

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
ACN Financing, Inc
KNOXVILLE, TN
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
May 28, 2008

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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.

Due to the minor nature of this notice no 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 05/22/2008.

Company

ALLTEL Communications, LLC
AMERICAN ELECTRIC POWER SERVICE CORP.
AT&T COMM. OF THE SOUTH CENTRAL STATES
Cellco Partnership - Kentucky
Cincinnati New Orleans and Texas Pacific
KINGSPORT POWER COMPANY
METROPOLITAN AREA NETWORKS, INC.
North Carolina RSA #4 Inc.
T-Mobile License LLC
TWIN LAKES TELEPHONE COOPERATIVE CORP
Tennessee RSA #3 Limited Partnership
UNIVERSITY OF NORTH CAROLINA
US Cellular Operating Co. of Knoxville
US Cellular Telephone Co-Grtr Knoxville
United Telephone - Southeast
Verizon Wireless Tennessee Partnership

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: 05/28/2008
Job Number: 080522COMSTC01

Administrative Information

Call Sign: E980017
Licensee Name: ACN Financing, Inc

Site Information

KNOXVILLE, TN

Latitude (NAD 83): 35° 54' 24.3" N
Longitude (NAD 83): 84° 6' 54.7" W
Climate Zone: A
Rain Zone: 1
Ground Elevation (AMSL): 280.42 m / 920.0 ft

Link Information

Satellite Type: Geostationary
Mode: TR - Transmit-Receive
Modulation: Analog & Digital
Satellite Arc: 60° W to 143° West Longitude
Azimuth Range: 142.6° to 250.5°
Corresponding Elevation Angles: 41.1° / 16.4°
Antenna Centerline (AGL): 2.74 m / 9.0 ft

Antenna Information

Receive - C40551

Transmit - C60551

Manufacturer: COMTECH ANTENNA SYSTEMS
Model: 5 METER OFFSAT
Gain / Diameter: 42.0 dBi / 5.5 m
3-dB / 15-dB Beamwidth: 1.00° / 2.00°

Manufacturer: COMTECH ANTENNA SYSTEMS
Model: 5 METER OFFSAT
Gain / Diameter: 45.9 dBi / 5.5 m
0.60° / 1.60°

		<u>36M0F8F</u>	<u>8M00G7W</u> – <u>36M0G7W</u>	<u>18M0G7W</u>	
Max Available RF Power	(dBW/4 kHz)	-0.5	-14.1	-14.1	-13.0
	(dBW/MHz)	23.5	9.9	9.9	11.0
Maximum EIRP	(dBW/4 kHz)	45.4	31.8	31.8	32.89
	(dBW/MHz)	69.4	55.8	55.8	56.89
	(dBW)	72.4	64.81	71.34	69.42
Interference Objectives:	Long Term	-144.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
	Short Term	-134.0 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)
36M0F8F / 3700.0 - 4200.0
8M00G7W – 36M0G7W / 3700.0 - 4200.0
18M0G7W / 3700.0 – 4200.0

36M0F8F / 5925.0 - 6425.0
8M00G7W – 36M0G7W / 5925.0 – 6425.0
18M0G7W / 5925.0 – 6425.0

Max Great Circle Coordination Distance: 211.5 km / 131.4 mi 165.3 km / 102.7 mi
Precipitation Scatter Contour Radius: 559.8 km / 347.8 mi 172.7 km / 107.3 mi

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Coordination Values

KNOXVILLE, TN

Licensee Name	ACN Financing, Inc				
Latitude (NAD 83)	35° 54' 24.3" N				
Longitude (NAD 83)	84° 6' 54.7" W				
Ground Elevation (AMSL)	280.42 m / 920.0 ft				
Antenna Centerline (AGL)	2.74 m / 9.0 ft				
Antenna Model	COMTECH ANTENNA SYSTEMS 5 METER OFFSAT				
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz		
Interference Objectives: Long Term	-144.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%	
Short Term	-134.0 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	2.41	108.90	-9.78	131.55	-11.22	100.00
5	2.11	113.69	-10.74	133.55	-13.58	100.00
10	1.53	118.42	-12.37	140.09	-14.10	100.00
15	1.22	117.94	-12.18	149.42	-14.10	106.30
20	1.26	114.46	-10.89	153.68	-13.88	105.82
25	1.22	110.85	-10.17	158.16	-12.44	111.12
30	1.30	107.20	-9.44	159.07	-9.86	116.84
35	1.23	103.45	-8.69	164.71	-8.24	123.59
40	1.19	99.67	-8.07	170.65	-8.19	124.77
45	1.26	95.86	-8.07	166.65	-8.22	122.88
50	1.06	92.03	-8.02	175.32	-8.13	128.56
55	0.95	88.20	-8.08	179.30	-8.20	131.83
60	0.75	84.41	-8.01	190.22	-8.24	139.72
65	0.49	80.66	-8.03	204.24	-8.26	154.15
70	0.38	76.94	-8.04	211.47	-8.26	165.29
75	0.56	73.21	-8.02	200.21	-8.22	149.85
80	0.46	69.61	-8.01	204.61	-8.20	157.45
85	0.39	66.08	-8.01	210.31	-8.18	164.14
90	0.89	62.41	-8.05	182.91	-8.14	133.67
95	1.28	58.85	-8.07	165.98	-8.12	122.65
100	1.47	55.51	-8.06	160.26	-8.13	117.91
105	2.18	51.99	-8.04	141.42	-8.16	101.01
110	2.15	49.12	-8.03	142.17	-8.25	101.38
115	2.75	46.02	-8.10	131.46	-8.15	100.00
120	2.75	43.66	-8.06	131.48	-8.13	100.00
125	2.98	41.46	-8.06	127.36	-8.17	100.00
130	3.47	39.43	-8.08	118.41	-8.15	100.00
135	3.31	38.47	-8.06	121.29	-8.11	100.00
140	2.99	38.22	-8.07	127.09	-8.21	100.00
145	3.12	38.07	-8.05	124.78	-8.16	100.00
150	3.41	38.32	-8.05	119.61	-9.05	100.00
155	3.25	39.55	-8.91	119.36	-9.10	100.00
160	2.59	41.70	-9.34	129.75	-10.00	100.00
165	1.46	44.46	-9.89	152.30	-10.97	109.47
170	0.52	46.67	-10.33	192.49	-11.93	139.10
175	0.65	47.39	-10.48	184.68	-12.10	133.48
180	0.81	47.51	-10.50	176.07	-12.10	126.47
185	1.04	47.00	-10.40	162.75	-12.10	116.81

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Coordination Values

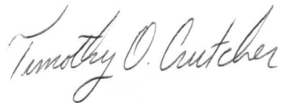
KNOXVILLE, TN

Licensee Name ACN Financing, Inc
Latitude (NAD 83) 35° 54' 24.3" N
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Antenna Model COMTECH ANTENNA SYSTEMS 5 METER OFFSAT
Antenna Mode Receive 4.0 GHz Transmit 6.1 GHz
Interference Objectives: Long Term -144.0 dBW/MHz 20% -154.0 dBW/4 kHz 20%
Short Term -134.0 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	1.77	45.49	-10.10	142.85	-12.10	100.00
195	2.13	43.84	-9.77	135.67	-11.87	100.00
200	2.36	41.88	-9.38	134.05	-11.48	100.00
205	2.04	39.96	-8.99	140.54	-11.08	100.00
210	2.13	37.34	-8.47	140.76	-10.04	100.00
215	1.41	35.01	-8.00	162.22	-9.10	116.31
220	1.46	31.85	-8.00	160.82	-7.84	119.10
225	0.91	28.89	-7.56	183.71	-7.10	135.95
230	1.18	25.21	-6.08	180.39	-7.10	128.80
235	1.27	21.53	-4.61	184.19	-5.71	131.01
240	1.52	18.15	-2.52	186.75	-5.10	127.04
245	1.67	15.71	-0.56	191.57	-5.10	123.25
250	1.97	14.44	0.56	188.50	-4.54	117.88
255	1.45	15.60	-0.48	198.09	-5.10	128.63
260	0.94	18.09	-2.47	204.94	-5.10	142.12
265	0.83	21.15	-4.46	201.69	-5.56	145.84
270	0.77	24.80	-5.92	198.18	-7.02	143.09
275	0.78	28.79	-7.52	190.75	-7.10	142.24
280	0.66	33.10	-8.00	195.20	-8.14	144.86
285	0.96	37.40	-8.04	179.26	-8.15	131.83
290	0.90	41.96	-8.03	182.12	-8.18	134.08
295	1.16	46.51	-8.05	171.97	-8.17	125.81
300	1.07	51.22	-8.07	174.56	-8.17	128.00
305	0.95	55.96	-8.08	179.43	-8.15	132.09
310	1.11	60.68	-8.02	173.51	-8.17	126.98
315	1.16	65.45	-8.03	171.86	-8.18	125.63
320	1.05	70.26	-8.03	175.32	-8.22	128.29
325	1.12	75.06	-8.04	173.15	-8.20	126.63
330	1.11	79.87	-8.00	173.58	-8.12	127.10
335	1.13	84.69	-8.05	172.76	-8.13	126.58
340	1.89	89.51	-8.04	148.28	-8.18	107.32
345	1.27	94.34	-8.05	166.59	-8.18	122.85
350	1.55	99.18	-8.03	158.03	-8.17	115.83
355	2.25	104.05	-8.81	137.12	-8.16	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.



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

DATED: May 28, 2008