

## 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 Mt. Jackson, VA teleport 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 antenna will be used with a co-located 2.4-m temporary-fixed antenna to test the diversity switching functionality between the Mt. Jackson teleport and a proximate earth station site in Middletown, VA.<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 Mt. Jackson teleport 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:	Mt. Jackson	E5: Call Sign:	
E2: Contact Name	Todd Sypolt	E6: Phone Number:	540-477-5540
E3: Street:	1305 Industrial Park Road	E7: City:	Mount Jackson
E4: State	VA	E8: County:	Shenandoah
E10: Area of Operation:		E9: Zip Code	22842
E11: Latitude:	38 ° 43 ' 44.4 " N	Fixed	
E12: Longitude:	78 ° 39 ' 24.1 " W		
E13: Lat/Lon Coordinates are:		<input type="radio"/> NAD-27	<input checked="" type="radio"/> NAD-83 <input type="radio"/> N/A
E14: Site Elevation (AMSL):	282.24 meters		

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	
<b>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? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.</b>	<input type="radio"/> Yes	<input checked="" type="radio"/> No	

**POINTS OF COMMUNICATION**

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 GainTransmint and/or Recieve(____ dBi at ____ GHz)
Mt. Jackson	Ka-1	1	ASC Signal	9.4	9.4	63.0 dBi at 18.7
						66.5 dBi at 29.25

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)	E39. Maximum Antenna Height Above Rooftop (meters)	E40. Total EIRP for al carriers (dBW)
Ka-1	0.0/0.0	12.0	294.24	0.0	280.0	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 ERIP 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
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E50. Modulation and Services Digital (data and video)

Ka-1	19700 20070	R	Horizontal and Vertical	112MG7W	0.0	0.0
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E50. Modulation and Services Digital (data and video)

Ka-1	19700 20070	R	Horizontal and Vertical	500KG7W	0.0	0.0
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E50. Modulation and Services Digital (data and video)

Ka-1	28361 28872	T	Horizontal and Vertical	112MG7W	81.3	36.5
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E50. Modulation and Services Digital (data and video)

Ka-1	28361 28872	T	Horizontal and Vertical	500KG7W	57.5	36.5
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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**

<b>E28. Antenna Id</b>	<b>E51. Satellite Orbit Type</b>	<b>E52/53. Frequency Limits(MHz)</b>	<b>E54/55. Range of Satellite Arc E/W Limit</b>	<b>E56. Earth Station Azimuth Angle Eastern Limit</b>	<b>E57. Antenna Elevation Angle Eastern Limit</b>	<b>E58. Earth Station Azimuth Angle Western Limit</b>	<b>E59. Antenna Elevation Angle Western Limit</b>	<b>E60. Maximum EIRP Density toward the Horizon(dBW/4kHz)</b>
Ka-1	Geostationary	18306 19103	15.0/ 15.0	107.2	11.7	107.2	11.7	0.0
	Geostationary	19700 20070	15.0/ 15.0	107.2	11.7	107.2	11.7	0.0
	Geostationary	28361 28872	15.0/ 15.0	107.2	11.7	107.2	11.7	-28.8
	Geostationary	29300 29868	15.0/ 15.0	107.2	11.7	107.2	11.7	-28.8

**REMOTE CONTROL POINT LOCATION**

**REMOTE CONTROL POINT LOCATION**

E61. Call Sign				E65. Phone Number			
<p><b>NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.</b></p>							
E62. Street Address							
E63. City				E67. County	E64/68. State/Country	E66. Zip Code	
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