

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
TURNER BROADCASTING SYSTEM, INC.
ATLANTA, GA
(Antenna 16)
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
April 12, 2004

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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

MCI Network Services, Inc.
Verizon Wireless (VAW) LLC (Georgia)
Southwestco Wireless LP (Georgia 5)
Public Service Cellular, Inc.
Athens Cellular, Inc.
Cellco Partnership dba Verizon Wireless
CORBAN COMMUNICATIONS INC.
Norfolk Southern Railway

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 03/18/2004.

Company

ALABAMA ELECTRIC COOPERATIVE, INC.
ALLTEL Communications, Inc.
Athens Cellular, Inc.
BELL ATLANTIC MOBILE SYS OF ALLENTOWN
BellSouth Mobility LLC - AL & MS
CELLCO PARTNERSHIP - NEWARK-DALLAS-ROUTE
COBB COUNTY
CORBAN COMMUNICATIONS INC.
CORR WIRELESS COMMUNICATIONS LLC
Cellco Partnership - ALABAMA
Cellco Partnership dba Verizon Wireless
Farmers Cellular Telephone Co., Inc.
Gadsden Celltelco
Georgia RSA #8 Partnership
HOUSTON, COUNTY OF
Jackson Electric Membership Corporation
MCI Network Services, Inc.
MEDIACOM LLC
Norfolk Southern Railway
North Georgia Electric Membership Corp.
PATHNET, INC. - DEBTOR IN POSSESSION
Public Service Cellular, Inc.
Public Service Telephone Company
SOUTHERN COMPANY SERVICES INC
Southwestco Wireless LP (Georgia 5)
TROY STATE UNIVERSITY RADIO & TELEVISION
VERIZON WIRELESS ALABAMA, LLC
Verizon Wireless (VAW) LLC (Georgia)
Verizon Wireless of The East 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: 04/12/2004
Job Number: 040318COMSGE04

Administrative Information

Status ENGINEER PROPOSAL
Call Sign
Licensee Code TURCOM
Licensee Name TURNER BROADCASTING SYSTEM, INC.

Site Information ATLANTA 16, GA

Venue Name
Latitude (NAD 83) 33° 41' 25.0" N
Longitude (NAD 83) 84° 37' 22.0" W
Climate Zone A
Rain Zone 1
Ground Elevation (AMSL) 251.16 m / 824.0 ft

Link Information

Satellite Type Geostationary
Mode TR - Transmit-Receive
Modulation Digital
Satellite Arc 18° W to 101° West Longitude
Azimuth Range 103.5° to 207.9°
Corresponding Elevation Angles 10.7° / 47.1°
Antenna Centerline (AGL) 5.49 m / 18.0 ft

Antenna Information

Receive - S40911

Transmit - S60911

Manufacturer	SCIENTIFIC-ATLANTA, INC	SCIENTIFIC-ATLANTA, INC
Model	8009A 9.1 METER	8009A 9.1 METER
Gain / Diameter	50.3 dBi / 9.1 m	53.8 dBi / 9.1 m
3-dB / 15-dB Beamwidth	0.52° / 1.06°	0.36° / 0.72°
Max Available RF Power (dBW/4 kHz)		3.0
(dBW/MHz)		27.0
Maximum EIRP (dBW/4 kHz)		56.8
(dBW/MHz)		80.8
(dBW)		
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)	36M0F3F - 36M0G7F / 3700.0 - 4200.0	36M0F3F - 36M0G7F / 5925.0 - 6425.0
Max Great Circle Coordination Distance	375.8 km / 233.5 mi	245.7 km / 152.7 mi
Precipitation Scatter Contour Radius	621.9 km / 386.4 mi	269.7 km / 167.6 mi

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Coordination Values

ATLANTA 16, GA

Licensee Name TURNER BROADCASTING SYSTEM, INC.
Latitude (NAD 83) 33° 41' 25.0" N
Longitude (NAD 83) 84° 37' 22.0" W
Ground Elevation (AMSL) 251.16 m / 824.0 ft
Antenna Centerline (AGL) 5.49 m / 18.0 ft
Antenna Model SCIENTIFIC-ATLANTA, INC 8009A 9.1 METER
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 3.0 (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	0.30	103.26	-10.70	269.05	-11.32	177.55
5	0.80	98.36	-10.70	227.70	-11.35	138.78
10	0.54	93.43	-10.70	243.07	-11.24	152.67
15	0.49	88.51	-10.70	246.63	-11.30	155.66
20	0.33	83.59	-10.70	264.60	-11.23	173.94
25	0.00	78.69	-10.70	280.87	-11.27	187.80
30	0.00	73.78	-10.70	280.87	-11.40	187.30
35	0.00	68.88	-10.70	280.87	-11.39	187.32
40	0.00	63.98	-10.70	280.87	-11.26	187.85
45	0.00	59.10	-10.70	280.87	-11.36	187.45
50	0.00	54.22	-10.70	280.87	-11.39	187.34
55	0.22	49.33	-9.57	285.79	-11.32	185.77
60	0.30	44.48	-8.60	281.76	-9.10	186.08
65	0.40	39.64	-7.56	276.33	-8.06	180.25
70	0.40	34.87	-5.67	288.84	-6.17	188.16
75	0.34	30.17	-4.73	302.95	-5.23	197.86
80	0.38	25.55	-3.81	304.19	-3.42	201.33
85	0.48	21.05	-2.12	303.72	-3.20	192.93
90	0.45	16.90	-1.70	310.54	-1.34	203.48
95	0.30	13.42	-0.12	342.25	0.38	223.05
100	0.00	11.28	2.02	372.32	2.52	243.56
105	0.00	10.84	2.46	375.80	2.96	245.72
110	0.00	12.53	0.77	362.50	1.27	237.52
115	0.34	15.47	-1.70	325.75	-0.48	215.87
120	0.25	19.41	-1.70	337.57	-2.85	214.49
125	0.00	23.44	-3.08	333.55	-3.20	217.60
130	0.00	27.23	-4.15	325.79	-4.09	213.90
135	0.00	30.90	-4.88	320.53	-5.38	208.75
140	0.00	34.42	-5.58	315.55	-6.08	206.01
145	0.22	37.58	-6.73	303.76	-7.23	200.92
150	0.00	40.82	-7.86	299.22	-8.36	198.94
155	0.22	43.46	-8.39	293.50	-8.89	195.21
160	0.00	46.06	-8.91	292.29	-10.05	192.49
165	0.40	47.73	-9.25	266.16	-11.38	165.10
170	0.30	49.30	-9.56	275.94	-12.64	172.14
175	0.00	50.51	-9.90	285.89	-13.20	180.36
180	0.00	50.83	-10.03	285.08	-13.20	180.36
185	0.00	50.51	-9.91	285.88	-13.20	180.36

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Coordination Values

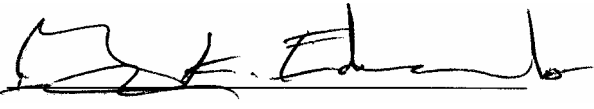
ATLANTA 16, GA

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Short Term -146.0 dBW/MHz 0.01% -131.0 dBW/4 kHz 0.0025%
Max Available RF Power 3.0 (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	0.00	49.58	-9.62	287.74	-12.86	181.67
195	0.00	48.39	-9.38	289.27	-11.91	185.33
200	0.00	47.56	-9.21	290.34	-11.25	187.89
205	0.30	46.82	-9.06	278.37	-10.66	179.47
210	0.00	47.09	-9.12	290.95	-10.87	189.33
215	0.00	47.46	-9.19	290.47	-11.17	188.19
220	0.00	48.23	-9.35	289.48	-11.38	187.37
225	0.00	49.37	-9.57	288.01	-11.40	187.30
230	0.00	50.85	-10.04	285.02	-11.29	187.72
235	0.00	52.66	-10.70	280.87	-11.37	187.43
240	0.00	54.74	-10.70	280.87	-11.24	187.92
245	0.00	57.08	-10.70	280.87	-11.25	187.88
250	0.29	59.45	-10.70	270.08	-11.36	178.26
255	0.32	62.18	-10.70	266.64	-11.24	175.74
260	0.60	64.95	-10.70	239.23	-11.51	148.23
265	0.57	68.03	-10.70	241.47	-11.51	150.20
270	0.50	71.22	-10.70	245.56	-11.44	154.15
275	0.44	74.49	-10.70	252.46	-11.23	161.14
280	0.65	77.76	-10.70	236.30	-11.33	146.30
285	0.64	81.14	-10.70	237.15	-11.49	146.46
290	0.71	84.55	-10.70	232.71	-11.24	143.49
295	0.87	87.98	-10.70	223.98	-11.31	135.77
300	0.85	91.44	-10.70	224.78	-11.43	136.02
305	0.84	94.90	-10.70	225.60	-11.48	136.56
310	0.82	98.33	-10.70	226.72	-11.34	137.98
315	0.80	101.72	-10.70	227.74	-11.40	138.64
320	0.85	105.09	-10.70	224.62	-11.38	136.06
325	1.01	108.42	-10.70	216.67	-11.33	130.82
330	0.88	111.58	-10.70	223.33	-13.10	130.91
335	0.87	114.68	-10.70	223.84	-16.81	120.17
340	0.94	117.69	-13.39	207.21	-17.20	115.88
345	0.75	118.02	-13.72	215.22	-17.20	124.34
350	0.50	113.09	-10.70	245.91	-14.91	142.08
355	0.50	108.18	-10.70	245.69	-11.26	154.98

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: April 12, 2004