

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
United Teleports
PORT ST LUCIE, FL
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
August 29, 2018

TABLE OF CONTENTS

1. CONCLUSIONS 3

2. SUMMARY OF RESULTS 4

3. SUPPLEMENTAL SHOWING 5

4. EARTH STATION COORDINATION DATA..... 8

5. CERTIFICATION..... 12

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.

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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 08/29/2018.

Company

AB Indiana, LLC
Alltel Communications LLC - S Florida
Alternative Choice Wireless, LLC
Altius Communications
Beasley Media Group Lienses, LLC
Beasley Media Group, LLC
Bethesda Memorial Hospital
Brevard County Sheriffs Office
Brevard, County of
Broadwave, LLC
Broward County Board of Commissioners
CBS Communications Services Inc
CBS Radio East, LLC.
CBS Radio Stations Inc.
COLLIER, COUNTY OF
Cape Coral, City of
Cape Coral, City of
Charlotte County Board of County Comm
Citrus County Sheriff's Office
City of Hollywood, Florida
City of Melbourne
City of Miami Beach
City of Palm Bay
City of Pompano Beach Florida
Clearsurf International
Clearwater, City of
Clearwire Spectrum Holdings II, LLC
Clearwire Spectrum Holdings III, LLC
Coconut Creek, City of
Computer Office Solutions, Inc.
Coral Gables, City of
Cox Radio, Inc. (Hollywood, FL)
Echo Technologies
Embarq Florida, Inc.
Entercom Miami License, LLC
FL Courts 18th Judicial Circuit
FiberX LLC
Fixed Wireless Holdings, LLC
Florida High Speed Internet
Florida Keys Electric Cooperative Associ
Florida Mobile Telecom, Inc.

Florida Rural Broadband Alliance, LLC
Florida State
Florida, State of
Fort Lauderdale City Florida
Gigabit Squared Telecom LLC
Global Telecom & Technology Americas
Greater Orlando Public Safety Coop
HARRIS CORPORATION
Hardee County - IDA
Harris Corporation - Florida
HiQ Data Corporation
Hialeah City Fire Department
Hialeah Housing Authority
Highlands County
Hillsborough County Sheriffs Office
Hollywood, City of fl
Indian River Community College
Indian River, County of
Manatee, County of
Mb Development I/C Grand Beach Hotel
Miami City of
Miami-Dade County
Mosaic Fertilizer LLC
Mun Public Safety Comm Consortium(MPSCC)
New Cingular Wireless PCS LLC - N FL
New Cingular Wireless PCS LLC - S FL
Nexogy, Inc
Nextlink Wireless, LLC
North Florida Broadband Authority
Ocala Broadcasting Corporation, LLC
Okeechobee County Fire Department
Olympic Wireless, LLC
Orange County Government
Orlando City Police Department
Orlando Telephone Company Inc.
Orlando Utilities Commission
Palm Beach, County of
Pdmnet Inc.
Pinellas Park Police Department
Pinellas, County of
Plantation, City of
Rapid Systems, Inc
Reedy Creek Improvement District
SkyNet360
Sling Broadband, LLC
South Florida Water Management District
Southeastern Construction & Maintenance
Sprint Communications Company, LP
Sprint PCS
Sprint Spectrum L.P.
Sprintcom, Inc
St. Lucie County Fire District
Sumter County Board of County Commission
Sun Hydraulics Corp
T-Mobile License LLC
Tampa City of

TampaBay DSL Inc
Tower Cloud, Inc.
Towerstream Corp.
United States Sugar Corporation
Verizon Wireless (VAW) LLC - S Florida
Verizon Wireless Personal Comm, LP(S FL)
Wavetech Systems, LLC
Webpass Inc.
West Palm Beach, City of
XO Communications, LLC

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: 08/29/2018
Job Number: 180829COMSGE03

Administrative Information

Status: ENGINEER PROPOSAL
Call Sign: E160081
Licensee Code: UNTELE
Licensee Name: United Teleports

Site Information

PORT ST LUCIE, FL

Venue Name
Latitude (NAD 83): 27° 16' 56.5" N
Longitude (NAD 83): 80° 28' 58.6" W
Climate Zone: B
Rain Zone: 1
Ground Elevation (AMSL): 7.46 m / 24.5 ft

Link Information

Satellite Type: Geostationary
Mode: TR - Transmit-Receive
Modulation: Digital
Satellite Arc: 64° W to 73° West Longitude
Azimuth Range: 147.2° to 164.0°
Corresponding Elevation Angles: 53.3° / 57.1°
Antenna Centerline (AGL): 3.66 m / 12.0 ft

Antenna Information

Receive - FCC32

Transmit - FCC32

Manufacturer	Scientific-Atlanta	Scientific-Atlanta
Model	8010	8010
Gain / Diameter	56.8 dBi / 7.0 m	57.3 dBi / 7.0 m
3-dB / 15-dB Beamwidth	0.25° / 0.45°	0.22° / 0.38°
Max Available RF Power (dBW/4 kHz) (dBW/MHz)	-1.0 23.0	
Maximum EIRP (dBW/4 kHz) (dBW/MHz)	56.3 80.3	
Interference Objectives:	Long Term Short Term	-156.0 dBW/MHz 20% -146.0 dBW/MHz 0.01%
		-151.0 dBW/4 kHz 20% -128.0 dBW/4 kHz 0.0025%

Frequency Information

Receive 11.0 GHz

Transmit 14.0 GHz

Emission / Frequency Range (MHz)	800KF9D / 11447.5 and 11454.0	800KF9D / 14013.0 and 14493.0
Max Great Circle Coordination Distance	307.7 km / 191.2 mi	174.5 km / 108.4 mi
Precipitation Scatter Contour Radius	100.0 km / 62.1 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

PORT ST LUCIE, FL

Licensee Name	United Teleports				
Latitude (NAD 83)	27° 16' 56.5" N				
Longitude (NAD 83)	80° 28' 58.6" W				
Ground Elevation (AMSL)	7.46 m / 24.5 ft				
Antenna Centerline (AGL)	3.66 m / 12.0 ft				
Antenna Model	Scientific-Atlanta 7 meter				
Antenna Mode	Receive 11.0 GHz		Transmit 14.0 GHz		
Interference Objectives: Long Term	-156.0 dBW/MHz	20%	-151.0 dBW/4 kHz	20%	
Short Term	-146.0 dBW/MHz	0.01%	-128.0 dBW/4 kHz	0.0025%	
Max Available RF Power			-1.0 (dBW/4 kHz)		

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 11.0 GHz		Transmit 14.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	120.17	-10.00	307.68	-10.00	174.45
5	0.00	118.19	-10.00	307.68	-10.00	174.45
10	0.00	116.01	-10.00	307.68	-10.00	174.45
15	0.00	113.67	-10.00	307.68	-10.00	174.45
20	0.00	111.18	-10.00	307.68	-10.00	174.45
25	0.00	108.56	-10.00	307.68	-10.00	174.45
30	0.00	105.84	-10.00	307.68	-10.00	174.45
35	0.00	103.04	-10.00	307.68	-10.00	174.45
40	0.00	100.16	-10.00	307.68	-10.00	174.45
45	0.00	97.24	-10.00	307.68	-10.00	174.45
50	0.00	94.27	-10.00	307.68	-10.00	174.45
55	0.00	91.29	-10.00	307.68	-10.00	174.45
60	0.00	88.30	-10.00	307.68	-10.00	174.45
65	0.00	85.32	-10.00	307.68	-10.00	174.45
70	0.00	82.36	-10.00	307.68	-10.00	174.45
75	0.00	79.44	-10.00	307.68	-10.00	174.45
80	0.00	76.58	-10.00	307.68	-10.00	174.45
85	0.00	73.78	-10.00	307.68	-10.00	174.45
90	0.00	71.07	-10.00	307.68	-10.00	174.45
95	0.00	68.48	-10.00	307.68	-10.00	174.45
100	0.00	66.00	-10.00	307.68	-10.00	174.45
105	0.00	63.68	-10.00	307.68	-10.00	174.45
110	0.00	61.53	-10.00	307.68	-10.00	174.45
115	0.00	59.58	-10.00	307.68	-10.00	174.45
120	0.00	57.85	-10.00	307.68	-10.00	174.45
125	0.00	56.36	-10.00	307.68	-10.00	174.45
130	0.00	55.15	-10.00	307.68	-10.00	174.45
135	0.00	54.22	-10.00	307.68	-10.00	174.45
140	0.00	53.60	-10.00	307.68	-10.00	174.45
145	0.00	53.30	-10.00	307.68	-10.00	174.45
150	0.00	53.32	-10.00	307.68	-10.00	174.45
155	0.00	53.67	-10.00	307.68	-10.00	174.45
160	0.00	54.33	-10.00	307.68	-10.00	174.45
165	0.00	55.30	-10.00	307.68	-10.00	174.45
170	0.00	56.55	-10.00	307.68	-10.00	174.45
175	0.00	57.73	-10.00	307.68	-10.00	174.45
180	0.00	58.50	-10.00	307.68	-10.00	174.45
185	0.00	59.50	-10.00	307.68	-10.00	174.45

COMSEARCH

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Coordination Values

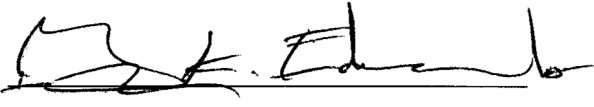
PORT ST LUCIE, FL

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Antenna Mode	Receive 11.0 GHz				
Interference Objectives: Long Term	-156.0 dBW/MHz	20%	Transmit 14.0 GHz	-151.0 dBW/4 kHz	20%
Short Term	-146.0 dBW/MHz	0.01%		-128.0 dBW/4 kHz	0.0025%
Max Available RF Power	-1.0 (dBW/4 kHz)				

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 11.0 GHz		Transmit 14.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	60.75	-10.00	307.68	-10.00	174.45
195	0.00	62.22	-10.00	307.68	-10.00	174.45
200	0.00	63.91	-10.00	307.68	-10.00	174.45
205	0.00	65.77	-10.00	307.68	-10.00	174.45
210	0.00	67.81	-10.00	307.68	-10.00	174.45
215	0.00	69.99	-10.00	307.68	-10.00	174.45
220	0.00	72.30	-10.00	307.68	-10.00	174.45
225	0.00	74.71	-10.00	307.68	-10.00	174.45
230	0.00	77.22	-10.00	307.68	-10.00	174.45
235	0.00	79.80	-10.00	307.68	-10.00	174.45
240	0.00	82.44	-10.00	307.68	-10.00	174.45
245	0.00	85.12	-10.00	307.68	-10.00	174.45
250	0.00	87.82	-10.00	307.68	-10.00	174.45
255	0.00	90.54	-10.00	307.68	-10.00	174.45
260	0.00	93.25	-10.00	307.68	-10.00	174.45
265	0.00	95.95	-10.00	307.68	-10.00	174.45
270	0.00	98.61	-10.00	307.68	-10.00	174.45
275	0.00	101.23	-10.00	307.68	-10.00	174.45
280	0.00	103.78	-10.00	307.68	-10.00	174.45
285	0.00	106.25	-10.00	307.68	-10.00	174.45
290	0.00	108.63	-10.00	307.68	-10.00	174.45
295	0.00	110.89	-10.00	307.68	-10.00	174.45
300	0.00	113.01	-10.00	307.68	-10.00	174.45
305	0.00	114.98	-10.00	307.68	-10.00	174.45
310	0.00	116.78	-10.00	307.68	-10.00	174.45
315	0.00	118.38	-10.00	307.68	-10.00	174.45
320	0.00	119.77	-10.00	307.68	-10.00	174.45
325	0.00	120.93	-10.00	307.68	-10.00	174.45
330	0.00	121.83	-10.00	307.68	-10.00	174.45
335	0.00	122.47	-10.00	307.68	-10.00	174.45
340	0.00	122.84	-10.00	307.68	-10.00	174.45
345	0.00	122.92	-10.00	307.68	-10.00	174.45
350	0.00	122.73	-10.00	307.68	-10.00	174.45
355	0.00	121.93	-10.00	307.68	-10.00	174.45

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: August 29, 2018