

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
BFI Licenses, LLC
STAMFORD, CT
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
April 13, 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 transmit-receive earth station.

Company

Direct Broadcast Services, Inc.
Cellco Partnership-Newark-Dallas Verizon
New Cingular Wireless PCS LLC -Northeast
Weblin Holdings 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..

Company

AB Services LLC
ALGONQUIN GAS TRANSMISSION CO
AT&T CORP
Aerbender, LLC
Allentown SMSA Limited Partnership
Appalachian Broadcasting
Atlantic City Electric Company
Auburn Data Systems, LLC
BFI Licenses, LLC
Berks, County of
CAMDEN COUNTY
CONNECTICUT STATE POLICE DEPARTMENT
CONSOLIDATED EDISON COMPANY OF NEW YORK
Capital Communications of America
Cellco Partnership - (W-NY)
Cellco Partnership - CT, W-MA, VT
Cellco Partnership- PA Region
Cellco Partnership-Newark-Dallas Verizon
Cellco Prtnrshp - Phil. Tri-State Rgn
Comprehensive Wireless LLC
Coral Reef Technologies Ltd
Coralinks
County of Warren
Direct Broadcast Services, Inc.
EASTERN PENNSYLVANIA EMS COUNCIL
ECW Wireless, LLC
EG Broadcast Newco Corp
Eastern MLG LLC
Essex County Sherrif Office
FELHC, Inc.
Fibertrack, LLC
Fleet Systems, LLC
Fundamental Broadcasting LLC
Garden State Transmissions
Geneva Communications, LLC
Gloucester, County of
Goosetown Network Services, LLC
High Voltage Communications LLC
Jefferson Microwave, LLC
Kryptic Technologies

MCI Communications Services Inc.
METROPOLITAN AREA NETWORKS, INC.
MVC Research. LLC
Massachusetts Department of State Police
Massachusetts, Commonwealth Public Works
Monroe County Control Center (PA)
NBC TELEMUNDO LICENSE LLC
NEW YORK CITY POLICE DEPARTMENT
Nassau County Police Department
New Cingular Wireless PCS LLC -NJ
New Cingular Wireless PCS LLC -Northeast
New Cingular Wireless PCS of PA LLC
New Cingular Wireless PCS, LLC (NY)
New Cingular Wireless PCS, LLC - PA
New Jersey State Police
New Jersey Transit Rail Operations, Inc.
New Jersey Turnpike Authority-Pkwy Div
New Jersey, State of -NJ Transit
New York Communcations CO., Inc
New York, City of
Newgig Networks, LLC
Northeast Utilities Services Company
OCEAN, COUNTY OF
Ocean, County of-Div of Wireless Tech.
Orange Poughkeepsie SMSA LTD Partnership
Orange and Rockland Utilities, Inc.
PENNSYLVANIA TURNPIKE COMMISSION
PSEG Services Corporation
Passaic Valley Microwave
Pike, County of PA
SW Networks
Stevens Institute of Technology
Suffolk, County of
TRF SERVICES LLC
Texas Eastern Communications, Inc.
Turtle Networks 6384
Turtle Networks 6386
Turtle Networks 6408
Turtle Networks 6457
Velox Networks LLC
Weblin Holdings LLC
Wireless Backhaul Infrastructure, LLC
Wireless Internetwork LLC
World Class Wireless LLC
Zen Networks, Inc
iSignal

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: 04/13/2012
Job Number: 120405COMSTC03

Administrative Information

Licensee Name BFI Licenses, LLC

Site Information

STAMFORD, CT

Latitude (NAD 83) 41°4' 34.4" N
Longitude (NAD 83) 73°31' 13.0" W
Climate Zone B
Rain Zone 2
Ground Elevation (AMSL) 16.9 m / 55.5 ft

Link Information

Satellite Type Geostationary
Mode TR - Transmit-Receive
Modulation Analog and Digital
Satellite Arc 54°W to 139°West Longitude
Azimuth Range 151.7° to 253.3°
Corresponding Elevation Angles 38.5° / 9.7°
Antenna Centerline (AGL) 6.4 m / 21.0 ft

Antenna Information

Receive - V41103

Transmit - V61103

Manufacturer VERTEX COMMUNICATIONS
Model 11 KPC
Gain / Diameter 51.9 dBi / 11.0 m
3-dB / 15-dB Beamwidth 0.40° / 0.90°

VERTEX COMMUNICATIONS
11 KPC
55.4 dBi / 11.0 m
0.30° / 0.60°

| | | | | <u>36M0F3F</u> | <u>51K2G7W - 36M0G7W</u> | |
|--------------------------|-------------|----------------|-------|------------------|--------------------------|--------|
| Max Available RF Power | (dBW/4 kHz) | | | -0.5 | -13.01 | -13.01 |
| | (dBW/MHz) | | | 23.5 | -1.94 | 10.97 |
| Maximum EIRP | (dBW/4 kHz) | | | 54.9 | 42.39 | 42.39 |
| | (dBW/MHz) | | | 78.9 | 53.46 | 64.39 |
| | (dBW) | | | 81.9 | 53.46 | 81.93 |
| Interference Objectives: | Long Term | -156.0 dBW/MHz | 20% | -154.0 dBW/4 kHz | 20% | |
| | Short Term | -146.0 dBW/MHz | 0.01% | -131.0 dBW/4 kHz | 0.0025% | |

Frequency Information

Receive 4.0 GHz

Transmit 6.1 GHz

Emission / Frequency Range (MHz) 51K2G7W - 36M0G7W / 3700.0 - 4200.0
36M0F3F / 3700.0 - 4200.0

51K2G7W - 36M0G7W / 5925.0 - 6425.0
36M0F3F / 5925.0 - 6425.0

Max Great Circle Coordination Distance 464.9 km / 288.8 mi 243.6 km / 151.3 mi
Precipitation Scatter Contour Radius 543.9 km / 337.9 mi 152.5 km / 94.8 mi

COMSEARCH

Earth Station Data Sheet

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Coordination Values

STAMFORD, CT

Licensee Name BFI Licenses, LLC
Latitude (NAD 83) 41° 4' 34.4" N
Longitude (NAD 83) 73° 31' 13.0" W
Ground Elevation (AMSL) 16.9 m / 55.5 ft
Antenna Centerline (AGL) 6.4 m / 21.0 ft
Antenna Model VERTEX COMMUNICATIONS 11 KPC
Antenna Mode Receive 4.0 GHz Transmit 6.1 GHz
Interference Objectives: Long Term -156.0 dBW/MHz 20% -154.0 dBW/4 kHz 20%
Short Term -146.0 dBW/MHz 0.01% -131.0 dBW/4 kHz 0.0025%
Max Available RF Power -0.5 (dBW/4 kHz)

| Azimuth (°) | Horizon Elevation (°) | Antenna Discrimination (°) | Receive 4.0 GHz | | Transmit 6.1 GHz | |
|-------------|-----------------------|----------------------------|--------------------|----------------------------|--------------------|----------------------------|
| | | | Horizon Gain (dBi) | Coordination Distance (km) | Horizon Gain (dBi) | Coordination Distance (km) |
| 0 | 0.78 | 106.48 | -9.10 | 288.54 | -9.60 | 144.09 |
| 5 | 0.90 | 111.42 | -10.24 | 262.28 | -10.45 | 132.27 |
| 10 | 0.74 | 116.34 | -13.37 | 261.12 | -12.60 | 135.40 |
| 15 | 0.53 | 121.24 | -14.10 | 281.09 | -12.60 | 149.95 |
| 20 | 0.61 | 121.64 | -14.10 | 270.57 | -12.60 | 144.30 |
| 25 | 0.75 | 118.17 | -13.73 | 256.74 | -12.60 | 134.53 |
| 30 | 0.86 | 114.56 | -12.75 | 250.00 | -12.34 | 128.30 |
| 35 | 1.14 | 110.89 | -9.82 | 247.13 | -10.14 | 123.73 |
| 40 | 1.37 | 107.11 | -9.10 | 238.84 | -9.60 | 119.25 |
| 45 | 1.58 | 103.25 | -9.10 | 227.11 | -9.60 | 116.09 |
| 50 | 1.65 | 99.30 | -9.10 | 223.13 | -9.60 | 114.38 |
| 55 | 1.69 | 95.32 | -9.10 | 221.22 | -9.60 | 113.55 |
| 60 | 1.58 | 91.32 | -9.10 | 227.06 | -9.60 | 116.07 |
| 65 | 1.48 | 87.33 | -9.10 | 232.28 | -9.60 | 116.40 |
| 70 | 1.40 | 83.35 | -9.10 | 237.07 | -9.60 | 118.47 |
| 75 | 1.24 | 79.41 | -9.10 | 246.43 | -9.60 | 122.67 |
| 80 | 1.06 | 75.52 | -9.10 | 256.62 | -9.60 | 127.45 |
| 85 | 0.95 | 71.68 | -9.10 | 265.62 | -9.60 | 132.59 |
| 90 | 0.84 | 67.92 | -9.10 | 279.88 | -9.60 | 139.71 |
| 95 | 0.68 | 64.26 | -9.10 | 302.73 | -9.60 | 151.23 |
| 100 | 0.62 | 60.67 | -9.10 | 311.02 | -9.60 | 155.53 |
| 105 | 0.49 | 57.25 | -9.10 | 332.59 | -9.60 | 166.87 |
| 110 | 0.00 | 54.20 | -9.10 | 423.52 | -9.60 | 216.03 |
| 115 | 0.00 | 51.09 | -9.10 | 423.52 | -9.60 | 216.03 |
| 120 | 0.00 | 48.21 | -9.10 | 423.52 | -9.60 | 216.03 |
| 125 | 0.32 | 45.35 | -9.10 | 383.19 | -8.74 | 199.88 |
| 130 | 0.00 | 43.31 | -8.76 | 427.85 | -8.26 | 224.23 |
| 135 | 0.00 | 41.41 | -8.38 | 432.79 | -7.88 | 226.60 |
| 140 | 0.00 | 39.94 | -8.08 | 436.80 | -7.58 | 228.52 |
| 145 | 0.00 | 38.96 | -7.68 | 441.99 | -7.18 | 231.00 |
| 150 | 0.00 | 38.51 | -7.50 | 444.41 | -7.00 | 232.16 |
| 155 | 0.00 | 38.60 | -7.54 | 443.91 | -7.04 | 231.92 |
| 160 | 0.00 | 39.23 | -7.79 | 440.53 | -7.29 | 230.31 |
| 165 | 0.28 | 40.13 | -8.13 | 408.20 | -7.63 | 213.59 |
| 170 | 0.34 | 41.23 | -8.35 | 383.51 | -7.85 | 200.51 |
| 175 | 0.00 | 42.28 | -8.56 | 430.52 | -8.06 | 225.51 |
| 180 | 0.00 | 42.53 | -8.61 | 429.88 | -8.11 | 225.20 |
| 185 | 0.00 | 42.28 | -8.56 | 430.52 | -8.06 | 225.51 |

COMSEARCH

Earth Station Data Sheet

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

Coordination Values

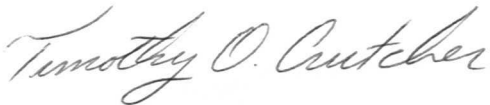
STAMFORD, CT

Licensee Name BFI Licenses, LLC
Latitude (NAD 83) 41°4' 34.4" N
Longitude (NAD 83) 73°31' 13.0" W
Ground Elevation (AMSL) 16.9 m / 55.5 ft
Antenna Centerline (AGL) 6.4 m / 21.0 ft
Antenna Model VERTEX COMMUNICATIONS 11 KPC
Antenna Mode Receive 4.0 GHz Transmit 6.1 GHz
Interference Objectives: Long Term -156.0 dBW/MHz 20% -154.0 dBW/4 kHz 20%
Short Term -146.0 dBW/MHz 0.01% -131.0 dBW/4 kHz 0.0025%
Max Available RF Power -0.5 (dBW/4 kHz)

| Azimuth (°) | Receive 4.0 GHz | | Transmit 6.1 GHz | | | |
|-------------|-----------------------|----------------------------|--------------------|----------------------------|--------------------|----------------------------|
| | Horizon Elevation (°) | Antenna Discrimination (°) | Horizon Gain (dBi) | Coordination Distance (km) | Horizon Gain (dBi) | Coordination Distance (km) |
| 190 | 0.00 | 41.56 | -8.41 | 432.39 | -7.91 | 226.41 |
| 195 | 0.00 | 40.39 | -8.18 | 435.47 | -7.68 | 227.89 |
| 200 | 0.00 | 38.79 | -7.62 | 442.89 | -7.12 | 231.43 |
| 205 | 0.00 | 36.83 | -6.83 | 453.51 | -6.33 | 236.47 |
| 210 | 0.00 | 34.53 | -6.01 | 464.91 | -5.51 | 241.84 |
| 215 | 0.29 | 31.73 | -5.45 | 439.04 | -4.95 | 228.34 |
| 220 | 0.34 | 28.88 | -4.65 | 431.58 | -4.15 | 224.12 |
| 225 | 0.63 | 25.65 | -3.36 | 365.75 | -2.86 | 188.51 |
| 230 | 0.77 | 22.38 | -1.53 | 362.11 | -1.03 | 185.91 |
| 235 | 1.00 | 18.91 | 0.56 | 345.44 | 1.06 | 175.66 |
| 240 | 1.21 | 15.35 | 2.69 | 348.78 | 3.19 | 177.85 |
| 245 | 1.43 | 11.67 | 5.23 | 356.61 | 5.73 | 181.56 |
| 250 | 1.60 | 8.71 | 8.19 | 374.86 | 8.69 | 190.67 |
| 255 | 1.82 | 8.02 | 8.88 | 441.94 | 9.38 | 243.59 |
| 260 | 1.88 | 10.25 | 6.65 | 336.30 | 7.15 | 169.87 |
| 265 | 2.11 | 13.89 | 3.01 | 286.92 | 4.40 | 148.56 |
| 270 | 2.14 | 18.26 | 0.95 | 268.26 | 1.45 | 135.64 |
| 275 | 1.94 | 22.95 | -1.87 | 258.23 | -1.37 | 130.15 |
| 280 | 1.71 | 27.76 | -4.20 | 254.55 | -3.70 | 128.76 |
| 285 | 1.45 | 32.63 | -5.63 | 259.39 | -5.13 | 131.44 |
| 290 | 1.13 | 37.53 | -7.11 | 265.95 | -6.61 | 135.85 |
| 295 | 0.88 | 42.43 | -8.59 | 278.02 | -8.09 | 142.47 |
| 300 | 1.10 | 47.29 | -9.10 | 254.54 | -9.51 | 126.73 |
| 305 | 1.16 | 52.18 | -9.10 | 251.06 | -9.60 | 124.81 |
| 310 | 1.25 | 57.09 | -9.10 | 245.84 | -9.60 | 122.39 |
| 315 | 1.16 | 62.02 | -9.10 | 250.62 | -9.60 | 124.61 |
| 320 | 1.15 | 66.96 | -9.10 | 251.38 | -9.60 | 124.96 |
| 325 | 1.19 | 71.89 | -9.10 | 249.07 | -9.60 | 123.89 |
| 330 | 1.25 | 76.83 | -9.10 | 245.70 | -9.60 | 122.33 |
| 335 | 1.21 | 81.78 | -9.10 | 247.63 | -9.60 | 123.22 |
| 340 | 1.64 | 86.72 | -9.10 | 223.46 | -9.60 | 114.53 |
| 345 | 1.88 | 91.67 | -9.10 | 210.97 | -9.60 | 108.99 |
| 350 | 1.78 | 96.62 | -9.10 | 216.48 | -9.60 | 111.47 |
| 355 | 1.43 | 101.57 | -9.10 | 235.15 | -9.60 | 117.64 |

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.

A handwritten signature in cursive script that reads "Timothy O. Crutcher".

Timothy O. Crutcher
Frequency Planner
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147

DATED: April 13, 2012