

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for

Globecomm Systems, Inc.
Hauppauge, New York
(Call Sign: E060431)

Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, Virginia 20147
April 26, 2013

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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

Capital Communications of America
Coralinks
Nassau County Police Department
New Cingular Wireless PCS, LLC (NY)
Turtle Networks 6465
Wireless Backhaul Infrastructure, LLC

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 March 27, 2013 and a revised PCN was forwarded on April 2, 2013.

Company

256Q Networks
AB Services LLC
ALGONQUIN GAS TRANSMISSION CO
AT&T Corp.
AWC Networks
Aerbender, LLC
Auburn Data Systems, LLC
BFI Licenses, LLC
Bucks, County of
CONSOLIDATED EDISON COMPANY OF NEW YORK
CTAB Holdings LLC
Capital Communications of America
Cellco Partnership - (W-NY)
Cellco Partnership - CT, W-MA, VT
Cellco Partnership-Newark-Dallas Verizon
China Cat Productions LLC
City of New York
Comprehensive Wireless LLC
Connecticut State Police Department
Converge Towers LLC
Coral Reef Technologies Ltd
Coralinks
Direct Broadcast Services, Inc.
ECW Wireless, LLC
EG Broadcast Newco Corp
Eastern MLG LLC
Electric Railroad, LLC
Essex County Sherrif Office (NJ)
FELHC, Inc.
Fibertrack, LLC
Firstlevel Networks
Fundamental Broadcasting LLC
Garden State Transmissions
Geneva Communications, LLC
Goosetown Network Services, LLC

Company (Continued)

High Voltage Communications LLC
Jefferson Microwave, LLC
K1 COMMUNICATIONS
Kryptic Technologies
MONMOUTH, COUNTY OF
MVC Research. LLC
Mahwah Communications
Morris, County of
Nassau County Police Department
New Cingular Wireless PCS LLC -NJ
New Cingular Wireless PCS, LLC (NY)
New Jersey State Police
New Jersey Transit Rail Operations, Inc.
New Jersey, State of -NJ Transit
New York Communications Co., Inc
New York, City of (Police Department)
Newgig Networks, LLC
Northeast Utilities Services Company
Office of Emergency Telecom Services, NJ
Open Line Communications
Orange Poughkeepsie SMSA LTD Partnership
Orange and Rockland Utilities, Inc.
PEG Bandwidth
PSEG Services Corporation
Pitt Power
Port Authority of New York & New Jersey
Qoncept Holdings LLC
SCS Networks
SW Networks
Stevens Institute of Technology
Suffolk, County of
TRF SERVICES LLC
Texas Eastern Communications, Inc.
Thought Transmissions, LLC
Turtle Networks 6386
Turtle Networks 6423
Turtle Networks 6465
Turtle Networks 6466
Velox Networks LLC
Weblin Holdings LLC
White Rabbit Networks
Wireless Backhaul Infrastructure, LLC
Wireless Internet Work II.
Wireless Internetwork LLC
World Class Wireless LLC
Zen Networks, Inc
iSignal

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: 04/26/2013
Job Number: 130402COMSJC01

Administrative Information

Status: ENGINEER PROPOSAL
Call Sign: E060431
Licensee Code: SWSITE
Licensee Name: Globecom Systems, Inc.

Site Information

HAUPPAUGE, NEW YORK

Venue Name:
Latitude (NAD 83): 40° 48' 55.6" N
Longitude (NAD 83): 73° 14' 17.6" W
Climate Zone: A
Rain Zone: 2
Ground Elevation (AMSL): 31.7 m / 104.0 ft

Link Information

Satellite Type: Geostationary
Mode: TR - Transmit-Receive
Modulation: Analog and Digital
Satellite Arc: 14° W to 143° West Longitude
Azimuth Range: 111.3° to 256.4°
Corresponding Elevation Angles: 14.3° / 6.5°
Antenna Centerline (AGL): 3.05 m / 10.0 ft

Antenna Information

Receive

Manufacturer: ASC Signal
Model: 4.5 Meter
Gain / Diameter: 43.8 dBi / 4.5 m
3-dB / 15-dB Beamwidth: 1.22° / 2.47°

Transmit

ASC Signal
4.5 Meter
46.5 dBi / 4.5 m
0.85° / 1.90°

Max Available RF Power (dBW/4 kHz): -13.0
(dBW/MHz): 11.0

Maximum EIRP (dBW/4 kHz): 33.5
(dBW/MHz): 57.5

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

Emission / Frequency Range (MHz):
36M0F8W / 3700.0 - 4200.0
64K0G7W - 36M0G7W / 3700.0 - 4200.0

Transmit 6.1 GHz

36M0F8W / 5925.0 - 6425.0
64K0G7W - 36M0G7W / 5925.0 - 6425.0

Max Great Circle Coordination Distance	465.6 km / 289.3 mi	187.6 km / 116.6 mi
Precipitation Scatter Contour Radius	589.0 km / 365.9 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

HAUPPAUGE, NY

Licensee Name: Globecom Systems, Inc.
Latitude (NAD 83): 40° 48' 55.6" N
Longitude (NAD 83): 73° 14' 17.6" W
Ground Elevation (AMSL): 31.7 m / 104.0 ft
Antenna Centerline (AGL): 3.05 m / 10.0 ft
Antenna Model: ASC Signal 4.5 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 -13.0 (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	0.00	103.46	-10.00	285.28	-10.00	134.30
5	0.00	105.74	-10.00	285.28	-10.00	134.30
10	0.00	100.91	-10.00	285.28	-10.00	134.30
15	0.00	96.06	-10.00	285.28	-10.00	134.30
20	0.00	91.22	-10.00	285.28	-10.00	134.30
25	0.00	86.38	-10.00	285.28	-10.00	134.30
30	0.00	81.54	-10.00	285.28	-10.00	134.30
35	0.00	76.70	-10.00	285.28	-10.00	134.30
40	0.00	71.87	-10.00	285.28	-10.00	134.30
45	0.00	67.04	-10.00	285.28	-10.00	134.30
50	0.00	62.24	-10.00	285.28	-10.00	134.30
55	0.00	57.45	-10.00	285.28	-10.00	134.30
60	0.00	52.68	-10.00	285.28	-10.00	134.30
65	0.00	47.95	-10.00	285.28	-10.00	134.30
70	0.00	43.26	-8.90	292.36	-8.90	137.41
75	0.00	38.63	-7.67	300.51	-7.67	141.04
80	0.00	34.09	-6.32	309.80	-6.32	145.28
85	0.29	29.55	-4.76	309.29	-4.76	142.05
90	0.42	25.24	-3.05	304.94	-3.05	135.98
95	0.54	21.21	-1.16	305.40	-1.16	134.17
100	0.36	17.89	0.69	340.59	0.69	153.37
105	0.00	15.63	2.15	373.34	2.15	177.85
110	0.00	14.40	3.04	380.39	3.04	181.28
115	0.21	14.62	2.88	378.20	2.88	179.94
120	0.59	16.25	1.73	324.32	1.73	139.32
125	0.66	19.30	-0.14	304.21	-0.14	131.55
130	0.72	22.58	-1.84	287.32	-1.84	123.67
135	0.73	25.76	-3.27	277.08	-3.27	119.34
140	0.72	28.78	-4.48	269.42	-4.48	116.16
145	0.87	31.47	-5.45	253.49	-5.45	106.60
150	0.89	34.02	-6.29	247.17	-6.29	103.59
155	0.92	36.28	-6.99	241.32	-6.99	100.47
160	0.99	38.17	-7.54	234.17	-7.54	100.00
165	1.03	39.69	-7.97	229.86	-7.97	100.00
170	1.03	40.85	-8.28	228.30	-8.28	100.00
175	1.02	41.56	-8.47	227.57	-8.47	100.00
180	0.99	41.82	-8.54	228.28	-8.54	100.00
185	1.34	41.24	-8.38	217.97	-8.38	100.00

COMSEARCH

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Coordination Values

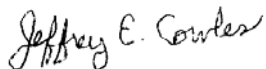
HAUPPAUGE, NY

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Interference Objectives: Long Term: -156.0 dBW/MHz 20% Transmit 6.1 GHz: -154.0 dBW/4 kHz 20%
Short Term: -146.0 dBW/MHz 0.01% Transmit 6.1 GHz: -131.0 dBW/4 kHz 0.0025%
Max Available RF Power: -13.0 (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	1.47	40.42	-8.17	215.23	-8.17	100.00
195	1.49	39.26	-7.85	216.20	-7.85	100.00
200	1.40	37.79	-7.43	220.88	-7.43	100.00
205	1.30	35.95	-6.89	226.97	-6.89	100.00
210	1.21	33.76	-6.21	233.89	-6.21	100.00
215	1.17	31.24	-5.37	240.11	-5.37	100.00
220	1.55	28.14	-4.23	233.81	-4.23	100.00
225	1.61	25.09	-2.99	239.30	-2.99	100.00
230	1.66	21.89	-1.50	246.85	-1.50	100.00
235	1.64	18.59	0.27	259.55	0.27	101.04
240	1.45	15.30	2.39	281.94	2.39	112.23
245	1.28	11.89	5.12	310.45	5.12	125.27
250	1.19	8.37	8.94	347.30	8.94	139.53
255	1.21	5.52	13.45	465.64	13.45	187.59
260	1.15	6.45	11.76	373.92	11.76	152.37
265	1.06	10.14	6.85	334.45	6.85	135.43
270	0.94	14.64	2.86	307.95	2.86	128.17
275	0.93	19.35	-0.17	285.13	-0.17	119.22
280	0.92	24.18	-2.58	269.24	-2.58	112.84
285	0.66	29.10	-4.60	272.56	-4.60	118.50
290	0.44	34.04	-6.30	279.51	-6.30	126.01
295	0.38	38.96	-7.77	277.86	-7.77	127.28
300	0.54	43.88	-9.06	252.73	-9.06	112.00
305	0.00	48.88	-10.00	285.28	-10.00	134.30
310	0.00	53.83	-10.00	285.28	-10.00	134.30
315	0.00	58.78	-10.00	285.28	-10.00	134.30
320	0.00	63.74	-10.00	285.28	-10.00	134.30
325	0.00	68.70	-10.00	285.28	-10.00	134.30
330	0.00	73.66	-10.00	285.28	-10.00	134.30
335	0.00	78.63	-10.00	285.28	-10.00	134.30
340	0.00	83.59	-10.00	285.28	-10.00	134.30
345	0.00	88.56	-10.00	285.28	-10.00	134.30
350	0.00	93.53	-10.00	285.28	-10.00	134.30
355	0.00	98.50	-10.00	285.28	-10.00	134.30

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
Engineer III, Telecommunications
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, Va. 20147

DATED: April 26, 2013