

# FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for  
**WORD OF GOD FELLOWSHIP, INC.**  
**DALLAS, TX**  
**Satellite Earth Station**

Prepared By:  
COMSEARCH  
19700 Janelia Farm Boulevard  
Ashburn, VA 20147  
November 02, 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  
BorderComm Partners LP (XC)  
Dallas MTA, L.P.  
Station Venture Operations - Ft Worth TX  
Texas RSA 6 Limited Partnership  
Texas RSA 7B1 Limited Partnership  
Verizon Wireless Texas, LLC  
Westar Satellite Services LP

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  
Classic Cable of Oklahoma, Inc.  
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.  
Enbridge Pipelines (East Texas) L.P.  
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  
UNITED WEHCO INC.  
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: 11/02/2009  
Job Number: 090818COMSTC01

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### Administrative Information

Licensee Name WORD OF GOD FELLOWSHIP INC

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### Site Information

#### DALLAS, TX

Latitude (NAD 83) 32° 52' 16.5" N  
Longitude (NAD 83) 96° 55' 23.0" W  
Climate Zone A  
Rain Zone 2  
Ground Elevation (AMSL) 128.02 m / 420.0 ft

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### Link Information

Satellite Type Geostationary  
Mode TR - Transmit-Receive  
Modulation Digital  
Satellite Arc 60° W to 143° West Longitude  
Azimuth Range 125.8° to 242.4°  
Corresponding Elevation Angles 35.1° / 28.0°  
Antenna Centerline (AGL) 7.32 m / 24.0 ft

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### Antenna Information

#### Receive - S41001

Manufacturer SCIENTIFIC-ATLANTA, INC  
Model 8002-SHORT MOUNT  
Gain / Diameter 50.8 dBi / 10.0 m  
3-dB / 15-dB Beamwidth 0.60° / 1.00°

#### Transmit - S61001

Manufacturer SCIENTIFIC-ATLANTA, INC  
Model 8002-SHORT MOUNT  
Gain / Diameter 53.5 dBi / 10.0 m  
0.32° / 0.70°

		<u>51K2G7W - 36M0G7W</u>			
Max Available RF Power	(dBW/4 kHz)	-5.4	-13.01		
	(dBW/MHz)	18.6	10.99		
Maximum EIRP	(dBW/4 kHz)	48.1	40.49		
	(dBW/MHz)	72.1	64.49		
	(dBW)	59.17	80.03		
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%

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### Frequency Information

#### Receive 4.0 GHz

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

#### Transmit 6.1 GHz

51K2G7W - 36M0G7W / 5925.0 - 6425.0

Max Great Circle Coordination Distance 303.6 km / 188.6 mi 173.6 km / 107.9 mi  
Precipitation Scatter Contour Radius 491.5 km / 305.4 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

### DALLAS, TX

Licensee Name WORD OF GOD FELLOWSHIP INC  
Latitude (NAD 83) 32° 52' 16.5" N  
Longitude (NAD 83) 96° 55' 23.0" W  
Ground Elevation (AMSL) 128.02 m / 420.0 ft  
Antenna Centerline (AGL) 7.32 m / 24.0 ft  
Antenna Model SCIENTIFIC-ATLANTA, INC 8002-SHORT MOUNT  
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	114.16	-10.20	284.01	-9.50	160.58
5	0.00	114.81	-10.20	284.01	-9.50	160.58
10	0.00	110.90	-10.20	284.01	-9.50	160.58
15	0.00	106.93	-10.20	284.01	-9.50	160.58
20	0.00	102.91	-10.20	284.01	-9.50	160.58
25	0.00	98.86	-10.20	284.01	-9.50	160.58
30	0.00	94.78	-10.20	284.01	-9.50	160.58
35	0.00	90.69	-10.20	284.01	-9.50	160.58
40	0.00	86.60	-10.20	284.01	-9.50	160.58
45	0.00	82.52	-10.20	284.01	-9.50	160.58
50	0.20	78.42	-10.20	283.98	-9.50	160.55
55	0.25	74.37	-10.20	277.58	-9.50	155.17
60	0.26	70.37	-10.20	276.94	-9.50	154.64
65	0.24	66.43	-10.20	278.75	-9.50	156.15
70	0.23	62.56	-10.20	280.13	-9.50	157.30
75	0.21	58.79	-10.20	283.21	-9.50	159.90
80	0.26	55.11	-10.20	277.03	-9.50	154.71
85	0.24	51.61	-10.20	279.52	-9.50	156.79
90	0.00	48.43	-9.89	286.00	-9.50	160.58
95	0.00	45.35	-9.27	289.96	-9.50	160.58
100	0.00	42.56	-8.71	293.61	-9.01	162.41
105	0.00	40.10	-8.22	296.85	-8.52	164.29
110	0.00	38.06	-7.81	299.58	-7.72	169.01
115	0.00	36.50	-7.50	301.68	-7.10	171.43
120	0.00	35.49	-7.30	303.05	-6.70	173.00
125	0.00	35.08	-7.22	303.61	-6.53	173.65
130	0.00	35.28	-7.26	303.33	-6.61	173.33
135	0.00	36.10	-7.42	302.23	-6.94	172.06
140	0.00	37.48	-7.70	300.36	-7.49	169.91
145	0.00	39.36	-8.07	297.83	-8.25	165.35
150	0.00	41.69	-8.54	294.75	-8.84	163.07
155	0.00	44.36	-9.07	291.25	-9.37	161.05
160	0.00	46.86	-9.57	288.02	-9.50	160.58
165	0.00	48.92	-9.98	285.38	-9.50	160.58
170	0.38	50.12	-10.20	262.42	-9.50	142.94
175	0.45	50.99	-10.20	254.47	-9.50	136.87
180	0.38	51.38	-10.20	262.57	-9.50	143.07
185	0.43	51.01	-10.20	256.15	-9.50	138.14



# COMSEARCH

## Earth Station Data Sheet

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### Coordination Values

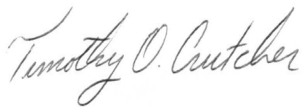
### DALLAS, TX

Licensee Name	WORD OF GOD FELLOWSHIP INC				
Latitude (NAD 83)	32° 52' 16.5" N				
Longitude (NAD 83)	96° 55' 23.0" W				
Ground Elevation (AMSL)	128.02 m / 420.0 ft				
Antenna Centerline (AGL)	7.32 m / 24.0 ft				
Antenna Model	SCIENTIFIC-ATLANTA, INC 8002-SHORT MOUNT				
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)
190	0.46	50.04	-10.20	252.83	-9.50	135.65
195	0.55	48.44	-9.89	247.20	-9.50	131.57
200	0.38	46.55	-9.51	265.84	-9.50	142.35
205	0.37	44.08	-9.02	270.55	-9.32	144.23
210	0.41	41.21	-8.44	269.52	-8.74	142.58
215	0.55	37.99	-7.80	259.74	-7.69	135.65
220	0.55	34.84	-7.14	263.81	-6.47	139.48
225	0.52	32.13	-6.05	272.83	-5.93	142.84
230	0.57	29.87	-5.15	275.34	-5.45	141.87
235	0.51	28.35	-4.54	283.34	-4.84	146.93
240	0.56	27.50	-4.20	282.71	-4.50	145.87
245	0.60	27.48	-4.19	279.95	-4.49	143.77
250	0.44	28.47	-4.59	290.91	-4.89	152.92
255	0.38	30.11	-5.24	293.56	-5.52	156.30
260	0.46	32.27	-6.11	278.56	-5.95	147.44
265	0.38	35.08	-7.22	280.30	-6.53	152.52
270	0.37	38.24	-7.85	278.25	-7.80	149.64
275	0.30	41.74	-8.55	281.79	-8.85	152.38
280	0.22	45.48	-9.30	287.71	-9.50	158.83
285	0.23	49.34	-10.07	280.98	-9.50	157.31
290	0.28	53.33	-10.20	274.15	-9.50	152.33
295	0.23	57.48	-10.20	279.78	-9.50	157.00
300	0.00	61.75	-10.20	284.01	-9.50	160.58
305	0.00	66.02	-10.20	284.01	-9.50	160.58
310	0.00	70.33	-10.20	284.01	-9.50	160.58
315	0.00	74.68	-10.20	284.01	-9.50	160.58
320	0.00	79.07	-10.20	284.01	-9.50	160.58
325	0.26	83.45	-10.20	276.32	-9.50	154.13
330	0.22	87.88	-10.20	280.98	-9.50	158.01
335	0.00	92.30	-10.20	284.01	-9.50	160.58
340	0.00	96.71	-10.20	284.01	-9.50	160.58
345	0.00	101.11	-10.20	284.01	-9.50	160.58
350	0.00	105.49	-10.20	284.01	-9.50	160.58
355	0.00	109.84	-10.20	284.01	-9.50	160.58

## 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: November 02, 2009