

4. EARTH STATION COORDINATION DATA

This section presents the data pertinent to frequency coordination of the proposed earth station that was circulated to all carriers within its coordination contours. The coordination contours include all the area within this route as well as all of the area seaward of this route within 200 km of the baseline of the United States or 200 km from any fixed service offshore installations.”

Date: 11/18/2013
Job Number: 131118SKJTEL01

Administrative Information

Status ENGINEER PROPOSAL
Call Sign
Licensee Code TELESV
Licensee Name Astrium Services Govt Inc -ESV In-Motion

Site Information PUGET SOUND, WA

Venue Name
Latitude (NAD 83) 47° 59' 20.4" N
Longitude (NAD 83) 122° 14' 28.0" W
Climate Zone B
Rain Zone 3
Ground Elevation (AMSL) 0.0 m / 0.0 ft

Link Information

Satellite Type Geostationary
Mode TO - Transmit-Only
Modulation Digital
Satellite Arc 177° W to 177° West Longitude
Azimuth Range 242.3° to 242.3°
Corresponding Elevation Angles 14.3° / 14.3°
Antenna Centerline (AGL) 15.54 m / 51.0 ft

Antenna Information Transmit - FCC32

Manufacturer FCC REFERENCE
Model 32-25LOG(THETA)
Gain / Diameter 41.7 dBi / 2.4 m
3-dB / 15-dB Beamwidth 0.66° / 1.18°

Max Available RF Power (dBW/4 kHz) -10.5
(dBW/MHz) 13.5

Maximum EIRP (dBW/4 kHz) 31.2
(dBW/MHz) 55.2
(dBW)

Interference Objectives: Long Term -154.0 dBW/4 kHz 20%
Short Term -131.0 dBW/4 kHz 0.0025%

Frequency Information Transmit 6.1 GHz

Emission / Frequency Range (MHz) 102KG7D - 205KG7D / 6277.0 - 6283.0
102KG7D - 205KG7D / 6295.5 - 6298.0
102KG7D - 205KG7D / 6344.0 - 6350.0
102KG7D - 205KG7D / 6355.0 - 6371.5
102KG7D - 205KG7D / 6418.0 - 6423.0

Max Great Circle Coordination Distance 232.1 km / 144.2 mi
Precipitation Scatter Contour Radius 100.0 km / 62.1 mi

Coordination Values	PUGET SOUND, WA
Licensee Name	Astrium Services Govt Inc -ESV In-Motion
Latitude (NAD 83)	47° 59' 20.4" N
Longitude (NAD 83)	122° 14' 28.0" W
Ground Elevation (AMSL)	0.0 m / 0.0 ft
Antenna Centerline (AGL)	15.54 m / 51.0 ft
Antenna Model	FCC Reference 32-25LOG(THETA)
Antenna Mode	Transmit 6.1 GHz
Interference Objectives: Long Term	-154.0 dBW/4 kHz 20%
Short Term	-131.0 dBW/4 kHz 0.0025%
Max Available RF Power	-10.5 (dBW/4 kHz)

Transmit 6.1 GHz				
Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.48	116.83	-10.00	127.50
5	0.66	121.67	-10.00	116.41
10	0.67	126.46	-10.00	116.29
15	0.00	131.08	-10.00	160.62
20	0.00	135.79	-10.00	160.62
25	0.00	140.43	-10.00	160.62
30	0.00	145.00	-10.00	160.62
35	0.00	149.44	-10.00	160.62
40	0.00	153.71	-10.00	160.62
45	0.34	157.91	-10.00	141.86
50	0.51	161.61	-10.00	124.54
55	0.56	164.48	-10.00	121.72
60	0.58	166.10	-10.00	120.83
65	0.49	165.95	-10.00	125.92
70	0.44	164.19	-10.00	130.95
75	0.43	161.29	-10.00	132.15
80	0.47	157.68	-10.00	127.98
85	0.56	153.66	-10.00	121.92
90	0.60	149.35	-10.00	119.48
95	0.61	144.85	-10.00	118.87
100	0.58	140.24	-10.00	120.75
105	0.55	135.55	-10.00	122.04
110	0.50	130.82	-10.00	125.02
115	0.54	126.06	-10.00	122.87
120	0.64	121.28	-10.00	117.37
125	0.55	116.46	-10.00	122.09
130	0.83	111.66	-10.00	110.41
135	0.94	106.82	-10.00	105.21
140	1.47	101.99	-10.00	100.00
145	1.71	97.12	-10.00	100.00
150	2.01	92.25	-10.00	100.00
155	1.60	87.37	-10.00	100.00
160	1.33	82.50	-10.00	100.00
165	1.42	77.63	-10.00	100.00
170	1.38	72.76	-10.00	100.00
175	1.42	67.90	-10.00	100.00
180	1.44	63.05	-10.00	100.00
185	1.42	58.22	-10.00	100.00

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Ground Elevation (AMSL)	0.0 m / 0.0 ft
Antenna Centerline (AGL)	15.54 m / 51.0 ft
Antenna Model	FCC Reference 32-25LOG(THETA)
Antenna Mode	Transmit 6.1 GHz
Interference Objectives: Long Term	-154.0 dBW/4 kHz 20%
Short Term	-131.0 dBW/4 kHz 0.0025%
Max Available RF Power	-10.5 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	1.55	53.38	-10.00	100.00
195	1.51	48.60	-10.00	100.00
200	1.45	43.85	-9.05	100.00
205	1.28	39.19	-7.83	101.28
210	1.28	34.56	-6.46	104.79
215	1.02	30.13	-4.97	114.82
220	0.68	25.94	-3.35	136.49
225	0.00	22.30	-1.71	203.60
230	0.00	18.77	0.16	214.61
235	0.00	16.01	1.89	225.17
240	0.00	14.47	2.99	232.10
245	0.00	14.54	2.94	231.78
250	0.00	16.19	1.77	224.41
255	0.00	19.03	0.01	213.72
260	0.00	22.60	-1.85	202.75
265	0.00	26.62	-3.63	192.38
270	0.00	30.91	-5.25	183.68
275	0.00	35.37	-6.71	176.19
280	0.00	39.94	-8.03	169.73
285	0.00	44.59	-9.23	164.12
290	0.24	49.24	-10.00	154.59
295	0.40	53.97	-10.00	135.53
300	0.00	58.81	-10.00	160.62
305	0.00	63.61	-10.00	160.62
310	0.00	68.42	-10.00	160.62
315	0.00	73.25	-10.00	160.62
320	0.00	78.09	-10.00	160.62
325	0.00	82.93	-10.00	160.62
330	0.00	87.77	-10.00	160.62
335	0.00	92.62	-10.00	160.62
340	0.00	97.46	-10.00	160.62
345	0.42	102.32	-10.00	133.58
350	0.49	107.17	-10.00	125.78
355	0.37	112.00	-10.00	138.46

Break Points	Latitude	Longtiude
BP1	47.89	122.403
BP2	47.989	122.241
BP3	48.179	122.448
BP4	48.191	122.393
BP5	48.301	122.399
BP6	48.375	122.538
BP7	48.429	122.581
BP8	48.397	122.582
BP9	48.2829	122.4753
BP10	48.232	122.69
BP11	48.235	122.573
BP12	48.034	122.53
BP13	48.144	122.535
BP14	48.035	122.363
BP15	47.958	122.336

