

**Lockheed Martin Corporation
Carpentersville, New Jersey Earth Station
Call Sign E7541
STA Request for LEOp TT&C Operations
July 2011
Attachment**

Description

Lockheed Martin Corporation (“Lockheed Martin”) requests a 30-day extension of the special temporary authority (“STA”) it holds in File No. SES-STA-20110518-00600 (“BSAT-3c STA”) to operate its Carpentersville, New Jersey Ku-band fixed earth station (see File No. SES-LIC-20081103-01443, as amended)¹ to provide telemetry, tracking and control (“TT&C”) functions during the post-launch and transfer orbit phases of operation for the BSAT-3c satellite that will be operated by the Broadcasting Satellite System Corporation of Japan.

As Lockheed Martin explained in its request for the BSAT-3c STA, BSAT-3c was scheduled for launch on July 1, 2011. The launch was subsequently postponed, and is now scheduled to take place on August 2, 2011. Lockheed Martin requests a 30-day extension of the BSAT-3c STA – until August 30, 2011 – to accommodate possible further slippages in the launch schedule.

All technical information in the Attachment to Lockheed Martin’s request for the BSAT-3c STA remains valid, and is hereby incorporated by reference. Michael Usarzewicz continues to be Lockheed Martin’s designated contact person, and Mr. Usarzewicz will be available whenever transmission to, or reception from, BSAT-3c is to occur through the subject earth station. Mr. Usarzewicz can be reached at the following cell phone number: (609)-865-2658 and/or station number: (908) 859-4050.

The limited operations Lockheed Martin proposes in support of the launch of BSAT-3c continue to be required in the public interest. Lockheed Martin’s earth station will be part of a global network of control facilities that will be used to position the satellite as it progresses from transfer orbit to its final location. The safe and orderly use of the entire geostationary orbital resource and protection of the hundreds of satellites from the U.S. and other countries that operate there depends in no small part on ensuring that the BSAT-3c satellite is controlled while over North America, and Lockheed Martin’s earth station thus will serve a limited-duration, but nonetheless vital function.

Lockheed Martin and the satellite operator will coordinate in advance with any and all potentially affected entities that operate communications systems in compliance with the Table

¹ The pending application in File No. SES-LIC-20081103-01443, under Call Sign E7541, was filed on a provisional basis to replace Lockheed Martin’s inadvertently non-renewed license for a 14.2 meter Ku-band antenna at the Carpentersville, NJ site under Call Sign E920702. Lockheed Martin’s petition to reinstate the license for Call Sign E920702, as well as the “replacement” application it filed in the alternative under File No. SES-LIC-20081103-01443 and Call Sign E7541, are pending.

of Frequency Allocations during the limited period of use. Lockheed Martin fully understands that all of its proposed launch and early-operations TT&C support for the BSAT-3c launch will be on a non-harmful interference, non-protected basis.

Lockheed Martin has secured an updated temporary frequency coordination that covers the period from August 1, 2011 (which is before the re-scheduled BSAT-3c launch date) to beyond the proposed STA terminal date of August 30, 2011 for operations on the BSAT-3c TT&C frequencies from its Carpentersville earth station facility. The report is included as Exhibit A to this Attachment.

In sum, Lockheed Martin requests a 30-day extension of its authority in the BSAT-3c STA to operate its Carpentersville, NJ Ku-band earth station antenna to provide critical TT&C services during the launch and early operations phase of the BSAT-3c satellite. The new STA term would run from July 31, 2011 to August 30, 2011.

Action on this STA extension request is required by July 30, 2011, as the BSAT-3c STA grant specifically identified the BSAT-3c STA as “one not relating to an ‘activity of a continuing nature’ for purposes of Section 1.62 of the Commission’s Rules.” BSAT-3c STA, Stamp Grant at Condition No. 8.

EXHIBIT A

Prepared By

COMSEARCH

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

Prepared For

Lockheed Martin Corporation Carpentersville, New Jersey

Temporary Transmit-Only Earth Station
Operation Dates: 08/01/2011 - 10/01/2011

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. Verbal and written coordination was conducted with the below listed carriers on July 15, 2011.

Company

ABC, Inc. - WPVI-TV
ACCELACOM-BALTIMORE LLC
ADAMS COUNTY EMERGENCY MANAGEMENT AGENCY
ART Licensing Corp.
AT&T CORP
Airband Communications Inc
American Broadcasting Companies, Inc.
BUSINESS INFORMATION GROUP, INC.
Believe Wireless, LLC
Boeing Company
Borough of Fort Lee, New Jersey
Borough of Sayreville
Business Only Broadband, LLC
CABLEVISION LIGHTPATH
CAMP HILL SCHOOL DISTRICT
CAMPUS TELEVIDEO
CBS Broadcasting Inc
CECIL COUNTY PUBLIC SCHOOLS
COLUMBIA UNIVERSITY IN THE CITY NEW YORK
CRISPUS ATTUCKS ASSOCIATION
Cape May County Municipal Utilities Auth
Cape May County, MIS Department
Carlisle Area School District
City of Bethlehem
City of Jersey City
City of Jersey City, Police Department
Clearwire Spectrum Holdings III, LLC
Commissioners of Caroline County
Conterra Ultra Broadband, LLC

Company (Continued)

County of Bergen, Bergen Cnty Police Dept
County of Hunterdon
Cumberland County, New Jersey
Cumberland Valley School District
DOVER AREA SCHOOL DISTRICT
DREXEL UNIVERSITY
DREXEL UNIVERSITY
Delmarva Power & Light Company
Diocese of Camden
East Pennsboro Area School
Eastern Lancaster County School District
Enoch Pratt Free Library
Entergy Nuclear Indian Point 2, LLC
FIRST BOSTON CORPORATION
FORDHAM UNIVERSITY
Federal Communications Commission
Federal Home Loan Bank of New York
FiberTower Network Services Corp.
Franklin County Dept. of Emergency Servi
Freehold Township Police Department
Greenwich, Town of (CT)
HALIFAX AREA SCHOOL DISTRICT
HISPANIC INFORMATION AND TELECOMM NETWRK
Hopewell Radiology Group
Hotwire Communications
Hudson County MIS Department
IDT Corporation - IDT Spectrum
J & R ELECTRONIC INC
Jamaica Hospital Medical Center
LANCASTER GENERAL HOSPITAL
LAWRENCE SCHOOL DISTRICT
Last Mile Inc.
MARYLAND, STATE OF - MDOT - MTA
MINEOLA UNION FREE SCHOOL DISTRICT
MONTGOMERY, McCracken, Walker & Rhoads
MPX, Inc.
MTA - Long Island Railroad
Metro Networks Communications, Inc.
Microwave Satellite Technologies, Inc.
Millennium Shore License Holdco, LLC
Monmouth County, NJ
NBC TELEMUNDO LICENSE CO.
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

Company (Continued)

NEXTEL COMM. OF THE MID-ATLANTIC
NEXTEL OF NEW YORK, INC
NW TECHNOLOGIES, LLC
NYU MEDICAL CENTER
Nassau County Government
Nassau County Police Department
Netrepid, Inc.
New Jersey Telcomm
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
Northern York County School District
Northrop Grumman Information Technology
OCEAN, COUNTY OF
Ocean, County of-Div of Wireless Tech.
Open Range Communications
PENNSYLVANIA MICROWAVE NETWORK INC.
PENNSYLVANIA TURNPIKE COMMISSION
PPL Telecom, LLC.
Philadelphia, City of
Pitt Power
Plymouth Township Police Department
Port Authority of New York & New Jersey
Pottsville Area School District
RCN Telecom Services, LLC
READING HOSPITAL & MEDICAL CENTER
Red Rose Transit Authority
Rutgers, The State University of N.J.
SECOM NET
SHIPPENSBURG AREA SCHOOL DISTRICT
SONSHINE FAMILY TELEVISION CORPORATION
SOUTHEASTERN PENNSYLVANIA TRANSIT AUTH
SPEAR LEEDS AND KELLOGG INC
ST. LUKE'S HOSPITAL
SUSQUEHANNA TOWNSHIP SCHOOL DISTRICT
Sachem Central School District
Sesame Workshop
Sprint Spectrum LP DBA Sprint PCS
Sprint Spectrum, LP
St. Joseph Medical Center
St. Lukes Cornwall Hospital
Steelton-Highspire School District
T-Mobile License LLC
TELEMARK NETWORKS, INC
THE BROOKLYN HOSPITAL CENTER
THE HERSHEY COMPANY
THOMAS OLSZEWSKI, INC

Company (Continued)

TRIBUNE TELEVISION COMPANY
Telecom Transport Management, Inc
The Goldman Sachs Group, Inc.
Total Recall Corp
Towerstream Corp
ULTRAVISION INC
University of Medicine & Dentistry of NJ
Verizon New Jersey, Inc.
WDAS LICENSE LIMITED PARTNERSHIP
WESTCHESTER, COUNTY OF
WINEMILLER COMMUNICATIONS, INC.
WLG TV INC
WXTU LICENSE LIMITED PARTNERSHIP
WYCKOFF HEIGHTS MEDICAL CENTER
York County Dept of Emergency Services
York Water Co

There are no unresolved interference objections with the stations contained in these applications.

The following 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: 07/20/2011
Job Number: 110715COMSJC10

Administrative Information

Status: TEMPORARY (Operation from 08/01/2011 to 10/01/2011)
Call Sign: TEMP10
Licensee Code: RCASTR
Licensee Name: LOCKHEED MARTIN CORPORATION

Site Information

CARPENTERSVILLE, NEW JERSEY

Venue Name
Latitude (NAD 83): 40° 38' 39.4" N
Longitude (NAD 83): 75° 11' 27.6" W
Climate Zone: A
Rain Zone: 2
Ground Elevation (AMSL): 54.86 m / 180.0 ft

Link Information

Satellite Type: Geostationary
Mode: TO - Transmit-Only
Modulation: Analog and Digital
Satellite Arc: 18° W to 132° West Longitude
Azimuth Range: 112.8° to 246.9°
Corresponding Elevation Angles: 15.9° / 16.2°
Antenna Centerline (AGL): 9.14 m / 30.0 ft

Antenna Information

Transmit

Manufacturer: TIW
Model: 14.2 Meter
Gain / Diameter: 63.9 dBi / 14.2 m
3-dB / 15-dB Beamwidth: 0.10° / 0.20°

Max Available RF Power (dBW/4 kHz): 31.1
(dBW/MHz): 31.1

Maximum EIRP (dBW/4 kHz): 95.0
(dBW/MHz): 95.0
(dBW):

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

Frequency Information

Transmit 18.0 GHz

Emission / Frequency Range (MHz): 1K03F3D / 17305.0
4K10G2D / 17305.0

Max Great Circle Coordination Distance: 250.3 km / 155.5 mi
Precipitation Scatter Contour Radius: 513.6 km / 319.1 mi

COMSEARCH

Earth Station Data Sheet

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Coordination Values

CARPENTERSVILLE, NJ

Licensee Name LOCKHEED MARTIN CORPORATION
Latitude (NAD 83) 40° 38' 39.4" N
Longitude (NAD 83) 75° 11' 27.6" W
Ground Elevation (AMSL) 54.86 m / 180.0 ft
Antenna Centerline (AGL) 9.14 m / 30.0 ft
Antenna Model TIW 14.2 Meter
Antenna Mode Transmit 18.0 GHz
Interference Objectives: Long Term -151.0 dBW/4 kHz 20%
Short Term -128.0 dBW/4 kHz 0.0025%
Max Available RF Power 31.1 (dBW/4 kHz)

| Azimuth (°) | Horizon Elevation (°) | Antenna Discrimination (°) | Transmit 18.0 GHz | |
|-------------|--------------------------|-------------------------------|-----------------------|-------------------------------|
| | | | Horizon Gain (dBi) | Coordination Distance (km) |
| 0 | 3.54 | 112.22 | -10.00 | 153.79 |
| 5 | 3.44 | 107.35 | -10.00 | 155.60 |
| 10 | 4.05 | 102.50 | -10.00 | 144.56 |
| 15 | 4.33 | 97.62 | -10.00 | 140.64 |
| 20 | 3.97 | 92.72 | -10.00 | 145.81 |
| 25 | 3.25 | 87.83 | -10.00 | 159.79 |
| 30 | 3.56 | 82.95 | -10.00 | 153.27 |
| 35 | 3.60 | 78.07 | -10.00 | 152.69 |
| 40 | 3.62 | 73.19 | -10.00 | 152.13 |
| 45 | 3.66 | 68.31 | -10.00 | 151.48 |
| 50 | 3.42 | 63.48 | -10.00 | 155.99 |
| 55 | 3.51 | 58.62 | -10.00 | 154.24 |
| 60 | 3.29 | 53.83 | -10.00 | 159.06 |
| 65 | 3.08 | 49.07 | -10.00 | 163.28 |
| 70 | 3.20 | 44.28 | -9.15 | 164.63 |
| 75 | 3.00 | 39.61 | -7.95 | 174.18 |
| 80 | 2.76 | 35.05 | -6.62 | 185.30 |
| 85 | 2.54 | 30.60 | -5.14 | 196.53 |
| 90 | 2.27 | 26.37 | -3.53 | 210.24 |
| 95 | 2.23 | 22.30 | -1.71 | 220.40 |
| 100 | 2.55 | 18.41 | 0.38 | 224.49 |
| 105 | 2.55 | 15.42 | 2.29 | 234.37 |
| 110 | 2.11 | 14.08 | 3.29 | 250.31 |
| 115 | 2.43 | 13.66 | 3.61 | 244.78 |
| 120 | 2.11 | 15.55 | 2.21 | 243.91 |
| 125 | 2.45 | 18.11 | 0.55 | 227.81 |
| 130 | 2.22 | 21.59 | -1.36 | 222.57 |
| 135 | 2.16 | 24.80 | -2.86 | 216.09 |
| 140 | 2.65 | 27.42 | -3.95 | 200.09 |
| 145 | 2.25 | 30.50 | -5.11 | 202.78 |
| 150 | 2.21 | 33.07 | -5.99 | 199.43 |
| 155 | 1.91 | 35.58 | -6.78 | 202.61 |
| 160 | 2.13 | 37.30 | -7.29 | 195.00 |
| 165 | 2.60 | 38.39 | -7.61 | 183.82 |
| 170 | 2.41 | 39.69 | -7.97 | 186.18 |
| 175 | 1.90 | 40.87 | -8.29 | 195.77 |
| 180 | 1.90 | 41.11 | -8.35 | 195.49 |
| 185 | 1.85 | 40.92 | -8.30 | 196.96 |

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Antenna Model TIW 14.2 Meter
Antenna Mode Transmit 18.0 GHz
Interference Objectives: Long Term -151.0 dBW/4 kHz 20%
Short Term -128.0 dBW/4 kHz 0.0025%
Max Available RF Power 31.1 (dBW/4 kHz)

| Azimuth (°) | Horizon Elevation (°) | Antenna Discrimination (°) | Transmit 18.0 GHz | |
|-------------|-----------------------|----------------------------|--------------------|----------------------------|
| | | | Horizon Gain (dBi) | Coordination Distance (km) |
| 190 | 1.24 | 40.83 | -8.27 | 213.92 |
| 195 | 1.36 | 39.56 | -7.93 | 212.06 |
| 200 | 2.31 | 37.14 | -7.25 | 191.73 |
| 205 | 1.76 | 35.72 | -6.82 | 206.50 |
| 210 | 1.78 | 33.43 | -6.10 | 209.28 |
| 215 | 2.34 | 30.43 | -5.08 | 200.98 |
| 220 | 2.98 | 27.15 | -3.85 | 193.73 |
| 225 | 4.04 | 23.36 | -2.21 | 181.19 |
| 230 | 4.93 | 19.56 | -0.29 | 177.70 |
| 235 | 4.30 | 16.77 | 1.39 | 195.81 |
| 240 | 4.35 | 13.69 | 3.59 | 207.16 |
| 245 | 3.60 | 12.73 | 4.38 | 225.03 |
| 250 | 2.38 | 14.15 | 3.23 | 243.80 |
| 255 | 2.22 | 16.10 | 1.83 | 239.15 |
| 260 | 2.59 | 18.79 | 0.15 | 222.56 |
| 265 | 3.08 | 22.21 | -1.66 | 202.62 |
| 270 | 2.75 | 26.53 | -3.59 | 199.79 |
| 275 | 2.58 | 30.96 | -5.27 | 195.17 |
| 280 | 2.85 | 35.38 | -6.72 | 182.86 |
| 285 | 3.20 | 39.91 | -8.03 | 169.70 |
| 290 | 3.81 | 44.49 | -9.21 | 152.14 |
| 295 | 4.44 | 49.15 | -10.00 | 139.19 |
| 300 | 5.32 | 53.85 | -10.00 | 129.00 |
| 305 | 5.47 | 58.70 | -10.00 | 128.48 |
| 310 | 5.49 | 63.59 | -10.00 | 128.29 |
| 315 | 5.43 | 68.49 | -10.00 | 128.83 |
| 320 | 4.59 | 73.44 | -10.00 | 137.16 |
| 325 | 3.78 | 78.36 | -10.00 | 149.16 |
| 330 | 3.36 | 83.25 | -10.00 | 157.29 |
| 335 | 3.12 | 88.13 | -10.00 | 162.42 |
| 340 | 2.98 | 93.00 | -10.00 | 165.37 |
| 345 | 3.16 | 97.87 | -10.00 | 161.68 |
| 350 | 3.35 | 102.75 | -10.00 | 157.39 |
| 355 | 3.44 | 107.62 | -10.00 | 155.65 |

Certification

I hereby certify that I am the technically qualified person responsible for the preparation of the frequency coordination data contained in this report. I am familiar with Parts 101 and 25 of the FCC Rules and Regulations and I have either prepared or reviewed the frequency coordination data submitted with this report, 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 Blvd.
Ashburn, Virginia 20147

DATED: July 20, 2011