

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:  
T12V antenna testing STA 9.4-m Middletown - 60 days

1. Applicant

**Name:** Telesat Network Services, Inc. **Phone Number:** 613-748-8700  
**DBA Name:** **Fax Number:** 613-748-8712  
**Street:** 135 Routes 202/206 **E-Mail:** JForsey@telesat.com  
**City:** Bedminster **State:** NJ  
**Country:** USA **Zipcode:** 07921 -1538  
**Attention:** Mr John Forsey



File # SES-STA-20151119-00859  
E150130  
Call Sign Grant Date 12-14-15  
(or other identifier)  
From: 12-14-15 Term Days To: 2-18-16  
Approved: *[Signature]*

Applicant: Telesat Network Services, Inc.  
Call Sign: E150130  
File No.: SES-STA-20151119-00859  
Special Temporary Authority



File # SES-STA-20151119-00859  
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Call Sign E150130 Grant Date 12-14-15  
(or other identifier)  
From: 12-14-15 Term Dates To: 2-12-16  
Approved: Paul E. [Signature]

Telesat Network Services, Inc. ("Telesat") is granted Special Temporary Authority ("STA") for 60 days, starting December 14, 2015, to operate an ASC Signal 9.4 meter antenna located in Middletown, Virginia to communicate with U.S. licensed GSO satellite Telstar 12V (S2933) at orbital location 15 degrees W.L in the 29300-29868 MHz (Earth-to-space) frequency band. This grant of STA is subject to the following conditions:

- 1) Operations will not exceed the operational power levels and parameters requested and coordinated.
- 2) Operations under this STA 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.
- 3) Grant of this STA is without prejudice to any determination that the Commission may make regarding other pending and or future Telesat's application, e.g., IBFS File No. SES-LIC-20151016-00712, E150130.
- 4) Transmitter(s) must be turned off during antenna maintenance to ensure compliance with the FCC-specified safety guidelines for human exposure to radiofrequency radiation in the region between the antenna feed and the reflector. Appropriate measures must also be taken to restrict access to other regions in which the antennas' power flux-density levels exceed the specified guidelines.
- 5) The licensee shall take all necessary measures to ensure that the antenna does not create potential exposure of humans to radiofrequency radiation in excess of the FCC exposure limits defined in 47 CFR 1.1307(b) and 1.1310 wherever such exposures might occur. Measures must be taken to ensure compliance with limits for both occupational/controlled exposure and for general population/uncontrolled exposure, as defined in these rule sections. Compliance can be accomplished in most cases by appropriate restrictions such as fencing. Requirements for restrictions can be determined by predictions based on calculations, modeling or by field measurements. The FCC's OET Bulletin 65 (available on-line at [www.fcc.gov/oet/rfsafety](http://www.fcc.gov/oet/rfsafety)) provides information on predicting exposure levels and on methods for ensuring compliance, including the use of warning and alerting signs and protective equipment for workers.
- 6) Any action taken or expense incurred as a result of operations pursuant to this STA is solely at Telesat's risk.

<b>2. Contact</b>			
<b>Name:</b>	Ryan N. Terry	<b>Phone Number:</b>	202-429-4900
<b>Company:</b>	Goldberg, Godles, Wiener & Wright	<b>Fax Number:</b>	202-429-4912
<b>Street:</b>	1229 19th Street, N.W.	<b>E-Mail:</b>	rterry@g2w2.com
<b>City:</b>	Washington	<b>State:</b>	DC
<b>Country:</b>	USA	<b>Zipcode:</b>	20036 -
<b>Attention:</b>		<b>Relationship:</b>	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 SESLIC2015101600712 or Submission ID			
4a. 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 type="radio"/> Other (please explain):			
4b. Fee Classification CGX – Fixed Satellite Transmit/Receive Earth Station			
5. Type Request			
<input checked="" type="radio"/> Use Prior to Grant <input type="radio"/> Change Station Location <input type="radio"/> Other			
6. Requested Use Prior Date			
12/14/2015			

7. City/Middletown	8. Latitude (dd mm ss.s h) 39 1 0.8 N
9. State VA	10. Longitude (dd mm ss.s h) 78 17 29.0 W
11. Please supply any need attachments. Attachment 1: Request for STA Attachment 2: 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.) <div style="border: 1px solid black; padding: 5px;">Telesat Network Services, Inc., pursuant to Section 25.120 of the Commission's rules, hereby requests Special Temporary Authority to operate a fixed 9.4-m antenna at its Middletown, VA antenna location, for a 60-day period to begin on December 14, 2015, to permit testing of facilities that will communicate with the Telstar 12 Vantage satellite.</div>	
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. <p style="text-align: center;">Yes <input checked="" type="radio"/> No <input type="radio"/></p>	
14. Name of Person Signing R. John Forsey	15. Title of Person Signing Director, Corporate Development
WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).	

**FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT**

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**THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.**

## REQUEST FOR SPECIAL TEMPORARY AUTHORITY

Telesat Network Services, Inc. ("Telesat"), pursuant to Section 25.120 of the Commission's rules, hereby requests Special Temporary Authority ("STA") to operate a fixed 9.4-m antenna at its Middletown, VA antenna location in the manner described herein. Telesat respectfully requests that its STA begin on December 14, 2015, for a period of 60 days, to permit testing of facilities that will communicate with the Telstar 12 Vantage ("T12V") satellite. The T12V satellite is planned for launch on November 24, 2015. The Commission has authorized Skynet Satellite Corporation, a Telesat affiliate, to operate the Telstar 12V satellite at 15°W.L.<sup>1</sup>

Specifically, the 9.4-m antenna will be used with a 2.4-m temporary-fixed antenna co-located with another 9.4-m antenna at its Mt. Jackson teleport to test the diversity switching functionality between the two locations.<sup>2</sup> Telesat has filed an application for permanent authority of this 9.4-m antenna and another in Middletown to support the services provided on the T12V satellite in the Ka-band.<sup>3</sup>

The Mt. Jackson 9.4-m antenna will be the primary one during nominal operation, but during periods of rain fade at Mt. Jackson and lesser atmospheric attenuation conditions at Middletown, the Middletown 9.4-m antenna will be used to transmit to and receive from Telstar 12V. When Middletown is active, the signals to be transmitted and that are generated at Mt. Jackson are switched onto a fiber optic link between the two sites. Similarly, the satellite signals received at Middletown are switched to the fiber optic link. In order to test and tune the switching equipment and the fiber optic link, the 2.4-m temporary-fixed antenna will simulate a user terminal both transmitting and receiving. In addition, it will uplink a Ka-band pilot carrier to be received at the 9.4-m antennas to allow their receive patterns to be measured.

The subject antenna will be located within a secured perimeter at the Middletown location to which only authorized employees would have access. Telesat is incorporating by reference the radiation hazard report that it submitted with its underlying request. In addition, Telesat is incorporating by reference the 28 GHz Frequency Coordination Report and 18 GHz Frequency Analysis Report to demonstrate that coordination has been successfully completed with terrestrial operators.

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<sup>1</sup> FCC File No. SAT-LOA-20141010-00107.

<sup>2</sup> The STA request seeking authority for the 2.4-m temporary-fixed antenna has been submitted under IBFS Submission IB2015002249.

<sup>3</sup> FCC File Nos. SES-LIC-20151014-00689 and SES-LIC-20151016-00712. Because grant of these license applications will not be possible prior to the date on which testing must commence, Telesat is submitting the instant STA requests to cover the operation of the referenced 9.4-m antenna on a limited basis.

Finally, Telesat is attaching to this request a copy of the Schedule B that it submitted with its underlying application for permanent authority. The Schedule B attached hereto has been modified to identify in red the more limited transmit frequencies that Telesat is seeking in the instant STA request.

Grant of this application will serve the public interest, convenience, and necessity by allowing Telesat to test and calibrate its ground network system to support a newly launched satellite. Accordingly, and for good cause shown, Telesat respectfully requests that its STA be granted in time for it to commence testing under this 60-day STA on December 14, 2015.

**SATELLITE EARTH STATION AUTHORIZATIONS**  
**FCC Form 312 - Schedule B:(Technical and Operational Description)**

**FOR OFFICIAL USE ONLY**

Location of Earth Station Site			
E1: Site Identifier:	Middletown	E5. Call Sign:	
E2: Contact Name	Todd Sypolt	E6. Phone Number:	540-477-5540
E3: Street:	8209 Valley Pike	E7. City:	Middletown
E4. State	VA	E8. County:	Frederick
E10. Area of Operation:		E9. Zip Code	22645
E11. Latitude:	39 ° 1 ' 0.8 " N	Fixed	
E12. Longitude:	78 ° 17 ' 29.0 " W		
E13. Lat/Lon Coordinates are:		<input checked="" type="radio"/> NAD-27	<input checked="" type="radio"/> NAD-83
E14. Site Elevation (AMSL):		217.82 meters	<input type="radio"/> N/A
E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurement? If NO, provide a technical analysis showing compliance with two-degree spacing policy.			<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A
E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non-geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?			<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.			<input type="radio"/> Yes <input checked="" type="radio"/> No
E18. Is frequency coordination required? If YES, attach a frequency coordination report as			<input checked="" type="radio"/> Yes <input type="radio"/> No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as			<input type="radio"/> Yes <input checked="" type="radio"/> No
E20. FAA Notification - (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and or the FAA's study regarding the potential hazard of the structure to aviation?			<input type="radio"/> Yes <input checked="" type="radio"/> No
<b>FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.</b>			
<b>POINTS OF COMMUNICATION</b>			



Satellite Name:PERMITTED LIST || If you selected OTHER, please enter the following:

E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

**POINTS OF COMMUNICATION (Destination Points)**

E25. Site Identifier:	
E26. Common Name:	E27. Country:

**ANTENNA**

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size	E41/42. Antenna Gain Transmitt and/or Recieve( dB at GHz)	E39. Maximum Antenna Height Above Rooftop (meters)	E40. Total EIRP for al carriers (dBW)
Middletown	Ka-1	1	ASC Signal	9.4	9.4	63.0 dBi at 18.7 66.5 dBi at 29.25		91.0
E28. Antenna Id	E33/34. Diameter Minor/Major(meters)	E35. Above Ground Level (meters)	E36. Above Sea Level (meters)	E37. Building Height Above Ground Level (meters)	E38. Total Input Power at antenna flange (Watts)	E49. Maximum EIRP per Carrier(dBW)	E48. Maximum EIRP per Carrier(dBW)	E49. Maximum EIRP Density per Carrier(dBW/4kHz)
Ka-1	0.0/0.0	12.0	229.82	0.0	280.0	0.0	0.0	91.0

**FREQUENCY**

E28. Antenna Id	E43/44. Frequency Bands(MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V,L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier(dBW)	E49. Maximum EIRP Density per Carrier(dBW/4kHz)
Ka-1	18306 19103	R	Horizontal and Vertical	112MG7W	0.0	0.0
E50. Modulation and Services Digital (data and video)						
Ka-1	18306 19103	R	Horizontal and Vertical	500KG7W	0.0	0.0
E50. Modulation and Services Digital (data and video)						
Ka-1	19700 20070	R	Horizontal and Vertical	112MG7W	0.0	0.0
E50. Modulation and Services Digital (data and video)						
Ka-1	19700 20070	R	Horizontal and Vertical	500KG7W	0.0	0.0
E50. Modulation and Services Digital (data and video)						
Ka-1	28361 28872	T	Horizontal and Vertical	112MG7W	81.3	36.5
E50. Modulation and Services Digital (data and video)						
Ka-1	28361 28872	T	Horizontal and Vertical	500KG7W	57.5	36.5
E50. Modulation and Services Digital (data and video)						

Ka-1	29300 29868	T	Horizontal and Vertical	112MG7W	81.3	36.5
E50. Modulation and Services Digital (data and video)						
Ka-1	29300 29868	T	Horizontal and Vertical	500KG7W	57.5	36.5
E50. Modulation and Services Digital (data and video)						

**FREQUENCY COORDINATION**

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc E/W Limit	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum ERP Density toward the Horizon(dBW/4kHz)
Ka-1	Geostationary	18306 19103	15.0/ 15.0	107.6	11.9	107.6	11.9	0.0
	Geostationary	19700 20070	15.0/ 15.0	107.6	11.9	107.6	11.9	0.0
	Geostationary	28361 28872	15.0/ 15.0	107.6	11.9	107.6	11.9	-28.8
	Geostationary	29300 29868	15.0/ 15.0	107.6	11.9	107.6	11.9	-28.8

**REMOTE CONTROL POINT LOCATION**

**REMOTE CONTROL POINT LOCATION**

E61. Call Sign	E65. Phone Number
NOTE: Please enter the call sign of the controlling station, not the call sign for which this application is being filed.	
E62. Street Address	

E63. City	E67. County	E64/68. State/Country	E66. Zip Code
		/	