

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
WML Services, LLC
ATLANTA, GA
Satellite Earth Station

Prepared By:
COMSEARCH
21515 Ridgetop Circle, Suite 300
Sterling, VA 20166
March 22, 2023

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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.

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 03/09/2023.

Company

Alabama Great Southern Railroad Company
Athens-Clark County Unified Government
Barrow County Emergency Services
Bartow, County of
CableLabs
Cellco Partnership - AL/SC
Cellco Partnership - Georgia/Western NC
Central of Georgia Railway Company
Clayton, County of
Cobb, County of
Conterra Ultra Broadband, LLC
Conyers, City of
Coweta County
DeKalb County Police Department
Diverse Power Inc
Douglas County Sheriff Office
Fayette County
Floyd County
Fulton, County of
Georgia System Operations Corporation
Greene County E911
Gwinnett County Government
Hall County 9-1-1
Henry County Emergency Communications
Jackson County Emergency Services
Jackson Electric Membership Corporation
Metropolitan Atlanta Rapid Transit Auth
Monroe, County of (GA)
New Cingular Wireless PCS LLC - AL, MS
New Cingular Wireless PCS LLC - Georgia
Norfolk Southern Railway Company
Oconee County Sheriffs Office
Olympic Wireless, LLC
One Ring Networks, Inc.
Polk County
Public Service Towers, Inc.
Southern Company Services, Inc.
T-Mobile License LLC
Walton County Georgia

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: 03/22/2023
Job Number: 230309COMSGE11

Administrative Information

Status: ENGINEER PROPOSAL
Call Sign:
Licensee Code: WMLSER
Licensee Name: WML Services, LLC

Site Information

ATLANTA, GA

Venue Name: TECHWOOD ANT 12
Latitude (NAD 83): 33° 47' 2.8" N
Longitude (NAD 83): 84° 23' 38.4" W
Climate Zone: B
Rain Zone: 1
Ground Elevation (AMSL): 269.1 m / 882.9 ft

Link Information

Satellite Type: Geostationary
Mode: TO - Transmit-Only
Modulation: Digital
Satellite Arc: 80° W to 140° West Longitude
Azimuth Range: 172.1° to 249.2°
Corresponding Elevation Angles: 50.4° / 19.8°
Antenna Centerline (AGL): 5.49 m / 18.0 ft

Antenna Information

Transmit - FCC32

Manufacturer: Scientific-Atlanta
Model: 8113
Gain / Diameter: 53.5 dBi / 10.0 m
3-dB / 15-dB Beamwidth: 0.20° / 0.80°

Max Available RF Power (dBW/4 kHz): -18.6
(dBW/MHz): 5.4

Maximum EIRP (dBW/4 kHz): 34.9
(dBW/MHz): 58.9

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): 36M0G7F / 5925.0 - 6425.0

Max Great Circle Coordination Distance: 124.1 km / 77.1 mi
Precipitation Scatter Contour Radius: 100.0 km / 62.1 mi

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Earth Station Data Sheet

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Coordination Values

ATLANTA, GA

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Antenna Model Scientific-Atlanta 10 meter
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 -18.6 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	0.85	109.66	-10.00	100.00
5	0.28	114.25	-10.00	121.51
10	0.25	118.89	-10.00	124.10
15	0.31	123.50	-10.00	118.97
20	1.78	125.73	-10.00	100.00
25	3.06	124.67	-10.00	100.00
30	3.14	122.37	-10.00	100.00
35	3.78	120.20	-10.00	100.00
40	6.44	118.86	-10.00	100.00
45	6.44	115.74	-10.00	100.00
50	7.56	112.94	-10.00	100.00
55	7.39	109.47	-10.00	100.00
60	7.39	105.98	-10.00	100.00
65	6.84	102.32	-10.00	100.00
70	3.70	98.28	-10.00	100.00
75	2.13	94.74	-10.00	100.00
80	2.13	91.42	-10.00	100.00
85	2.18	88.09	-10.00	100.00
90	2.38	84.75	-10.00	100.00
95	2.53	81.42	-10.00	100.00
100	3.19	77.98	-10.00	100.00
105	3.32	74.67	-10.00	100.00
110	3.65	71.34	-10.00	100.00
115	3.16	68.40	-10.00	100.00
120	2.52	65.71	-10.00	100.00
125	2.23	63.04	-10.00	100.00
130	2.24	60.38	-10.00	100.00
135	2.31	57.85	-10.00	100.00
140	2.50	55.44	-10.00	100.00
145	2.37	53.51	-10.00	100.00
150	2.08	52.01	-10.00	100.00
155	2.02	50.64	-10.00	100.00
160	1.87	49.69	-10.00	100.00
165	1.19	49.63	-10.00	100.00
170	1.14	49.34	-10.00	100.00
175	1.20	49.30	-10.00	100.00
180	1.00	49.72	-10.00	100.00
185	1.17	49.26	-10.00	100.00

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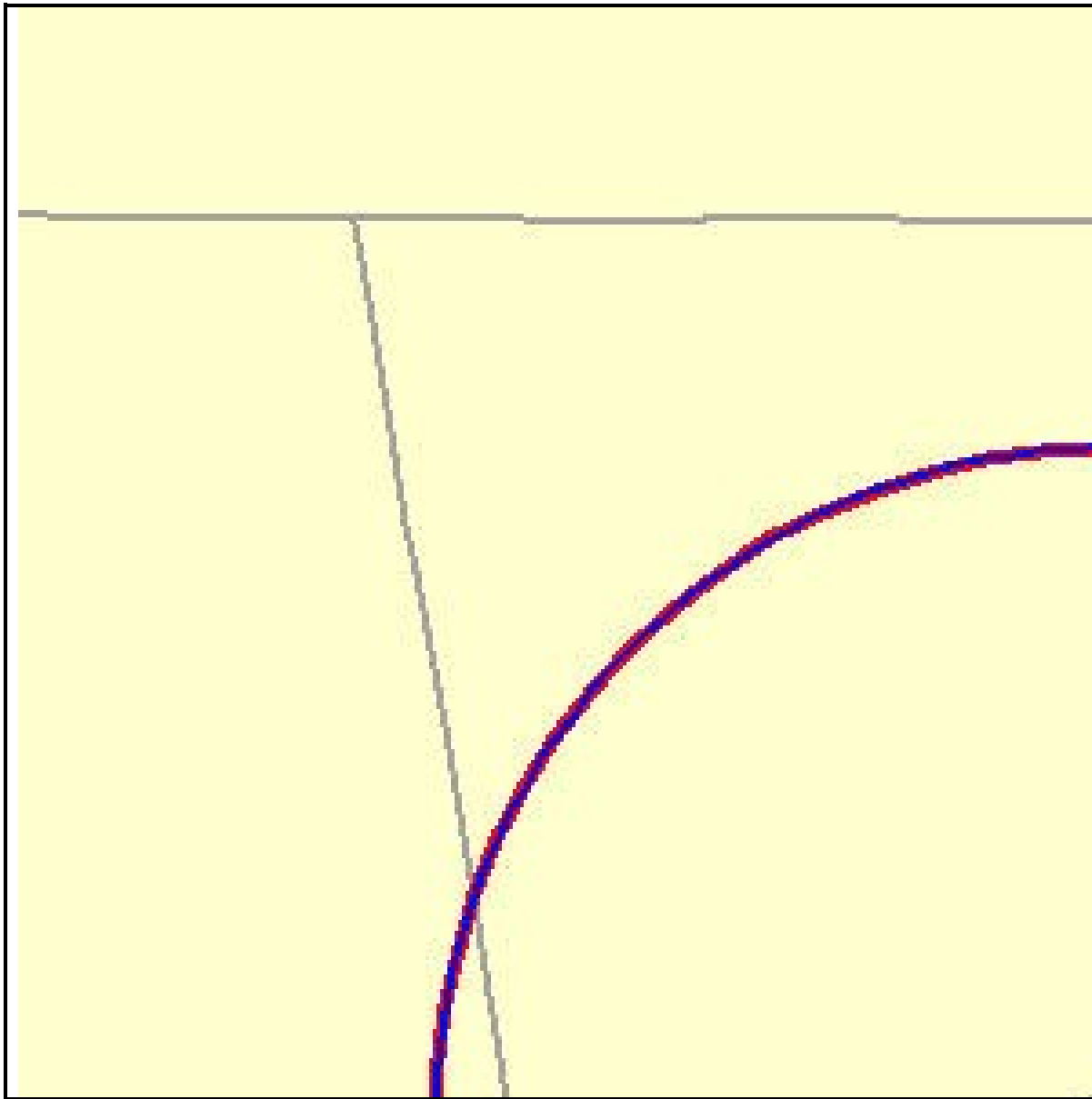
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Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	0.96	48.57	-10.00	100.00
195	1.03	47.07	-9.82	100.00
200	1.26	44.94	-9.31	100.00
205	1.20	42.61	-8.74	100.00
210	1.20	39.88	-8.02	100.00
215	1.23	36.81	-7.15	100.00
220	1.36	33.44	-6.11	100.00
225	1.21	30.07	-4.95	100.00
230	1.14	26.51	-3.58	100.00
235	1.15	23.28	-2.17	100.00
240	1.21	20.67	-0.88	100.00
245	1.22	19.04	0.01	101.96
250	1.47	18.37	0.40	100.00
255	1.56	19.14	-0.05	100.00
260	1.48	21.21	-1.17	100.00
265	1.35	24.15	-2.57	100.00
270	1.24	27.65	-4.04	100.00
275	1.17	31.49	-5.45	100.00
280	1.13	35.58	-6.78	100.00
285	0.92	39.92	-8.03	100.00
290	2.82	43.66	-9.00	100.00
295	2.71	48.26	-10.00	100.00
300	2.96	52.82	-10.00	100.00
305	1.72	57.74	-10.00	100.00
310	1.56	62.44	-10.00	100.00
315	1.34	67.16	-10.00	100.00
320	1.27	71.87	-10.00	100.00
325	1.48	76.58	-10.00	100.00
330	1.37	81.32	-10.00	100.00
335	0.83	86.07	-10.00	100.00
340	0.85	90.80	-10.00	100.00
345	0.73	95.52	-10.00	100.00
350	0.71	100.24	-10.00	100.00
355	0.76	104.95	-10.00	100.00

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WML Services, LLC



Legend:

Scale: 1:2,000,000

Great Circle: 6.1 GHz 

Precipitation Scatter: 6.1 GHz 

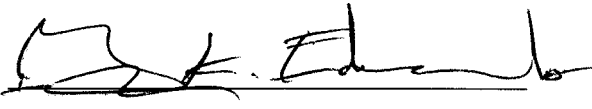
Earth Station Site: 



COMSEARCH®
21515 Ridgetop Circle, Suite
300
Sterling, VA 20166

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
21515 Ridgetop Circle, Suite 300
Sterling, VA 20166

DATED: March 22, 2023