

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
MP INTEGRAL TELCOMMUNICATIONS, INC.
The WOODLANDS, TX
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
February 13, 2019

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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 cases that were resolved:

Centerpoint Energy Inc
Union Pacific Railroad Company

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 02/08/2019.

Company

AT&T MOBILITY OF GALVESTON, LLC
AT&T Mobility Spectrum LLC - South Texas
Air Canopy Internet Services, Inc.
American Electric Power Service Corp
Austin Energy
Bluebonnet Electric Cooperative
Brazoria, County of
Brazos Electric Power Cooperative Inc
Centerpoint Energy Inc
Central Telephone Company of Texas
Cequel III Communications I, LLC
Chambers, County of
Cingular Wireless of Texas RSA #16 LP
City of Houston
Conterra Ultra Broadband, LLC
Cox Radio, Inc. (Houston, TX)
Cy-Fair Volunteer Fire Department
ERF Wireless Bundled Services, Inc.
East Texas Electric Cooperative, Inc
Entergy Services Inc
Enterprise Products Operating, LLC
Equistar Chemicals, LP
FiberLight LLC
GTE Mobilnet of South TX Ltd Prtnrshp
GTE Mobilnet of South Texas LTD Partners
GTE Mobilnet of Texas RSA #17 LTD Prtnsh
Graham Media Group, Houston, Inc
Greater Harris County 911 Emergency Net
Harris County ITC (TX)
Houston County Electric Cooperative
KN Telecommunications, Inc.
Lower Colorado River Authority
MidSouth Electric Coop Association
New Cingular Wireless PCS LLC - N Texas
New Cingular Wireless PCS LLC - S Texas
Northwest Communications Inc.
Olympic Wireless, LLC
One Ring Networks, Inc.
Phillips 66 Communications Inc
Radio One Inc
RigNet SatCom, Inc.
Sam Houston Electric Cooperative Inc.

San Antonio MTA, L.P. (HGC Mkt)
San Bernard Electric Cooperative Inc.
Skynet Communications (Houston)
South East Texas Regional Planning Com
T-Mobile License LLC
Tampnet Licensee LLC
Texas Eastern Communications, LLC
Texas New Mexico Power Company
Towerstream Corp.
Transcontinental Gas Pipeline Corp.
Trunkline Gas Company LLC
Union Pacific Railroad Company
VTX Communications LLC
Verizon Wireless (VAW) LLC - Texas
Verizon Wireless (VAW) LLC-C TX/LA/AR
Verizon Wireless VAW LLC-TX/Houston GC
Verizon Wireless(VAW) LLC-AZ/CO/NM/NV/UT

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: 02/13/2019
Job Number: 190208COMSGE03

Administrative Information

Status ENGINEER PROPOSAL
Call Sign
Licensee Code MPINTE
Licensee Name MP INTEGRAL TELCOMMUNICATIONS, INC.

Site Information

WOODLANDS, TX
Venue Name
Latitude (NAD 83) 30° 7' 23.3" N
Longitude (NAD 83) 95° 26' 26.7" W
Climate Zone A
Rain Zone 2
Ground Elevation (AMSL) 34.13 m / 112.0 ft

Link Information

Satellite Type Geostationary
Mode TO - Transmit-Only
Modulation Digital
Satellite Arc 43° W to 143° West Longitude
Azimuth Range 111.1° to 245.3°
Corresponding Elevation Angles 23.9° / 28.0°
Antenna Centerline (AGL) 2.74 m / 9.0 ft

Antenna Information

Transmit - P60381
Manufacturer PRODELIN CORPORATION
Model 1383
Gain / Diameter 46.0 dBi / 3.8 m
3-dB / 15-dB Beamwidth 1.00° / 2.00°

Max Available RF Power (dBW/4 kHz) -15.8
(dBW/MHz) 8.2

Maximum EIRP (dBW/4 kHz) 30.2
(dBW/MHz) 54.2

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) 25K0G7D / 5972.0 - 6037.0
25K0G7D / 6090.0 - 6425.0

Max Great Circle Coordination Distance 148.4 km / 92.2 mi
Precipitation Scatter Contour Radius 100.0 km / 62.1 mi

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Coordination Values

WOODLANDS, TX

Licensee Name MP INTEGRAL TELCOMMUNICATIONS, INC.
Latitude (NAD 83) 30° 7' 23.3" N
Longitude (NAD 83) 95° 26' 26.7" W
Ground Elevation (AMSL) 34.13 m / 112.0 ft
Antenna Centerline (AGL) 2.74 m / 9.0 ft
Antenna Model PRODELIN CORPORATION 1383
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 -15.8 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	109.22	-10.00	128.03
5	0.00	104.69	-10.00	128.03
10	0.00	100.14	-10.00	128.03
15	0.00	95.58	-10.00	128.03
20	0.00	91.01	-10.00	128.03
25	0.00	86.44	-10.00	128.03
30	0.00	81.87	-10.00	128.03
35	0.00	77.31	-10.00	128.03
40	0.00	72.77	-10.00	128.03
45	0.00	68.26	-10.00	128.03
50	0.00	63.78	-10.00	128.03
55	0.00	59.34	-10.00	128.03
60	0.00	54.96	-10.00	128.03
65	0.00	50.65	-10.00	128.03
70	0.00	46.44	-9.29	129.93
75	0.00	42.37	-8.47	132.11
80	0.00	38.47	-7.69	134.21
85	0.00	34.80	-6.92	135.08
90	0.00	31.45	-5.58	138.93
95	0.00	28.53	-4.41	142.46
100	0.00	26.19	-3.48	145.41
105	0.00	24.60	-2.84	147.47
110	0.00	23.90	-2.56	148.40
115	0.00	24.17	-2.67	148.04
120	0.00	25.38	-3.15	146.45
125	0.00	27.41	-3.97	143.85
130	0.00	30.10	-5.04	140.54
135	0.00	33.27	-6.31	136.81
140	0.00	36.81	-7.36	133.86
145	0.00	40.39	-8.08	133.17
150	0.00	43.74	-8.75	131.37
155	0.00	46.80	-9.36	129.74
160	0.00	49.50	-9.90	128.30
165	0.00	51.75	-10.00	128.03
170	0.00	53.46	-10.00	128.03
175	0.00	54.52	-10.00	128.03
180	0.00	54.89	-10.00	128.03
185	0.00	54.52	-10.00	128.03

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Earth Station Data Sheet

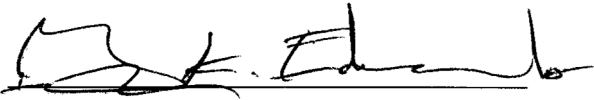
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Antenna Model	PRODELIN CORPORATION 1383
Antenna Mode	Transmit 6.1 GHz
Interference Objectives: Long Term	-154.0 dBW/4 kHz 20%
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Max Available RF Power	-15.8 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	53.45	-10.00	128.03
195	0.00	51.75	-10.00	128.03
200	0.00	49.50	-9.90	128.30
205	0.00	46.80	-9.36	129.74
210	0.00	43.74	-8.75	131.37
215	0.00	40.39	-8.08	133.17
220	0.00	37.09	-7.42	133.70
225	0.00	34.15	-6.66	135.81
230	0.00	31.66	-5.67	138.68
235	0.00	29.74	-4.90	140.97
240	0.00	28.50	-4.40	142.49
245	0.00	28.04	-4.22	143.06
250	0.00	28.39	-4.36	142.63
255	0.00	29.53	-4.81	141.23
260	0.00	31.36	-5.54	139.04
265	0.00	33.78	-6.51	136.23
270	0.00	36.66	-7.33	133.94
275	0.00	39.91	-7.98	133.43
280	0.00	43.44	-8.69	131.53
285	0.00	47.19	-9.44	129.53
290	0.00	51.11	-10.00	128.03
295	0.00	55.15	-10.00	128.03
300	0.00	59.30	-10.00	128.03
305	0.00	63.52	-10.00	128.03
310	0.31	67.73	-10.00	119.41
315	0.46	72.05	-10.00	107.34
320	0.42	76.44	-10.00	110.51
325	0.58	80.83	-10.00	100.44
330	0.41	85.26	-10.00	110.75
335	0.43	89.69	-10.00	109.71
340	0.00	94.11	-10.00	128.03
345	0.00	98.51	-10.00	128.03
350	0.00	102.90	-10.00	128.03
355	0.00	107.27	-10.00	128.03

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.

BY: 

Gary K. Edwards
Senior Manager
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147

DATED: February 13, 2019