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February 1, 2013

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Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

**Re: Gogo LLC ESAA License Application and STA Requests, Call Sign E120106
File Nos. SES-LIC-20120619-00574; SES-AMD-20120731-00709;
SES-AFS-20121008-00902; SES-STA-20121009-00907; & SES-STA-20130107-00018**

Dear Ms. Dortch:

Gogo LLC ("Gogo"), by its attorney and pursuant to Section 1.65 of the Commission's rules, 47 C.F.R. § 1.65, hereby updates the record regarding Gogo's above-referenced application for a blanket license to operate earth stations aboard aircraft ("ESAAs") and related requests for special temporary authority ("STA"). Specifically, Gogo advises the Commission that it has finalized a coordination agreement with the National Aeronautics and Space Administration, and an executed copy of the agreement is attached.

Please let me know if you have any questions regarding this matter.

Respectfully submitted,

/s/ Karis A. Hastings

Karis A. Hastings
Counsel for Gogo LLC
karis@satcomlaw.com

Attachment

cc: Andrea Kelly
Paul Blais
Eleanor Lott
Trang Nguyen

**A Coordination Agreement
Between the National Aeronautics and Space Administration
(hereinafter "NASA")
and Gogo, LLC (hereinafter "Gogo")
for Operation of the AMSS
in the 14.0 – 14.5 GHz-Band**

Gogo seeks to license and operate aeronautical mobile-satellite stations (AMSS) over the Continental United States (CONUS) on a secondary basis in the 14.0 to 14.5 GHz FSS band. The AMSS terminals are part of the Gogo communications system aboard general aviation and commercial aircraft using transponders in the Geostationary Satellite Orbit (GSO) arc. This Coordination Agreement has been prepared in compliance with the rules of the Federal Communications Commission (FCC) and the recommendations of the member states of the International Telecommunication Union (ITU) following the World Radio Communication Conference WRC-03.

1. Overview

The 14.0 – 14.5 GHz-band has been allocated to the mobile-satellite service, now including aeronautical mobile-satellite service, on a secondary basis, provided that Airborne Earth Stations (AES) include specific protection to the Space Research Services (SRS) earth stations and to the Tracking and Data Relay Satellite System (TDRSS) within the 13.40 – 14.4 GHz-band

Gogo has filed an application for license authorization to operate up to 1000 technically identical AES units in the 14.05 – 14.47 GHz-band.

The Gogo AESs receive from, and transmit to, the same GSO satellite transponder under control of a Ground Earth Station (GES) and Network Operations Center (NOC). They, and the terrestrial network to which they are connected, comprise the Gogo system.

This Coordination Agreement has been prepared to ensure that operation of the Gogo AESs conform to FCC requirements for protection of the SRS Network.

Gogo has the authority to negotiate and sign this Coordination Agreement for their AMSS system and NASA has the authority to negotiate and sign this agreement for the TDRSS and SRS Network sites listed in Section 3.1.

2. AUTHORITY

NASA concludes this agreement pursuant to 42 USC §2473 © (5) and (6) and section 203 © (5) of the National Aeronautics and Space Act of 1958 as amended, in addition to the Manual of Regulations and Procedures for Federal Radio Frequency Management (National Telecommunications & Information Administration Redbook), May 2008 Edition, May 2011 Revision.

3. Space Research Services Earth Stations

TDRSS Earth Station Sites:

Table 1 provides a list of TDRSS earth stations sites requiring interference protection. The White Sands and Guam sites are currently operational. The Blossom Point, MD site is planned for operation within the year 2013. Also provided are the TDRSS satellite orbital locations currently supported by each earth station site.

Earth Station Site	Latitude (deg)	Longitude (deg)	TDRSS Satellite (Degree East Long.)
<u>Continental United States</u>			-174
White Sands, New Mexico			-171
Antenna Size – 18.3 meter			-167.5
Antenna Gain – 66.4 dBi			-164.2
Elevation – 1456 m			-79
			-62
			-49
			-47
			-41
<u>Continental United States</u>			-12
Blossom Point, MD			-41
Antenna Size – 20 meter			-47
Antenna Gain – 67.2 dBi			-49
Elevation – 4 m			-62
			-79
<u>United States Territory</u>			
Guam			85
Antenna Size – 11 meter			89
Antenna Gain – 61.9 dBi			133
Elevation – 129 m			-171
			-174

Table 1. Existing TDRSS Earth Station Sites

* Ephemeris data on existing TDRSS spacecraft indicated in Table 1 may be found at the following Web site: <http://celestrak.com/NORAD/elements/> . Choose Tracking and Data Relay Satellite System (TDRSS)

Additional TDRSS Earth Station Sites:

NASA shall provide Gogo at least two months written notice of when the Blossom Point, MD earth station is about to become operational. Protection of this site must be provided by its planned operational date of use.

NASA may unilaterally add additional TDRSS earth station sites to the list in Table 1 above. NASA will notify Gogo as soon as it knows that a new earth station is being planned and has the coordinates of the newly planned site.

Earth Site Protection Limits:

The TDRSS protection limits are listed in the Table 2 below.

Frequency Band	Interference Threshold Limit Measured at Antenna Output	Reference Percentage of Time
13.40 – 14.00 GHz	-176 dBW/ kHz	Never to be Exceeded
14.00 – 14.05 GHz	-146 dBW/ MHz	Never to be Exceeded
14.05 – 14.40 GHz	-100 dBW (WSC, Guam), -85 dBW (BP)	Never to be Exceeded

Table 2. TDRSS Protection Limits

For interference calculations, the TDRSS spacecraft can have an inclination angle up to 15 degrees. In calculating the interference threshold levels in Table 2, the antenna patterns in Figure 1 below should be used.

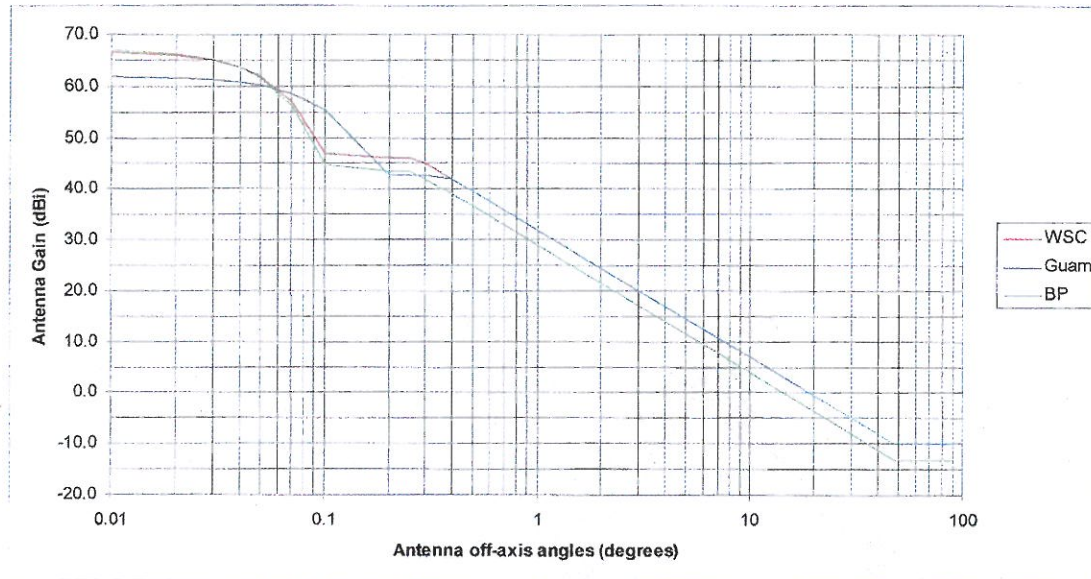


Figure 1. TDRSS Earth Station Antenna Gain Patterns

Note: This antenna pattern for WSC and Guam sites is calculated using Annex III of Appendix 8 of the ITU Radio Regulations, with the following modifications:

$$G_1 = 5 + 15\log(D/\lambda)$$

$$\phi_r = 12.02 (D/\lambda)^{-0.6}$$

where G_{max} and D are given in Table 1.

In the case of the BP site, the antenna pattern in ITU F.1245 is used which has side lobes up to 3 dB less than those obtained with Annex 3 of Appendix 8 for large off-axis angles. For this pattern,

$$G_1 = 2 + 15\log(D/\lambda) \text{ and}$$

$$\phi_r = 12.02 (D/\lambda)^{-0.6}$$

4. Operational Coordination Agreement

NASA and Gogo agree to the following:

- a. The purpose of this Coordination Agreement is to provide protection to the TDRSS earth station sites listed in Table 1 and any future TDRSS earth station sites.
- b. The level of protection afforded to the sites in Table 1, and any future TDRSS earth station sites which NASA adds to Table 1 pursuant to Section 3.2 of this Agreement, shall be equal to or greater than the Interference Threshold Limits shown in Table 2.

4.1 This Coordination Agreement may be reviewed periodically by the signatories to the agreement following commencement of service by Gogo under an operational license from the

FCC. The purpose of the review is to assess the effectiveness of this agreement and update this, or subordinate operational agreements, as appropriate.

4.2 Each party shall inform the other party in a timely manner of changes in the points of contact as defined in Section 5.

4.3 FINANCIAL OBLIGATIONS: Each party shall be responsible for funding its own responsibilities under this Agreement. No provision of this Agreement shall be interpreted to require obligation of funds in violation of the Anti-Deficiency Act 31 U.S.C § 1341.

Gogo agrees to:

4.4 Monitor, control and cease transmissions from any AES that would exceed the thresholds given in Table 2 within line-of-sight of the sites listed in Table 1.

4.5 Monitor, control and cease transmissions from any AES that would exceed the thresholds given in the Table 2 within line-of-sight of such additional sites as NASA may require.

4.6 Respond expeditiously to a NASA request for protection of the sites listed in Section 3.1, or additions thereto as provided for in Section 3.2, in accordance with the threshold limits of Section 3.3.

4.7 Respond expeditiously to a NASA request to isolate a source of interference to a TDRSS earth station suspected to be from an AES.

4.8 Provide a central point of contact (on a 24 hour, 7 day basis) for interference resolution and other contact.

NASA agrees to:

4.9 Maintain an open dialog with Gogo concerning any perceived breach of interference thresholds that may be attributable to an AES that is not in compliance with this Coordination Agreement.

4.10 Provide timely notification to Gogo of changes or additions to TDRSS earth station sites, TDRSS spacecraft orbital positions or interference thresholds listed in this Coordination Agreement.

5. Assignment and Termination

5.1 This Coordination Agreement shall be binding upon the parties hereto and their respective successors and assigns.

5.2 This Coordination Agreement may be terminated by either party upon 6 months written notice to the other.

5.3 CONTINUING OBLIGATIONS: The obligation of Gogo to protect the NASA TDRSS earth stations from interference as described in this agreement will survive termination or expiration of this Agreement.

6. Points of Contact

6.1 Points of contact concerning this Coordination Agreement:

Name:	Victor Sparrow
Organization:	NASA HQ
Title:	Director, NASA Spectrum Policy
Address:	NASA Headquarters 300 E Street SW Washington D.C. 20546-0001
Phone:	(202) 358-4808
Fax:	(202) 358-2865
E-mail:	Victor.D.Sparrow@nasa.gov

Name:	William J. Gordon
Organization:	Gogo, LLC
Title:	VP, Regulatory Affairs
Address:	Gogo, LLC 5614 Connecticut Ave, NW #288 Washington, DC 20015
Phone:	202-680-0576
Fax:	
E-mail:	bgordon@gogoair.com

6.2 Points of contact for technical concerns related to this Coordination Agreement:

Name:	Vincent Scott Galbraith
Organization:	NASA GSFC
Title:	Goddard Spectrum Manager
Address:	Goddard Space Flight Center Mission Services Program Office Greenbelt, MD 20771
Phone:	(301) 286-5089
Fax:	(301) 286-1724
E-mail:	vincent.s.galbraith@nasa.gov

Name:	Tim Joyce
Organization:	Gogo, LLC
Title:	VP, RF Engineering
Address:	Gogo, LLC 1250 N. Arlington Heights Rd. Itasca, IL 60153
Phone:	630-647-1427
Fax:	630-647-1627
E-mail:	tjoyce@gogoair.com

7. Signatures

This Coordination Agreement is being made in good faith by both parties and is effective on the date on of final signature.

For: The National Aeronautics and Space Administration

For: Gogo

By: Victor Sparrow

By: William J. Gordon

Name: Victor Sparrow

Name: William J. Gordon

Title: Director, NASA Spectrum Policy and Planning

Title: VP, Regulatory Affairs

Date: 2/1/2013

Date: 1/8/2013