

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for

VIZADA, INC.
SANTA PAULA, CALIFORNIA
(Call Sign: E980136)

Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, Virginia 20147
March 16, 2010

*to add
Mike High Inc.*

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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, 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 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-only earth station. Further the transmit spectrum will be limited to 6532.52 to 6536.52 MHz and 6538.55 - 6558.55 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.

Expedited coordination data for this earth station was emailed and sent to the below listed carriers with a letter dated November 23, 2009.

Company

AERA ENERGY LLC
American Tower, LLC
ARCHDIOCESE OF LOS ANGELES WELFARE CORP
BNSF Railway Company
CBS Broadcasting Inc
CBS Communications Services
CITY OF POMONA COMMUNICATIONS
California, State of
Chevron USA Inc.
Exxon Communications Company
Fresno MSA Limited Partnership
GLENDALE CITY CALIFORNIA
GTE Mobilnet of Santa Barbara LTD Ptsh
INCOMM DIVISION CHURCH OF SCIENTOLOGY
Kern, County of
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 County Metro Transit Auth
Los Angeles SMSA Ltd. Partnership
METROPOLITAN WATER DIST OF SO CALIFORNIA
MILE HIGH, INC.
MOBILE RELAY ASSOCIATES INC
NBC TELEMUNDO LICENSE CO
New Cingular Wireless PCS - Los Angeles
New Cingular Wireless PCS LLC - N CAL
Northrop Grumman Information Technology
PACIFIC PIPELINE SYSTEM LLC
Pacific Gas and Electric Company
Plains Exploration & Production Company
SANTA BARBARA COUNTY
Southern California Edison Company
Southern California Gas Company
Time Warner NY Cable LLC
Union Pacific Railroad Company

Company (Continued)

VENOCO, INC.

Ventura, County of

Verizon California Inc.

KTLA INC

LOS ANGELES TELEVISION STATION KCAL LLC

PAPPAS SOUTHERN CALIFORNIA LICENSE, LLC

Society of Broadcast Engineers – Southern California Region

Society of Broadcast Engineers – San Diego Region

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: 03/16/2010
Job Number: 091123COMSJC03

Administrative Information

Status: ENGINEER PROPOSAL
Call Sign: E980136
Licensee Code: VIZSAT
Licensee Name: Vizada Satellite, Inc.

Site Information SANTA PAULA, CALIFORNIA

Venue Name:
Latitude (NAD 83): 34° 24' 6.0" N
Longitude (NAD 83): 119° 4' 25.2" W
Climate Zone: A
Rain Zone: 4
Ground Elevation (AMSL): 229.21 m / 752.0 ft

Link Information

Satellite Type: Geostationary
Mode: TR - Transmit-Receive
Modulation: Digital
Satellite Arc: 97° W to 99° West Longitude
Azimuth Range: 144.3° to 147.1°
Corresponding Elevation Angles: 43.6° / 44.6°
Antenna Centerline (AGL): 9.75 m / 32.0 ft

Antenna Information

	Receive	Transmit
Manufacturer	COMSAT RSI	COMSAT RSI
Model	16.4 Meter	16.4 Meter
Gain / Diameter	55.5 dBi / 16.4 m	58.7 dBi / 16.4 m
3-dB / 15-dB Beamwidth	0.29° / 0.54°	0.22° / 0.42°

Max Available RF Power	(dBW/4 kHz)			4M00X2D	and 20M0X2D
	(dBW/MHz)	-3.7	-10.7		
		20.3	13.3		
Maximum EIRP	(dBW/4 kHz)	55.0	48.0		
	(dBW/MHz)	79.0	72.0		
	(dBW)	85.0	85.0		
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)	131KG2D / 3947.0 - 3953.0	4M00X2D / 6532.52 - 6536.52 20M0X2D / 6538.55 - 6558.55

Max Great Circle Coordination Distance	291.4 km / 181.0 mi	170.4 km / 105.9 mi
Precipitation Scatter Contour Radius	100.0 km / 62.1 mi	100.0 km / 62.1 mi

Ketchup

COMSEARCH

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Coordination Values		SANTA PAULA, CA			
Licensee Name	Vizada Satellite, Inc.				
Latitude (NAD 83)	34° 24' 6.0" N				
Longitude (NAD 83)	119° 4' 25.2" W				
Ground Elevation (AMSL)	229.21 m / 752.0 ft				
Antenna Centerline (AGL)	9.75 m / 32.0 ft				
Antenna Model	COMSAT RSI 16.4 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	-3.7 (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	10.66	133.00	-10.00	100.00	-10.00	100.00
5	11.68	130.08	-10.00	100.00	-10.00	100.00
10	12.34	126.69	-10.00	100.00	-10.00	100.00
15	13.16	123.13	-10.00	100.00	-10.00	100.00
20	11.72	118.62	-10.00	100.00	-10.00	100.00
25	13.00	114.95	-10.00	100.00	-10.00	100.00
30	13.02	110.78	-10.00	100.00	-10.00	100.00
35	13.74	106.69	-10.00	100.00	-10.00	100.00
40	13.04	102.31	-10.00	100.00	-10.00	100.00
45	12.43	97.98	-10.00	100.00	-10.00	100.00
50	11.69	93.68	-10.00	100.00	-10.00	100.00
55	10.20	89.44	-10.00	100.00	-10.00	100.00
60	9.07	85.33	-10.00	100.00	-10.00	100.00
65	8.57	81.28	-10.00	100.00	-10.00	100.00
70	7.76	77.35	-10.00	106.27	-10.00	100.00
75	8.08	73.30	-10.00	103.08	-10.00	100.00
80	8.23	69.31	-10.00	101.80	-10.00	100.00
85	7.60	65.62	-10.00	107.95	-10.00	100.00
90	7.28	61.97	-10.00	111.35	-10.00	100.00
95	6.69	58.59	-10.00	117.68	-10.00	100.00
100	6.56	55.17	-10.00	119.05	-10.00	100.00
105	5.83	52.30	-10.00	126.86	-10.00	100.00
110	5.82	49.25	-10.00	126.99	-10.00	100.00
115	6.34	46.05	-9.58	123.09	-9.58	100.00
120	4.86	44.70	-9.26	138.47	-9.26	100.00
125	3.79	43.53	-8.97	157.09	-8.97	100.00
130	2.86	42.76	-8.78	180.97	-8.78	100.00
135	2.58	41.87	-8.55	188.38	-8.55	100.00
140	1.66	42.10	-8.61	207.53	-8.61	101.78
145	0.57	43.02	-8.84	252.42	-8.84	136.61
150	0.00	43.88	-9.06	291.35	-9.06	170.44
155	0.00	44.62	-9.24	290.18	-9.24	169.73
160	0.00	45.78	-9.52	288.37	-9.52	168.65
165	0.00	47.33	-9.88	286.05	-9.88	165.61
170	0.00	49.03	-10.00	285.28	-10.00	165.14
175	0.22	50.85	-10.00	283.12	-10.00	163.26
180	0.35	53.04	-10.00	266.41	-10.00	149.20
185	0.92	55.21	-10.00	224.48	-10.00	118.10

COMSEARCH

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Coordination Values

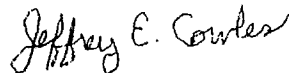
SANTA PAULA, CA

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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			-3.7 (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	1.66	57.58	-10.00	203.78	-10.00	100.00
195	3.26	59.78	-10.00	163.63	-10.00	100.00
200	4.21	62.65	-10.00	144.66	-10.00	100.00
205	3.72	66.32	-10.00	153.66	-10.00	100.00
210	2.28	70.32	-10.00	188.13	-10.00	100.00
215	3.26	73.59	-10.00	163.74	-10.00	100.00
220	4.19	77.06	-10.00	144.95	-10.00	100.00
225	6.46	80.51	-10.00	120.14	-10.00	100.00
230	4.38	84.58	-10.00	142.10	-10.00	100.00
235	5.43	88.37	-10.00	130.70	-10.00	100.00
240	5.75	92.25	-10.00	127.64	-10.00	100.00
245	4.54	96.03	-10.00	139.78	-10.00	100.00
250	5.16	99.92	-10.00	133.31	-10.00	100.00
255	5.43	103.77	-10.00	130.70	-10.00	100.00
260	5.78	107.63	-10.00	127.37	-10.00	100.00
265	6.66	111.64	-10.00	118.00	-10.00	100.00
270	5.35	114.86	-10.00	131.43	-10.00	100.00
275	4.56	118.04	-10.00	139.48	-10.00	100.00
280	5.03	121.63	-10.00	134.52	-10.00	100.00
285	5.24	124.99	-10.00	132.47	-10.00	100.00
290	5.67	128.33	-10.00	128.39	-10.00	100.00
295	5.97	131.41	-10.00	125.50	-10.00	100.00
300	5.93	134.00	-10.00	125.92	-10.00	100.00
305	5.42	135.89	-10.00	130.73	-10.00	100.00
310	6.33	138.60	-10.00	121.61	-10.00	100.00
315	5.92	139.73	-10.00	126.01	-10.00	100.00
320	5.38	140.21	-10.00	131.20	-10.00	100.00
325	5.41	140.74	-10.00	130.85	-10.00	100.00
330	5.53	140.81	-10.00	129.74	-10.00	100.00
335	6.57	141.26	-10.00	118.99	-10.00	100.00
340	7.73	141.23	-10.00	106.56	-10.00	100.00
345	7.85	139.42	-10.00	105.32	-10.00	100.00
350	8.17	137.27	-10.00	102.30	-10.00	100.00
355	9.07	135.13	-10.00	100.00	-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: March 16, 2010