

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
SES Americom, Inc.
Vernon Valley, New Jersey
(Call Sign: E080162)

Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, Virginia 20147
February 21, 2012

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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-only 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.

Expedited coordination data for this earth station was emailed and sent to the below listed carriers with a letter dated February 1, 2012.

Company

ABC, Inc. - WPVI-TV
ART Licensing Corp.
AT&T CORP
American Broadcasting Companies, Inc.
Archdiocese of New York Dept of Education
Borough of Fort Lee, New Jersey
Borough of Sayreville
Business Only Broadband, LLC
CABLEVISION LIGHTPATH
CAMPUS TELEVIDEO
CAPITAL DIST REG OFFTRACK BETTING CORP
COLUMBIA UNIVERSITY IN THE CITY NEW YORK
City of Bethlehem
City of Jersey City
City of Jersey City, Police Department
Clearwire Spectrum Holdings III, LLC
County of Bergen, Bergen Cnty Police Dep
County of Hunterdon
DREXEL UNIVERSITY
Diocese of Camden
ECW Wireless, LLC
Eastern Mlg
Entergy Nuclear Indian Point 2, LLC
FIRST BOSTON CORPORATION
FORDHAM UNIVERSITY(WFUV)
Federal Home Loan Bank of New York
FiberTower Network Services Corp.
Greenwich, Town of (CT)
HISPANIC INFORMATION AND TELECOMM NETWRK
High Voltage Communications LLC
Hoboken Fire Department
Hopewell Radiology Group
Hotwire Communications
Hudson County MIS Department
IDT Corporation - IDT Spectrum

Company (Continued)

J & R ELECTRONIC INC
Jamaica Hospital Medical Center
Jefferson Microwave, LLC
Jubatus, LLC
Lawrence School District
M-Wave Networks LLC
MINEOLA UNION FREE SCHOOL DISTRICT
MONTGOMERY, McCracken, Walker & Rhoads
MPX, Inc.
MTA - Long Island Railroad
Metro Networks Communications, Inc.
Microwave Satellite Technologies, Inc.
NBC TELEMUNDO LICENSE LLC
NBC Telemundo License Co.
NEW JERSEY PUBLIC BROADCASTING AUTHORITY
NEW JERSEY STATE DEPT OF TRANSPORTATION
NEW YORK CITY HOUSING AUTHORITY
NEW YORK CITY DEPT OF INFO TECH & TELECO
NEW YORK CITY POLICE DEPARTMENT
NEW YORK CITY POLICE DEPARTMENT
NEW YORK POLICE DEPARTMENT - TARU
NEW YORK UNIVERSITY
NEXTEL COMM. OF THE MID-ATLANTIC
NW TECHNOLOGIES, LLC
NYU MEDICAL CENTER
Nassau County Government
Nassau County Police Department
New Cingular Wireless PCS, LLC - NY
New Jersey Telcomm
New York Communications CO., Inc
New York Health and Hospitals Corp/North
New York Methodist Hospital
New York Power Authority
New York Presbyterian Hospital
New York SMSA Limited Partnership
New York State Police
Nextel of New York, Inc.
Northeast Utilities Services Company
Northrop Grumman Information Technology
Northrop Grumman Systems Corporation Inc
PPL Telecom, LLC.
Philadelphia, City of
Pitt Power
Plymouth Township Police Department
Port Authority of New York & New Jersey
Qoncept Holdings LLC
RCN Telecom Services, LLC
Rutgers, The State University of N.J.
SECOM NET
SONSHINE FAMILY TELEVISION CORPORATION
SOUTHEASTERN PENNSYLVANIA TRANSIT AUTH

Company (Continued)

SPEAR LEEDS AND KELLOGG INC
ST. LUKE'S HOSPITAL
Sesame Workshop
Sprint Spectrum, LP
St. Lukes Cornwall Hospital
T-Mobile License LLC
TELEMARK NETWORKS, INC
THE BROOKLYN HOSPITAL CENTER
TRIBUNE TELEVISION COMPANY
Telecom Transport Management, Inc
The Goldman Sachs Group, Inc.
Total Recall Corp
Towerstream Corp
Town of Westport Connecticut
ULTRAVISION INC
University of Medicine & Dentistry of NJ
Verizon New Jersey, Inc.
WATERBURY CITY POLICE
WDAS LICENSE LIMITED PARTNERSHIP
WESTCHESTER, COUNTY OF
WLG TV INC
WXTU LICENSE LIMITED PARTNERSHIP
WYCKOFF HEIGHTS MEDICAL CENTER
Weblin Holdings LLC
Wireless Backhaul Infrastructure, LLC
Wireless Internetwork LLC
World Class Wireless LLC
YONKERS, CITY OF
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: 02/21/2012
Job Number: 120201COMSJC03

Administrative Information

Status: ENGINEER PROPOSAL
Call Sign: E080162
Licensee Code: P3210
Licensee Name: SES Americom, Inc.

Site Information

Venue Name: VERNON VALLEY, NEW JERSEY
Latitude (NAD 83): 41° 12' 10.0" N
Longitude (NAD 83): 74° 31' 39.0" W
Climate Zone: A
Rain Zone: 2
Ground Elevation (AMSL): 217.93 m / 715.0 ft

Link Information

Satellite Type: Geostationary
Mode: TR - Transmit-Receive
Modulation: Digital
Satellite Arc: 40° W to 140° West Longitude
Azimuth Range: 133.8° to 253.3°
Corresponding Elevation Angles: 30.8° / 9.6°
Antenna Centerline (AGL): 7.32 m / 24.0 ft

Antenna Information

| | Receive | Transmit |
|------------------------|-------------------|-------------------|
| Manufacturer | Vertex/RSI | Vertex/RSI |
| Model | 11.0 KPK | 11.0 KPK |
| Gain / Diameter | 60.5 dBi / 11.0 m | 62.0 dBi / 11.0 m |
| 3-dB / 15-dB Beamwidth | 0.16° / 0.30° | 0.14° / 0.26° |

1M00G7W to 36M0G7W

| | | | | | |
|--------------------------|-------------|----------------|-------|------------------|---------|
| Max Available RF Power | (dBW/4 kHz) | 1.4 | -14.1 | | |
| | (dBW/MHz) | 25.4 | 9.9 | | |
| Maximum EIRP | (dBW/4 kHz) | 63.4 | 47.9 | | |
| | (dBW/MHz) | 87.4 | 71.9 | | |
| | (dBW) | 87.4 | 87.4 | | |
| 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

| | Receive 12.0 GHz | Transmit 18.0 GHz |
|----------------------------------------|------------------------------------------------------------|------------------------------------------------------------|
| Emission / Frequency Range (MHz) | 1M00G7W / 12200.0 - 12700.0 36M0G7W / 12200.0 - 12700.0 | 1M00G7W / 17300.0 - 17800.0 36M0G7W / 17300.0 - 17800.0 |
| Max Great Circle Coordination Distance | 332.7 km / 206.7 mi | 190.7 km / 118.5 mi |
| Precipitation Scatter Contour Radius | 531.8 km / 330.4 mi | 156.2 km / 97.1 mi |

COMSEARCH

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Coordination Values

VERNON VALLEY, NJ

Licensee Name SES Americom, Inc.
Latitude (NAD 83) 41° 12' 10.0" N
Longitude (NAD 83) 74° 31' 39.0" W
Ground Elevation (AMSL) 217.93 m / 715.0 ft
Antenna Centerline (AGL) 7.32 m / 24.0 ft
Antenna Model Vertex/RSI 11 KPK
Antenna Mode Receive 12.0 GHz Transmit 18.0 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 1.4 (dBW/4 kHz)

| Azimuth (°) | Receive 12.0 GHz | | Transmit 18.0 GHz | | | |
|-------------|-----------------------|----------------------------|--------------------|----------------------------|--------------------|----------------------------|
| | Horizon Elevation (°) | Antenna Discrimination (°) | Horizon Gain (dBi) | Coordination Distance (km) | Horizon Gain (dBi) | Coordination Distance (km) |
| 0 | 4.79 | 106.67 | -10.00 | 100.00 | -10.00 | 100.00 |
| 5 | 3.32 | 111.59 | -10.00 | 118.99 | -10.00 | 100.00 |
| 10 | 2.14 | 116.49 | -10.00 | 140.05 | -10.00 | 100.00 |
| 15 | 1.14 | 114.70 | -10.00 | 172.54 | -10.00 | 101.2 |
| 20 | 0.97 | 110.45 | -10.00 | 178.63 | -10.00 | 105.7 |
| 25 | 2.12 | 106.38 | -10.00 | 140.62 | -10.00 | 100.00 |
| 30 | 2.20 | 102.05 | -10.00 | 138.77 | -10.00 | 100.00 |
| 35 | 1.54 | 97.63 | -10.00 | 156.88 | -10.00 | 100.00 |
| 40 | 0.23 | 93.23 | -10.00 | 224.67 | -10.00 | 146.7 |
| 45 | 0.00 | 88.93 | -10.00 | 227.19 | -10.00 | 149.0 |
| 50 | 0.00 | 84.64 | -10.00 | 227.19 | -10.00 | 149.0 |
| 55 | 0.00 | 80.36 | -10.00 | 227.19 | -10.00 | 149.0 |
| 60 | 0.00 | 76.11 | -10.00 | 227.19 | -10.00 | 149.0 |
| 65 | 0.00 | 71.88 | -10.00 | 227.19 | -10.00 | 149.0 |
| 70 | 0.00 | 67.69 | -10.00 | 227.19 | -10.00 | 149.0 |
| 75 | 0.51 | 63.41 | -10.00 | 202.38 | -10.00 | 125.2 |
| 80 | 1.43 | 59.00 | -10.00 | 160.39 | -10.00 | 100.00 |
| 85 | 1.70 | 54.85 | -10.00 | 151.90 | -10.00 | 100.00 |
| 90 | 1.69 | 50.89 | -10.00 | 152.19 | -10.00 | 100.00 |
| 95 | 2.13 | 46.85 | -9.77 | 141.26 | -9.77 | 100.00 |
| 100 | 2.03 | 43.25 | -8.90 | 147.49 | -8.90 | 100.00 |
| 105 | 2.28 | 39.65 | -7.96 | 145.90 | -7.96 | 100.00 |
| 110 | 2.20 | 36.56 | -7.08 | 151.86 | -7.08 | 100.00 |
| 115 | 2.10 | 33.88 | -6.25 | 158.43 | -6.25 | 100.00 |
| 120 | 2.40 | 31.35 | -5.41 | 155.20 | -5.41 | 100.00 |
| 125 | 2.30 | 29.75 | -4.84 | 160.64 | -4.84 | 100.00 |
| 130 | 2.42 | 28.65 | -4.43 | 159.56 | -4.43 | 100.00 |
| 135 | 2.84 | 28.03 | -4.19 | 150.71 | -4.19 | 100.00 |
| 140 | 3.50 | 28.00 | -4.18 | 136.82 | -4.18 | 100.00 |
| 145 | 3.39 | 29.51 | -4.75 | 136.56 | -4.75 | 100.00 |
| 150 | 3.38 | 31.58 | -5.49 | 133.57 | -5.49 | 100.00 |
| 155 | 3.83 | 33.36 | -6.08 | 124.60 | -6.08 | 100.00 |
| 160 | 2.85 | 36.08 | -6.93 | 137.93 | -6.93 | 100.00 |
| 165 | 2.63 | 37.78 | -7.43 | 140.42 | -7.43 | 100.00 |
| 170 | 2.40 | 39.10 | -7.80 | 143.84 | -7.80 | 100.00 |
| 175 | 2.87 | 39.30 | -7.86 | 133.82 | -7.86 | 100.00 |
| 180 | 2.25 | 40.14 | -8.09 | 146.00 | -8.09 | 100.00 |
| 185 | 2.01 | 40.15 | -8.09 | 151.55 | -8.09 | 100.00 |

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Coordination Values

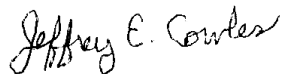
VERNON VALLEY, NJ

Licensee Name SES Americom, Inc.
Latitude (NAD 83) 41° 12' 10.0" N
Longitude (NAD 83) 74° 31' 39.0" W
Ground Elevation (AMSL) 217.93 m / 715.0 ft
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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 1.4 (dBW/4 kHz)

| Azimuth (°) | Horizon Elevation (°) | Antenna Discrimination (°) | Receive 12.0 GHz | | Transmit 18.0 GHz | |
|-------------|-----------------------|----------------------------|--------------------|----------------------------|--------------------|----------------------------|
| | | | Horizon Gain (dBi) | Coordination Distance (km) | Horizon Gain (dBi) | Coordination Distance (km) |
| 190 | 1.17 | 40.29 | -8.13 | 180.56 | -8.13 | 105.6 |
| 195 | 0.00 | 40.25 | -8.12 | 235.58 | -8.12 | 154.9 |
| 200 | 0.00 | 38.67 | -7.68 | 237.59 | -7.68 | 156.4 |
| 205 | 0.00 | 36.71 | -7.12 | 240.23 | -7.12 | 158.7 |
| 210 | 0.00 | 34.42 | -6.42 | 244.05 | -6.42 | 161.0 |
| 215 | 0.00 | 31.86 | -5.58 | 248.12 | -5.58 | 163.9 |
| 220 | 0.00 | 29.05 | -4.58 | 253.05 | -4.58 | 167.3 |
| 225 | 0.95 | 25.33 | -3.09 | 207.47 | -3.09 | 125.8 |
| 230 | 1.87 | 21.49 | -1.31 | 192.01 | -1.31 | 108.5 |
| 235 | 1.65 | 18.37 | 0.39 | 202.94 | 0.39 | 119.1 |
| 240 | 1.63 | 14.98 | 2.61 | 213.39 | 2.61 | 126.8 |
| 245 | 2.65 | 10.76 | 6.20 | 206.76 | 6.20 | 119.1 |
| 250 | 3.92 | 6.57 | 11.56 | 208.58 | 11.56 | 116.6 |
| 255 | 5.06 | 4.88 | 14.79 | 332.68 | 14.79 | 190.7 |
| 260 | 6.70 | 7.34 | 10.36 | 163.45 | 10.36 | 100.00 |
| 265 | 9.13 | 11.74 | 5.26 | 113.46 | 5.26 | 100.00 |
| 270 | 9.42 | 16.73 | 1.41 | 100.00 | 1.41 | 100.00 |
| 275 | 9.95 | 21.73 | -1.43 | 100.00 | -1.43 | 100.00 |
| 280 | 9.26 | 26.73 | -3.68 | 100.00 | -3.68 | 100.00 |
| 285 | 9.60 | 31.73 | -5.54 | 100.00 | -5.54 | 100.00 |
| 290 | 9.90 | 36.73 | -7.13 | 100.00 | -7.13 | 100.00 |
| 295 | 9.16 | 41.73 | -8.51 | 100.00 | -8.51 | 100.00 |
| 300 | 8.15 | 46.75 | -9.74 | 100.00 | -9.74 | 100.00 |
| 305 | 8.08 | 51.75 | -10.00 | 100.00 | -10.00 | 100.00 |
| 310 | 8.07 | 56.75 | -10.00 | 100.00 | -10.00 | 100.00 |
| 315 | 7.72 | 61.75 | -10.00 | 100.00 | -10.00 | 100.00 |
| 320 | 7.30 | 66.75 | -10.00 | 100.00 | -10.00 | 100.00 |
| 325 | 6.27 | 71.76 | -10.00 | 100.00 | -10.00 | 100.00 |
| 330 | 7.15 | 76.74 | -10.00 | 100.00 | -10.00 | 100.00 |
| 335 | 8.54 | 81.73 | -10.00 | 100.00 | -10.00 | 100.00 |
| 340 | 8.52 | 86.73 | -10.00 | 100.00 | -10.00 | 100.00 |
| 345 | 8.26 | 91.73 | -10.00 | 100.00 | -10.00 | 100.00 |
| 350 | 7.34 | 96.73 | -10.00 | 100.00 | -10.00 | 100.00 |
| 355 | 6.18 | 101.71 | -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
Engineer III, Telecommunications
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, Va. 20147

DATED: February 21, 2012