

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 receive-only earth station.

Company

Clearwire Spectrum Holdings III, LLC

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 December 22, 2011.

Company

Airband Communications Inc
American Telecasting Development, Inc.
Associated Telecommunications Management
BEASLEY FM ACQUISITION CORP.
BETHESDA MEMORIAL HOSPITAL
COLLIER, COUNTY OF
Cape Coral, City of
Cape Coral, City of
City of Miami Beach
Clearwire Spectrum Holdings III, LLC
Cyprex
FiberTower Network Services Corp.
Florida High Speed Internet
Fort Lauderdale City Florida
HIALEAH CITY FIRE DEPARTMENT
Hardee County - IDA
Hillsborough County Tax Collector
Hometown Broadband Orlando, LLC
MELBOURNE CITY FLORIDA
METROPOLITAN AREA NETWORKS, INC.
Miami City of
Miami-Dade County
Mid-Florida Bank
Mun Public Safety Comm Consortium(MPSCC)
ORLANDO CITY POLICE DEPARTMENT
ORLANDO UTILITIES COMMISSION
POMPANO BEACH CITY FLORIDA
SKYNET360, LLC
Sling Broadband, LLC
South Florida Water Management District
Sprint Communications Company, LP
St. Lucie County Fire District
T-MOBILE USA, INC.
T3 Communications, Inc.
Towerstream Corp
Trillion Partners, 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: 111222COMSJC12

Administrative Information

Status ENGINEER PROPOSAL
Call Sign
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 RO - Receive-Only
Modulation Digital
Satellite Arc 50° W to 143° West Longitude
Azimuth Range 126.6° to 257.3°
Corresponding Elevation Angles 44.8° / 16.1°
Antenna Centerline (AGL) 8.53 m / 28.0 ft

Antenna Information **Receive**

Manufacturer Prodelin
Model 1.2 Meter
Gain / Diameter 41.7 dBi / 1.2 m
3-dB / 15-dB Beamwidth 1.40° / 2.65°

Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Frequency Information **Receive 11.0 GHz**

Emission / Frequency Range (MHz) 4M00G7W - 36M0G7W / 11450.0 - 12200.0

Max Great Circle Coordination Distance 423.3 km / 263.0 mi
Precipitation Scatter Contour Radius 553.0 km / 343.6 mi

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Earth Station Data Sheet

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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) 8.53 m / 28.0 ft
Antenna Model Prodelin 1.2 Meter
Antenna Mode Receive 11.0 GHz
Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 11.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	102.18	-10.00	307.68
5	0.00	106.97	-10.00	307.68
10	0.00	108.53	-10.00	307.68
15	0.00	105.15	-10.00	307.68
20	0.00	101.70	-10.00	307.68
25	0.00	98.21	-10.00	307.68
30	0.00	94.69	-10.00	307.68
35	0.00	91.15	-10.00	307.68
40	0.00	87.60	-10.00	307.68
45	0.00	84.07	-10.00	307.68
50	0.00	80.55	-10.00	307.68
55	0.00	77.08	-10.00	307.68
60	0.00	73.65	-10.00	307.68
65	0.00	70.30	-10.00	307.68
70	0.00	67.03	-10.00	307.68
75	0.00	63.88	-10.00	307.68
80	0.00	60.85	-10.00	307.68
85	0.00	57.98	-10.00	307.68
90	0.00	55.31	-10.00	307.68
95	0.00	52.85	-10.00	307.68
100	0.00	50.65	-10.00	307.68
105	0.00	48.75	-10.00	307.68
110	0.00	47.19	-9.85	308.95
115	0.00	46.00	-9.57	311.27
120	0.00	45.21	-9.38	312.84
125	0.00	44.85	-9.30	313.58
130	0.00	44.93	-9.31	313.42
135	0.00	45.44	-9.44	312.38
140	0.00	46.38	-9.66	310.53
145	0.00	47.70	-9.96	307.98
150	0.00	49.39	-10.00	307.68
155	0.00	51.40	-10.00	307.68
160	0.00	53.69	-10.00	307.68
165	0.00	56.16	-10.00	307.68
170	0.00	58.15	-10.00	307.68
175	0.00	59.42	-10.00	307.68
180	0.00	59.86	-10.00	307.68

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Coordination Values

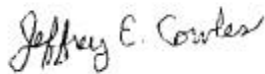
MIAMI, FL

Licensee Name MAPALE LLC
Latitude (NAD 83) 25° 47' 25.9" N
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Interference Objectives: Long Term -156.0 dBW/MHz 20%
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Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 11.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
185	0.00	59.42	-10.00	307.68
190	0.00	58.15	-10.00	307.68
195	0.00	56.16	-10.00	307.68
200	0.00	53.57	-10.00	307.68
205	0.00	50.52	-10.00	307.68
210	0.00	47.11	-9.83	309.11
215	0.00	43.44	-8.95	316.54
220	0.00	39.56	-7.93	325.35
225	0.00	35.53	-6.76	335.57
230	0.00	31.38	-5.42	348.13
235	0.00	27.26	-3.89	362.97
240	0.00	23.46	-2.26	379.53
245	0.00	20.15	-0.61	397.05
250	0.00	17.62	0.85	413.14
255	0.00	16.24	1.74	423.25
260	0.00	16.29	1.70	422.83
265	0.00	17.78	0.75	412.10
270	0.00	20.37	-0.73	395.77
275	0.00	23.73	-2.38	378.27
280	0.00	27.56	-4.01	361.81
285	0.00	31.69	-5.52	347.11
290	0.00	36.03	-6.92	334.19
295	0.00	40.50	-8.19	323.12
300	0.00	45.06	-9.35	313.16
305	0.00	49.69	-10.00	307.68
310	0.00	54.37	-10.00	307.68
315	0.00	59.09	-10.00	307.68
320	0.00	63.84	-10.00	307.68
325	0.00	68.60	-10.00	307.68
330	0.00	73.38	-10.00	307.68
335	0.00	78.17	-10.00	307.68
340	0.00	82.97	-10.00	307.68
345	0.00	87.77	-10.00	307.68
350	0.00	92.58	-10.00	307.68
355	0.00	97.38	-10.00	307.68

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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19700 Janelia Farm Boulevard
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DATED: February 9, 2012