REQUEST FOR SPECIAL TEMPORARY AUTHORITY

EXPEDITED TREATMENT REQUESTED

Telesat Network Services, Inc. ("Telesat"), pursuant to Section 25.120 of the Commission's rules, hereby requests Special Temporary Authority ("STA") to operate a temporary-fixed 4.6-m antenna at its Mt. Jackson, VA teleport in the manner described herein. Telesat respectfully requests that its STA begin on March 1, 2016, and have a term of thirty (30) days, consistent with 47 C.F.R. 25.120(b)(4) of the Commission's rules.[1]

The instant STA request is sought to permit testing of facilities that will communicate with the Telstar 12 Vantage ("Telstar 12V") satellite. The T12V satellite was launched on November 24, 2015. The Commission has authorized Skynet Satellite Corporation, a Telesat affiliate, to operate the Telstar 12V satellite at 15°W.L.[2]

Since the launch of Telstar 12V, Telesat has been actively working to transition services from the Telstar 12 satellite and to commence new services, including those planned for communication with a recently authorized 9.4-m antenna in the Ka-band.[3] Owing to unforeseen delays in the installation and commissioning of that 9.4-m antenna, Telesat is required to utilize a temporary-fixed 4.6-m antenna to commence critical testing that would otherwise have been conducted using the primary 9.4-m antenna.

Specifically, the antenna will be used to test a bidirectional link between Mt. Jackson and a ship-mounted earth station off the coast of Brazil. The testing over the link with Brazil is critical to verify whether Telesat can transition certain services from Telstar 12 to Telstar 12V while minimizing outage time.

The subject 4.6-m antenna will be located within a secured perimeter at the Mt. Jackson teleport to which only authorized employees would have access. Telesat is also providing herewith a radiation hazard report.

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[1] Telesat notes that it is concurrently filing herewith a second STA request to continue operation of the subject facility for an additional 60 days. Telesat anticipates that it will require a period through May 30, 2016 to complete the subject testing and to make the appropriate network calibrations, and is thus submitting two requests to facilitate expedited treatment of this initial STA request. Telesat has no plans to license the 4.6-m antenna on a permanent basis.

[2] Call Sign S2933 (FCC File No. SAT-LOA-20141010-00107).

[3] Call Sign E150128 (FCC File Nos. SES-LIC-20151014-00689 and SES-AMD-20151209-00922), granted Jan. 11, 2016.

In addition, Telesat is providing a Frequency Coordination Report to demonstrate that coordination has been successfully completed with terrestrial operators in the 28 GHz band.[4]

Finally, Telesat is attaching to this request a completed Schedule B in which it furnishes the technical details that relate to the proposed operations.

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 30-day STA as soon as possible.

[4] Telesat is submitting herewith a Frequency Coordination Report that was generated for an immediately adjacent 2.4-m antenna with which Telesat is also performing tests of the new antenna infrastructure at Mt. Jackson. (*See* FCC File No. SES-STA-20151218-00955.) Given the urgency in commencing operation of the subject 4.6-m antenna, and the fact that the testing period is for a relatively short duration, Telesat is submitting the same Frequency Coordination Report with the instant request, understanding that (a) this request for authority is to operate on the same frequency bands; (b) the proposed operations will be bound by the same EIRP density limits; and (c) as a larger antenna, the subject 4.6-m antenna will have lower sidelobe emissions. As it stated in its 2.4-m STA request, Telesat herein also notes that it has not sought frequency protection for its proposed temporary receive operations and is willing to accept any interference it receives during the testing.

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

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: Mt. Jackson	
E4. State: VA	E8. County: Shenandoah E9. Zip Code: 22842	
E10. Area of Operation: Fixed E11. Latitude: 38-43-44.4 N E12. Longitude: 78-39-24.1 W		
E13. Lat/Lon Coordinates are:	○ NAD-27	◉ NAD-83
E14. Site Elevation (AMSL): 282.24 meters		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.	◉ Yes ○ No 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?	○ Yes ○ No ◉ N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	○ Yes ◉ No
E18. Is frequency coordination required? If YES, attach a frequency coordination report as	◉ Yes ○ No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	○ Yes ◉ 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? **FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.**	○ Yes ◉ No

POINTS OF COMMUNICATION

Satellite Name: | | Eq. If you selected OTHER, please enter the following:	
E21. Common Name:	E22. ITU Name:
E23. Orbit Location: TELSTAR 12 VANTAGE (TELSTAR 12V)	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 Transmit and/or Receive (___dBi at_____GHz)
Mt. Jackson	Temp-1	1	Andrews	4.6	4.6	54.7 dBi at 28.5 GHz 51.0 dBi at 18.7 GHz

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)
Temp-1	0/0	6.0	288.24	0	7.4	0	63.4

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)
Temp 1	28350-28872	T	Horizontal and Vertical	2M50G7D	61.9	33.9
E50. Modulation and Services : Data						
Temp 1	28350-28872	T	Horizontal and Vertical	500KG7D	54.9	33.9
E50. Modulation and Services : Data						
Temp 1	28350-28872	T	Horizontal and Vertical	10K0N0N	37.9	33.9
E50. Modulation and Services : CW pilot carrier						
Temp 1	29300-29500	T	Horizontal and Vertical	2M50G7D	61.9	33.9
E50. Modulation and Services : Data						
Temp 1	29300-29500	T	Horizontal and Vertical	500KG7D	54.9	33.9
E50. Modulation and Services : Data						
Temp 1	29300-29500	T	Horizontal and Vertical	10K0N0N	37.9	33.9
E50. Modulation and Services : CW pilot carrier						
Temp 1	18306-19103	R	Horizontal and Vertical	500KG7D	0.0	0.0
E50. Modulation and Services : Data						
Temp 1	18306-19103	R	Horizontal and Vertical	500KN0N	0.0	0.0
E50. Modulation and Services : CW pilot carrier						

Temp 1	19700-20070	R	Horizontal and Vertical	500KG7D	0.0	0.0
E50. Modulation and Services : Data						
Temp 1	19700-20070	R	Horizontal and Vertical	500KN0N	0.0	0.0
E50. Modulation and Services : CW pilot carrier						

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 EIRP Density toward the Horizon(dBW/4kHz)
Temp-1	Geostationary	28350-29500	15.0/15.0	107.2	11.7	107.2	11.7	-18.5
Temp-1	Geostationary	18306-20070	15.0/15.0	107.2	11.7	107.2	11.7	0

REMOTE CONTROL POINT LOCATION

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

Ka-Band Earth Station – Mt. Jackson, VA

Frequency Coordination Report

28 GHz

Prepared on Behalf of
Telesat Canada

November 4, 2015

COMSEARCH®
A CommScope Company

Table of Contents

1. Summary of Results

On behalf of Telesat Canada, Comsearch performed a coordination notice for all existing and proposed terrestrial licenses within the coordination contours of their proposed Ka-Band earth station in Mt. Jackson, Virginia, which will transmit at 28 GHz[1]. Prior-notification letters were sent to the licensees and a copy of the notification data is provided in section four of this report. The earth station coordination was finalized on November 4, 2015.

No objections were received from any of the incumbent 28 GHz licensees.

2. 28 GHz Common Carrier and LTTS Coordination

In accordance with FCC Rules and Regulations, the Ka-Band earth station in Mt. Jackson, Virginia was prior-coordinated by Comsearch. A notification letter and datasheet for this earth station were sent to the following 28 GHz common carrier fixed microwave licensee on November 2, 2015. This licensee is authorized to operate temporary fixed operations from 27.5 to 29.5 GHz on a nationwide basis.

Licensee	Authorized Geographic Area
Verizon	Continental US

A notification letter and datasheets for the Ka-Band earth station in Mt. Jackson, Virginia were also sent to the following 28 GHz local television transmission licensee on November 2, 2015. This licensee is authorized to operate temporary fixed operations from 27.5 to 29.5 GHz on a nationwide basis.

Licensee	Authorized Geographic Area
Information Super Station, LLC	Continental US

No objections were received from the common carrier or local television transmission service incumbents.

[1] The proposed earth station will operate in the 28.35 – 29.5 GHz portion of the Ka-Band.

3. 28 GHz LMDS Coordination

The proposed earth station will not operate on frequencies that overlap Block A of the LMDS service. Therefore, no LMDS coordination was necessary.

The total frequency allocation for Block A of the LMDS spectrum appears below.

Block A: 27.500-28.350 GHz
29.100-29.250 GHz
31.075-31.225 GHz

4. Earth Station Coordination Data

This section presents the data pertinent to the proposed Ka-Band earth station in Mt. Jackson, Virginia. This data was circulated to all incumbent licensees in the shared 28 GHz frequency ranges.

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5662 http://www.comsearch.com

Date:	11/02/2015
Job Number:	<PCNJobCode>

Administrative Information

Status	ENGINEER PROPOSAL
Call Sign	<PCNCallSign>
Licensee Code	IC0236
Licensee Name	Telesat Canada -

Site Information — MT JACKSON, VA

Venue Name	
Latitude (NAD 83)	38° 43' 44.4" N
Longitude (NAD 83)	78° 39' 24.1" W
Climate Zone	A
Rain Zone	2
Ground Elevation (AMSL)	282.24 m / 926.0 ft

Link Information

Satellite Type	Geostationary
Mode	TO - Transmit-Only
Modulation	Digital
Satellite Arc	15° W to 15° West Longitude
Azimuth Range	107.2° to 107.2°
Corresponding Elevation Angles	11.7° / 11.7°
Antenna Centerline (AGL)	2.74 m / 9.0 ft

Antenna Information — Transmit - FCC32

Manufacturer		Andrew
Model		2.4 Meter
Gain / Diameter		55.1 dBi / 2.4 m
3-dB / 15-dB Beamwidth		0.32° / 0.64°
Max Available RF Power	(dBW/4 kHz)	8.3
	(dBW/MHz)	32.3
Maximum EIRP	(dBW/4 kHz)	63.4
	(dBW/MHz)	87.4
Interference Objectives:	Long Term	-151.0 dBW/4 kHz 20%
	Short Term	-128.0 dBW/4 kHz 0.0025%

Frequency Information — Transmit 28.0 GHz

Emission / Frequency Range (MHz)	500KG7D - N0N / 28350.0 - 28872.0
	500KG7D - N0N / 29256.0 - 29500.0
Max Great Circle Coordination Distance	155.0 km / 96.3 mi
Precipitation Scatter Contour Radius	220.3 km / 136.9 mi

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5662 http://www.comsearch.com

Coordination Values	**MT JACKSON, VA**
Licensee Name	Telesat Canada -
Latitude (NAD 83)	38° 43' 44.4" N
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Antenna Centerline (AGL)	2.74 m / 9.0 ft
Antenna Model	Andrew 2.4 meter
Antenna Mode	Transmit 28.0 GHz
Interference Objectives: Long Term	-151.0 dBW/4 kHz 20%
Short Term	-128.0 dBW/4 kHz 0.0025%
Max Available RF Power	8.3 (dBW/4 kHz)

Transmit 28.0 GHz

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.64	106.88	-10.00	124.45
5	0.60	101.98	-10.00	125.37
10	0.91	97.09	-10.00	113.69
15	0.65	92.17	-10.00	124.09
20	0.62	87.27	-10.00	125.44
25	0.36	82.37	-10.00	140.15
30	0.00	77.49	-10.00	154.98
35	0.00	72.60	-10.00	154.98
40	0.00	67.72	-10.00	154.98
45	0.00	62.84	-10.00	154.98
50	0.00	57.98	-10.00	154.98
55	0.32	53.09	-10.00	143.73
60	0.76	48.18	-10.00	119.80
65	1.30	43.25	-8.90	105.48
70	2.45	38.19	-7.55	100.00
75	3.93	33.05	-5.98	100.00
80	4.12	28.18	-4.25	100.00
85	4.36	23.35	-2.21	100.00
90	4.85	18.50	0.32	100.00
95	4.83	14.01	3.34	100.00
100	4.75	10.03	6.96	100.00
105	3.38	8.65	8.58	127.85
110	3.58	8.62	8.62	119.46
115	3.57	11.27	5.70	109.71
120	3.38	15.24	2.43	100.99
125	3.57	19.52	-0.26	100.00
130	3.61	24.12	-2.56	100.00
135	3.49	28.89	-4.52	100.00
140	3.05	33.79	-6.22	100.00
145	1.93	38.85	-7.74	100.00
150	1.47	43.77	-9.03	101.02
155	0.80	48.72	-10.00	117.87
160	0.45	53.62	-10.00	133.12
165	0.27	58.50	-10.00	147.86
170	0.25	63.37	-10.00	149.69
175	0.22	68.26	-10.00	152.35
180	0.21	73.14	-10.00	154.52
185	0.30	78.03	-10.00	144.82

COMSEARCH

Earth Station Data Sheet

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Coordination Values	**MT JACKSON, VA**
Licensee Name	Telesat Canada -
Latitude (NAD 83)	38° 43' 44.4" N
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Antenna Model	Andrew 2.4 meter
Antenna Mode	Transmit 28.0 GHz
Interference Objectives: Long Term	-151.0 dBW/4 kHz 20%
Short Term	-128.0 dBW/4 kHz 0.0025%
Max Available RF Power	8.3 (dBW/4 kHz)

Transmit 28.0 GHz

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.29	82.93	-10.00	146.17
195	0.00	87.83	-10.00	154.98
200	0.00	92.73	-10.00	154.98
205	0.27	97.63	-10.00	147.36
210	1.01	102.56	-10.00	109.59
215	1.20	107.48	-10.00	104.93
220	1.10	112.37	-10.00	107.25
225	0.58	117.22	-10.00	126.11
230	1.25	122.17	-10.00	103.74
235	1.55	127.09	-10.00	100.00
240	1.01	131.86	-10.00	109.65
245	1.13	136.72	-10.00	106.72
250	0.90	141.46	-10.00	113.75
255	1.15	146.27	-10.00	106.02
260	2.14	151.27	-10.00	100.00
265	2.56	156.05	-10.00	100.00
270	1.21	159.90	-10.00	104.75
275	1.22	163.93	-10.00	104.33
280	1.14	167.20	-10.00	106.31
285	1.22	169.25	-10.00	104.50
290	1.57	169.46	-10.00	100.00
295	1.92	167.50	-10.00	100.00
300	1.72	163.81	-10.00	100.00
305	1.49	159.55	-10.00	100.00
310	1.34	155.07	-10.00	101.38
315	1.45	150.52	-10.00	100.00
320	1.55	145.84	-10.00	100.00
325	1.59	141.07	-10.00	100.00
330	1.88	136.31	-10.00	100.00
335	1.74	131.43	-10.00	100.00
340	1.52	126.53	-10.00	100.00
345	1.13	121.60	-10.00	106.53
350	0.99	116.70	-10.00	110.06
355	0.66	111.78	-10.00	123.97

5. Contact Information

For questions or information regarding the 28 GHz Frequency Coordination Report, please contact:

Contact person:	Joanna Lynch
Title:	Manager, Spectrum & Data Solutions
Company:	Comsearch
Address:	19700 Janelia Farm Blvd., Ashburn, VA 20147
Telephone:	703-726-5711
Fax:	703-726-5599
Email:	jlynch@comsearch.com
Web site:	www.comsearch.com