

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
WORD OF GOD FELLOWSHIP INC
BEDFORD, TX
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
December 10, 2009

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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

AT&T Mobility Texas LLC - N TX
BelWave Communications
BorderComm Partners LP (XC)
Brazos Electric Power Cooperative Inc
DALLAS, CITY OF
Dallas MTA, L.P.
EAST TEXAS TRANSMISSION CO
HARRIS METHODIST HEALTH SERVICES
International Communications Group, Inc.
METROPOLITAN AREA NETWORKS, INC.
Station Venture Operations - Ft Worth TX
Texahoma Cellular Limited Partnership
Texas RSA 6 Limited Partnership
Texas RSA 7B1 Limited Partnership
Verizon Wireless Texas, 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 with a letter dated 08/18/2009.

Company

ALLTEL Communications of Texas, LP
ALLTEL Newco, LLC
ANDREW TOWER RENTAL INC
AT&T Mobility Texas LLC - N TX
AirCanopy Internet Services
Alpheus Communications, L.P.
BNSF Railway Company
BTR Partners L.P.
BelWave Communications
BorderComm Partners LP (XC)
Brazos Electric Power Cooperative Inc
CHOICE WIRELESS LC
Cebridge Acquisition, L.P.
Central Telephone Company of Texas
Conterra Ultra Broadband, LLC
DALLAS COUNTY COMMUNITY COLLEGE DISTRICT
DALLAS, CITY OF
Dallas MTA, L.P.
Denton County
EAST TEXAS TRANSMISSION CO
ENBRIDGE ENERGY COMPANY, INC.
FORT WORTH, CITY OF
HARRIS METHODIST HEALTH SERVICES
HILL-NAVARRO ELECTRONIC CONSORTIUM
International Communications Group, Inc.
LB Tower Company LLC
METROPOLITAN AREA NETWORKS, INC.
Northeast Texas Consortium(NETnet)
Oklahoma RSA 9 Limited Partnership
One Ring Networks, Inc
RAYTHEON COMPANY
RICHARDSON INDEPENDENT SCHOOL DISTRICT
Station Venture Operations - Ft Worth TX
TEXAS HEALTH RESOURCES
TEXAS STATE DEPT. OF TRANSPORTATION
Texahoma Cellular Limited Partnership
Texas RSA 6 Limited Partnership
Texas RSA 7B1 Limited Partnership
Texas RSA 9B1 Limited Partnership
Tyler-Longview-Marshall MSA Ltd Partners
USCOC of Greater Oklahoma, LLC
USCOC of Oklahoma RSA #10, Inc.
Verizon Wireless Texas, LLC
WILSON PUBLIC SCHOOLS
WWC Texas RSA Limited Partnership
Westar Satellite Services LP

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: 12/10/2009
Job Number: 090818COMSTC02

Administrative Information

Licensee Name WORD OF GOD FELLOWSHIP INC

Site Information

BEDFORD, TX

Latitude (NAD 83) 32° 51' 41.8" N
Longitude (NAD 83) 97° 6' 23.2" W
Climate Zone A
Rain Zone 2
Ground Elevation (AMSL) 185.0 m / 607.0 ft

Link Information

Satellite Type Geostationary
Mode TR - Transmit-Receive
Modulation Digital
Satellite Arc 58°W to 143° West Longitude
Azimuth Range 123.7° to 242.3°
Corresponding Elevation Angles 33.4° / 28.1°
Antenna Centerline (AGL) 1.83 m / 6.0 ft

Antenna Information

Receive

Transmit

| | | |
|------------------------|------------------|------------------|
| Manufacturer | Vertex | Vertex |
| Gain / Diameter | 47.9 dBi / 7.2 m | 51.7 dBi / 7.2 m |
| 3-dB / 15-dB Beamwidth | 1.00° / 2.00° | 0.30° / 0.60° |

Max Available RF Power (dBW/4 kHz)
(dBW/MHz)

51K2G7W - 36M0G7W

-5.4 -13.01
18.6 10.99

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

46.3 38.69
70.3 62.69
57.37 78.23

Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

-154.0 dBW/4 kHz 20%
-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 51K2G7W - 36M0G7W / 5925.0 - 6425.0

Max Great Circle Coordination Distance 306.1 km / 190.2 mi
Precipitation Scatter Contour Radius 491.3 km / 305.3 mi

172.4 km / 107.1 mi
100.0 km / 62.1 mi

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Coordination Values

BEDFORD, TX

Licensee Name WORD OF GOD FELLOWSHIP INC
Latitude (NAD 83) 32° 51' 41.8" N
Longitude (NAD 83) 97° 6' 23.2" W
Ground Elevation (AMSL) 185.0 m / 607.0 ft
Antenna Centerline (AGL) 1.83 m / 6.0 ft
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 -5.4 (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 | 0.00 | 114.24 | -10.00 | 285.28 | -10.00 | 158.73 |
| 5 | 0.00 | 113.65 | -10.00 | 285.28 | -10.00 | 158.73 |
| 10 | 0.00 | 109.62 | -10.00 | 285.28 | -10.00 | 158.73 |
| 15 | 0.00 | 105.54 | -10.00 | 285.28 | -10.00 | 158.73 |
| 20 | 0.00 | 101.42 | -10.00 | 285.28 | -10.00 | 158.73 |
| 25 | 0.00 | 97.27 | -10.00 | 285.28 | -10.00 | 158.73 |
| 30 | 0.00 | 93.11 | -10.00 | 285.28 | -10.00 | 158.73 |
| 35 | 0.00 | 88.94 | -10.00 | 285.28 | -10.00 | 158.73 |
| 40 | 0.00 | 84.77 | -10.00 | 285.28 | -10.00 | 158.73 |
| 45 | 0.00 | 80.61 | -10.00 | 285.28 | -10.00 | 158.73 |
| 50 | 0.00 | 76.48 | -10.00 | 285.28 | -10.00 | 158.73 |
| 55 | 0.00 | 72.37 | -10.00 | 285.28 | -10.00 | 158.73 |
| 60 | 0.00 | 68.32 | -10.00 | 285.28 | -10.00 | 158.73 |
| 65 | 0.00 | 64.33 | -10.00 | 285.28 | -10.00 | 158.73 |
| 70 | 0.00 | 60.41 | -10.00 | 285.28 | -10.00 | 158.73 |
| 75 | 0.00 | 56.60 | -10.00 | 285.28 | -10.00 | 158.73 |
| 80 | 0.00 | 52.91 | -10.00 | 285.28 | -10.00 | 158.73 |
| 85 | 0.00 | 49.38 | -10.00 | 285.28 | -10.00 | 158.73 |
| 90 | 0.00 | 46.04 | -9.58 | 287.97 | -9.58 | 160.28 |
| 95 | 0.00 | 42.96 | -8.83 | 292.86 | -8.83 | 163.12 |
| 100 | 0.00 | 40.18 | -8.10 | 297.65 | -8.10 | 165.92 |
| 105 | 0.00 | 37.78 | -7.43 | 302.15 | -7.43 | 170.15 |
| 110 | 0.00 | 35.83 | -6.86 | 306.06 | -6.86 | 172.38 |
| 115 | 0.33 | 34.10 | -6.32 | 292.91 | -6.32 | 158.74 |
| 120 | 0.33 | 33.28 | -6.06 | 294.69 | -6.06 | 159.74 |
| 125 | 0.33 | 33.12 | -6.00 | 295.09 | -6.00 | 159.98 |
| 130 | 0.32 | 33.63 | -6.17 | 295.42 | -6.17 | 160.55 |
| 135 | 0.23 | 34.85 | -6.55 | 303.69 | -6.55 | 169.84 |
| 140 | 0.39 | 36.42 | -7.03 | 281.38 | -7.03 | 150.62 |
| 145 | 0.42 | 38.61 | -7.67 | 273.10 | -7.67 | 145.14 |
| 150 | 0.31 | 41.32 | -8.40 | 281.12 | -8.40 | 152.66 |
| 155 | 0.25 | 44.18 | -9.13 | 284.80 | -9.13 | 156.88 |
| 160 | 0.21 | 46.70 | -9.73 | 286.29 | -9.73 | 159.13 |
| 165 | 0.00 | 48.93 | -10.00 | 285.28 | -10.00 | 158.73 |
| 170 | 0.00 | 50.48 | -10.00 | 285.28 | -10.00 | 158.73 |
| 175 | 0.31 | 51.14 | -10.00 | 272.09 | -10.00 | 147.94 |
| 180 | 0.58 | 51.19 | -10.00 | 244.80 | -10.00 | 128.82 |
| 185 | 0.60 | 50.85 | -10.00 | 243.06 | -10.00 | 127.53 |

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Latitude (NAD 83) 32° 51' 41.8" N

Longitude (NAD 83) 97° 6' 23.2" W

Ground Elevation (AMSL) 185.0 m / 607.0 ft

Antenna Centerline (AGL) 1.83 m / 6.0 ft

Antenna Mode Receive 4.0 GHz

Interference Objectives: Long Term -156.0 dBW/MHz 20%

Short Term -146.0 dBW/MHz 0.01%

Transmit 6.1 GHz

-154.0 dBW/4 kHz 20%

-131.0 dBW/4 kHz 0.0025%

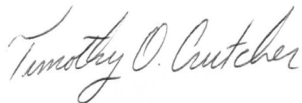
Max Available RF Power

-5.4 (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) |
| 190 | 0.66 | 49.86 | -10.00 | 239.55 | -10.00 | 124.90 |
| 195 | 0.98 | 48.08 | -10.00 | 221.32 | -10.00 | 110.51 |
| 200 | 1.48 | 45.67 | -9.49 | 208.51 | -9.49 | 100.00 |
| 205 | 1.20 | 43.47 | -8.95 | 219.47 | -8.95 | 107.62 |
| 210 | 1.12 | 40.71 | -8.24 | 225.40 | -8.24 | 111.57 |
| 215 | 1.12 | 37.60 | -7.38 | 230.11 | -7.38 | 114.17 |
| 220 | 1.12 | 34.44 | -6.43 | 235.42 | -6.43 | 116.99 |
| 225 | 1.21 | 31.61 | -5.50 | 237.97 | -5.50 | 117.65 |
| 230 | 1.20 | 29.38 | -4.70 | 242.88 | -4.70 | 120.21 |
| 235 | 1.04 | 27.95 | -4.16 | 252.10 | -4.16 | 126.06 |
| 240 | 1.20 | 27.00 | -3.78 | 248.65 | -3.78 | 123.12 |
| 245 | 0.96 | 27.28 | -3.90 | 257.74 | -3.90 | 129.68 |
| 250 | 0.80 | 28.31 | -4.30 | 265.63 | -4.30 | 134.51 |
| 255 | 0.80 | 29.93 | -4.90 | 261.73 | -4.90 | 133.92 |
| 260 | 0.80 | 32.20 | -5.70 | 256.75 | -5.70 | 131.55 |
| 265 | 0.43 | 35.24 | -6.68 | 277.99 | -6.68 | 147.37 |
| 270 | 0.43 | 38.39 | -7.61 | 271.96 | -7.61 | 144.17 |
| 275 | 0.37 | 41.89 | -8.55 | 273.13 | -8.55 | 146.53 |
| 280 | 0.29 | 45.62 | -9.48 | 277.15 | -9.48 | 151.19 |
| 285 | 0.00 | 49.63 | -10.00 | 285.28 | -10.00 | 158.73 |
| 290 | 0.00 | 53.62 | -10.00 | 285.28 | -10.00 | 158.73 |
| 295 | 0.00 | 57.73 | -10.00 | 285.28 | -10.00 | 158.73 |
| 300 | 0.00 | 61.92 | -10.00 | 285.28 | -10.00 | 158.73 |
| 305 | 0.00 | 66.18 | -10.00 | 285.28 | -10.00 | 158.73 |
| 310 | 0.00 | 70.48 | -10.00 | 285.28 | -10.00 | 158.73 |
| 315 | 0.00 | 74.83 | -10.00 | 285.28 | -10.00 | 158.73 |
| 320 | 0.31 | 79.18 | -10.00 | 271.34 | -10.00 | 147.35 |
| 325 | 0.31 | 83.59 | -10.00 | 271.31 | -10.00 | 147.32 |
| 330 | 0.52 | 88.00 | -10.00 | 248.66 | -10.00 | 131.65 |
| 335 | 0.52 | 92.43 | -10.00 | 248.71 | -10.00 | 131.69 |
| 340 | 0.72 | 96.87 | -10.00 | 236.12 | -10.00 | 122.30 |
| 345 | 0.00 | 101.22 | -10.00 | 285.28 | -10.00 | 158.73 |
| 350 | 0.00 | 105.59 | -10.00 | 285.28 | -10.00 | 158.73 |
| 355 | 0.00 | 109.94 | -10.00 | 285.28 | -10.00 | 158.73 |

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.



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

DATED: December 10, 2009