

# FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for

**Vizada, Inc**  
**Southbury, Connecticut**  
**Call Sign: WB36**

**Satellite Earth Station**

Prepared By:  
COMSEARCH  
19700 Janelia Farm Boulevard  
Ashburn, VA 20147  
July 15, 2009

## 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 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

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 with a letter dated June 11, 2009.

#### Company

ALGONQUIN GAS TRANSMISSION CO  
AMFM RADIO LICENSES, LLC  
ART Licensing Corp.  
AT&T CORP  
Airband Communications Inc  
American Cellular Corporation  
Ascent Media Network Services, Inc.  
Business Only Broadband, LLC  
COUNTY OF MORRIS  
Cellco Partnership - (W-NY)  
Cellco Partnership - CT, W-MA  
Cellco Partnership - E-MA, NH, RI  
Cellco Partnership-Newark-Dallas Verizon  
City of Bristol Mayor's Office  
City of New Haven Police Services  
County of Bergen, Bergen Cnty Police Dep  
EAST HAMPTON TOWN POLICE DEPARTMENT  
FiberTower Network Services Corp.  
GREENWICH TOWN  
Global Crossing Telecommunications, Inc.  
Goosetown Network Services, LLC  
METRO NETWORKS COMMUNICATIONS INC  
METROPOLITAN AREA NETWORKS, INC.  
NEW JERSEY STATE POLICE  
NEW JERSEY TRANSIT RAIL OPERATIONS, INC  
NEW YORK CITY POLICE DEPARTMENT  
NORTHEAST UTILITIES SERVICE COMPANY  
NSAC LLC  
NYNEX Mobile Limited Partnership 2  
Nassau County Police Dept.  
New Britain, City of  
New Cingular Wireless PCS LLC - MA  
New Jersey, State of -NJ Transit

Company (Continued)

New York SMSA LP (NY Metro Region)  
New York State Office for Technology SWN  
New York, City of  
Norton, Douglas R  
Orange Poughkeepsie SMSA LTD Partnership  
PSEG Services Corporation  
Port Authority of New York & New Jersey  
QUICK LINK CONNECTIONS INC  
STAMFORD, CITY OF  
SUFFOLK, COUNTY OF  
Stevens Institute of Technology  
TELEMARK NETWORKS, INC  
Thacher, Proffitt & Wood LLP  
Towerstream, Inc  
Town of Woodbridge, Police Department  
Trans Video Communications, Inc  
Verizon New Jersey, Inc.

## **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: 07/15 /2009  
Job Number: 090611COMSJC02

---

### Administrative Information

Status ENGINEER PROPOSAL  
Call Sign WB36  
Licensee Code VIZSBC  
Licensee Name Vizada, Inc

---

### Site Information SOUTHURY, CONNECTICUT

Venue Name  
Latitude (NAD 83) 41° 27' 5.0" N  
Longitude (NAD 83) 73° 17' 19.0" W  
Climate Zone A  
Rain Zone 2  
Ground Elevation (AMSL) 35.66 m / 117.0 ft

---

### Link Information

Satellite Type Geostationary  
Mode TR - Transmit-Receive  
Modulation Digital  
Satellite Arc 3° W to 102° West Longitude  
Azimuth Range 103.3° to 219.6°  
Corresponding Elevation Angles 6.0° / 33.9°  
Antenna Centerline (AGL) 6.1 m / 20.0 ft

---

### Antenna Information

Manufacturer  
Model  
Gain / Diameter  
3-dB / 15-dB Beamwidth

### Receive

Vertex  
9 KPK  
58.6 dBi / 9.0 m  
0.19° / 0.38°

### Transmit

Vertex  
9 KPK  
60.1 dBi / 9.0 m  
0.17° / 0.34°

Max Available RF Power (dBW/4 kHz) -14.0  
(dBW/MHz) 10.0

Maximum EIRP (dBW/4 kHz) 46.1  
(dBW/MHz) 70.1

Interference Objectives: Long Term -156.0 dBW/MHz 20% -151.0 dBW/4 kHz 20%  
Short Term -146.0 dBW/MHz 0.01% -128.0 dBW/4 kHz 0.0025%

---

### Frequency Information

Emission / Frequency Range (MHz)

### Receive 11.0 GHz

64K0G7W / 10950.0 - 11200.0  
417KG7W / 10950.0 - 11200.0  
7M50G7W / 10950.0 - 11200.0  
64K0G7W / 11450.0 - 11700.0  
417KG7W / 11450.0 - 11700.0  
7M50G7W / 11450.0 - 11700.0

### Transmit 14.0 GHz

64K0G7W / 14000.0 - 14500.0  
600KG7W / 14000.0 - 14500.0  
1M86G7W / 14000.0 - 14500.0  
45M0G7W / 14000.0 - 14500.0

Max Great Circle Coordination Distance 488.9 km / 303.7 mi 207.6 km / 129.0 mi  
Precipitation Scatter Contour Radius 588.3 km / 365.5 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

### SOUTHBURY, CT

Licensee Name Vizada, Inc  
Latitude (NAD 83) 41° 27' 5.0" N  
Longitude (NAD 83) 73° 17' 19.0" W  
Ground Elevation (AMSL) 35.66 m / 117.0 ft  
Antenna Centerline (AGL) 6.1 m / 20.0 ft  
Antenna Model Vertex 9 KPK  
Antenna Mode Receive 11.0 GHz Transmit 14.0 GHz  
Interference Objectives: Long Term -156.0 dBW/MHz 20% -151.0 dBW/4 kHz 20%  
Short Term -146.0 dBW/MHz 0.01% -128.0 dBW/4 kHz 0.0025%  
Max Available RF Power -14.0 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 11.0 GHz		Transmit 14.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	4.81	103.34	-10.00	100.28	-10.00	100.00
5	4.39	98.34	-10.00	105.39	-10.00	100.00
10	3.72	93.34	-10.00	114.83	-10.00	100.00
15	4.03	88.35	-10.00	109.99	-10.00	100.00
20	4.26	83.35	-10.00	107.03	-10.00	100.00
25	4.25	78.35	-10.00	107.14	-10.00	100.00
30	4.44	73.35	-10.00	104.73	-10.00	100.00
35	4.52	68.35	-10.00	103.81	-10.00	100.00
40	4.49	63.35	-10.00	104.08	-10.00	100.00
45	4.22	58.36	-10.00	107.54	-10.00	100.00
50	3.85	53.37	-10.00	112.69	-10.00	100.00
55	3.46	48.39	-10.00	119.35	-10.00	100.00
60	2.98	43.43	-8.94	130.25	-8.94	100.00
65	2.38	38.49	-7.63	148.45	-7.63	100.00
70	2.63	33.49	-6.12	149.89	-6.12	100.00
75	2.87	28.50	-4.37	152.96	-4.37	100.00
80	2.78	23.55	-2.30	169.48	-2.30	100.00
85	2.43	18.68	0.22	190.65	0.22	100.00
90	2.46	13.80	3.51	205.16	3.51	100.00
95	2.54	9.03	8.11	223.80	8.11	100.00
100	2.44	4.88	14.79	266.84	14.79	107.67
105	2.62	3.76	17.62	488.88	17.62	207.57
110	3.46	6.55	11.60	223.16	11.60	100.00
115	4.69	9.21	7.89	184.59	7.89	100.00
120	6.07	11.65	5.34	147.64	5.34	100.00
125	7.44	13.95	3.39	124.05	3.39	100.00
130	8.55	16.25	1.73	107.36	1.73	100.00
135	9.18	18.72	0.19	100.00	0.19	100.00
140	9.47	21.25	-1.19	100.00	-1.19	100.00
145	9.44	23.81	-2.42	100.00	-2.42	100.00
150	9.15	26.34	-3.52	100.00	-3.52	100.00
155	9.59	27.92	-4.15	100.00	-4.15	100.00
160	9.41	29.72	-4.83	100.00	-4.83	100.00
165	8.92	31.49	-5.46	100.00	-5.46	100.00
170	8.45	32.90	-5.93	100.00	-5.93	100.00
175	7.00	34.91	-6.57	100.00	-6.57	100.00
180	6.34	35.76	-6.84	100.00	-6.84	100.00
185	5.25	36.65	-7.10	105.76	-7.10	100.00

# COMSEARCH

## Earth Station Data Sheet

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

### Coordination Values

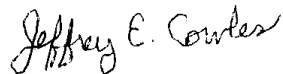
### SOUTHBURY, CT

Licensee Name Vizada, Inc  
Latitude (NAD 83) 41° 27' 5.0" N  
Longitude (NAD 83) 73° 17' 19.0" W  
Ground Elevation (AMSL) 35.66 m / 117.0 ft  
Antenna Centerline (AGL) 6.1 m / 20.0 ft  
Antenna Model Vertex 9 KPK  
Antenna Mode Receive 11.0 GHz Transmit 14.0 GHz  
Interference Objectives: Long Term -156.0 dBW/MHz 20% -151.0 dBW/4 kHz 20%  
Short Term -146.0 dBW/MHz 0.01% -128.0 dBW/4 kHz 0.0025%  
Max Available RF Power -14.0 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 11.0 GHz		Transmit 14.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	3.91	37.35	-7.31	121.52	-7.31	100.00
195	3.27	36.90	-7.18	131.68	-7.18	100.00
200	3.16	35.54	-6.77	135.43	-6.77	100.00
205	3.42	33.48	-6.12	133.29	-6.12	100.00
210	3.61	31.63	-5.50	132.25	-5.50	100.00
215	3.80	30.40	-5.07	130.57	-5.07	100.00
220	3.75	30.14	-4.98	131.85	-4.98	100.00
225	3.33	30.98	-5.28	138.49	-5.28	100.00
230	2.89	32.53	-5.81	145.54	-5.81	100.00
235	2.08	34.99	-6.60	161.41	-6.60	100.00
240	1.45	37.72	-7.41	179.65	-7.41	100.00
245	1.82	40.04	-8.06	161.47	-8.06	100.00
250	2.10	42.85	-8.80	149.78	-8.80	100.00
255	2.11	46.14	-9.60	145.80	-9.60	100.00
260	2.21	49.60	-10.00	141.64	-10.00	100.00
265	2.64	53.11	-10.00	132.75	-10.00	100.00
270	2.83	56.90	-10.00	130.39	-10.00	100.00
275	2.98	60.84	-10.00	127.66	-10.00	100.00
280	3.06	64.90	-10.00	126.33	-10.00	100.00
285	3.71	68.91	-10.00	115.16	-10.00	100.00
290	4.53	73.00	-10.00	103.65	-10.00	100.00
295	4.54	77.31	-10.00	103.57	-10.00	100.00
300	4.98	81.60	-10.00	100.00	-10.00	100.00
305	4.70	85.98	-10.00	101.57	-10.00	100.00
310	4.77	90.35	-10.00	100.70	-10.00	100.00
315	4.31	94.69	-10.00	106.39	-10.00	100.00
320	4.78	99.07	-10.00	100.64	-10.00	100.00
325	4.71	103.40	-10.00	101.45	-10.00	100.00
330	4.65	107.71	-10.00	102.14	-10.00	100.00
335	4.77	112.01	-10.00	100.68	-10.00	100.00
340	5.10	116.32	-10.00	100.00	-10.00	100.00
345	5.40	118.34	-10.00	100.00	-10.00	100.00
350	5.58	113.34	-10.00	100.00	-10.00	100.00
355	5.51	108.34	-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: July 15, 2009