

# FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for  
**United Teleports**  
**THOMASTON, GA**  
**Satellite Earth Station**

Prepared By:  
COMSEARCH  
19700 Janelia Farm Boulevard  
Ashburn, VA 20147  
January 26, 2022

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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 11/15/2021.

Company

3G Wireless, LLC  
Aerial Video Systems  
Alabama Power Company  
Alascom Inc  
Ascent Media Network Services, LLC  
Athens-Clark County Unified Government  
Atlanta Television Station Wupa Inc.  
Augusta Richmond County Consolidated Gov  
Automated Control Systems, LLC  
Baldwin County Sheriffs Office  
Bartow, County of  
Bellsouth Telecommunications, Inc.  
Board of Education, City of Atlanta  
Borgeson, Tom R.  
Broadcast Sports Inc.  
Business Only Broadband, LLC  
Calhoun County 911 District  
Calhoun County Commission  
Carolina Telephone and Telegraph Co  
Casper, John  
Cellco Partnership - AL/SC  
Cellco Partnership - Georgia/Western NC  
Cellco Partnership - NC/SC  
Cellco Partnership - South Carolina  
CenturyTel of the Southwest, Inc.  
Cherokee County E911  
Chicago Comnet Corp  
Christian Television Network, Inc.  
Cincinnati Bell Wireless LLC  
City of Atlanta  
City of Donalsonville  
City of Douglasville  
City of East Point Georgia  
City Of Forest Park  
City of Gadsden, Alabama  
City of Hoover  
City of McDonough  
Citywide News Network, Inc.  
Clayton, County of  
Clearwire Spectrum Holdings II, LLC

Clearwire Spectrum Holdings III, LLC  
Cobb Electric Membership Corporation  
Colquitt Electric Membership Corp  
Conterra Ultra Broadband, LLC  
Cowboys Stadium LP  
Dale County Sheriff's Office  
DCI II, INC.  
Dean's Commercial Two-way  
DeKalb County Police Department  
Dickey Broadcasting Company  
Direct Broadcast Services, Inc.  
Diverse Power Inc  
Dothan, City of  
Douglas County Sheriff Office  
Echo Technologies  
Elbert County Board of Commissioners  
Farmers Telecommunications Cooperative  
Fast Internet For All  
Fayette County  
FiberFly, LLC  
First Baptist Church of Albany  
Floyd County  
Fort Code, Inc  
Frontier California Inc.  
Fulton, County of  
Gadsden Celltelco Partnership  
Georgia College and State University  
Georgia Institute of Technology  
Georgia Power Company  
Georgia Public Web  
Georgia Television Company  
Global Telecom & Technology Americas  
Gordon, County of  
Gray Television Licensee, LLC  
Greene County E911  
Habersham, County of  
Hall County 9-1-1  
Hallco Unlimited, Inc.  
Harris County Board of Education  
Hart Electric Membership Corporation  
Hawaiian Telecom Inc.  
Heiden, William  
Henry County Emergency Communications  
HF Enterprises, Inc  
Houston County Board of Commissioners  
HUB Electronics, Inc.  
iHM Licenses, LLC  
Illinois Bell Telephone Company  
Indiana Bell Telephone Company  
Information & Display Systems, Inc.  
Information Super Station, LLC  
Information Transport Solutions, Inc.  
International Communications Group, Inc.  
iWispr  
Jackson County Emergency Services  
Kentucky RSA #3 Cellular General Partner

Kentucky RSA #4 Cellular General Partner  
Kudzu Networks, Inc.  
L3Harris Technologies, Inc  
Lee County Emergency Services  
Lee, County of  
Lumpkin County 911  
Macon-Bibb County Government  
McDonough, City of  
MCIS Inc  
MERCURY COMMUNICATIONS  
Meredith Corporation  
Meredith Corporation - WGCL  
Michigan Bell Telephone Company  
Montgomery, County Of  
Moreen, Steven K  
Morris Network, Inc.  
Navajo Communications Company  
NBC Telemundo License LLC  
New Cingular Wireless PCS LLC - AL, MS  
New Cingular Wireless PCS LLC - Georgia  
NEW ENGLAND DIGITAL DISTRIBUTION, INC.  
New World Communications of Atlanta, Inc  
North Fulton Regional Radio System Auth  
North Georgia Electric Membership Corp.  
Northeastern Georgia RSA Limited Partner  
Northstar Network Services, LLC  
NorthWest Suburbs Community Access Corp  
NSM Surveillance  
Oconee County Sheriffs Office  
Ohio Bell GTelephone Company  
Olympic Wireless, LLC  
Onboard Images  
One Ring Networks, Inc.  
Pacific and Southern, LLC  
Pacific Bell Tel Com dba AT&T California  
Paladin Wireless LLC  
Penn Service Microwave Co., Inc.  
Pinpoint Wireless, Inc.  
Plateau Telecommunications, Inc.  
Plum TV, LLC  
PMB Broadcasting, LLC  
Point Broadband Fiber Holdings, LLC  
Polk County  
Prism Broadcasting Network, Inc.  
Production & Satellite Services, Inc.  
Quick Link Connections Inc.  
Qwest Corporation  
Radio One Inc  
Radiofone, Inc.  
Randy Hermes Production  
RCC Minnesota Inc. - MN NE ND SD  
Remote Broadcasts, Inc.  
REMOTE FACILITIES CONSULTING SERVICES  
RF Central, LLC  
RF Film, Inc  
Riverdale, City of

RiverStreet Wireless of North Carolina  
Rockdale County Georgia  
Seminole Communications, Inc.  
Shelby County 911  
SmartSky Microwave, LLC  
Southern Company Services, Inc.  
Southern Light, LLC  
Southwestern Bell Telephone L.P.  
Spalding, County of  
Speedshotz, Inc  
Sprint Spectrum LLC  
Sprintcom, Inc  
Stephens County, GA  
Talladega County Emergency Mangement Age  
Tallapoosa, County of  
T-Mobile License LLC  
True North Wifi, LLC  
TTWN Networks, LLC  
Unisat, Inc.  
United Telephone - Southeast  
Univision Atlanta, LLC  
Verizon Maryland, Inc.  
Verizon New England Inc.  
Verizon New Jersey, Inc.  
Verizon New York, Inc.  
Verizon North Inc.  
Verizon Northwest Inc.  
Verizon Pennsylvania, Inc.  
VERIZON SOUTH INC.  
Verizon Virginia, Inc.  
Verizon Washington DC, Inc.  
Verizon Wireless (VAW) LLC - Alabama  
Verizon Wireless of The East LP - (GA)  
Verizon Wireless of the East LP- Alabama  
VYVX, LLC  
Vyvx, LLC - Atlanta  
Walker, County of  
Walton County Georgia  
Westar Satellite Services LP  
Winged Vision Inc  
Wireless Internet Solutions Experts LLC  
Wisconsin Bell Telephone Company  
Wolfe Air Aviation  
WXTX License Subsidiary, 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: 01/26/2022  
Job Number: 211115COMSGE16

### Administrative Information

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

### Site Information THOMASTON, GA

Venue Name:  
Latitude (NAD 83): 32° 56' 56.7" N  
Longitude (NAD 83): 84° 15' 42.1" W  
Climate Zone: A  
Rain Zone: 1  
Ground Elevation (AMSL): 241.89 m / 793.6 ft

### Link Information

Satellite Type: Geostationary  
Mode: TR - Transmit-Receive  
Modulation: Digital  
Satellite Arc: 61° W to 61° West Longitude  
Azimuth Range: 141.7° to 141.7°  
Corresponding Elevation Angles: 44.2° / 44.2°  
Antenna Centerline (AGL): 5.49 m / 18.0 ft

### Antenna Information

#### Receive - FCC32

#### Transmit - FCC32

|                                    |                      |                          |
|------------------------------------|----------------------|--------------------------|
| Manufacturer                       | Vertex RSI           | Vertex RSI               |
| Model                              | 9.2 Meter            | 9.2 Meter                |
| Gain / Diameter                    | 59.2 dBi / 9.2 m     | 60.2 dBi / 9.2 m         |
| 3-dB / 15-dB Beamwidth             | 0.18° / 0.38°        | 0.15° / 0.30°            |
| Max Available RF Power (dBW/4 kHz) | -21.7                | -21.7                    |
| (dBW/MHz)                          | 2.3                  | 2.3                      |
| Maximum EIRP (dBW/4 kHz)           | 38.5                 | 38.5                     |
| (dBW/MHz)                          | 62.5                 | 62.5                     |
| 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% |

### Frequency Information

#### Receive 11.0 GHz

#### Transmit 14.0 GHz

|                                        |                              |                             |
|----------------------------------------|------------------------------|-----------------------------|
| Emission / Frequency Range (MHz)       | 18M0G7W / 10790.0 - 10826.0  | 18M0G7W / 12840.0 - 12876.0 |
|                                        | 18M0 G7W / 11204.0 - 11240.0 | 18M0G7W / 13004.0 - 13040.0 |
|                                        | 18M0 G7W / 11324.0 - 11360.0 | 18M0G7W / 13124.0 - 13160.0 |
| Max Great Circle Coordination Distance | 235.1 km / 146.1 mi          | 100.0 km / 62.1 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  
(703)726-5500 <http://www.comsearch.com>

### Coordination Values

### THOMASTON, GA

Licensee Name United Teleports  
Latitude (NAD 83) 32° 56' 56.7" N  
Longitude (NAD 83) 84° 15' 42.1" W  
Ground Elevation (AMSL) 241.89 m / 793.6 ft  
Antenna Centerline (AGL) 5.49 m / 18.0 ft  
Antenna Model Vertex/RSI 9.2 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 -21.7 (dBW/4 kHz)

| Azimuth (°) | Horizon<br>Elevation (°) | Antenna<br>Discrimination (°) | Receive 11.0 GHz      |                               | Transmit 14.0 GHz     |                               |
|-------------|--------------------------|-------------------------------|-----------------------|-------------------------------|-----------------------|-------------------------------|
|             |                          |                               | Horizon<br>Gain (dBi) | Coordination<br>Distance (km) | Horizon<br>Gain (dBi) | Coordination<br>Distance (km) |
| 0           | 0.00                     | 124.22                        | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 5           | 0.00                     | 121.43                        | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 10          | 0.00                     | 118.46                        | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 15          | 0.00                     | 115.35                        | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 20          | 0.00                     | 112.11                        | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 25          | 0.00                     | 108.77                        | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 30          | 0.00                     | 105.35                        | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 35          | 0.00                     | 101.87                        | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 40          | 0.00                     | 98.34                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 45          | 0.00                     | 94.78                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 50          | 0.00                     | 91.20                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 55          | 0.00                     | 87.62                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 60          | 0.00                     | 84.05                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 65          | 0.00                     | 80.50                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 70          | 0.00                     | 76.98                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 75          | 0.00                     | 73.52                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 80          | 0.00                     | 70.12                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 85          | 0.00                     | 66.82                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 90          | 0.00                     | 63.62                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 95          | 0.00                     | 60.55                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 100         | 0.00                     | 57.64                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 105         | 0.00                     | 54.92                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 110         | 0.00                     | 52.42                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 115         | 0.00                     | 50.18                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 120         | 0.00                     | 48.24                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 125         | 0.00                     | 46.64                         | -9.72                 | 232.60                        | -9.72                 | 100.00                        |
| 130         | 0.00                     | 45.42                         | -9.43                 | 233.87                        | -9.43                 | 100.00                        |
| 135         | 0.00                     | 44.62                         | -9.24                 | 234.73                        | -9.24                 | 100.00                        |
| 140         | 0.00                     | 44.24                         | -9.15                 | 235.14                        | -9.15                 | 100.00                        |
| 145         | 0.00                     | 44.32                         | -9.16                 | 235.06                        | -9.16                 | 100.00                        |
| 150         | 0.00                     | 44.83                         | -9.29                 | 234.50                        | -9.29                 | 100.00                        |
| 155         | 0.00                     | 45.78                         | -9.52                 | 233.49                        | -9.52                 | 100.00                        |
| 160         | 0.00                     | 47.13                         | -9.83                 | 232.11                        | -9.83                 | 100.00                        |
| 165         | 0.00                     | 48.84                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 170         | 0.00                     | 50.88                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 175         | 0.00                     | 53.21                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 180         | 0.00                     | 55.78                         | -10.00                | 231.37                        | -10.00                | 100.00                        |
| 185         | 0.00                     | 58.57                         | -10.00                | 231.37                        | -10.00                | 100.00                        |

# COMSEARCH

## Earth Station Data Sheet

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

### Coordination Values

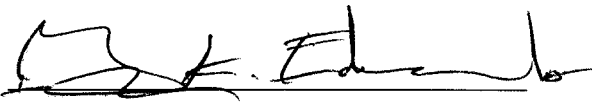
### THOMASTON, GA

|                                    |                      |       |  |                   |         |
|------------------------------------|----------------------|-------|--|-------------------|---------|
| Licensee Name                      | United Teleports     |       |  |                   |         |
| Latitude (NAD 83)                  | 32° 56' 56.7" N      |       |  |                   |         |
| Longitude (NAD 83)                 | 84° 15' 42.1" W      |       |  |                   |         |
| Ground Elevation (AMSL)            | 241.89 m / 793.6 ft  |       |  |                   |         |
| Antenna Centerline (AGL)           | 5.49 m / 18.0 ft     |       |  |                   |         |
| Antenna Model                      | Vertex/RSI 9.2 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             |                      |       |  | -21.7 (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                  | 61.54                      | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 195         | 0.00                  | 64.65                      | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 200         | 0.00                  | 67.89                      | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 205         | 0.00                  | 71.23                      | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 210         | 0.00                  | 74.65                      | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 215         | 0.00                  | 78.13                      | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 220         | 0.00                  | 81.66                      | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 225         | 0.00                  | 85.22                      | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 230         | 0.00                  | 88.80                      | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 235         | 0.00                  | 92.38                      | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 240         | 0.00                  | 95.95                      | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 245         | 0.00                  | 99.50                      | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 250         | 0.00                  | 103.02                     | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 255         | 0.00                  | 106.48                     | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 260         | 0.00                  | 109.88                     | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 265         | 0.00                  | 113.18                     | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 270         | 0.00                  | 116.38                     | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 275         | 0.00                  | 119.45                     | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 280         | 0.00                  | 122.36                     | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 285         | 0.00                  | 125.08                     | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 290         | 0.00                  | 127.58                     | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 295         | 0.00                  | 129.82                     | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 300         | 0.00                  | 131.76                     | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 305         | 0.00                  | 133.36                     | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 310         | 0.30                  | 134.87                     | -10.00             | 221.55                     | -10.00             | 100.00                     |
| 315         | 0.46                  | 135.84                     | -10.00             | 207.33                     | -10.00             | 100.00                     |
| 320         | 0.23                  | 135.99                     | -10.00             | 228.09                     | -10.00             | 100.00                     |
| 325         | 0.22                  | 135.90                     | -10.00             | 229.74                     | -10.00             | 100.00                     |
| 330         | 0.00                  | 135.17                     | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 335         | 0.00                  | 134.22                     | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 340         | 0.35                  | 133.19                     | -10.00             | 217.46                     | -10.00             | 100.00                     |
| 345         | 0.00                  | 131.16                     | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 350         | 0.00                  | 129.12                     | -10.00             | 231.37                     | -10.00             | 100.00                     |
| 355         | 0.00                  | 126.79                     | -10.00             | 231.37                     | -10.00             | 100.00                     |

## 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: January 26, 2022