

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for

**HBO Latin America Production Services
Sunrise, Florida**

Satellite Earth Station

Prepared By:

COMSEARCH

19700 Janelia Farm Boulevard

Ashburn, Virginia 20147

September 29, 2014

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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

New Cingular Wireless PCS LLC – S. FL
South Florida Water Management District

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.

Expedited coordination data for this earth station was emailed and sent to the below listed carriers with a letter dated March 7, 2013. Extension notices for the earth station were forwarded on September 5, 2013, February 28, and September 10, 2014.

Company

Alltel Communications LLC - S Florida
Embarq Florida, Inc.
FLORIDA POWER AND LIGHT COMPANY
Florida RSA No. 2B (Indian River) LP
Florida Rural Broadband Alliance, LLC
Harris Corporation - Orlando, FL
Miami-Dade County
New Cingular Wireless PCS LLC - N FL
New Cingular Wireless PCS LLC - S FL
PALM BEACH, COUNTY OF
Palm Beach, County Facilities Dev & Ops
Saint Lucie, County of
South Florida Water Management District
T-Mobile License LLC
Verizon Wireless (VAW) LLC - S Florida
Verizon Wireless Personal Comm, LP(S FL)

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.

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Earth Station Data Sheet

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

Date: 09/29/2014
Job Number: 140910COMSJC04

Administrative Information

Status: ENGINEER PROPOSAL
Call Sign:
Licensee Code: LAPSER
Licensee Name: HBO Latin America Production Services

Site Information

SUNRISE, FLORIDA

Venue Name:
Latitude (NAD 83): 26° 8' 25.6" N
Longitude (NAD 83): 80° 19' 59.7" W
Climate Zone: B
Rain Zone: 1
Ground Elevation (AMSL): 1.83 m / 6.0 ft

Link Information

Satellite Type: Geostationary
Mode: TR - Transmit-Receive
Modulation: Digital
Satellite Arc: 37° W to 143° West Longitude
Azimuth Range: 115.0° to 257.2°
Corresponding Elevation Angles: 33.5° / 16.0°
Antenna Centerline (AGL): 7.32 m / 24.0 ft

Antenna Information

Receive

Transmit

Manufacturer	Scientific-Atlanta	Scientific-Atlanta	
Model	11 Meter	11 Meter	
Gain / Diameter	52.1 dBi / 11.0 m	55.5 dBi / 11.0 m	
3-dB / 15-dB Beamwidth	0.40° / 0.78°	0.26° / 0.54°	
Max Available RF Power (dBW/4 kHz)	-16.0	-16.0	
(dBW/MHz)	8.0	8.0	
Maximum EIRP (dBW/4 kHz)	39.5	39.5	
(dBW/MHz)	63.5	63.5	
(dBW)	79.0	79.0	
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)	15M0G7F - 36M0G7F / 3700.0 - 4200.0	15M0G7F - 36M0G7F / 5925.0 - 6425.0
Max Great Circle Coordination Distance	587.5 km / 365.0 mi	192.1 km / 119.3 mi
Precipitation Scatter Contour Radius	594.6 km / 369.4 mi	100.0 km / 62.1 mi

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Earth Station Data Sheet

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Coordination Values

SUNRISE, FL

Licensee Name	HBO Latin America Production Services				
Latitude (NAD 83)	26° 8' 25.6" N				
Longitude (NAD 83)	80° 19' 59.7" W				
Ground Elevation (AMSL)	1.83 m / 6.0 ft				
Antenna Centerline (AGL)	7.32 m / 24.0 ft				
Antenna Model	Scientific-Atlanta 11 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			-16.0 (dBW/4 kHz)		

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz		Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	102.33	-10.00	412.20	-10.00	138.51
5	0.00	106.59	-10.00	412.20	-10.00	138.51
10	0.00	102.49	-10.00	412.20	-10.00	138.51
15	0.00	98.35	-10.00	412.20	-10.00	138.51
20	0.00	94.19	-10.00	412.20	-10.00	138.51
25	0.00	90.03	-10.00	412.20	-10.00	138.51
30	0.00	85.86	-10.00	412.20	-10.00	138.51
35	0.00	81.70	-10.00	412.20	-10.00	138.51
40	0.00	77.57	-10.00	412.20	-10.00	138.51
45	0.00	73.46	-10.00	412.20	-10.00	138.51
50	0.00	69.40	-10.00	412.20	-10.00	138.51
55	0.00	65.39	-10.00	412.20	-10.00	138.51
60	0.00	61.46	-10.00	412.20	-10.00	138.51
65	0.00	57.62	-10.00	412.20	-10.00	138.51
70	0.00	53.90	-10.00	412.20	-10.00	138.51
75	0.00	50.33	-10.00	412.20	-10.00	138.51
80	0.00	46.95	-9.79	414.79	-9.79	139.27
85	0.00	43.80	-9.04	424.32	-9.04	142.07
90	0.00	40.95	-8.31	433.79	-8.31	144.87
95	0.00	38.44	-7.62	442.83	-7.62	147.56
100	0.00	36.38	-7.02	450.91	-7.02	149.85
105	0.00	34.82	-6.55	457.40	-6.55	151.79
110	0.00	33.86	-6.24	461.64	-6.24	153.07
115	0.00	33.52	-6.13	463.13	-6.13	153.52
120	0.00	33.85	-6.24	461.68	-6.24	153.08
125	0.00	34.81	-6.54	457.47	-6.54	151.82
130	0.00	36.35	-7.01	451.01	-7.01	149.88
135	0.00	38.41	-7.61	442.95	-7.61	147.59
140	0.00	40.91	-8.30	433.92	-8.30	144.91
145	0.00	43.76	-9.03	424.45	-9.03	142.11
150	0.00	46.91	-9.78	414.92	-9.78	139.31
155	0.00	50.22	-10.00	412.20	-10.00	138.51
160	0.00	53.24	-10.00	412.20	-10.00	138.51
165	0.00	55.80	-10.00	412.20	-10.00	138.51
170	0.00	57.77	-10.00	412.20	-10.00	138.51
175	0.00	59.02	-10.00	412.20	-10.00	138.51
180	0.00	59.45	-10.00	412.20	-10.00	138.51

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Earth Station Data Sheet

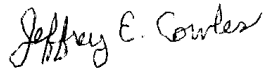
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Interference Objectives: Long Term		-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
Short Term		-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%
Max Available RF Power				-16.0 (dBW/4 kHz)	

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz		Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
185	0.00	59.02	-10.00	412.20	-10.00	138.51
190	0.00	57.77	-10.00	412.20	-10.00	138.51
195	0.00	55.80	-10.00	412.20	-10.00	138.51
200	0.00	53.25	-10.00	412.20	-10.00	138.51
205	0.00	50.22	-10.00	412.20	-10.00	138.51
210	0.00	46.85	-9.77	415.10	-9.77	139.36
215	0.00	43.20	-8.89	426.26	-8.89	142.64
220	0.00	39.35	-7.87	439.49	-7.87	146.56
225	0.00	35.34	-6.71	455.23	-6.71	151.14
230	0.00	31.21	-5.36	473.47	-5.36	156.85
235	0.00	27.09	-3.82	495.95	-3.82	163.70
240	0.00	23.29	-2.18	521.13	-2.18	171.44
245	0.00	19.99	-0.52	547.83	-0.52	179.70
250	0.00	17.48	0.94	572.32	0.94	187.33
255	0.00	16.13	1.81	587.47	1.81	192.06
260	0.00	16.23	1.74	586.30	1.74	191.70
265	0.00	17.75	0.77	569.43	0.77	186.42
270	0.00	20.39	-0.74	544.31	-0.74	178.61
275	0.00	23.77	-2.40	517.67	-2.40	170.37
280	0.00	27.62	-4.03	492.81	-4.03	162.74
285	0.00	31.77	-5.55	470.70	-5.55	156.00
290	0.00	36.12	-6.94	451.97	-6.94	150.16
295	0.00	40.60	-8.21	435.00	-8.21	145.23
300	0.00	45.17	-9.37	420.08	-9.37	140.82
305	0.00	49.81	-10.00	412.20	-10.00	138.51
310	0.00	54.49	-10.00	412.20	-10.00	138.51
315	0.00	59.21	-10.00	412.20	-10.00	138.51
320	0.00	63.96	-10.00	412.20	-10.00	138.51
325	0.00	68.73	-10.00	412.20	-10.00	138.51
330	0.00	73.51	-10.00	412.20	-10.00	138.51
335	0.00	78.31	-10.00	412.20	-10.00	138.51
340	0.00	83.11	-10.00	412.20	-10.00	138.51
345	0.00	87.91	-10.00	412.20	-10.00	138.51
350	0.00	92.72	-10.00	412.20	-10.00	138.51
355	0.00	97.53	-10.00	412.20	-10.00	138.51

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
Engineer III, Telecommunications
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DATED: September 29, 2014