FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for

Mapale LLC
Miami, Florida

Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, Virginia 20147
February 9, 2012

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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

None

No 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 December 22, 2011.

Company

Embarq Florida, Inc.
FLORIDA POWER AND LIGHT COMPANY
Florida RSA No. 2B (Indian River) LP
Harris Corporation - Orlando, FL
METROPOLITAN AREA NETWORKS, INC.
Miami-Dade County
New Cingular Wireless PCS LLC - N FL
New Cingular Wireless PCS LLC - S FL
Palm Beach County Facilities Dev & Ops
South Florida Water Management District
T-MOBILE USA, INC.
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.

COMSEARCH

Earth Station Data Sheet

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

Date:	02/09/2012
Job Number:	111222COMSJC11

Administrative Information

Status	ENGINEER PROPOSAL
Call Sign	<PCNCallSign>
Licensee Code	MAPALE
Licensee Name	MAPALE LLC

Site Information — MIAMI, FLORIDA

Venue Name	
Latitude (NAD 83)	25° 47' 25.9" N
Longitude (NAD 83)	80° 20' 52.8" 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	58° W to 59° West Longitude
Azimuth Range	136.6° to 138.1°
Corresponding Elevation Angles	50.9° / 51.6°
Antenna Centerline (AGL)	2.44 m / 8.0 ft

Antenna Information		Receive		Transmit	
Manufacturer		Prodelin		Prodelin	
Model		2.4 Meter		2.4 Meter	
Gain / Diameter		38.0 dBi / 2.4 m		42.0 dBi / 2.4 m	
3-dB / 15-dB Beamwidth		2.17° / 4.00°		1.36° / 2.55°	
Max Available RF Power	(dBW/4 kHz)			-12.0	
	(dBW/MHz)			12.0	
Maximum EIRP	(dBW/4 kHz)			30.0	
	(dBW/MHz)			54.0	
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)	6M00G7W / 3700.0 - 4200.0	6M00G7W / 5925.0 - 6425.0
Max Great Circle Coordination Distance	412.2 km / 256.1 mi	154.1 km / 95.7 mi
Precipitation Scatter Contour Radius	100.0 km / 62.1 mi	100.0 km / 62.1 mi

COMSEARCH

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Coordination Values	**MIAMI, FL**			
Licensee Name	MAPALE LLC			
Latitude (NAD 83)	25° 47' 25.9" N			
Longitude (NAD 83)	80° 20' 52.8" W			
Ground Elevation (AMSL)	1.83 m / 6.0 ft			
Antenna Centerline (AGL)	2.44 m / 8.0 ft			
Antenna Model	Prodelin 2.4 Meter 1251			
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			-12.0 (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	0.00	117.28	-10.00	412.20	-10.00	154.09
5	0.00	114.76	-10.00	412.20	-10.00	154.09
10	0.00	112.09	-10.00	412.20	-10.00	154.09
15	0.00	109.31	-10.00	412.20	-10.00	154.09
20	0.00	106.41	-10.00	412.20	-10.00	154.09
25	0.00	103.44	-10.00	412.20	-10.00	154.09
30	0.00	100.39	-10.00	412.20	-10.00	154.09
35	0.00	97.30	-10.00	412.20	-10.00	154.09
40	0.00	94.17	-10.00	412.20	-10.00	154.09
45	0.00	91.02	-10.00	412.20	-10.00	154.09
50	0.00	87.87	-10.00	412.20	-10.00	154.09
55	0.00	84.73	-10.00	412.20	-10.00	154.09
60	0.00	81.61	-10.00	412.20	-10.00	154.09
65	0.00	78.54	-10.00	412.20	-10.00	154.09
70	0.00	75.51	-10.00	412.20	-10.00	154.09
75	0.00	72.56	-10.00	412.20	-10.00	154.09
80	0.00	69.71	-10.00	412.20	-10.00	154.09
85	0.00	66.96	-10.00	412.20	-10.00	154.09
90	0.00	64.34	-10.00	412.20	-10.00	154.09
95	0.00	61.88	-10.00	412.20	-10.00	154.09
100	0.00	59.60	-10.00	412.20	-10.00	154.09
105	0.00	57.53	-10.00	412.20	-10.00	154.09
110	0.00	55.69	-10.00	412.20	-10.00	154.09
115	0.00	54.12	-10.00	412.20	-10.00	154.09
120	0.00	52.83	-10.00	412.20	-10.00	154.09
125	0.00	51.86	-10.00	412.20	-10.00	154.09
130	0.00	51.22	-10.00	412.20	-10.00	154.09
135	0.00	50.93	-10.00	412.20	-10.00	154.09
140	0.00	50.99	-10.00	412.20	-10.00	154.09
145	0.00	51.41	-10.00	412.20	-10.00	154.09
150	0.00	52.16	-10.00	412.20	-10.00	154.09
155	0.00	53.25	-10.00	412.20	-10.00	154.09
160	0.00	54.64	-10.00	412.20	-10.00	154.09
165	0.00	56.31	-10.00	412.20	-10.00	154.09
170	0.00	58.19	-10.00	412.20	-10.00	154.09
175	0.00	60.23	-10.00	412.20	-10.00	154.09
180	0.00	62.48	-10.00	412.20	-10.00	154.09
185	0.00	64.91	-10.00	412.20	-10.00	154.09

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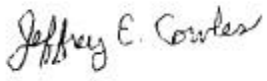
Antenna Model	Prodelin 2.4 Meter 1251			
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz	
Interference Objectives: Long Term	-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
Short Term	-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%
Max Available RF Power			-12.0 (dBW/4 kHz)	

			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	0.00	67.48	-10.00	412.20	-10.00	154.09
195	0.00	70.19	-10.00	412.20	-10.00	154.09
200	0.00	73.01	-10.00	412.20	-10.00	154.09
205	0.00	75.92	-10.00	412.20	-10.00	154.09
210	0.00	78.89	-10.00	412.20	-10.00	154.09
215	0.00	81.93	-10.00	412.20	-10.00	154.09
220	0.00	85.00	-10.00	412.20	-10.00	154.09
225	0.00	88.10	-10.00	412.20	-10.00	154.09
230	0.00	91.20	-10.00	412.20	-10.00	154.09
235	0.00	94.30	-10.00	412.20	-10.00	154.09
240	0.00	97.38	-10.00	412.20	-10.00	154.09
245	0.00	100.42	-10.00	412.20	-10.00	154.09
250	0.00	103.41	-10.00	412.20	-10.00	154.09
255	0.00	106.34	-10.00	412.20	-10.00	154.09
260	0.00	109.18	-10.00	412.20	-10.00	154.09
265	0.00	111.91	-10.00	412.20	-10.00	154.09
270	0.00	114.52	-10.00	412.20	-10.00	154.09
275	0.00	116.98	-10.00	412.20	-10.00	154.09
280	0.00	119.27	-10.00	412.20	-10.00	154.09
285	0.00	121.36	-10.00	412.20	-10.00	154.09
290	0.00	123.23	-10.00	412.20	-10.00	154.09
295	0.00	124.85	-10.00	412.20	-10.00	154.09
300	0.00	126.19	-10.00	412.20	-10.00	154.09
305	0.00	127.23	-10.00	412.20	-10.00	154.09
310	0.00	127.95	-10.00	412.20	-10.00	154.09
315	0.00	128.33	-10.00	412.20	-10.00	154.09
320	0.00	128.37	-10.00	412.20	-10.00	154.09
325	0.00	128.06	-10.00	412.20	-10.00	154.09
330	0.00	127.42	-10.00	412.20	-10.00	154.09
335	0.00	126.45	-10.00	412.20	-10.00	154.09
340	0.00	125.18	-10.00	412.20	-10.00	154.09
345	0.00	123.62	-10.00	412.20	-10.00	154.09
350	0.00	121.77	-10.00	412.20	-10.00	154.09
355	0.00	119.62	-10.00	412.20	-10.00	154.09

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.



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DATED: February 9, 2012