

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for

Direct Shopping Network, LLC
Glendale, California
Call Sign: E070153

Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, Virginia 20147
January 28, 2010

TABLE OF CONTENTS

1. CONCLUSIONS.....	3
2. SUMMARY OF RESULTS.....	4
3. SUPPLEMENTAL SHOWING	5
4. EARTH STATION COORDINATION DATA	7
5. CERTIFICATION	11

1. CONCLUSIONS

An interference study considering all existing, proposed and prior coordinated microwave facilities within the coordination contours of the earth station demonstrates that this site will operate satisfactorily with the common carrier microwave environment, based upon the restrictions noted in the Summary of Results (Section 2).

2. SUMMARY OF RESULTS

A number of great circle interference cases were identified during the interference study of the 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 most cases.

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 and frequency separation are considered on the interfering paths, sufficient losses exist to negate harmful interference from occurring with the transmit/receive earth station. Further the transmit spectrum will be limited to frequencies 6010.0 to 6048.6 MHz, 6106.1 to 6137.6 MHz, 6167.9 to 6182.0 MHz, 6212.4 to 6241.3 MHz, 6271.8 to 6362.0 MHz, and 6387.8 to 6425.0 MHz.

Company

None

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 in an Information-Only letter dated January 26, 2010.

Company

ANAHEIM CITY, COMMUNICATIONS DIVISION
AT&T California
AirSites2000, LLC
American Tower, LLC
BNSF Railway Company
CNG Communications, Inc.
COAST COMMUNITY COLLEGE DISTRICT
California, State of
KTLA INC
Kern, County of
LB Tower Company LLC
LOS ANGELES CITY WATER & POWER
LOS ANGELES UNIFIED SCHOOL DISTRICT
Los Angeles City Info Technology Agency
Los Angeles County Dept of Public Works
Los Angeles County FCC Licensing Section
Los Angeles SMSA Ltd. Partnership
M.U.T. Licensing, LLC
METROPOLITAN AREA NETWORKS, INC.
METROPOLITAN WATER DIST OF SO CALIFORNIA
MONTEBELLO CITY CALIFORNIA
Microwave Service Company
NEXTEL OF CALIFORNIA INC
New Cingular Wireless PCS - Los Angeles
Nextweb Inc
Northrop Grumman Information Technology
ORANGE, COUNTY OF, CA
RIVERSIDE COUNTY OF
San Bernardino County of California
Southern California Edison Company
Southern California Gas Company

Company (Continued)

T-Mobile License LLC
TV MICROWAVES CO
Turn Wireless, LLC
Ventura, County of
Verizon California Inc.
Verizon Wireless (VAW) LLC (CA)
Western Technical Services

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: 01/27/2010
Job Number: 100126COMSJC03

Administrative Information

Status: ENGINEER PROPOSAL
Call Sign: E070153
Licensee Code: DISHOP
Licensee Name: Direct Shopping Network, LLC

Site Information

GLENDALE, CALIFORNIA

Venue Name
Latitude (NAD 83): 34° 7' 52.2" N
Longitude (NAD 83): 118° 15' 10.6" W
Climate Zone: A
Rain Zone: 4
Ground Elevation (AMSL): 143.26 m / 470.0 ft

Link Information

Satellite Type: Geostationary
Mode: TR - Transmit-Receive
Modulation: Digital
Satellite Arc: 60° W to 143° West Longitude
Azimuth Range: 109.1° to 219.4°
Corresponding Elevation Angles: 17.5° / 42.3°
Antenna Centerline (AGL): 3.05 m / 10.0 ft

Antenna Information

	Receive	Transmit
Manufacturer	Vertex RSI	Vertex RSI
Model	4.8 Meter	4.8 Meter
Gain / Diameter	43.8 dBi / 4.8 m	47.8 dBi / 4.8 m
3-dB / 15-dB Beamwidth	1.10° / 2.31°	0.69° / 1.45°

Max Available RF Power	(dBW/4 kHz)	-16.5
	(dBW/MHz)	7.5

Maximum EIRP	(dBW/4 kHz)	31.3
	(dBW/MHz)	55.3

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)	4M00G7W - 36M0G7W / 3700.0 - 4200.0	4M00G7W - 36M0G7W / 6010.0 - 6048.6 4M00G7W - 31M0G7W / 6106.1 - 6137.6 4M00G7W - 13M5G7W / 6167.9 - 6182.0 4M00G7W - 28M0G7W / 6212.4 - 6241.3 4M00G7W - 36M0G7W / 6271.8 - 6362.0 4M00G7W - 36M0G7W / 6387.8 - 6425.0

Max Great Circle Coordination Distance	293.9 km / 182.6 mi	129.7 km / 80.6 mi
Precipitation Scatter Contour Radius	372.5 km / 231.4 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

LENDALE, CA

Licensee Name Direct Shopping Network, LLC
Latitude (NAD 83) 34° 7' 52.2" N
Longitude (NAD 83) 118° 15' 10.6" W
Ground Elevation (AMSL) 143.26 m / 470.0 ft
Antenna Centerline (AGL) 3.05 m / 10.0 ft
Antenna Model Vertex RSI 4.8 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 -16.5 (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	4.74	108.66	-10.00	137.07	-10.00	100.00
5	3.93	103.74	-10.00	149.34	-10.00	100.00
10	3.38	98.87	-10.00	161.00	-10.00	100.00
15	2.55	94.01	-10.00	182.00	-10.00	100.00
20	2.08	89.18	-10.00	192.70	-10.00	100.00
25	2.33	84.35	-10.00	187.01	-10.00	100.00
30	2.58	79.52	-10.00	181.20	-10.00	100.00
35	3.33	74.64	-10.00	162.03	-10.00	100.00
40	2.81	69.86	-10.00	175.81	-10.00	100.00
45	2.42	65.10	-10.00	184.99	-10.00	100.00
50	2.76	60.27	-10.00	177.03	-10.00	100.00
55	3.68	55.34	-10.00	154.42	-10.00	100.00
60	2.89	50.74	-10.00	174.12	-10.00	100.00
65	2.77	46.06	-9.58	178.83	-9.58	100.00
70	2.51	41.49	-8.45	190.39	-8.45	100.00
75	2.43	36.96	-7.19	198.19	-7.19	100.00
80	2.41	32.53	-5.81	205.16	-5.81	100.00
85	2.65	28.13	-4.23	205.36	-4.23	100.00
90	2.52	24.15	-2.57	216.54	-2.57	100.00
95	3.23	20.01	-0.53	211.80	-0.53	100.00
100	3.56	16.65	1.47	216.04	1.47	100.00
105	5.05	13.14	4.03	205.16	4.03	100.00
110	5.66	11.90	5.11	204.46	5.11	100.00
115	5.76	13.13	4.05	199.77	4.05	100.00
120	6.05	15.74	2.07	184.93	2.07	100.00
125	5.99	19.46	-0.23	172.26	-0.23	100.00
130	5.70	23.31	-2.19	162.76	-2.19	100.00
135	3.95	28.02	-4.19	180.45	-4.19	100.00
140	3.79	31.52	-5.47	177.09	-5.47	100.00
145	2.63	35.55	-6.77	195.91	-6.77	100.00
150	2.56	38.57	-7.66	193.17	-7.66	100.00
155	1.24	42.27	-8.65	219.75	-8.65	100.00
160	0.82	44.96	-9.32	234.05	-9.32	100.00
165	0.97	46.76	-9.75	223.01	-9.75	100.00
170	0.90	48.25	-10.00	225.70	-10.00	100.00
175	0.83	49.20	-10.00	229.47	-10.00	100.00
180	0.68	49.66	-10.00	238.72	-10.00	100.00
185	0.76	49.27	-10.00	233.65	-10.00	100.00

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Coordination Values

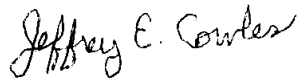
GLENDALE, CA

Licensee Name Direct Shopping Network, LLC
Latitude (NAD 83) 34° 7' 52.2" N
Longitude (NAD 83) 118° 15' 10.6" W
Ground Elevation (AMSL) 143.26 m / 470.0 ft
Antenna Centerline (AGL) 3.05 m / 10.0 ft
Antenna Model Vertex RSI 4.8 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 -16.5 (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)
190	0.57	48.56	-10.00	245.11	-10.00	100.00
195	0.43	47.24	-9.86	258.46	-9.86	108.05
200	0.67	45.19	-9.38	242.79	-9.38	100.00
205	0.56	43.74	-9.02	251.52	-9.02	101.89
210	0.37	42.80	-8.79	271.76	-8.79	115.43
215	0.66	41.85	-8.54	247.81	-8.54	100.00
220	0.00	42.33	-8.67	293.91	-8.67	129.72
225	0.63	42.00	-8.58	249.70	-8.58	100.00
230	0.49	42.91	-8.81	257.99	-8.81	106.09
235	1.25	43.44	-8.95	217.81	-8.95	100.00
240	1.99	44.47	-9.20	198.38	-9.20	100.00
245	2.29	46.33	-9.65	189.53	-9.65	100.00
250	3.00	48.25	-10.00	171.39	-10.00	100.00
255	3.49	50.70	-10.00	158.42	-10.00	100.00
260	3.29	53.85	-10.00	162.86	-10.00	100.00
265	4.12	56.64	-10.00	146.05	-10.00	100.00
270	3.67	60.28	-10.00	154.70	-10.00	100.00
275	3.83	63.75	-10.00	151.31	-10.00	100.00
280	2.82	67.74	-10.00	175.57	-10.00	100.00
285	2.30	71.56	-10.00	187.77	-10.00	100.00
290	1.76	75.38	-10.00	201.13	-10.00	100.00
295	1.22	79.20	-10.00	213.61	-10.00	100.00
300	0.92	82.96	-10.00	224.56	-10.00	100.00
305	0.86	86.70	-10.00	228.20	-10.00	100.00
310	0.00	90.44	-10.00	285.28	-10.00	126.18
315	0.21	94.15	-10.00	284.32	-10.00	125.56
320	0.39	97.87	-10.00	261.79	-10.00	110.55
325	0.62	101.58	-10.00	242.01	-10.00	100.00
330	0.93	105.30	-10.00	224.12	-10.00	100.00
335	1.92	109.21	-10.00	196.66	-10.00	100.00
340	2.58	113.04	-10.00	181.31	-10.00	100.00
345	3.71	117.06	-10.00	153.71	-10.00	100.00
350	4.40	118.32	-10.00	141.78	-10.00	100.00
355	5.23	113.56	-10.00	132.62	-10.00	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.



Jeffrey E. Cowles
Principal Frequency Planner
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, Va. 20147

DATED: January 28, 2010