FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for

SES Americom, Inc.
Woodbine, Maryland
Call Sign: 7169

Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, Virginia 20147
July 21, 2010

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1. CONCLUSIONS

An interference study considering all existing, proposed and prior coordinated microwave facilities within the coordination contours of the proposed earth station demonstrates that this site will operate satisfactorily with the common carrier microwave environment. Further, there will be no restrictions of its operation due to interference considerations.

2. SUMMARY OF RESULTS

A number of great circle interference cases were identified during the interference study of the proposed earth station. Each of the cases, which exceeded the interference objective on a line-of-sight basis, was profiled and the propagation losses estimated using NBS TN101 (Revised) techniques. The losses were found to be sufficient to reduce the signal levels to acceptable magnitudes in every case.

The following companies reported potential great circle interference conflicts that did not meet the objectives on a line-of-sight basis. When over-the-horizon losses are considered on the interfering paths, sufficient blockage exists to negate harmful interference from occurring with the proposed transmit-receive earth station.

Company

Baltimore County of Maryland
Cellco Partnership – Washington/Baltimore
MCI Communications Services, Inc.
New Cingular Wireless LLC - DC
New Cingular Wireless LLC – VA/DC/MD
State of Maryland, MIEMSS

No other carriers reported potential interference cases.

3. SUPPLEMENTAL SHOWING

Pursuant to Part 25.203(c) of the FCC Rules and Regulations, the satellite earth station proposed in this application was coordinated by Comsearch using computer techniques and in accordance with Part 25 of the FCC Rules and Regulations.

Coordination data for this earth station was sent to the below listed carriers with a letter dated June 16, 2010.

Company

AT&T COMMUNICATIONS OF MARYLAND INC
AT&T COMMUNICATIONS OF VIRGINIA INC
AT&T CORP
Allegheny Power Service Corporation
Atlantic Broadband (Delmar), LLC
Atlantic Broadband (Penn), LLC
BAY BROADBAND COMMUNICATIONS LLC
Baltimore County of Maryland
Baltimore Gas and Electric Company
COLLEGE OF SOUTHERN MARYLAND
Cellco Partnership- PA Region
Cellco Partnership-Newark-Dallas Verizon
Cellco Partnership-Washington/Baltimore
Charles, County of
Conterra Ultra Broadband, LLC
County of Frederick
County of Stafford
County of York
DAUPHIN COUNTY EMERGENCY MANAGEMENT
DELAWARE STATE - DTI
Enoch Pratt Free Library
Exelon Generation Company, L.L.C
Frederick County
Hardy Cellular Telephone Company
International Communications Group, Inc.
LB Tower Company LLC
Last Mile Inc.
Local Communications Network, Inc.
Loudoun, County of
MARYLAND PUBLIC BROADCASTING COMMISSION
MCI Communications Services Inc.
METROPOLITAN AREA NETWORKS, INC.
Maryland State Highway Administration
Maryland, State of - Budget & Management

Company (Continued)

National Radio Astronomy Observatory
New Cingular Wireless PCS - VA/DC/MD
New Cingular Wireless PCS LLC - DC
New Cingular Wireless PCS LLC- DE/NH/RI
New Cingular Wireless PCS, LLC - PA
Northern Virginia Electric Cooperative
PENNSYLVANIA TURNPIKE COMMISSION
PRINCE WILLIAM COUNTY
Prince George's County
RAPPAHANNOCK ELECTRIC COOPERATIVE
SCTF NET
Southern Maryland Electric Cooperative I
State of Maryland, MIEMSS
State of WV DHHR/BPH STECS
Texas Eastern Communications, Inc.
USCOC of Cumberland, Inc.
Verizon Maryland, Inc.
Virginia Department of State Police
Virginia Electric & Power Company
Virginia PCS Alliance, L.C.
WASHINGTON SUBURBAN SANITARY COMMISSION
WITF Inc.
Washington D.C. SMSA L.P.
Washington Gas Light Company
Wireless Strategies, Inc.

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.

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 http://www.comsearch.com

Date:	07/21/2010
Job Number:	100616COMSJC01

Administrative Information

Status	ENGINEER PROPOSAL
Call Sign	E7169
Licensee Code	P3210
Licensee Name	SES Americom, Inc.

Site Information — WOODBINE, MARYLAND

Venue Name	
Latitude (NAD 83)	39° 22' 33.4" N
Longitude (NAD 83)	77° 4' 50.9" W
Climate Zone	A
Rain Zone	2
Ground Elevation (AMSL)	187.76 m / 616.0 ft

Link Information

Satellite Type	Geostationary
Mode	TR - Transmit-Receive
Modulation	Digital
Satellite Arc	10° W to 145° West Longitude
Azimuth Range	105.0° to 255.6°
Corresponding Elevation Angles	8.9° / 8.3°
Antenna Centerline (AGL)	8.53 m / 28.0 ft

Antenna Information		Receive		Transmit	
Manufacturer		UAI		UAI	
Model		13 Meter		13 Meter	
Gain / Diameter		53.0 dBi / 13.0 m		56.6 dBi / 13.0 m	
3-dB / 15-dB Beamwidth		0.30° / 0.60°		0.20° / 0.40°	
Max Available RF Power	(dBW/4 kHz)			-13.7	
	(dBW/MHz)			10.3	
Maximum EIRP	(dBW/4 kHz)			42.9	
	(dBW/MHz)			66.9	
Interference Objectives:	Long Term	-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
	Short Term	-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%

Frequency Information	Receive 4.0 GHz	Transmit 6.1 GHz
Emission / Frequency Range (MHz)	137KG7D / 3700.0 - 4200.0	800KG7D / 5925.0 - 6425.0
	800KG7D / 3700.0 - 4200.0	137KG7D / 5925.0 - 6425.0
Max Great Circle Coordination Distance	489.3 km / 304.0 mi	206.6 km / 128.3 mi
Precipitation Scatter Contour Radius	561.1 km / 348.6 mi	100.0 km / 62.1 mi

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
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Coordination Values	**WOODBINE, MD**			
Licensee Name	SES Americom, Inc.			
Latitude (NAD 83)	39° 22' 33.4" N			
Longitude (NAD 83)	77° 4' 50.9" W			
Ground Elevation (AMSL)	187.76 m / 616.0 ft			
Antenna Centerline (AGL)	8.53 m / 28.0 ft			
Antenna Model	UAI 13 Meter			
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz	
Interference Objectives: Long Term	-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
Short Term	-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%
Max Available RF Power			-13.7 (dBW/4 kHz)	

			Receive 4.0 GHz		Transmit 6.1 GHz	
Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	1.42	104.33	-10.00	207.78	-10.00	100.00
5	1.44	99.93	-10.00	207.28	-10.00	100.00
10	1.18	94.97	-10.00	214.70	-10.00	100.00
15	0.93	90.02	-10.00	223.95	-10.00	100.00
20	1.24	85.06	-10.00	213.04	-10.00	100.00
25	1.03	80.11	-10.00	219.23	-10.00	100.00
30	0.92	75.17	-10.00	224.54	-10.00	100.00
35	1.03	70.22	-10.00	219.44	-10.00	100.00
40	1.16	65.26	-10.00	215.32	-10.00	100.00
45	1.09	60.33	-10.00	217.65	-10.00	100.00
50	1.12	55.39	-10.00	216.57	-10.00	100.00
55	1.10	50.46	-10.00	217.29	-10.00	100.00
60	0.97	45.57	-9.47	224.72	-9.47	100.00
65	0.95	40.67	-8.23	232.39	-8.23	100.00
70	0.97	35.80	-6.85	239.05	-6.85	100.00
75	0.91	30.97	-5.27	252.20	-5.27	103.48
80	0.85	26.21	-3.46	267.49	-3.46	111.12
85	0.95	21.49	-1.30	275.78	-1.30	113.00
90	0.86	17.00	1.24	300.51	1.24	124.49
95	1.04	12.73	4.38	314.93	4.38	126.94
100	0.92	9.44	7.62	349.68	7.62	141.38
105	0.84	8.09	9.31	483.72	9.31	201.01
110	1.16	9.22	7.89	339.24	7.89	133.96
115	1.06	12.65	4.45	314.55	4.45	126.56
120	0.70	16.51	1.55	314.95	1.55	132.66
125	0.47	20.20	-0.64	316.31	-0.64	136.49
130	0.47	23.63	-2.34	303.04	-2.34	132.70
135	0.37	26.99	-3.78	306.19	-3.78	136.02
140	0.00	30.39	-5.07	319.20	-5.07	147.05
145	0.00	33.32	-6.07	311.53	-6.07	143.85
150	0.33	35.74	-6.83	289.89	-6.83	131.81
155	0.39	38.09	-7.52	278.15	-7.52	125.18
160	0.53	40.01	-8.05	259.60	-8.05	113.39
165	0.48	41.72	-8.51	261.50	-8.51	115.43
170	0.66	42.77	-8.78	246.60	-8.78	105.40
175	0.89	43.29	-8.91	232.35	-8.91	100.00
180	0.97	43.46	-8.95	227.58	-8.95	100.00
185	0.78	43.39	-8.94	238.24	-8.94	100.00

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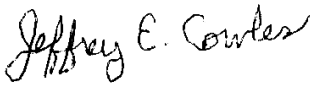
Coordination Values	**WOODBINE, MD**			
Licensee Name	SES Americom, Inc.			
Latitude (NAD 83)	39° 22' 33.4" N			
Longitude (NAD 83)	77° 4' 50.9" W			
Ground Elevation (AMSL)	187.76 m / 616.0 ft			
Antenna Centerline (AGL)	8.53 m / 28.0 ft			
Antenna Model	UAI 13 Meter			
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz	
Interference Objectives: Long Term	-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
Short Term	-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%
Max Available RF Power			-13.7 (dBW/4 kHz)	

			Receive 4.0 GHz		Transmit 6.1 GHz	
Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.86	42.57	-8.73	234.90	-8.73	100.00
195	0.74	41.48	-8.44	243.76	-8.44	102.79
200	0.58	39.96	-8.04	256.01	-8.04	110.85
205	0.57	37.93	-7.47	260.20	-7.47	112.87
210	0.74	35.41	-6.73	253.88	-6.73	107.19
215	0.83	32.67	-5.85	253.32	-5.85	105.29
220	0.93	29.69	-4.81	253.66	-4.81	103.71
225	0.96	26.56	-3.60	259.85	-3.60	106.06
230	0.78	23.41	-2.23	280.60	-2.23	117.87
235	1.00	19.83	-0.43	278.57	-0.43	113.28
240	0.92	16.37	1.65	299.93	1.65	123.32
245	0.83	12.81	4.31	327.78	4.31	133.94
250	0.74	9.37	7.71	363.05	7.71	150.73
255	0.63	7.67	9.87	489.25	9.87	206.58
260	0.87	8.63	8.59	361.43	8.59	147.40
265	0.61	12.14	4.90	348.27	4.90	146.59
270	0.47	16.38	1.65	334.27	1.65	144.08
275	0.61	20.84	-0.97	301.55	-0.97	129.32
280	0.64	25.53	-3.18	283.56	-3.18	121.48
285	0.61	30.33	-5.05	273.11	-5.05	117.65
290	0.61	35.18	-6.66	263.12	-6.66	113.56
295	0.49	40.07	-8.07	263.02	-8.07	115.80
300	0.52	44.97	-9.32	252.30	-9.32	110.25
305	0.38	49.90	-10.00	263.74	-10.00	119.26
310	0.65	54.80	-10.00	240.40	-10.00	102.75
315	1.19	59.69	-10.00	214.32	-10.00	100.00
320	1.27	64.64	-10.00	212.23	-10.00	100.00
325	1.55	69.58	-10.00	206.70	-10.00	100.00
330	1.99	74.53	-10.00	194.90	-10.00	100.00
335	2.10	79.50	-10.00	192.19	-10.00	100.00
340	2.29	84.47	-10.00	187.91	-10.00	100.00
345	2.36	89.44	-10.00	186.36	-10.00	100.00
350	2.11	94.41	-10.00	191.93	-10.00	100.00
355	1.81	99.37	-10.00	199.54	-10.00	100.00

5. CERTIFICATION

I HEREBY CERTIFY THAT I AM THE TECHNICALLY QUALIFIED PERSON RESPONSIBLE FOR THE PREPARATION OF THE FREQUENCY COORDINATION DATA CONTAINED IN THIS APPLICATION, THAT I AM FAMILIAR WITH PARTS 101 AND 25 OF THE FCC RULES AND REGULATIONS, THAT I HAVE EITHER PREPARED OR REVIEWED THE FREQUENCY COORDINATION DATA SUBMITTED WITH THIS APPLICATION, AND THAT IT IS COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



Jeffrey E. Cowles
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COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, Va. 20147

DATED: July 21, 2010