

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for

**Vizada Satellite, Inc.
Santa Paula, California**

Satellite Earth Station

Prepared By:
COMSEARCH

19700 Janelia Farm Boulevard
Ashburn, Virginia 20147
December 16, 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

Los Angeles SMSA Ltd. Partnership
Santa Barbara Cellular Systems Ltd.
Southern California Edison Company
Verizon California

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.

Expedited coordination data for this earth station was emailed and sent to the below listed carriers with a letter dated December 2, 2009.

Company

AT&T California
AirSites2000, LLC
American Tower, LLC
California, State of
Chevron USA Inc.
Exxon Communications Company
Fresno MSA Limited Partnership
GTE Mobilnet of Santa Barbara LTD Ptsh
KERN ED TELECOM CONSORTIUM
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
New Cingular Wireless PCS LLC - N CAL
Nextweb Inc
Northrop Grumman Information Technology
OCCIDENTAL OF ELK HILLS INC
Plains Exploration & Production Company
Santa Barbara Cellular Systems, Ltd.
Southern California Edison Company
Southern California Gas Company

Company (Continued)

TV MICROWAVES CO
Ventura, County of
Verizon California Inc.
Vintage Production California LLC
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: 12/16/2009
Job Number: 091202COMSJC02

Administrative Information

Status ENGINEER PROPOSAL
Call Sign
Licensee Code VIZSAT
Licensee Name Vizada Satellite, Inc.

Site Information SANTA PAULA, CALIFORNIA

Venue Name
Latitude (NAD 83) 34° 24' 5.0" N
Longitude (NAD 83) 119° 4' 29.4" W
Climate Zone A
Rain Zone 4
Ground Elevation (AMSL) 228.6 m / 750.0 ft

Link Information

Satellite Type Geostationary
Mode TR - Transmit-Receive
Modulation Digital
Satellite Arc 176° W to 178° West Longitude
Azimuth Range 249.8° to 251.2°
Corresponding Elevation Angles 18.5° / 16.9°
Antenna Centerline (AGL) 4.27 m / 14.0 ft

Antenna Information

Receive
Manufacturer Vertex RSI
Model 6.3 Meter
Gain / Diameter 46.5 dBi / 6.3 m
3-dB / 15-dB Beamwidth 0.81° / 1.70°

Transmit
Vertex RSI
6.3 Meter
50.7 dBi / 6.3 m
0.50° / 1.05°

108KG7W and 203KG7W

Max Available RF Power (dBW/4 kHz)
(dBW/MHz)

-10.5 -18.4
3.8 -1.3

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

40.2 32.3
54.5 49.4
54.5 49.4

Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

-154.0 dBW/4 kHz 20%
-131.0 dBW/4 kHz 0.0025%

Frequency Information

Receive 4.0 GHz
Emission / Frequency Range (MHz) 108KG7W / 3700.0 - 4200.0
203KG7W / 3700.0 - 4200.0

Transmit 6.1 GHz
108KG7W / 5850.0 - 6425.0
203KG7W / 5850.0 - 6425.0

Max Great Circle Coordination Distance 285.3 km / 177.2 mi
Precipitation Scatter Contour Radius 373.6 km / 232.1 mi

141.6 km / 88.0 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

SANTA PAULA, CA

Licensee Name Vizada Satellite, Inc.
Latitude (NAD 83) 34° 24' 5.0" N
Longitude (NAD 83) 119° 4' 29.4" W
Ground Elevation (AMSL) 228.6 m / 750.0 ft
Antenna Centerline (AGL) 4.27 m / 14.0 ft
Antenna Model Vertex RSI 6.3 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 -10.5 (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	7.86	108.56	-10.00	105.25	-10.00	100.00
5	8.50	113.54	-10.00	100.00	-10.00	100.00
10	9.86	118.57	-10.00	100.00	-10.00	100.00
15	10.29	123.55	-10.00	100.00	-10.00	100.00
20	11.18	128.58	-10.00	100.00	-10.00	100.00
25	11.56	133.57	-10.00	100.00	-10.00	100.00
30	12.14	138.58	-10.00	100.00	-10.00	100.00
35	12.68	143.59	-10.00	100.00	-10.00	100.00
40	13.12	148.60	-10.00	100.00	-10.00	100.00
45	12.43	153.45	-10.00	100.00	-10.00	100.00
50	11.70	158.21	-10.00	100.00	-10.00	100.00
55	9.65	162.30	-10.00	100.00	-10.00	100.00
60	8.57	166.07	-10.00	100.00	-10.00	100.00
65	8.50	168.90	-10.00	100.00	-10.00	100.00
70	7.72	169.20	-10.00	106.67	-10.00	100.00
75	7.94	168.23	-10.00	104.39	-10.00	100.00
80	7.91	165.32	-10.00	104.70	-10.00	100.00
85	7.65	161.39	-10.00	107.46	-10.00	100.00
90	7.07	156.90	-10.00	113.57	-10.00	100.00
95	6.63	152.30	-10.00	118.36	-10.00	100.00
100	6.36	147.66	-10.00	121.31	-10.00	100.00
105	5.43	142.74	-10.00	130.66	-10.00	100.00
110	6.33	138.29	-10.00	121.57	-10.00	100.00
115	5.19	133.28	-10.00	132.96	-10.00	100.00
120	3.56	128.20	-10.00	156.89	-10.00	100.00
125	2.46	123.26	-10.00	183.93	-10.00	100.00
130	2.32	118.50	-10.00	187.12	-10.00	100.00
135	2.02	113.71	-10.00	194.15	-10.00	100.00
140	1.32	108.88	-10.00	210.59	-10.00	100.00
145	0.35	104.04	-10.00	266.28	-10.00	129.64
150	0.00	99.28	-10.00	285.28	-10.00	141.57
155	0.00	94.55	-10.00	285.28	-10.00	141.57
160	0.00	89.81	-10.00	285.28	-10.00	141.57
165	0.00	85.07	-10.00	285.28	-10.00	141.57
170	0.00	80.33	-10.00	285.28	-10.00	141.57
175	0.32	75.57	-10.00	270.74	-10.00	132.68
180	1.34	70.73	-10.00	209.96	-10.00	100.00
185	2.37	65.86	-10.00	185.99	-10.00	100.00

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Coordination Values

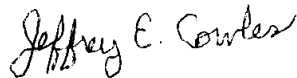
SANTA PAULA, CA

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Antenna Model	Vertex RSI 6.3 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
Short Term	-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz
Max Available RF Power			-10.5 (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	3.46	60.94	-10.00	159.20	-10.00	100.00
195	4.74	55.95	-10.00	137.00	-10.00	100.00
200	3.58	51.41	-10.00	156.64	-10.00	100.00
205	4.40	46.51	-9.69	143.15	-9.69	100.00
210	2.81	42.30	-8.66	182.57	-8.66	100.00
215	5.66	36.81	-7.15	138.73	-7.15	100.00
220	7.09	31.72	-5.53	131.41	-5.53	100.00
225	5.84	27.66	-4.05	151.22	-4.05	100.00
230	5.27	23.67	-2.35	168.91	-2.35	100.00
235	6.20	19.17	-0.06	170.29	-0.06	100.00
240	5.78	15.72	2.09	188.28	2.09	100.00
245	6.87	11.76	5.24	192.79	5.24	100.00
250	5.87	11.08	5.89	206.55	5.89	100.00
255	6.00	11.52	5.46	205.09	5.46	100.00
260	6.36	13.69	3.59	189.74	3.59	100.00
265	7.71	16.53	1.54	157.36	1.54	100.00
270	7.09	21.12	-1.12	150.40	-1.12	100.00
275	5.74	26.15	-3.44	155.54	-3.44	100.00
280	5.06	30.94	-5.26	154.12	-5.26	100.00
285	5.31	35.51	-6.76	144.15	-6.76	100.00
290	5.52	40.18	-8.10	136.12	-8.10	100.00
295	6.19	44.83	-9.29	125.89	-9.29	100.00
300	6.17	49.67	-10.00	123.38	-10.00	100.00
305	5.64	54.61	-10.00	128.68	-10.00	100.00
310	6.23	59.40	-10.00	122.64	-10.00	100.00
315	6.01	64.31	-10.00	125.10	-10.00	100.00
320	5.99	69.20	-10.00	125.30	-10.00	100.00
325	5.35	74.14	-10.00	131.43	-10.00	100.00
330	5.35	79.03	-10.00	131.43	-10.00	100.00
335	6.28	83.91	-10.00	122.19	-10.00	100.00
340	7.72	88.82	-10.00	106.74	-10.00	100.00
345	8.03	93.76	-10.00	103.51	-10.00	100.00
350	8.10	98.70	-10.00	102.88	-10.00	100.00
355	8.32	103.65	-10.00	100.99	-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: December 16, 2009