Approved by OMB
3060–0678

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATIONEnter a description of this application to identify it on the main menu:
STA for Earth Station KA258 to Perform TT&C for the Intelsat 16 Satellite

1. Applicant

Name:	Intelsat North America LLC	**Phone Number:**	202–944–7848
DBA Name:		**Fax Number:**	202–944–7870
Street:	c/o Intelsat Corporation	**E–Mail:**	susan.crandall@intelsat.com
	3400 International Drive, N.W.		
City:	Washington	**State:**	DC
Country:	USA	**Zipcode:**	20008 –3006
Attention:	Susan H Crandall		

With Condition

FEDERAL COMMUNICATIONS COMMISSION

GRANTED
International Bureau

File # SES-STA-20100127-00125

Call Sign KA258 Grant Date 3/12/2010
(or other identifier)

Term Dates
From 3/15/2010 To: 4/13/2010

Approved: Kathleen J. Medd
Chief Satellite Engrg. Br.

Attachment

SES-STA-20100127-00125
KA258

Condition:

All operations shall be on an unprotected and non-harmful interference basis, i.e., Intelsat North America LLC. shall not cause harmful interference to, and shall not claim protection from, interference caused to it by any other lawfully operating station and it shall cease transmission(s) immediately upon notice of such interference.

With Condition

GRANTED

File # SES-STA-20100127-00125

Call Sign KA258 Grant Date 3/12/2010
(or other identifier)

Term Dates
From 3/15/2010 To: 4/13/2010

Approved: Kathleen Medley
Chief Satellite Engrg. Br.

2. Contact

Name:	Intelsat North America LLC	**Phone Number:**	202–944–7848
Company:		**Fax Number:**	202–944–7870
Street:	c/o Intelsat Corporation 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

(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)
3. Reference File Number or Submission ID

4a. 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):

4b. Fee Classification CGX – Fixed Satellite Transmit/Receive Earth Station

5. Type Request

○ Use Prior to Grant ○ Change Station Location ◉ Other

6. Requested Use Prior Date	
7. CityClarksburg	8. Latitude (dd mm ss.s h) 39 13 6.6 N

9. State MD	10. Longitude (dd mm ss.s h) 77 16 15.3 W

11. Please supply any need attachments.

Attachment 1: STA Request Attachment 2: Exhibit A Attachment 3:

12. Description. (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 North America LLC herein requests a grant of Special Temporary Authority for 30 days, from March 1, 2010 through March 30, 2010 to use its Clarksburg, Maryland Ku-band earth station, call sign KA258, to provide telemetry, tracking and command services for the Intelsat 16 satellite at its permanent location of 58.10 W.L. Intelsat intends

13. 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

14. Name of Person Signing Susan H. Crandall	15. Title of Person Signing Asst. General 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).

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12. Description

Intelsat North America LLC herein requests a grant of Special Temporary Authority for 30 days, from March 1, 2010 through March 30, 2010 to use its Clarksburg, Maryland Ku-band earth station, call sign KA258, to provide telemetry, tracking and command services for the Intelsat 16 satellite at its permanent location of 58.10 W.L. Intelsat intends shortly to file an application to modify the KA258 license to add 58.10 W.L. as a point of communication.

January 27, 2010

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

INTELSAT

Re: Request for Special Temporary Authority
Clarksburg, Maryland Earth Station KA258

Dear Ms. Dortch:

Intelsat North America LLC ("Intelsat") herein requests a grant of Special Temporary Authority ("STA")[1] for 30 days, from March 1, 2010 through March 30, 2010 to use its Clarksburg, Maryland Ku-band earth station -- call sign KA258 -- to provide telemetry, tracking and command ("TT&C") services for the Intelsat 16 satellite at its permanent location of 58.10° W.L. Intelsat intends shortly to file an application to modify the KA258 license to add 58.10° W.L. as a point of communication.

Intelsat 16 is expected to be launched on February 11, 2010. After in-orbit testing, Intelsat 16 will be placed at its permanent location of 58.10° W.L.[2]

The Intelsat 16 TT&C operations will be performed at 58.10° W.L. in the following frequency bands: 13997.5 MHz and 14499.5 MHz in the uplink and 12198.25 MHz and 12198.75 MHz in the downlink. At 58.10° W.L., Intelsat will operate the TT&C transmissions in conformance with its coordination agreements for the nominal 58.0° W.L. location, as well as with the FCC's rules designed to allow co-frequency operations in a two-degree separation environment.

Operations in the 14499.5 MHz, 12198.25 MHz and 12198.75 MHz frequencies will be consistent with the antenna's licensed parameters. With respect to operations in the 13997.5 MHz frequency, Intelsat is attaching Exhibit A, which contains technical information that demonstrates that the operation of the earth station will be compatible with its electromagnetic environment and will not cause harmful interference into any lawfully

[1] Intelsat has filed its STA request, an FCC Form 159, a $175.00 filing fee and this supporting letter electronically via the International Bureau's Filing System ("IBFS").

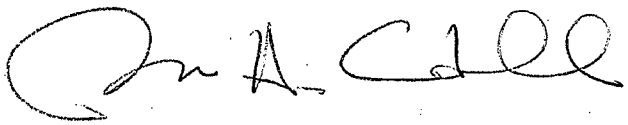
[2] *See Policy Branch Information; Actions Taken*, Report No. SAT-00610, File No. SAT-LOA-20080416-00085 (June 5, 2009) (Public Notice).

operating terrestrial facility.[3] In the extremely unlikely event that harmful interference should occur due to transmissions to or from its earth station, Intelsat will take all reasonable steps to eliminate the interference.

The provision of TT&C services to the Intelsat 16 satellite at 58.10° W.L. is critical to ensure the safe station-keeping of the satellite at that location. This, in turn, will result in additional capacity at the nominal 58.0° W.L. location and thereby promotes the public interest.

Please direct any questions regarding this STA request to the undersigned at (202) 944-7848.

Respectfully submitted,



Susan H. Crandall
Assistant General Counsel
Intelsat Corporation

Cc: Kathyrn Medley

[3] The EIRP levels for transmissions in the 13997.5 MHz frequency will be consistent with the antenna's licensed parameters.

Exhibit A

Compliance of Operations in the 13.75 - 14.0 GHz Band with FCC Report & Order (FCC96-377)

1. Background

This exhibit is presented to demonstrate the extent to which the Intelsat North America LLC earth station KA258 is in compliance with FCC Report & Order 96-377. The potential interference from the earth station to U.S. Navy shipboard radiolocation operations (RADAR) and the NASA space research operations in the 13.75 - 14.0 GHz Band is addressed in this exhibit. The parameters for the earth station are:

Table 1. Earth Station Characteristics

• Coordinates (NAD83):	39° 13' 06.6" N, 77° 16' 15.3" W
• Satellite Location for Earth Station:	Intelsat 16 from 48.0° W to 58° W
• Frequency Band:	13.9975 GHz for uplink
• Polarizations:	Circular and Linear
• Emissions:	850KG7D
• Modulation:	Digital
• Maximum Aggregate Uplink EIRP:	85.0 dBW for all Carriers
• Transmit Antenna Characteristics	
Antenna Size:	14.2 meter in Diameter
Antenna Type/Model:	TIW
Gain:	64.7 dBi
• RF power into Antenna Flange:	20.3 dBW or 21.0 dBW/ MHz or -3.0 dBW/4 kHz (Maximum)
• Minimum Elevation Angle: Clarksburg, MD	35.4° @ 138.4° Az. at 48.0° W 40.4° @ 151.1° Az. at 58.0° W
• Side Lobe Antenna Gain:	32 - 25*log(θ)

Because the above uplink spectrum is shared with the federal government, analysis of potential interference between the earth station and both Navy Department and NASA systems is required. Potential interference from the earth station could impact the Navy and/or NASA systems in two areas. These areas are noted in FCC Order 96-377 and consist of (1) Radiolocation and radio navigation and (2) Data Relay Satellites.

Summary of Coordination Issues:

1) Potential Impact to Government Radiolocation (Shipboard Radar)
2) Potential Impact to NASA Data Relay Satellite Systems (TDRSS)

2. Potential Impact to Government Radiolocation (Shipboard Radar)

Radiolocation operations (RADAR) may occur anywhere in the 13.4 - 14 GHz frequency band on U.S. Navy ships. The FCC Order 96-377 allocates the top 250 MHz of this 600 MHz band to the Fixed Satellite Service (FSS) on a co-primary basis with the radiolocation operations and provides for an interference protection level of -167 dBW/m^2/4 kHz.

The closest distance to shoreline from the Clarksburg, MD earth station is approximately 88 km Southeast towards the Atlantic Ocean. The calculation of the power spectral density at this distance is given below:

1.	Clear Sky EIRP:	85.00 dBW
2.	Carrier Bandwidth:	850 kHz
3.	PD at antenna input:	-3.0 dBW/4 kHz
4.	Transmit Antenna Gain:	64.7 dBi
5.	Antenna Gain Horizon:	FCC Reference Pattern
6.	Antenna Elevation Angle:	35.4° and 40.4°

The proposed earth station will radiate interference towards the ocean according to its off-axis side-lobe performance. A conservative analysis, using FCC standard reference pattern, results in off-axis antenna gains of -6.6 dBi towards the Atlantic Ocean.

The calculated signal density at the shoreline, assuming free space loss only:

$PFD_{\text{free space only}}$ = Antenna Feed Power density (dBW/4 kHz) + Antenna Off-Axis Gain (dBi) – Spread Loss (dBw-m^2).

= -3.0 dBw/4 kHz + (-6.6 dBi) – 10*log[4Π*(88000m)^2]
= -119.5 dBW/m^2/4 kHz

However there is an additional path loss of approximately 68.0 dB, which includes absorption loss and earth diffraction loss for the actual path profiles from the proposed earth station to the nearest shoreline.

PFD actual = $PFD_{\text{free space loss only}}$ +Additional Path Losses (~ 68.0 dB)
= -187.5 dBW/m2/4 kHz

The resulting PFD, including additional path losses to the closest shoreline location, is –187.5 dBW/m^2/4 kHz. This is 20.5 dB below the –167 dBW/m2/4 kHz interference criteria of FCC Order 96-377. Therefore, the interference to the U.S. Navy RADAR from the earth station will be well within the permissible levels per the FCC's rules, given the distance and the terrain blockage between the site and the shore.

3. Potential Impact to NASA's Data Relay Satellite System (TDRSS)

The geographic location of the Clarksburg, MD earth station is outside the 390 km radius coordination contour surrounding NASA's White Sands, NM ground station complex. Therefore, the TDRSS space-to-earth link will not be impacted by Intelsat's KA258 earth station.

The TDRSS space-to-space link in the 13.772 to 13.778 GHz band is assumed to be protected if an earth station produces an EIRP less than 71 dBW/6 MHz in this band. The 14.2 meter earth station that is the subject of this application will not radiate in this band, as the proposed transmissions will be limited to the 13997.5 GHz frequency.

Therefore, there will be interference to the TDRSS space-to-space link. .

4. Summary and Conclusions

The results of the analysis and calculations performed in this exhibit indicate compatible operation between the Clarksburg, MD earth station and the U.S. Navy radiolocation systems.

Similarly, there will be no interference above permissible FCC levels into NASA's TDRSS systems, as the intended operations are outside of the 13772.0 to 13778.0 MHz frequency range.