

# FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for  
**Globecomm License Sub LLC**  
**HAUPPAUGE, NY**  
**(AOT-5, 3.7 meter)**  
**Satellite Earth Station**

Prepared By:  
COMSEARCH  
19700 Janelia Farm Boulevard  
Ashburn, VA 20147  
December 08, 2015

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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.

### 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 08/25/2015.

Company

256Q Networks  
ALBANY, COUNTY OF  
ALGONQUIN GAS TRANSMISSION, LLC  
AMFM Radio Licenses, LLC  
AT&T Corporation  
AWC Networks  
Adams County Department of Emergency Svc  
Affiniti PA, LLC  
Allentown SMSA Limited Partnership  
Appalachian Broadcasting  
Archdiocese of New York Dept of Educatio  
Atlantic Telecommunications  
Atlantic, County of  
Auburn Data Systems, LLC  
BFI Licenses, LLC  
BJ'S Wholesale Club, Inc  
Bergen, County of  
Berks County Department of Emergency Ser  
Binghamton MSA Limited Partnership(PA)  
Blueline Communications  
Buckeye Partners  
Bucks County Dept. of Emergency Comm  
Business Only Broadband, LLC  
CBS Communication Services Inc  
CMEEC  
CONNECTICUT STATE OF  
Cape May County Municipal Utilities Auth  
Capital Communications of America  
Cellco Partnership - (W-NY)  
Cellco Partnership - CT, W-MA, VT  
Cellco Partnership - E-MA, NH, RI  
Cellco Partnership-Northern New Jersey  
Cellco Prtnrshp - Phil. Tri-State Rgn  
Central Massachusetts Emergency Medical  
Chester, County of  
China Cat Productions LLC  
City of Albany  
City of Bristol Mayor's Office  
City of Jersey City  
City of New Haven Police Services

City of New York  
City of Providence RI Public Safety Comm  
City of Springfield Police Department  
Clarity Connect, Inc.  
Clearwire Spectrum Holdings III, LLC  
Columbia, County  
Columbia, County of  
Community Products, LLC  
Comprehensive Wireless LLC  
Connect-Vision Ltd.  
Connecticut State Police Department  
Conterra Ultra Broadband, LLC  
Converge Towers LLC  
Coralinks  
County of Burlington  
County of Burlington, Public Safety Cntr  
County of Camden  
County of Mercer  
County of Warren, NJ  
County of York  
D&E Communications, Inc.  
DAUPHIN COUNTY EMERGENCY MANAGEMENT  
Delaware County (PA) Emergency Services  
Delaware Division of Communications  
Direct Broadcast Services, Inc.  
EAST HAMPTON TOWN POLICE DEPARTMENT  
ECW Wireless, LLC  
EG Broadcast Newco Corp  
East Brunswick, Township of, NJ  
Eastern MLG LLC  
Egg Harbor Township Board of Education  
Electric Railroad, LLC  
Essex County Sheriff's Office (NJ)  
Eversource Energy Service Company  
Exelon Generation Company, LLC  
FORDHAM UNIVERSITY(WFUV)  
FiberTower Network Services Corp.-DIP  
Fishers Island Telephone  
Franklin County Dept. of Emergency Servi  
Fundamental Broadcasting LLC  
GAW High Speed Internet  
Garden State Transmissions  
Geodesic Networks LLC  
Global Crossing Telecommunications, Inc.  
Global Telecom & Technology Americas  
Gloucester Township  
Gloucester, County of  
Goosetown Network Services, LLC  
Greater Boston Police Council  
Greater Philadelphia Radio, Inc.  
Green Line Networks  
Greenwich, Town of (CT)  
High Voltage Communications LLC (CFN)  
Highway Networks, LLC  
Holy Name Hospital  
Hopewell Radiology Group

Hudson County MIS Department  
Hudson County Prosecutors Office  
Industrial Tower and Wireless, LLC  
Jefferson Microwave, LLC  
Kryptick Technologies  
LANline Communications, Inc.  
Lackawanna County Dept. of Emergency Ser  
Lackawanna, County of  
Lancaster County-Wide Communications  
Lehigh, County of  
Limitless Mobile, LLC  
Local Media TV Philadelphia  
MB Microwave, LLC  
MONMOUTH, COUNTY OF  
MVC Research. LLC  
Mahwah Communications  
Manchester, Township of  
Massachusetts Commonwealth of  
Massachusetts Water Resources Authority  
Massachusetts, Commonwealth of  
Metro Networks Communications, Inc.  
Mid-Hudson Data Corp  
Middlesex, County of  
Monroe County Control Center (PA)  
Montgomery County Of  
Morris, County of  
NBC Telemundo License LLC  
NSTAR Electric Company  
NY Dept of Health and Mental Hygiene  
NYC DOT Staten Island Ferry  
Nassau County Police Department  
National Grid USA Service Company, Inc  
National Tower Company LLC  
NeXXCom Wireless LLC  
Nep Cellcorp Inc  
Netrepid, Inc.  
New Britain, City of  
New Cingular Wireless PCS LLC -NJ  
New Cingular Wireless PCS - Maryland  
New Cingular Wireless PCS LLC - DC  
New Cingular Wireless PCS LLC - MA  
New Cingular Wireless PCS LLC-DE/NH/RI  
New Cingular Wireless PCS of PA LLC  
New Cingular Wireless PCS, LLC (NY)  
New Cingular Wireless PCS, LLC - PA  
New Jersey State Police  
New Jersey Transit Rail Operations, Inc.  
New Jersey Turnpike Authority-Pkwy Div  
New Jersey, State of -NJ Transit  
New Line Networks, LLC  
New York City Police Department TARU  
New York Communications Co., Inc  
New York Presbyterian Hospital  
New York SMSA LP (Northern NJ)  
New York SMSA Limited Partnership  
New York, City of (Police Department)

Newark Police Department  
Norcom Communications Corp.  
Northeast Pennsylvania SMSA LTD Prtnrsh  
Northrop Grumman Systems Corp.  
Northrop Grumman Systems Corporation Inc  
Norton, Douglas R  
Ocean, County of - Div of Wireless Tech.  
Office of Emergency Telecom Services, NJ  
OpenCape Corporation  
Orange Poughkeepsie SMSA LTD Partnership  
Orange and Rockland Utilities, Inc.  
Orangetown, Town of  
PEG Bandwidth, LLC  
PISCATAWAY, TOWNSHIP OF  
PSEG Services Corporation  
Peco Energy Company  
Pennsylvania Turnpike Commission  
PhillieCo, L.P.  
Philly Sports Wireless  
Pines Pantry, Inc.  
Pitt Power  
Port Authority of New York & New Jersey  
QUALCOMM INC.  
Qoncept Holdings LLC  
Rendezvous Communications LLC  
Rensselaer County  
Rockland, County of  
SANOFI PASTEUR  
SCHENECTADY COUNTY LAW ENF MOB RADIO  
SCHUYLKILL, COUNTY OF  
SCS Networks  
SECOM NET  
STAMFORD, CITY OF  
STATE OF NEW JERSEY - OFFICE OF PUBLIC  
SUFFOLK, COUNTY OF  
SW Networks  
Salem County Information Technology  
Saratoga County Office of Emergency Svcs  
Shenandoah Personal Communications, LLC  
Somerset, County of - Emergency Manageme  
Southeastern Pennsylvania Transit Auth  
Spot On Networks  
Sprint Spectrum L.P.  
Standard Backhaul Communications LLC  
State of Maryland, MIEMSS  
State of New Jersey  
State of New Jersey Infomation Technolog  
State of New York, Div of State Police  
Suffolk County Police Department  
Sullivan County DPW  
Sussex County Sheriffs Office  
T-Mobile License LLC  
THE BROOKLYN HOSPITAL CENTER  
Telecom Transport Management, Inc  
Thacher, Proffitt & Wood LLP  
Towerstream Corp.



Town of Colonie Police Department  
Town of Holden  
Town of Narragansett, Rhode Island  
Town of Thomaston  
Town of Wethersfield  
Town of Woodbridge, Police Department  
Township of Jackson  
Township of Middletown  
Townsquare Media Atlantic City III Licen  
Townsquare Media Monmouth-Ocean License  
Transcontinental Gas Pipeline Corp.  
Turtle Networks 6562  
USCOC of Cumberland, Inc.  
Union County New Jersey  
VTel Wireless, Inc.  
Verizon New Jersey, Inc.  
Verizon Wireless (VAW) LLC (NY)  
Verizon Wireless (VAW) LLC - NJ  
Verizon Wireless (VAW) LLC-Pennsylvania  
WESTCHESTER, COUNTY OF  
WHYY, Inc.  
WORCESTER, CITY OF  
WYOMING, COUNTY OF  
Washington County Board of Education  
Wayne County - DHS-EM  
Wayne, Township of  
Weblin Holdings LLC  
West Haven, City of  
White Rabbit Networks  
Wireless Holdings Network, LLC  
Wireless Internetwork LLC  
World Class Wireless, LLC  
Zen Networks, Inc  
iSignal  
xWave Engineering LLC

## **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: 12/08/2015  
Job Number: 150825COMSJC04

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### Administrative Information

Status ENGINEER PROPOSAL  
Call Sign E070227  
Licensee Code SWSITE  
Licensee Name Globecom License Sub LLC

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### Site Information HAUPPAUGE, NY

Venue Name AOT-5  
Latitude (NAD 83) 40° 48' 54.2" N  
Longitude (NAD 83) 73° 14' 12.2" W  
Climate Zone A  
Rain Zone 2  
Ground Elevation (AMSL) 32.0 m / 105.0 ft

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### Link Information

Satellite Type Geostationary  
Mode TR - Transmit-Receive  
Modulation Digital  
Satellite Arc 37.5° W to 143° West Longitude  
Azimuth Range 132.3° to 256.4°  
Corresponding Elevation Angles 30.4° / 6.5°  
Antenna Centerline (AGL) 8.84 m / 29.0 ft

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### Antenna Information

		Receive - FCC32		Transmit - FCC32	
Manufacturer		Andrew		Andrew	
Model		ES37MPK		ES37MPK	
Gain / Diameter		51.8 dBi / 3.7 m		53.3 dBi / 3.7 m	
3-dB / 15-dB Beamwidth		0.40° / 0.80°		0.34° / 0.68°	
Max Available RF Power	(dBW/4 kHz) (dBW/MHz)			-14.0 10.0	
Maximum EIRP	(dBW/4 kHz) (dBW/MHz)			39.3 63.3	
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%

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### Frequency Information

	Receive 11.0 GHz	Transmit 14.0 GHz
Emission / Frequency Range (MHz)	44K0G7W - 36M0G7W / 10950.0 - 11200.0 44K0G7W - 36M0G7W / 11450.0 - 12200.0	44K0G7W - 36M0G7W / 14000.0 - 14500.0
Max Great Circle Coordination Distance	401.7 km / 249.6 mi	174.1 km / 108.2 mi
Precipitation Scatter Contour Radius	578.4 km / 359.4 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

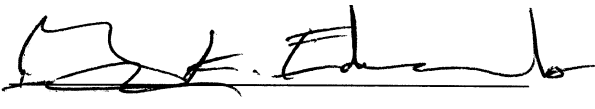
### HAUPPAUGE, NY

Licensee Name: Globecom License Sub LLC  
Latitude (NAD 83): 40° 48' 54.2" N  
Longitude (NAD 83): 73° 14' 12.2" W  
Ground Elevation (AMSL): 32.0 m / 105.0 ft  
Antenna Centerline (AGL): 8.84 m / 29.0 ft  
Antenna Model: Andrew 3.7 meter  
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	0.27	41.58	-8.47	230.86	-8.47	113.81
195	0.49	40.20	-8.11	212.79	-8.11	100.00
200	0.77	38.36	-7.60	203.71	-7.60	100.00
205	0.86	36.34	-7.01	201.90	-7.01	100.00
210	0.84	34.06	-6.31	203.04	-6.31	100.00
215	0.59	31.70	-5.53	218.74	-5.53	100.23
220	0.38	29.04	-4.57	238.23	-4.57	115.10
225	0.41	26.00	-3.37	241.35	-3.37	116.00
230	0.42	22.80	-1.95	248.14	-1.95	119.32
235	0.42	19.47	-0.23	256.88	-0.23	123.73
240	0.54	15.94	1.93	258.46	1.93	121.79
245	0.64	12.34	4.72	267.97	4.72	124.90
250	0.62	8.74	8.46	291.49	8.46	135.43
255	0.78	5.94	12.66	401.71	12.66	174.09
260	0.68	6.84	11.12	302.04	11.12	141.11
265	0.71	10.33	6.64	275.07	6.64	127.24
270	0.52	14.80	2.74	263.75	2.74	124.68
275	0.56	19.46	-0.23	245.44	-0.23	114.73
280	0.70	24.22	-2.61	226.33	-2.61	102.65
285	0.43	29.14	-4.61	233.63	-4.61	111.45
290	0.27	34.06	-6.31	241.18	-6.31	119.57
295	0.00	39.01	-7.78	241.35	-7.78	121.36
300	0.00	43.94	-9.07	235.47	-9.07	118.12
305	0.00	48.88	-10.00	231.37	-10.00	115.80
310	0.00	53.82	-10.00	231.37	-10.00	115.80
315	0.00	58.78	-10.00	231.37	-10.00	115.80
320	0.00	63.74	-10.00	231.37	-10.00	115.80
325	0.00	68.70	-10.00	231.37	-10.00	115.80
330	0.00	73.66	-10.00	231.37	-10.00	115.80
335	0.00	78.63	-10.00	231.37	-10.00	115.80
340	0.00	83.59	-10.00	231.37	-10.00	115.80
345	0.00	88.56	-10.00	231.37	-10.00	115.80
350	0.00	93.53	-10.00	231.37	-10.00	115.80
355	0.00	98.49	-10.00	231.37	-10.00	115.80

## 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.

BY: 

Gary K. Edwards  
Senior Manager  
COMSEARCH  
19700 Janelia Farm Boulevard  
Ashburn, VA 20147

DATED: December 08, 2015