inc. (SES), and Ciel Satellite Limited Partnership (Ciel) on August 1, 2008. No petitions to deny were filed against this application. In its comment filed against all pending 17/24 GHz BSS applications, including its own applications, Pegasus sought a "clarification" regarding Commission policies relating to 47 C.F.R. §§ 25.158(c) (prohibition on transfer of place in application queue) and 25.165 (bond requirement). The issues raised by Pegasus are not relevant to the processing of this application and, instead, relate to a request to assign an application to Pegasus from DIRECTV Enterprises, LLC (DIRECTV). IBFS File No. SAT-AMD-20080916-00188. Accordingly, we will not address Pegasus's comment in this grant.

² For the purposes of this calculation, the antenna diameter 'D' should be assumed to be 0.45 meters, which is the minimum-diameter antenna for which 17/24 GHz licensees may claim protection from interference. The wavelength ' λ ' should be assumed to be 0.017131 meters, corresponding to a frequency of 17.5 gigahertz, and the value of ' η ' can be assumed to be 0.65, as stated in Section 25.224.

1 space station transmissions shall meet the reduced PFD limits under all atmospheric conditions. The PFD levels of Galaxy BSS-1's transmissions shall not exceed the maximum PFD levels stated in its application.

2. Intelsat North America LLC shall maintain its 17/24 GHz BSS space station with an east-west longitudinal station-keeping tolerance of ± 0.05 of the assigned 90.9° W.L. orbital location.
3. Intelsat North America LLC is reminded to take into consideration the geographic service requirements of Section 25.225 of the Commission's rules when designing its space station system. 47 C.F.R. § 25.225.
4. *Division of Spectrum at the 91° W.L. Appendix F orbital location.*³ Grant of this application is subject to the provisions regarding division of spectrum contained in Section 25.158(d) of the Commission's rules. Accordingly, in the event that applications relating to call sign S2698 at the 91° W.L. Appendix F orbital location are also granted, the available bandwidth at the orbital location will be evenly divided among the licensees at this location. The following procedures apply to the selection of spectrum by Intelsat:

- a. *Ensuring Contiguous Bandwidth Selections.* Section 25.158(d)(6) requires that each licensee's bandwidth selection shall not preclude other licensees from selecting contiguous bandwidth. To implement the selection of bandwidth at this location, operations for telemetry, tracking, and command (TT&C), service-link, and feeder-link band will be as follows:

- i. *Downlink Transmissions.* Telemetry and beacon transmissions in the space-to-Earth direction may be conducted in an 11-megahertz band segment at 17.300-17.311 GHz, an 11-megahertz band segment at 17.689-17.700 GHz, and/or a 10-megahertz band segment at 17.790-17.800 GHz. The remaining portions of the 17.3-17.8 GHz band may be used for service links in the space-to-Earth direction.

- ii. *Uplink Transmissions.* Telecommand transmissions in the Earth-to-space direction may be conducted in an 11-megahertz band segment at 24.750-24.761 GHz, an 11-megahertz band segment at 25.139-25.150 GHz, and/or a 10-megahertz band segment at 25.240-25.250 GHz. On our own motion, we grant a limited waiver of § 25.202(g) of the Commission's rules, 47 C.F.R. § 25.202(g), to permit TT&C operations in the 25.139-25.150 GHz band segment. Section 25.202(g) requires that "telemetry, tracking and telecommand functions for U.S. domestic satellites shall be

See Intelsat North America LLC, *Order and Authorization*, DA 09-1132 (rel. May 26, 2009) (*Intelsat Order*).

³ For purposes of this condition, the 91° W.L. Appendix F orbital location means the precise 91° W.L. geostationary orbital location and other geostationary orbital locations offset from the 91° W.L. orbital location.

conducted at either or both edges of the allocated band(s).” The allocated uplink band in this service is the 24.75-25.25 GHz band. The 25.139-25.150 GHz uplink band segment is a necessary counterpart to the 17.689-17.700 GHz downlink band segment. We grant this limited waiver to allow productive use of the 25.139-25.150 GHz uplink band segment that would otherwise be unused. This waiver only applies to use of the 25.139-25.150 GHz uplink band segment at the 91° W.L. Appendix F orbital location. The remaining portions of the 24.75-25.25 GHz band may be used by Intelsat for feeder links in the Earth-to-space direction.

b. *Selection Process.* Intelsat will be allowed to select its the particular band segments (“Selected Assignments”) no earlier than 60 days before it plans to launch its satellite, and no later than 30 days before it plans to launch its satellite, by submitting a letter to the Secretary of the Commission. Intelsat shall serve copies of this letter to the other 17/24 GHz BSS Licensee at the 91° W.L. Appendix F orbital location. *See* 47 C.F.R. § 1.47.

i. *Selection of Downlink TT&C.* Intelsat may make up to two telemetry and/or beacon downlink frequency channel selections in the 17.3-17.7 GHz TT&C band segments with a bandwidth of one megahertz each: one in the 17.300-17.311 GHz TT&C band segment, and one in the 17.689-17.700 GHz TT&C band segment. Intelsat may also make up to one telemetry and/or beacon downlink frequency channel assignment selection with a bandwidth of one megahertz and in the 17.790-17.800 GHz TT&C band segment.

ii. *Selection of Uplink TT&C.* In the 24.75-25.25 GHz TT&C band segments, Intelsat may make up to three telecommand uplink frequency channel assignment selections with a bandwidth of one megahertz each: one in the 24.750-24.761 GHz TT&C band segment, one in the 25.139-25.150 GHz TT&C band segment, and one in the 25.240-25.250 GHz TT&C band segment.

iii. *Selection of Spectrum within the 17.3-17.7 GHz band for Service-Link Operations and within the 24.75-25.15 GHz band for Feeder-Link Operations.* In the 17.3-17.7 GHz band segment, the Selected Assignment shall give Intelsat access to 1/m of the quantity of spectrum in the band segment, for transmission on a primary basis, where “m” is the number of 17/24 GHz BSS Licensees authorized to provide service in the band segment at the 91° W.L. Appendix F orbital location at the time the Selected Assignment is chosen. In the 17.3-17.7 GHz band segment, the Selected Assignment shall be chosen such that the lower band edge of the assignment is an integer multiple of 378/m megahertz from the band edge of the lower TT&C band segment, at 17.311 GHz, and the upper band edge of the assignment is 378/m megahertz above the lower band edge of the assignment. The edges of the corresponding feeder-link Selected Assignment shall be 7450 MHz above the lower and upper band edges of the service-link Selected Assignment.

iv. Selection of Spectrum within the 17.7-17.8 GHz band for Service-Link Operations and within the 25.15-25.25 GHz Band for Feeder-Link Operations. In the 17.7-17.8 GHz band segment, the Selected Assignment shall give Intelsat access to 1/n of the quantity of spectrum in the band segment, for transmission on a primary basis, where “n” is the number of 17/24 GHz BSS Licensees authorized to provide service in the band segment at the 91° W.L. Appendix F orbital location at the time the Selected Assignment is chosen. In the 17.7-17.8 GHz band segment, the Selected Assignment shall be chosen such that the lower band edge of the assignment is an integer multiple of 90/n megahertz from the lower band edge at 17.7 GHz, and the upper band edge of the assignment is 90/n megahertz above the lower band edge of the assignment. The edges of the corresponding feeder-link band for the Selected Assignment shall be 7450 MHz above the lower and upper band edges of the Selected Assignment.

c. Operations Within and Outside of the Selected Assignments. Intelsat shall operate on a primary basis relative to the other 17/24 GHz BSS Licensee within its Selected Assignments. Intelsat may also operate in other portions of the 17.3-17.7 GHz, 17.7-17.8 GHz, and 24.75-25.25 GHz frequency bands outside its own Selected Assignments on a secondary basis with respect to operations of the other 17/24 GHz BSS Licensee in its respective Selected Assignments. Each 17/24 GHz BSS Licensee at the 91° W.L. Appendix F orbital location that launches a satellite to that location shall serve a Notice of Successful Launch, by letter to the Chief, Satellite Division, International Bureau, Federal Communications Commission. Copies of the letter shall be served on the other 17/24 GHz BSS Licensee at the 91° W.L. Appendix F orbital location. Within one week of receiving written notice of a successful launch, the 17/24 GHz BSS Licensee operating at the 91° W.L. Appendix F orbital location within the Selected Assignments of the newly launched satellite will be required to cease operations on such selected assignments.

5. Intelsat North America LLC’s request for a limited waiver of 47 C.F.R. § 25.202(g) for launch and early orbit (LEOP) operations is GRANTED. Section 25.202(g) limits space station operators to TT&C links in the same frequency bands as their primary service operations.⁴ The purpose of this rule is to simplify the coordination process among space stations at adjacent orbit locations, to provide an incentive for a space station operator to maximize the efficiency of its system’s TT&C operations, and to minimize the constraints placed on other space station operations.⁵ We find that Intelsat has demonstrated good cause for a waiver based on: 1) the present lack of 17/24 GHz TT&C facilities around the

⁴ 47 C.F.R. § 25.202(g).

⁵ Amendment of the Commission’s rules with Regard to the 3650-3700 MHz Government Transfer Band, *First Report and Order and Second Notice of Proposed Rulemaking*, 15 FCC Rcd 20488, 20538 (2000).

world; 2) the limited duration of its LEOP operations; and 3) its ability to coordinate C or Ku-band LEOP operations. Accordingly, Intelsat is authorized to use the center frequencies 5925.5 MHz (vertical polarization) and 6424.5 MHz (horizontal polarization) for LEOP global telecommand transmissions (Earth-to-space), with one megahertz of bandwidth at each center frequency. Intelsat is also authorized to use the center frequencies 4197.0 MHz (vertical polarization) and 4198.5 MHz (vertical polarization) for LEOP global telemetry transmissions (space-to-Earth), with 350 kilohertz of bandwidth at each center frequency. As a condition of this waiver, Intelsat shall coordinate its LEOP operations with all potentially-affected operators of other authorized radiocommunication systems. In the absence of a coordination agreement regarding such operations, Intelsat's operations shall be on a non-harmful interference basis *i.e.*, Intelsat shall not cause harmful interference to, and shall not claim protection from interference caused to it by, any other lawfully operating radiocommunication system. Further, Intelsat must terminate operations immediately upon notification of harmful interference to a lawfully operating radiocommunication system.

6. Intelsat North America LLC's request for a waiver of 47 C.F.R. § 25.202(g) to use C-band frequencies for on-station TT&C is DENIED. Intelsat initially requested authority to operate its BSS space station at the 89° W.L. orbital location, and requested the waiver based on its authority to use C-band frequencies at this location.⁶ In amending its application, Intelsat clarified that its on-orbit TT&C would be limited to emergency operations, however, Intelsat failed to revise its waiver to include a demonstration relevant to the 90.9° W.L. orbital location. In addition, to be effective for emergency use, frequencies must be set aside for use at any time for the life of the space station, effectively precluding or conflicting with the use of spectrum by other operators on a long-term basis. We find that Intelsat has failed to show good cause justifying a waiver of Section 25.202(g) for emergency on-station TT&C.

7. Intelsat North America LLC's authorization to construct, launch, and operate its Galaxy BSS-1 space station at the 90.9° 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 technical parameters, terms and conditions of this authorization by these specified time periods following the date of authorization:
 - a. Execute a binding contract for construction within one year
(July 28 2010)
 - b. Complete the Critical Design Review of the space station within two years
(July 28 2011)
 - c. Commence Construction of the space station within three years
(July 28 2012)
 - d. Launch and begin operations on the space station within five years
(July 28 2014)
 - e. Intelsat North America LLC must file a bond with the Commission in The amount of \$3 million, pursuant to the procedures set forth in 47 C.F.R. § 25.165, within 30 days of the grant of this authorization.

⁶ Intelsat North America LLC, File No. SAT-LOA-20050210-0031, Attachment at 10.

8. Intelsat North America LLC shall complete coordination of the physical operations of the space station with operators of space stations with overlapping station-keeping volumes within two years and two months of the grant of this authorization. Intelsat shall notify the Chief, Satellite Division, International Bureau, Federal Communications Commission, in writing, within 10 business days of completion of such coordination. Failure to meet this condition shall render this authorization null and void.
9. The license term for Intelsat North America LLC's 17/24 GHz BSS space station (Call Sign S2662) is fifteen years, the term for non-broadcast 17/24 GHz BSS space station licensees. The license terms begins to run on the date that Intelsat North America LLC certifies to the Commission that the space station has been successfully placed into orbit and its operation fully conforms to the terms and conditions of this authorization. 47 C.F.R. § 25.121(a). Intelsat North America LLC shall file this certification with the Chief, Satellite Division, International Bureau, Federal Communications Commission, within ten business days of the space station being put into operation.
10. On June 30th of each year, Intelsat North America LLC must file a report with the International Bureau and the Commission's Columbia Operations Center in Columbia, Maryland, containing the information current as of May 31st of that year, pursuant to Section 25.210(l) of the Commission's rules. 47 C.F.R. § 25.210(l).
11. Intelsat North America LLC shall prepare all necessary information that may be required for submission to the ITU to initiate and complete the advance publication, international coordination, due diligence, and notification procedures for this space station, in accordance with the ITU Radio Regulations. Intelsat North America LLC shall be held responsible for all cost recovery fees associated with these ITU filings. No protection from interference caused by radio stations authorized by other administrations is guaranteed unless coordination and notification procedures are timely completed or, with respect to individual Administrations, by successfully completing coordination agreements. Any radio station authorization for which coordination has not been completed may be subject to additional terms and conditions as required to effect coordination of the frequency assignments with other Administrations.⁷
12. This authorization and all conditions contained herein are subject to the final outcome of the Commission's rulemaking in IB Docket No. 06-123 and any requirements subsequently adopted therein.
13. Intelsat North America LLC has thirty days from the date of release of this authorization to decline the authorization as conditioned. Failure to respond

⁷ In their comments, SES and Ciel request that certain conditions relating to ITU procedures be included in each 17/24 GHz BSS authorization. Most of the conditions sought by SES and Ciel are included in this condition, which is a standard condition on space station authorizations. SES and Ciel, however, also seek to impose a customer notification requirement. We see no reason to impose such a condition on this authorization at this time. See 47 C.F.R. 25.111(b), and *Intelsat Order*, at para. 19.

within this period will constitute formal acceptance of the authorization as conditioned.

14. Intelsat North America LLC's request for a partial waiver of 47 C.F.R. § 25.114(d)(3), which requires the applicant to submit predicted space station antenna gain contour(s) for each transmit and receive antenna beam, is GRANTED. The main purpose of the antenna gain contour diagrams is to allow evaluation of the potential for harmful interference with other operators and services in the frequency band.⁸ It also facilitates the applicant's preparation of information that may be required for submission to the International Telecommunication Union (ITU) to initiate and complete coordination procedures.⁹ Intelsat complied with the rule for all beams except its 24 gateway receive (GR) and 24 ubiquitous transmit (UT) spot beams.¹⁰ For each of the GR and UT beams, Intelsat provided the antenna gain contour information in .pdf format, instead of the required .gxt format, with one exception.¹¹ Intelsat maintains that providing the information in .gxt format for each of the 48 beams in Schedule S would pose an undue hardship.¹² While Intelsat's .pdf format submission was not in compliance with the rule, in this limited instance, we were able to complete our technical review of the antenna gain contour information and determine that the Galaxy BSS-1 space station meets the Commission's technical requirements. Nonetheless, obtaining the antenna beam pattern information in the .gxt file format facilitates the space station International Telecommunication Union (ITU) coordination process. Consequently, as a condition of granting this waiver, any antenna beam diagrams submitted by Intelsat for purposes of its ITU submissions for this space station must be provided in .gxt format.
15. Intelsat North America LLC's request for waivers of 47 C.F.R. §§ 25.114(c)(4)(i), 25.114(c)(4)(iii), 25.114(c)(8), and 25.114(d)(5), to the extent the rules request technical information in a particular format ARE DISMISSED as

⁸ See SES Americom, Inc., Application for Modification of Space Station Authorization, DA 04-1581, *Order and Authorization*, 19 FCC Rcd. 20377, 20377-78 (paras. 4-8) (Int'l Bur., Sat. Div. 2004).

⁹ The .gxt format is compatible with the ITU's Radiocommunication Bureau's Graphical Interference Management (GIMS) software used to perform interference and PFD analyses using GIMS. A description of the GIMS software package can be found on the Internet at <http://www.itu.int/ITU-R/software/space/gims/index.html> (last visited April 17, 2009).

¹⁰ Intelsat North America LLC, File No. SAT-AMD-200800701-00138, Exhibit A, at 1

¹¹ Intelsat did file one representative GR and UT beam in the required .gxt format.

¹² Intelsat North America LLC, File No. SAT-AMD-200800701-00138, Exhibit A, at 2.

Our review of the application shows that no waivers are necessary because Intelsat submitted the information in the format required by our rules.¹⁴

16. This grant is issued pursuant to Section 0.261 of the Commission's rule on delegated authority, 47 C.F.R. § 0.261, and is effective upon release. 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 this order.

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IBFS Nos.



with conditions

File # _____
Call Sign _____ Grant Date 7/28/09
(or other identifier) _____
Term Dates _____
From _____ To: see conditions
Approved: [Signature]
Chief, Satellite Division

¹⁴ Intelsat's applications included the information required under the rules. See Intelsat North America LLC, File Nos. SAT-AMD-200800114-00008, Exhibit 8; SAT-AMD-20080617-00123, Exhibit A; and SAT-AMD-20080701-00138, Sections S9 and S10 of Schedule S.

9-16. Name of Contact Representative

Name: Susan H Crandall **Phone Number:** 202-944-7860
Company: Intelsat Global Service Corporation **Fax Number:** 202-944-7860
Street: 3400 International Drive, N.W. **E-Mail:** susan.crandall@intelsat.com
City: Washington **State:** DC
Country: USA **Zipcode:** 20008-3006
Attention: Susan H. Crandall **Relationship:** Legal Counsel

CLASSIFICATION OF FILING

17. Choose the button next to the classification that applies to this filing for both questions a. and b. Choose only one for 17a and only one for 17b.

- a1. Earth Station
- a2. Space Station

- (N/A) b1. Application for License of New Station
- (N/A) b2. Application for Registration of New Domestic Receive-Only Station
- (N/A) b3. Amendment to a Pending Application
- (N/A) b4. Modification of License or Registration
- b5. Assignment of License or Registration
- 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
- (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)

<p>17c. Is a fee submitted with this application? <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). <input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee <input checked="" type="radio"/> Other (please explain): 25.114(d)(14) amended orbital debris mitigation plans</p>	<p>17d. Fee Classification CWY – Space Station Amendment (Geostationary)</p>
<p>18. If this filing is in reference to an existing station, enter: (a) Call sign of station: S2662</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: (a) Date pending application was filed: 02/10/2005 (b) File number: SATLOA2005021000031</p>

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) Direct Broadcast Satellite

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: 17300 Frequency Upper: 25500 (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

<p>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?</p>	<p style="text-align: right;"> <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A </p>
<p>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.</p>	<p style="text-align: right;">Exhibit B</p>

BASIC QUALIFICATIONS

<p>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.</p>	<p style="text-align: right;"> <input checked="" type="radio"/> Yes <input type="radio"/> No </p> <p style="text-align: right;">Exhibit D</p>
<p>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.</p>	<p style="text-align: right;"> <input type="radio"/> Yes <input checked="" type="radio"/> No </p>

<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 style="text-align: center;"> <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 style="text-align: center;"> <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 style="text-align: center;"> <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> <p style="text-align: right;">Exhibit C</p>	

<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.</p>	<p style="text-align: center;"> <input checked="" type="radio"/> Yes <input type="radio"/> No </p>
<p>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.</p>	<p style="text-align: center;"> <input type="radio"/> Yes <input checked="" type="radio"/> No </p>
<p>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?</p>	
<p>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.)</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>Amendment to update orbital debris mitigation statement, per the Commission's Public Notice (DA 05-2698). See Exhibit A. All other information in the application remains the same.</p> </div> <p>Exhibit A</p>	

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
Assistant General 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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