

# **ATTACHMENT A**

Copy of 2001 Coordination Report\*

\* The report covers identical antennas with the same operating parameters at the same location and coordinated over same portion of the orbital arc; accordingly, no additional coordination is required.

FREQUENCY COORDINATION AND INTERFERENCE  
ANALYSIS REPORT

PREPARED FOR  
DIRECTRIX LICENSING  
LOS ANGELES, CALIFORNIA  
SATELLITE EARTH STATION

PREPARED BY  
COMSEARCH  
19700 Janelia Farm Boulevard  
Ashburn, Virginia 20147  
February 4, 2002

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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 WHICH 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 AND RECEIVE EARTH STATION.

COMPANY

WINSTAR WIRELESS FIBER CORPORATION  
GLOBECAST NORTH AMERICA  
VERIZON CALIFORNIA  
MCI WORLDWIDE NETWORK SERVICES  
MOBILEMEDIA COMMUNICATIONS - LA  
GE AMERICAN COMMUNICATIONS  
CNG COMMUNICATIONS  
CALIFORNIA, STATE OF  
SOUTHERN CALIFORNIA GAS COMPANY  
PACIFIC BELL PASADENA REGION  
LOS ANGELES CITY COMMUNICATIONS SERVICES  
LOS ANGELES SMSA LTD PARTNERSHIP  
LOS ANGELES COUNTY DEPT. OF PUBLIC WORKS  
KEYSTONE COMMUNICATIONS  
LOS ANGELES COUNTY FCC LICENSING SECTION  
LOS COUNTY FCC LICENSING SECTION

NO OTHER CARRIERS REPORTED POTENTIAL INTERFERENCE CASES.

3. SUPPLEMENTAL SHOWING  
RE: PART 25.203(C)

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 JUNE 20, 2001.  
EXTENSION LETTER SENT DECEMBER 15, 2001.

AB CELLULAR LA, LLC  
AT&T COMMUNICATIONS OF CALIFORNIA, INC.  
AT&T CORP.  
AT&T WIRELESS SERVICES - OXNARD, CA  
CALIFORNIA, STATE OF  
CNG COMMUNICATIONS, INC.  
COAST COMMUNITY COLLEGE DISTRICT  
CORBAN COMMUNICATIONS INC.  
FRESNO MSA LIMITED PARTNERSHIP  
GLOBECAST NORTH AMERICA INCORPORATED  
GTE WIRELESS OF CENTRAL CALIFORNIA INC.  
KERN COUNTY CALIFORNIA  
KERN COUNTY COMMUNICATIONS DIVISION  
KERN ED TELECOM CONSORTIUM  
LOS ANGELES CITY COMMUNICATIONS SERVICES  
LOS ANGELES COUNTY DEPT OF PUBLIC WORKS  
LOS ANGELES COUNTY FCC LICENSING SECTION  
LOS ANGELES SMSA LTD PARTNERSHIP  
MCI WORLDCOM NETWORK SERVICES INC  
METROPOLITAN WATER DIST OF SO CALIFORNIA  
MICROWAVE SERVICE COMPANY  
MOBILEMEDIA COMMUNICATIONS INC - LA  
MOBILEMEDIA COMMUNICATIONS INC - LA 1  
MUT Licensing, LLC  
ORANGE COUNTY GSA COMMUNICATIONS DIV  
OXNARD VENTURA SIMI LIMITED PARTNERSHIP  
PACAMTEL LLC  
PACIFIC BELL PASADENA REGION  
RIVERSIDE COUNTY OF

SES AMERICOM, INC.  
SOUTHERN CALIFORNIA EDISON COMPANY  
SOUTHERN CALIFORNIA GAS COMPANY  
UNION PACIFIC RAILROAD COMPANY  
VERESTAR, INC  
VERIZON CALIFORNIA INC.  
VERIZON WIRELESS (VAW) LLC (CA)  
WINSTAR WIRELESS FIBER CORPORATION  
Western Technical Services

4. EARTH STATION COORDINATION DATA

THIS SECTION PRESENTS THE DATA PERTINENT TO FREQUENCY COORDINATION OF THE PROPOSED EARTH STATION WHICH WAS CIRCULATED TO ALL COMMON CARRIERS WITHIN ITS COORDINATION CONTOURS.



SATELLITE EARTH STATION  
FREQUENCY COORDINATION DATA  
06/20/2001

Company	DIRECTRIX LICENSING		
Earth Station Name, State	BURBANK, CA		
Latitude (DMS) (NAD83)	34 6 58.5 N		
Longitude (DMS) (NAD83)	118 14 39.7 W		
Ground Elevation AMSL (Ft/m)	395.0 / 120.40		
Antenna Centerline AGL (Ft/m)	9.0 / 2.74		
Receive Antenna Type:	C40551	COMTECH ANT CORP	
		5 METER OFFSAT	
4.0 GHz Gain (dBi) / Diameter (m)		42.0 / 5.5	
3 dB / 15 dB Half Beamwidth		0.5 / 1.0	
Transmit Antenna Type:	C60551	COMTECH ANT CORP	
		5 METER OFFSAT	
6.0 GHz Gain (dBi) / Diameter (m)		45.9 / 5.5	
3 dB / 15 dB Half Beamwidth		0.3 / 0.8	
Operating Mode	TRANSMIT AND RECEIVE		
Modulation	ANALOG & DIGITAL		
Emission / Receive Band (MHz)		36M0F3F / 3700.00 - 4200.00	
	4M00G7W - 36M0G7W	/ 3700.00 - 4200.00	
	4M00G7D - 36M0G7D	/ 3700.00 - 4200.00	
Emission / Transmit Band (MHz)		36M0F3F / 5925.00 - 6425.00	
	4M00G7W - 36M0G7W	/ 5925.00 - 6425.00	
	4M00G7D - 36M0G7D	/ 5925.00 - 6425.00	
		4M00G7D - 36M0G7D	
Max. Available RF Power (dBW)/4 kHz)	36M0F3F	4M00G7W - 36M0G7W	
(dBW)/MHz)	-0.5	-7.0	-13.0
	23.5	14.0	12.0
Max. EIRP (dBW)/4 kHz)	45.4	38.9	32.9
(dBW)/MHz)	69.4	62.9	56.9
(dBW)	72.4	68.9	72.4
Max permissible Interference Power			
4.0 GHz, 20% (dBW/1 MHz)			-156.0
4.0 GHz, 0.0100% (dBW/1 MHz)			-146.0
6.0 GHz, 20% (dBW/4 kHz)			-154.0
6.0 GHz, 0.0025% (dBW/4 kHz)			-131.0
Range of Satellite Arc (Geostationary)			
Degrees Longitude		60.0 W / 143.0 W	
Azimuth Range (Min/Max)		109.1 / 219.4	
Corresponding Elevation Angles		17.5 / 42.3	
Radio Climate		A	
Rain Zone		4	
Max Great Circle Coordination Distance (Mi/Km)			
4.0 GHz		180.9 / 291.1	
6.0 GHz		108.5 / 174.6	
Precipitation Scatter Contour Radius (Mi/Km)			
4.0 GHz		231.4 / 372.5	
6.0 GHz		67.7 / 109.0	

Table of Earth Station Coordination Values  
06/20/2001

Earth Station Name BURBANK CA  
 Owner DIRECTRIX LICENSING  
 Latitude (DMS) (NAD83) 34 6 58.5 N  
 Longitude (DMS) (NAD83) 118 14 39.7 W  
 Ground Elevation (Ft/m) 395.03 / 120.40 AMSL  
 Antenna Centerline (Ft/m) 8.99 / 2.74 AGL  
 Antenna Model COMTECH ANT CORP 5 METER OFFSAT  
 Objectives: Receive -156.0 (dBW /1 MHz)  
 Transmit -154.0 (dBW /4 kHz) TX Power -0.5 (dBW/4 kHz)

Azimuth (Deg)	Horizon Elevation Angle (Deg)	Antenna Disc. Angle (Deg)	4.0 GHz		6.0 GHz	
			Antenna Gain (dBi)	Coordination Distance (Km)	Antenna Gain (dBi)	Coordination Distance (Km)
0	3.39	108.54	-9.71	162.1	-10.94	100.0
5	3.91	103.74	-8.75	155.5	-8.10	100.0
10	4.51	98.91	-8.04	148.9	-8.14	100.0
15	4.42	94.04	-8.02	150.5	-8.10	100.0
20	4.96	89.17	-8.04	142.2	-8.15	100.0
25	5.07	84.29	-8.00	141.0	-8.14	100.0
30	4.91	79.41	-8.04	142.9	-8.12	100.0
35	4.55	74.56	-8.00	148.5	-8.19	100.0
40	4.30	69.73	-8.05	152.3	-8.20	100.0
45	3.72	64.95	-8.05	163.2	-8.15	100.0
50	3.50	60.16	-8.03	170.0	-8.24	100.0
55	3.37	55.40	-8.05	173.0	-8.24	100.0
60	2.94	50.73	-8.10	182.5	-8.15	100.0
65	2.05	46.25	-8.09	202.2	-8.11	103.7
70	1.71	41.75	-8.10	208.7	-8.14	111.9
75	1.68	37.24	-8.09	209.4	-8.26	112.0
80	1.28	33.02	-8.00	221.6	-8.23	122.3
85	1.85	28.54	-7.41	207.9	-7.10	111.7
90	2.18	24.36	-5.75	207.9	-6.85	105.3
95	2.85	20.29	-4.12	204.1	-5.22	100.0
100	4.01	16.28	-1.03	195.9	-5.10	100.0
105	4.38	13.79	1.21	202.0	-3.67	100.0
110	3.54	14.03	0.97	213.6	-4.13	100.0
115	3.17	15.50	-0.40	213.9	-5.10	100.0
120	2.98	18.09	-2.47	207.0	-5.10	100.0
125	2.42	21.77	-4.71	207.7	-5.81	104.2
130	2.14	25.64	-6.25	206.4	-7.10	105.3
135	2.14	29.24	-7.69	202.1	-7.10	105.3
140	1.51	33.11	-8.00	214.8	-8.34	116.2
145	1.15	36.61	-8.32	224.2	-9.74	121.2
150	0.00	40.47	-9.09	291.1	-11.19	174.5
155	0.00	43.24	-9.65	287.5	-11.75	172.4
160	0.33	45.38	-10.08	269.3	-12.10	155.9
165	0.98	46.77	-10.35	219.6	-12.10	118.8
170	1.80	47.42	-10.48	197.8	-12.10	100.0
175	1.85	48.21	-10.64	195.6	-12.10	100.0
180	1.56	48.79	-10.76	203.0	-12.10	103.5

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Azimuth (Deg)	Horizon Elevation Angle (Deg)	Antenna Disc. Angle (Deg)	4.0 GHz		6.0 GHz	
			Antenna Gain (dBi)	Coordination Distance (Km)	Antenna Gain (dBi)	Coordination Distance (Km)
185	1.59	48.47	-10.69	202.4	-12.10	102.6
190	1.91	47.32	-10.46	194.9	-11.86	100.0
195	1.96	45.89	-10.18	194.7	-10.90	100.0
200	1.51	44.46	-9.84	206.1	-9.94	111.3
205	1.05	43.30	-8.88	224.5	-9.10	125.7
210	1.62	41.60	-8.06	211.4	-9.01	111.4
215	0.77	41.75	-8.01	244.2	-8.21	138.9
220	0.90	41.43	-8.06	236.0	-8.19	134.1
225	1.07	41.57	-8.03	228.2	-8.10	128.2
230	1.13	42.30	-8.09	225.9	-8.11	126.6
235	0.87	43.79	-8.06	237.8	-8.20	134.2
240	1.15	45.20	-8.07	225.4	-8.16	125.9
245	0.84	47.49	-8.04	239.6	-8.22	135.4
250	0.90	49.80	-8.09	236.1	-8.11	133.3
255	0.84	52.46	-8.05	239.5	-8.26	135.2
260	0.75	55.38	-8.04	245.2	-8.24	139.8
265	1.01	58.28	-8.05	230.1	-8.23	129.3
270	1.73	61.17	-8.06	208.3	-8.22	111.1
275	2.29	64.36	-8.09	197.1	-8.24	100.0
280	2.74	67.75	-8.12	186.8	-8.27	100.0
285	3.76	71.14	-8.11	162.1	-8.27	100.0
290	2.96	75.10	-8.04	182.3	-8.13	100.0
295	2.42	78.99	-8.01	194.5	-8.21	100.0
300	1.73	82.86	-8.03	208.4	-8.27	110.9
305	1.08	86.68	-8.03	227.9	-8.12	127.9
310	0.88	90.43	-8.03	237.4	-8.18	133.8
315	0.58	94.16	-8.06	256.4	-8.22	148.9
320	0.62	97.88	-8.07	253.7	-8.10	147.2
325	0.89	101.61	-8.32	235.2	-8.10	133.6
330	1.56	105.44	-9.09	208.1	-8.45	114.6
335	1.73	109.14	-9.83	202.6	-11.41	101.3
340	2.54	113.01	-10.60	179.1	-13.30	100.0
345	3.76	117.06	-11.82	144.2	-14.10	100.0
350	3.83	118.24	-12.30	141.0	-14.10	100.0
355	3.69	113.40	-10.68	151.0	-13.46	100.0

## 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: \_\_\_\_\_

TIMOTHY O. CRUTCHER  
SENIOR FREQUENCY COORDINATOR  
COMSEARCH  
19700 Janelia Farm Boulevard  
Ashburn, Virginia 20147

DATED: February 4, 2002