

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:  
METOP-A November 2011 ranging campaign Hawaii

1. Applicant

Name:	Universal Space Network, Inc.	Phone Number:	215-328-9130
DBA Name:		Fax Number:	215-328-9132
Street:	417 Caredean Drive Suite A	E-Mail:	jswank@uspacenet.com
City:	Horsham	State:	PA
Country:	USA	Zipcode:	19044
Attention:	Joanne Greet		

SES-STA-20111027-01272

Call Sign	Grant Date	11-20-11
(or other identifier)	Term Date	11-10-11
From	To	11-10-11
Approved	Paul E. Greet	

RECEIVED  
National Bureau

Universal Space Network  
SES-STA-20111027-01272

No Call Sign

Conditions:

Universal Space Network Inc. is granted extension of Special Temporary Authority (STA), SES-STA-20110823-00998, to operate the earth station identified in this application on transmit frequency 2053.4583 MHz and receive frequency 2230.0 MHz, from November 10, 2011 to December 10, 2011, to support the Swedish Space Corporation, Solona, Sweden to conduct Pre-Launch and Early Orbit testing on the non-US licensed space station METOP-A which is licensed by European Space Agency on the following conditions:

1. All operations shall be on an unprotected, non-interference basis to both government and non-government operations.
2. All operations shall be limited to telemetry, tracking, and control.
3. Universal Space Network will inform NTIA (Skotler@ntia.doc.gov, 202-482-7983) and the FCC (Paul.Blaiss@fcc.gov, 202-418-7274) at least 24 hours prior to start of operations.
4. The Universal Space Network point of contact for operation is Joanne Greet at 215-328-9130 or 907-490-3064 and must be available while the frequencies are in use.

SES-STA-2011027-01272

Grant Date: 11-2-11

Call Sign: (or other identifier)

From: 11-10-11

Term Date: 12-10-11

Approved: [Signature]

Universal Space Network

<b>2. Contact</b>			
<b>Name:</b>	Universal Space Network, Inc.	<b>Phone Number:</b>	215-328-9130
<b>Company:</b>		<b>Fax Number:</b>	215-328-9132
<b>Street:</b>	417 Caredean Drive Suite A	<b>E-Mail:</b>	jswank@uspacenet.com
<b>City:</b>	Horsham	<b>State:</b>	PA
<b>Country:</b>	USA	<b>Zipcode:</b>	19044 -
<b>Attention:</b>	Joanne Greet	<b>Relationship:</b>	Same
(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)			
3. Reference File Number or Submission ID			
4a. Is a fee submitted with this application?			
<input checked="" type="radio"/> If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114). <input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee <input type="radio"/> Other (please explain):			
4b. Fee Classification CGX - Fixed Satellite Transmit/Receive Earth Station			
5. Type Request			
<input checked="" type="radio"/> Use Prior to Grant <input type="radio"/> Change Station Location <input type="radio"/> Other			
6. Requested Use Prior Date 11/10/2011			
7. City Naalehu		8. Latitude (dd mm ss.s h) 19 0 50.3 N	

9. State HI	10. Longitude (dd mm ss.s h) 155 39 46.6 W
11. Please supply any need attachments. Attachment 1: FCC 312                      Attachment 2: Coordination report                      Attachment 3: Waiver	
12. Description. (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.) <div style="border: 1px solid black; padding: 5px;"> <p>continuation of intermittent ranging campaign on Metop-A for November 2011. Previous STA granted under SES-STA-20110823-00998 expired October 19, 2011</p> </div>	
13. By checking Yes, the undersigned certifies that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application"; for these purposes.                      Yes <input checked="" type="radio"/> No <input type="radio"/>	
14. Name of Person Signing Joanne Greet	15. Title of Person Signing Manager, Compliance
WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).	

## **FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT**

The public reporting for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PERM, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to [PRA@fcc.gov](mailto:PRA@fcc.gov). PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

Remember – You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-0678.

**THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.**

**Exhibit C**  
**PETITION FOR WAIVER OF SECTION 25.137 AND 25.114 AND OF**  
**THE U.S. TABLE OF FREQUENCY ALLOCATIONS**

**I. TO THE EXTENT THEY APPLY, GOOD CAUSE EXISTS FOR A WAIVER OF CERTAIN PORTIONS OF SECTIONS 25.137 AND 25.114**

Universal Space Network, Inc. (USN) is provided limited legal and technical information for the METOP-A Satellite.<sup>1</sup> Pursuant to Section 25.137 of the Federal Communications Commission's ("Commission" or "FCC") rules, the same technical information required by Section 25.114 for U.S.-licensed space station, and certain legal information, must be submitted by earth station applicants "requesting authority to operate with a non-U.S. licensed space station to serve the United States..."<sup>2</sup> USN seeks authority to support the needed testing ranging calibration campaign using METOP-A in preparation for the 2Q-2012 launch and (LEOP) support of METOP-B, not commercial service to the United States, and thus believes that Section 25.137 does not apply.

To the extent the Commission determines, however, that USN's request for authority to provide LEOP on a special temporary basis is a request to serve the United States with a non-U.S.-licensed satellite, USN respectfully requests a waiver of Sections 25.137 and 25.114 of the Commission's rules, to the extent that USN has not herein provided the information required by these rules.<sup>3</sup> The Commission may grant a waiver for good cause shown.<sup>4</sup> A waiver is therefore appropriate if special circumstances warrant a deviation from the general rule, and such a deviation will serve the public interest.

In this case, good cause for a waiver of portions of Section 25.114 exists. USN seeks authority only to conduct testing (pre-LEOP) support for METOP-A. Thus, any information sought by Section 25.114 that is not relevant to the LEOP – e.g., antenna patterns, energy and propulsion and orbital debris - USN does not have. In addition, USN would not easily be able to obtain such information because USN is not the operator of the METOP-A satellite, nor is USN in contractual privity with that operator. Rather, USN has contracted with Swedish Space Corporation, Solna Sweden (SSC) to support the calibration campaign in preparation for the Launch and Early Orbit (LEOP) portion in S-Band of the METOP-B satellite prior to its operation.

As evidenced by the Comsearch report attached to this request, USN has coordinated the test of the METOP-A satellite with potentially affected terrestrial operators. Moreover, as with any STA, USN will conduct the test on an unprotected, non-interference basis to government operations.

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<sup>1</sup> FCC Form 312 Section B

<sup>2</sup> 47 C.F.R. § 25.137(a)

<sup>3</sup> 47 C.F.R. §§25.137 and 25.114

<sup>4</sup> 47 C.F.R. §1.3

Because it is not relevant to the service for which USN seeks authorization, and because obtaining the information would be a hardship, USN seeks a waiver of all the technical and legal information required by Section 25.114, to the extent it is not provided herein. As noted above, USN has provided the required information to the extent that it is relevant to the LEOP service for which USN seeks authorization.

Good cause also exists to waive portions of Section 25.137, to the extent the information required is not herein provided. Section 25.137 is designed to ensure that “U.S.-licensed satellite systems have effective competitive opportunities to provide analogous services” in other countries. Here, there is no service being provided by the satellite; USN is providing TT&C while the satellite is on the way to its low earth orbit. Thus, the purpose of the information required by Section 25.137 is not implicated here. For example, Section 25.137(d) requires earth station applicants requesting authority to operate with a non-U.S.-licensed space station that is not in orbit and operating to post a bond.<sup>5</sup> The underlying purpose in having to post a bond – i.e., to prevent warehousing of orbital locations by operators seeking to serve the United States – would not be served by requiring USN to post a bond in order to conduct the 4 days of testing support of the METOP-A satellite.

It is USN’s understanding that METOP-A is licensed by ESA (European Space Agency). METOP-A is the first of the series spacecraft meant to serve the EU. Thus, the purpose of Section 25.137 – to ensure that U.S. satellite operators enjoy “effective competitive opportunities” to serve foreign markets and to prevent warehousing of orbital locations service the United States – will not be undermined by grant of this waiver request.

Finally, USN notes that it expects to communicate with the METOP-A satellite using its U.S. earth station for a period of 4 days interim. Requiring USN to obtain technical and legal information from an unrelated party, where there is no risk of interference and the operation will cease within 4 days would pose undue hardship without serving underlying policy objectives. Given these particular facts, the waiver sought herein is appropriate.

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<sup>5</sup> 47 C.F.R. §25.137(d)(4)

## **II. GOOD CAUSE EXISTS FOR A WAIVER OF THE UNITED STATES TABLE OF FREQUENCY ALLOCATIONS**

USN further requests a waiver of the United States Table of Frequency Allocations ("U.S. Table") as described in section 2.106 of the rules for the frequency bands 2025 – 2110 MHz (Earth-to-Space) and 2200 – 2290 MHz (Space-to-Earth).<sup>6</sup> Section footnotes allow for non-federal Government use of these bands in the United States on a case-by-case non-interference basis. Such use by USN necessitates a waiver of the U.S. Table.

Good cause exists to grant USN a limited waiver of the U.S. Table to allow testing of the METOP-A satellite in preparation for the LEOP of the METOP-B satellite. In considering request for case-by-case spectrum uses, the Commission has indicated that it would generally grant such waivers "where there is little potential for interference into any service authorized under the Table of Frequency Allocations and when the case-by-case operator accepts any interference from authorized services."<sup>7</sup> USN will coordinate with other parties operating communication systems in compliance with the Table of Frequency Allocations to ensure that no harmful interference is caused. USN seeks to operate only pursuant to special temporary authorization and thus agrees to accept any interference from authorized services. In summary, USN's operation on a non-interference, non-protected basis support waiver of the U.S. Table.

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<sup>6</sup> 47 C.F.R. §2.106

<sup>7</sup> Previously approved STA's for Universal Space Network SES-STA-20110823-00997 & 998 for Metop-A Ranging campaign ✓



19700 Janella Farm Boulevard

Ashburn, VA 20147

(703) 726-5500

Fax (703) 726-5600

COMSEARCH®

<http://www.comsearch.com>



July 24, 2011

\*\*\*\*\*

\*\*\* CLIENT COPY \*\*\*

\*\*\* PLEASE MAIL \*\*\*

\*\*\* TO CUSTOMER \*\*\*

Re: Universal Space Network, Inc.  
Naalehu, Hawaii  
2 GHz Band Transmit/Receive Earth Station  
Job Number: 110724COMSJC03

\*\*\*\*\* EXPEDITED FREQUENCY COORDINATION \*\*\*\*\*

\*\*\*\*\* RESPONSE REQUESTED BY AUGUST 5, 2011 \*\*\*\*\*

Dear Frequency Coordinator:

This notice is being provided in accordance with Section 25.203(c) of the FCC Rules and Regulations. We are forwarding the attached expedited coordination data on behalf of Universal Space Network, Inc. for the purpose of obtaining a STA to provide support services during the launch and early orbit testing of a new satellite from their existing transmit/receive earth station near Naalehu, Hawaii.

The coordination notice is being circulated to the owners (or their protection agents) of all existing or proposed terrestrial facilities operating in a shared frequency band within the coordination contours of the station(s).

Please update your database with the attached information.

We respectfully request that you examine this data for its interference potential with your system(s). In the event that your analysis identifies potential interference cases that were not previously reported, please contact Comsearch by August 5, 2011.

If there are any questions concerning this coordination notice, please contact Comsearch.

Sincerely,

COMSEARCH

Jeffrey E. Cowles  
Engineer III, Telecommunications  
[jcowles@comsearch.com](mailto:jcowles@comsearch.com)

Enclosure(s)

**COMSEARCH****Earth Station Data Sheet**

19700 Janelia Farm Boulevard, Ashburn, VA 20147  
(703)726-5660 <http://www.comsearch.com>

Date: 07/24/2011  
Job Number: 110724COMSJC03

**Administrative Information**

Status ENGINEER PROPOSAL  
Call Sign NAALEHU  
Licensee Code UNSPNE  
Licensee Name Universal Space Network, Inc.

**Site Information****NAALEHU, HAWAII**

Venue Name  
Latitude (NAD 83) 19° 0' 50.3" N  
Longitude (NAD 83) 155° 39' 46.6" W  
Climate Zone C  
Rain Zone 4  
Ground Elevation (AMSL) 378.0 m / 1240.2 ft

**Link Information**

Satellite Type Low Earth Orbit  
Mode TR – Transmit/Receive  
Modulation Digital  
Minimum Elevation Angle 5.0°  
Azimuth Range 0.0° to 360°  
Antenna Centerline (AGL) 8.53 m / 28.0 ft

**Antenna Information****Receive****Transmit**

Manufacturer	Datron	Datron
Model	1453	1453
Gain / Diameter	46.9 dBi / 13.0 m	45.9 dBi / 13.0 m
3-dB / 15-dB Beamwidth	0.78° / 1.46°	0.76° / 1.46°
Max Available RF Power (dBW/4 kHz)		4.5
(dBW/MHz)		22.1
Maximum EIRP (dBW/4 kHz)		50.4
(dBW/MHz)		68.0
(dBW)		68.0
Interference Objectives:	Long Term	-156.0 dBW/MHz 20%
	Short Term	-146.0 dBW/MHz 0.01%
		-154.0 dBW/4 kHz 20%
		-131.0 dBW/4 kHz 0.0025%

**Frequency Information****Receive 2.2 GHz****Transmit 2.0 GHz**

Emission / Frequency Range (MHz)	230KG2D / 2230.0000	230KG2D / 2053.4583
Max Great Circle Coordination Distance	1050.1 km / 652.4 mi	760.0 km / 472.2 mi
Precipitation Scatter Contour Radius	100.0 km / 62.1 mi	176.0 km / 109.3 mi

**COMSEARCH****Earth Station Data Sheet**

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(703)726-5660 <http://www.comsearch.com>

**Coordination Values****NAALEHU, HI**

Licensee Name Universal Space Network, Inc.

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Ground Elevation (AMSL) 378.0 m / 1240.2 ft

Antenna Centerline (AGL) 8.54 m / 28.0 ft

Antenna Model Datron 1453

Antenna Mode Receive 2.2 GHz

Interference Objectives: Long Term -156.0 dBW/MHz 20%

Short Term -146.0 dBW/MHz 0.01%

Transmit 2.0 GHz

-154.0 dBW/4 kHz 20%

-131.0 dBW/4 kHz 0.0025%

Max Available RF Power

4.5 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 2.2 GHz		Transmit 2.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	2.78	5.0	4.50	662.10	4.50	365.00
5	2.62	5.0	4.50	671.20	4.50	374.40
10	2.39	5.0	4.50	685.10	4.50	388.60
15	2.30	5.0	4.50	690.80	4.50	394.30
20	2.17	5.0	4.50	699.20	4.50	403.00
25	2.03	5.0	4.50	708.80	4.50	412.70
30	1.68	5.0	4.50	734.80	4.50	439.30
35	0.90	5.0	4.50	811.80	4.50	517.90
40	0.33	5.0	4.50	911.20	4.50	619.40
45	0.00	5.0	4.50	1050.10	4.50	760.00
50	0.00	5.0	4.50	1050.10	4.50	760.00
55	0.00	5.0	4.50	1050.10	4.50	760.00
60	0.00	5.0	4.50	1050.10	4.50	760.00
65	0.00	5.0	4.50	1050.10	4.50	760.00
70	0.00	5.0	4.50	1050.10	4.50	760.00
75	0.00	5.0	4.50	1050.10	4.50	760.00
80	0.00	5.0	4.50	1050.10	4.50	760.00
85	0.00	5.0	4.50	1050.10	4.50	760.00
90	0.00	5.0	4.50	1050.10	4.50	760.00
95	0.00	5.0	4.50	1050.10	4.50	760.00
100	0.00	5.0	4.50	1050.10	4.50	760.00
105	0.00	5.0	4.50	1050.10	4.50	760.00
110	0.00	5.0	4.50	1050.10	4.50	760.00
115	0.00	5.0	4.50	1050.10	4.50	760.00
120	0.00	5.0	4.50	1050.10	4.50	760.00
125	0.00	5.0	4.50	1050.10	4.50	760.00
130	0.00	5.0	4.50	1050.10	4.50	760.00
135	0.00	5.0	4.50	1050.10	4.50	760.00
140	0.00	5.0	4.50	1050.10	4.50	760.00
145	0.00	5.0	4.50	1050.10	4.50	760.00
150	0.00	5.0	4.50	1050.10	4.50	760.00
155	0.00	5.0	4.50	1050.10	4.50	760.00
160	0.00	5.0	4.50	1050.10	4.50	760.00
165	0.00	5.0	4.50	1050.10	4.50	760.00
170	0.00	5.0	4.50	1050.10	4.50	760.00
175	0.00	5.0	4.50	1050.10	4.50	760.00
180	0.00	5.0	4.50	1050.10	4.50	760.00

**COMSEARCH****Earth Station Data Sheet**

19700 Janelia Farm Boulevard, Ashburn, VA 20147

(703)726-5660 <http://www.comsearch.com>**Coordination Values****NAALEHU, HI**

Licensee Name Universal Space Network, Inc.

Latitude (NAD 83) 19° 0' 50.3" N

Longitude (NAD 83) 155° 39' 46.6" W

Ground Elevation (AMSL) 378.0 m / 1240.2 ft

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Antenna Mode Receive 2.2 GHz

Interference Objectives: Long Term -156.0 dBW/MHz 20%

Short Term -146.0 dBW/MHz 0.01%

Max Available RF Power

Transmit 2.0 GHz

-154.0 dBW/4 kHz 20%

-131.0 dBW/4 kHz 0.0025%

4.5 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 2.2 GHz		Transmit 2.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
185	0.00	5.0	4.50	1050.10	4.50	760.00
190	0.00	5.0	4.50	1050.10	4.50	760.00
195	0.00	5.0	4.50	1050.10	4.50	760.00
200	0.00	5.0	4.50	1050.10	4.50	760.00
205	0.00	5.0	4.50	1050.10	4.50	760.00
210	0.00	5.0	4.50	1050.10	4.50	760.00
215	0.00	5.0	4.50	1050.10	4.50	760.00
220	0.00	5.0	4.50	1050.10	4.50	760.00
225	0.00	5.0	4.50	1050.10	4.50	760.00
230	0.00	5.0	4.50	1050.10	4.50	760.00
235	0.00	5.0	4.50	1050.10	4.50	760.00
240	0.00	5.0	4.50	1050.10	4.50	760.00
245	0.00	5.0	4.50	1050.10	4.50	760.00
250	0.00	5.0	4.50	1050.10	4.50	760.00
255	0.00	5.0	4.50	1050.10	4.50	760.00
260	0.00	5.0	4.50	1050.10	4.50	760.00
265	0.34	5.0	4.50	908.60	4.50	616.80
270	0.54	5.0	4.50	866.00	4.50	573.30
275	0.79	5.0	4.50	826.30	4.50	532.80
280	1.04	5.0	4.50	795.00	4.50	500.90
285	0.98	5.0	4.50	802.00	4.50	508.00
290	1.14	5.0	4.50	784.10	4.50	489.70
295	1.30	5.0	4.50	768.00	4.50	473.20
300	1.42	5.0	4.50	757.00	4.50	461.80
305	1.68	5.0	4.50	734.80	4.50	439.30
310	1.86	5.0	4.50	721.00	4.50	425.20
315	2.05	5.0	4.50	707.40	4.50	411.30
320	2.17	5.0	4.50	699.20	4.50	403.00
325	2.35	5.0	4.50	687.60	4.50	391.10
330	2.46	5.0	4.50	681.00	4.50	384.10
335	2.59	5.0	4.50	673.00	4.50	376.20
340	2.68	5.0	4.50	667.80	4.50	370.80
345	2.73	5.0	4.50	664.90	4.50	367.90
350	3.10	5.0	4.50	644.70	4.50	347.30
355	2.96	5.0	4.50	652.20	4.50	354.90

<b>FCC 312</b> <b>Main Form</b>	Approved by OMB 3060-0678 Est. Avg. Burden Hours Per Response: 11 Hrs.	FCC Use Only File Number:
	<b>FEDERAL COMMUNICATIONS COMMISSION</b>  <b>APPLICATION FOR SATELLITE SPACE AND EARTH STATION AUTHORIZATIONS</b>	Call Sign:
		Fee Number:

### APPLICANT INFORMATION

1. Legal Name of Applicant Universal Space Network, Inc.	2. Voice Telephone Number 949-476-3432
3. Other Name Used for Doing Business (if any)	4. Fax Telephone Number 949-851-9485
5. Mailing Street Address or P.O. Box  1501 Quail Street, Suite 102 ATTENTION: Joanne Greet 215-328-9130 phone	6. City Newport Beach
9. Name of Contact Representative (if other than applicant)	7. State / Country (if not U.S.A.) CA
11. Firm or Company Name	8. Zip Code 92660
13. Mailing Street Address or P.O. Box	10. Voice Telephone Number
ATTENTION:	12. Fax Telephone Number
	14. City
	15. State / Country (if not U.S.A.)
	16. Zip Code

### CLASSIFICATION OF FILING

17. Place an "X" in the box next to the classification that applies to this filing for both questions a. and b. Mark only one box for 17a and only one box for 17b.	
<input checked="" type="checkbox"/> a1. Earth Station  <input type="checkbox"/> a2. Space Station	<input type="checkbox"/> b1. Application for License of New Station <input type="checkbox"/> b2. Application for Registration of New Domestic Receive-Only Station <input type="checkbox"/> b3. Amendment to a Pending Application <input type="checkbox"/> b4. Modification of License or Registration <input type="checkbox"/> b5. Assignment of License or Registration  <input type="checkbox"/> b6. Transfer of Control of License or Registration <input type="checkbox"/> b7. Notification of Minor Modification <input type="checkbox"/> b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite <input type="checkbox"/> b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States <input checked="" type="checkbox"/> b10. Other (Please Specify): Application to request Special Temporary Authority
18. If this filing is in reference to an existing station, enter: Call sign of station:	19. If this filing is an amendment to a pending application enter: (a) Date pending application was filed: (b) File number of pending application:
N/A	

# TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provide or use the following type(s) of service(s): Place an "X" in the box(es) next to all that apply.

<input type="checkbox"/> a. Fixed Satellite	<input type="checkbox"/> c. Radiodetermination Satellite	<input type="checkbox"/> e. Direct to Home Fixed Satellite
<input type="checkbox"/> b. Mobile Satellite	<input type="checkbox"/> d. Earth Exploration Satellite	<input type="checkbox"/> f. Digital Audio Radio Service
		<input checked="" type="checkbox"/> g. Other (please specify) <b>Ranging Compatibility Testing</b>

21. STATUS: Place an "X" in the box next to the applicable status. Mark only one box.

<input type="checkbox"/> a. Common Carrier	<input checked="" type="checkbox"/> b. Non-Common Carrier
--	---

22. If earth station applicant, place an "X" in the box(es) next to all that apply.

<input type="checkbox"/> a. Using U.S. licensed satellites	<input checked="" type="checkbox"/> b. Using Non-U.S. licensed satellites
--	---

23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Mark only one box. Are these facilities:

<input type="checkbox"/> a. Connected to the Public Switched Network	<input type="checkbox"/> b. Not connected to the Public Switched Network
--	--

24. FREQUENCY BAND(S): Place an "X" in the box(es) next to all applicable frequency band(s).

<input type="checkbox"/> a. C-Band (4/6 GHz)	<input type="checkbox"/> b. Ku-Band (12/14 GHz)	<input checked="" type="checkbox"/> c. Other (Please specify) <b>S-band</b>
--	---	---

# TYPE OF STATION

25. CLASS OF STATION: Place an "X" in the box next to the class of station that applies. Mark only one box.

<input checked="" type="checkbox"/> a. Fixed Earth Station	<input type="checkbox"/> b. Temporary-Fixed Earth Station	<input type="checkbox"/> c. 12/14 GHz VSAT Network	<input type="checkbox"/> d. Mobile Earth Station	<input type="checkbox"/> e. Space Station	<input type="checkbox"/> f. Other (Specify)
--	---	--	--	---	---

If space station applicant, go to Question 27.

26. TYPE OF EARTH STATION FACILITY. Mark only one box.

<input checked="" type="checkbox"/> a. Transmit/Receive	<input type="checkbox"/> b. Transmit-Only	<input type="checkbox"/> c. Receive-Only
---	---	--

# PURPOSE OF MODIFICATION OR AMENDMENT

27. The purpose of this proposed modification or amendment is to: Place an "X" in the box(es) next to all that apply.

<input type="checkbox"/> a -- authorization to add new emission designator and related service	<input type="checkbox"/> b -- authorization to change emission designator and related service
<input type="checkbox"/> c -- authorization to increase EIRP and EIRP density	<input type="checkbox"/> d -- authorization to replace antenna
<input type="checkbox"/> e -- authorization to add antenna	<input type="checkbox"/> f -- authorization to relocate fixed station
<input type="checkbox"/> g -- authorization to change assigned frequency(ies)	<input type="checkbox"/> h -- authorization to add Points of Communication (satellites & countries)
<input type="checkbox"/> i -- authorization to change Points of Communication (satellites & countries)	<input type="checkbox"/> j -- authorization for facilities for which environmental assessment and radiation hazard reporting is required
<input checked="" type="checkbox"/> k -- Other (Please Specify) <b>N/A</b>	

# ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307? If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. §§ 1.1308 and 1.1311, as an exhibit to this application. A Radiation Hazard Study must accompany all applications as an exhibit for new transmitting facilities, major modifications, or major amendments. Refer to OET Bulletin 65.

<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
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### ALIEN OWNERSHIP

29. Is the applicant a foreign government or the representative of any foreign government?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
30. Is the applicant an alien or the representative of an alien?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
31. Is the applicant a corporation organized under the laws of any foreign government?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
32. Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit, the identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote.		

### BASIC QUALIFICATIONS

35. Does the applicant request any waivers or exemptions from any of the Commission's Rules? If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
36. Has the applicant or any party to this application had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explanation of the circumstances.	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
37. Has the applicant, or any party to this application, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explanation of the circumstances.	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of the circumstances.	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If Yes, attach as an exhibit, an explanation of the circumstances.	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, addresses, and citizenship of those stockholders owning of record and/or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer.		
41. By checking Yes, the undersigned certifies, that neither the applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application" for these purposes.	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
42a. Does the applicant intend to use a non-U.S. licensed satellite to provide service in the United States? If yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. § 25.137, as appropriate. If no, proceed to question 43.	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station?	International Telecommunication Union	

USN ground station shall be used to assist the European Space Agency (ESA) and Swedish Space Corporation (SSC)

Communications shall consist of telemetry, telecommand, data deliver, and control of the satellite. The ranging campaign will be intermittent.

from 11 November - 13 December 2011 timeframe (TBD schedule will be provided later).

[illegible]

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

44. Applicant is a (an): (Place an "X" in the box next to applicable response.)

☐ a. Individual    ☐ b. Unincorporated Association    ☒ c. Partnership    ☐ d. Corporation    ☐ e. Governmental Entity    ☐ f. Other (Please specify)

45. Typed Name of Person Signing

Joanne Greet

**46. Title of Person Signing**

## Manager, Compliance

**47. Signature**

48. Date \_\_\_\_\_

25 October 2011

**WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).**



<b>FEDERAL COMMUNICATIONS COMMISSION</b> <b>FCC 312 - Schedule A</b> (Place an "X" in one of the blocks below)		FCC Use Only	
<input type="checkbox"/> <b>CONSENT TO TRANSFER OF CONTROL</b> <input type="checkbox"/> <b>CONSENT TO ASSIGNMENT OF LICENSE</b> <input type="checkbox"/> <b>NOTIFICATION OF TRANSFER OF CONTROL</b> <input type="checkbox"/> <b>NOTIFICATION OF ASSIGNMENT</b> <input type="checkbox"/> <b>OF RECEIVE ONLY REGISTRATION</b> <input type="checkbox"/> <b>OF RECEIVE ONLY REGISTRATION</b>			
A1. Name of Licensee or Registrant		A2. Voice Telephone Number	
A3. Mailing Street Address or P.O. Box		A4. Fax Telephone Number	
ATTENTION:			
A5. City	A6. State / Country (if not U.S.A.)	A7. Zip Code	
A8. List Call Sign(s) of station(s) being assigned or transferred		A9. No. of station(s) listed	
A10. Name of Transferor/Assignor (if different than licensee or registrant)		A15. Name of Transferee/Assignee	
A11. Mailing Street Address or P.O. Box		A16. Mailing Street Address or P.O. Box	
A12. City	A13. State/Country	A14. Zip Code	A17. City
	A18. State/Country	A19. Zip Code	
A20. If these facilities are licensed, is the transferee/assignee directly or indirectly controlled by any other entity? If Yes, attach as an exhibit, a statement (including organizational diagrams where appropriate) which fully and completely identifies the nature and extent of control including: (1) the name, address, citizenship, and primary business of the controlling entity and any intermediate subsidiaries or parties; and (2) the names, addresses, citizenship, and the percentages of voting and equity stock of those stockholders holding 10 percent or more of the controlling corporation's voting stock.			
A21. If these facilities are licensed, attach as an exhibit, a complete statement setting forth the facts which show how the assignment or transfer will serve the public interest.			

### CERTIFICATION

1. The undersigned, individually and for licensee, certifies that all attached exhibits pertinent to Schedule A and all statements made in Schedule A of this application are true, complete and correct to the best of his/her knowledge and belief. The undersigned also certifies that any contracts or other instruments submitted herewith are complete and constitute the full agreement.			
2. The undersigned represents that stock will not be delivered and that control will not be transferred until the Commission's consent has been received, but that transfer of control or assignment of license will be completed within 60 days of Commission consent. The undersigned also acknowledges that the Commission must be notified by letter within 30 days of consummation.			
A22. Printed Name of Licensee (Must agree with A1)	A23. Signature	A24. Title (Office Held by Person Signing)	A25. Date
A26. Printed Name of License Transferor/Assignor (if different than licensee. Must agree with A10)	A27. Signature	A28. Title (Office Held by Person Signing)	A29. Date
A30. Printed Name of License Transferee/Assignee (Must agree with A15)	A31. Signature	A32. Title (Office Held by Person Signing)	A33. Date

**FEDERAL COMMUNICATIONS COMMISSION  
SATELLITE EARTH STATION AUTHORIZATIONS  
(Technical and Operational Description)**

**B1. Location of Earth Station Site.** If temporary-fixed, mobile, or VSAT remote facility, specify area of operation and point of contact. If VSAT hub station, give its location. For VSAT networks attach individual Schedule B, Page 1 sheets for each hub station and each remote station. Individually provide the Location, Points of Communications, and Destination Points for each hub and remote station.

Bla. Station Call Sign	Blb. Site Identifier (HUB, REMOTE1, etc.)	Blc. Telephone Number	Blj. Geographic Coordinates Deg. - Min. - Sec. - E/W	Blk. Lat./Lon. Coordinates are:
	USHI01	808-929-8069		<input type="checkbox"/> NAD-27
Bld. Street Address of Station or Area of Operation	Ble. Name of Contact Person		Lat. 19 0 50.3 N	<input type="checkbox"/> NAD-27
93-1704 South Point Road	Joanne Greet		Lon. 155 39 46.6 W	<input checked="" type="checkbox"/> NAD-83
Bli. City Naalehu	Bli. County Ka'u	Bli. State HI	Bli. Zip Code 96772-0842	Bli. Site Elevation (AMSL) 378.0 meters

Satellite Name and Orbit Location	Satellite Name and Orbit Location	Satellite Name and Orbit Location
METOP-A		

[illegible]

## FCC Form 312 - Schedule B: (Technical and Operational Description)

**B4. Earth Station Antenna Facilities:** Use additional pages as needed.

[illegible]

**B5. Antenna Heights and Maximum Power Limits:** (The corresponding Antenna ID in tables B4 and B5 applies to the same antenna)

(a) Antenna ID**	(b) Antenna Structure Registration No.	Maximum Antenna Height		(c) Building Height Above Ground Level (meters)***	(f) Maximum Antenna Height Above Rooftop (meters)***	(g) Total Input Power at antenna flange (Watts)	(h) Total EIRP for all carriers (dBW)
		(c) Above Ground Level (meters)	(d) Above Mean Sea Level (meters)				
HI-13M	N/A	20	398	N/A+	N/A+	200W	68dBW
				+ Antenna are not	on a building.	Max bldg ht. is 10'	
				non-GEO	Non-GEO	5 degrees	5 degrees
0-360	0-360		HI-13M	2053.4583 MHz	non-GEO	Non-GEO	5 degrees
5 degrees	0-360	0-360	11.1 dBW				

Notes: \* If this is an application for a VSAT network, identify the site (Item B1b, Schedule B, Page 1) where each antenna is located. Also include this Site-ID on Schedule B, Page 5.

**\*\*** Identify each antenna in VSAT network or multi-antenna station with a unique identifier, such as HUB, REMOTE1, A1, A2, 10M, 12M, 7M, etc. Use this same antenna ID throughout tables B4, B5, B6, and B7 when referring to the same antenna.

\*\*\* Attach sketch of site or exemption, See 47 CFR Part 17.

[illegible]

Provide the ANTENNA-ID from table B4 to identify the antenna to which each frequency band and orbital arc range is associated.

If operating with geostationary satellites, give the orbital arc limits and the associated elevation and azimuth angles. If operating with non-geostationary satellites, give the notation "NON-GEO" for the satellite arc and give the minimum operational elevation angle and the maximum azimuth angle range.

## Page 4: Particulars

**B7. Particulars of Operation (Full particulars are required for each r.f. carrier): Use additional pages as needed.**

[illegible]

Notes: \* Provide the ANTENNA-ID from table B4 to identify the antenna to which each frequency band and emission is associated. For VSAT networks, include frequencies and emissions for all HUB and REMOTE units.  
 \*\* Indicate whether the earth station transmits or receives in each frequency band.

**FEDERAL COMMUNICATIONS COMMISSION**  
**SATELLITE EARTH STATION AUTHORIZATIONS**  
**FCC Form 312 - Schedule B: (Technical and Operational Description)**

If VSAT Network, provide the SITE-ID (Item B1b) of the station that B8-B13 are in response to (HUB, REMOTE1, etc.): N/A -not VSAT network

<b>B8. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with <u>geostationary</u> satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurements? If NO, provide as an exhibit, a technical analysis showing compliance with two-degree spacing policy.</b>				<input type="checkbox"/> YES	<input type="checkbox"/> NO
<b>B9. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with <u>non-geostationary</u> satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?</b>				<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
<b>B10. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.</b>				<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
<b>Remote Control Point Location:</b>					
B10a. Street Address 417 Caredean Drive, Suite A		B10c. County Montgomery		B10d. State / Country PA	
B10b. City Horsham		B10e. Zip Code 19044		B10f. Telephone Number 215-328-9130	
<b>B11. Is frequency coordination required? If YES, attach a frequency coordination report as an exhibit.</b>				<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
<b>B12. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as an exhibit.</b>				<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
<b>B13. FAA Notification - (See 47 CFR Part 17 and 47 CFR Part 25.113(c))          Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and/or the FAA's study regarding the potential hazard of the structure to aviation?</b>				<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
<b>FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.</b>					

**INSTRUCTIONS FOR COMPLETION OF FCC FORM 312**  
**APPLICATION FOR SATELLITE SPACE AND EARTH STATION AUTHORIZATIONS**

**Information and Instructions**

**Purpose of Form**

FCC Form 312 is used to apply for all authorizations relating to satellite earth and space station facilities, and to notify the Commission of changes to these facilities in cases where prior Commission approval is not required. Specifically, applicants should use FCC Form 312 in the following cases: (1) when applying for a license for a new earth or space station(s); (2) when applying for registration of a domestic receive-only earth station(s); (3) when applying for a modification to a licensed earth or space station(s); (4) when seeking Commission consent to an assignment or transfer of control of a licensed earth or space station(s); (5) when notifying the Commission of a minor modification to a licensed earth or space station(s); (6) when notifying the Commission of an assignment or transfer of control of a registered domestic receive-only earth station(s); and (7) when filing an amendment to a pending earth or space station application(s). The purpose of this form is to collect data and other information relating to satellite space and earth stations to assist the FCC in determining whether the public interest would be served by a grant of the requested authorization.

**Applicable Rules and Regulations**

Before the application is prepared, the applicant should refer to Parts 1 and 25 of the Rules and Regulations of the Commission, (Title 47, Code of Federal Regulations (CFR), Parts 1 and 25). Copies of the FCC Rules may be purchased from the Superintendent of Documents, Mail Stop: SSOP, U.S. Government Printing Office, Washington, DC 20402-9328. Part 1 contains rules regarding fee requirements. *See also* the International and Satellite Services Fee Filing Guide for specific fee information. Part 25 may require information to be filed with an application in addition to that specified in the application form. Applicant should make every effort to file a complete application in compliance with the Rules. Failure to do so can result in rejection or return of the application or a delay in the processing of the application. Use additional sheets only where necessary. All additional sheets must contain the applicant's name and the number of questions to which it responds.

**Introduction**

FCC Form 312 is a multi-part form comprised of a Main Form and schedules. Each application must contain a completed Main Form in addition to any required schedules in order to receive consideration.

The purpose of the **mandatory** Main Form is to (1) obtain information sufficient to identify the applicant; (2) establish the applicant's basic eligibility and qualifications; (3) classify the filing; and (4) identify the nature of the proposed service or request. The Main Form also contains required certifications and signature block(s).

**Schedules**

There are two schedules - Schedule A and Schedule B - that are used in conjunction with the mandatory Main Form.

**SCHEDULE A** is to be completed when:

Applying for Consent to Assignment of License of both  
space and earth stations  
Applying for Consent to Transfer of Control of both  
space and earth stations  
Notifying the FCC of Assignment or Transfer of Control  
of Receive-Only earth station Registration

**SCHEDULE B** is to be completed when:

Applying for a License for a Transmit and/or Receive  
Earth Stations  
Applying for Registration of Domestic Receive-only  
Earth Stations  
Applying for Blanket License for New Earth Station  
System, including VSAT and Mobile Satellite  
Service Systems  
Amending a **pending** earth station Application  
Applying for a Modification of a **granted** earth station or  
VSAT license  
Applying for a Modification of a **granted** Receive-only  
earth station Registration  
Notifying FCC of a Minor Modification of a **granted**  
earth station or VSAT license

### **For Assistance**

For additional information about Form 312 contact the FCC Consumer Assistance Office at (202) 418-0220. Information is also available on the FCC's internet site at <http://www.fcc.gov>. Examples of completed Form 312 applications are available on the FCC's internet site. The International and Satellite Services Fee Filing Guide is available on the International Bureau's Home Page at the above internet address.

### **Incorporation by Reference**

Reference documents, exhibits, or other lengthy showings already on file with the FCC may be referred to in the application without further submission only if: (a) the information is current and accurate in all significant respects and (b) the reference states specifically where the previously filed information can be found (*i.e.*, station call sign and application file number, title of proceeding, docket number or legal citations), including exhibit and page references. If either of these criterion is not met, the reference documents must accompany the application.

## **GENERAL INSTRUCTIONS**

### **Current Information**

Information filed with the FCC must be kept current. The applicant should notify the FCC regarding any substantial and significant changes in the facts as they appear in the application. *See* 47 CFR 1.65.

### **Waiver Requests**

Requests for waivers must contain a statement of reasons sufficient to justify a waiver and must be included as "Exhibit D" to the Main Form. For each rule waiver desired, a separate request with the required showing identifying the specific rule or policy for which the waiver is requested, must be made.

### **Exhibits**

Each document required to be filed as an exhibit should be current as of the date of filing. Each exhibit must be identified by a letter. Each page of each exhibit must be identified by exhibit and page number using the following format: Exhibit A, Page 2 of 3. If material is to be incorporated by reference within the exhibit, see the instruction on incorporation by reference. If interference studies, frequency coordination reports, radiation hazard reports, environmental impact statements, etc., are required by rule, include them as exhibits. All exhibits must be consecutively designated using either letters or numbers. All exhibits must be listed on the exhibit chart, Main Form, page 4.

### **Filing of Applications**

An original and two copies of the completed application(s) for earth station(s) and an original and nine copies of the completed application(s) for space station(s), as set forth in Part 25, must be submitted along with an FCC Form 159 and the correct filing fee amount. The original application and the duplicate thereof must be clearly marked as such. **DO NOT SEND CASH.** Payment can generally be made by check, bank draft, credit card, money order, or by pre-arrangement. For detailed information regarding fees refer to the International and Satellite Services Fee Filing Guide.

### **Mailing of Applications**

Completed applications concerning earth stations should be mailed to:

Federal Communications Commission  
International Bureau-Earth Station  
P.O. Box 358160  
Pittsburgh, Pennsylvania 15251-5160

Completed applications concerning space stations should be mailed to:

Federal Communications Commission  
International Bureau-Space Station  
P.O. Box 358210  
Pittsburgh, Pennsylvania 15251-5210

When delivering feeable applications by hand or by courier, use the following address:

Federal Communications Commission  
c/o Mellon Bank  
Three Mellon Bank Center  
535 William Penn Way  
27th Floor, Room 153-2713  
Pittsburgh, Pennsylvania  
(Attn: Wholesale Lockbox Shift Supervisor).

Applications received before midnight on a normal business day will receive that day's date as the receipt date. Deliveries made after midnight on Fridays will not be "officially" receipted until the next Monday. Applications received on weekends and government holidays are dated the next regular business day. *See* the FCC International and Satellite Services Fee Filing Guide for fee information.

### **Additional Information**

All information provided in this form will be available for public inspection. If information requested on the form is not provided, processing of the application may be delayed or the application may be returned without action pursuant to FCC rules.



### **Paperwork Reduction and Privacy Act Notice**

The solicitation of personal information requested in this form is authorized by the Communications Act of 1934, as amended, and the Telecommunications Act of 1996, Pub. L. 104-104 (February 8, 1996). The FCC will use the information provided in this form to determine whether grant of this application is in the public interest. In reaching that determination, or for law enforcement purposes, it may become necessary to refer personal information contained in this form to another government agency. In addition, all information provided in this form will be available for public inspection. If information requested on this form is not provided, processing of the application may be delayed or the application may be returned without action pursuant to the Commission rules. Your response is required to obtain the requested authority.

Public reporting burden for this collection is estimated to be 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Federal Communications Commission, AMD-Performance Evaluation and Records Management Branch, Washington, D.C. 20554, Paperwork Reduction Project 3060-0678. **[Do not send completed application forms to this address.]** Applicant is not required to respond to any collection of information that does not display a valid OMB Control Number.

The foregoing Notice is required by the Privacy Act of 1974, Pub.L. 93-597, December 31, 1974, 5 U.S.C. 552a(e)(3), and the Paperwork Reduction Act of 1995, Pub.L. 104-13, May 22, 1995, 44 U.S.C. 3506(c)(1)(B), 5 CFR 1320.5(b).

### **Miscellaneous Information Regarding Specific Types of Filings**

**Space Station Applications.** All space station applications should be filed using Form 312 Main Form. Applications for assignments and transfers of control of space station licenses should also include Schedule A. Only the Main Form is needed to submit ownership information. All additional required space station information such as business plans, technical descriptions, etc. should be provided in a narrative form attached to the Form 312 Main Form. See Part 25.140, et al., of the FCC's Rules and Regulations concerning the filing requirements for space station applications.

**Earth Station Amendments.** All amendments to pending earth station applications should include FCC Form 312 Main Form and Schedule B. Applicants may incorporate by reference those data items not being changed. (See instructions for incorporation by reference.)

**Earth Station Modifications.** All modifications to existing earth station authorizations should include FCC Form 312 Main Form and Schedule B. Applicants may incorporate by reference those data items not being changed. (See instructions for incorporation by reference.) If you presently hold domestic, international, and/or transborder authorizations for the same earth station (call sign) that were previously granted under different file numbers, be sure to include the composite data from all of these previous separate authorizations. Only one modified authorization will be issued that encompasses all of the previous earth station authorizations.

**VSAT Network Applications.** Applications for blanket licenses for VSAT networks may be filed in a single consolidated network application using Form 312. Separate radio station authorizations will be issued to each hub station and for each different size or type of remote unit in the network. The application for a new VSAT network should include a single Main Form and a Schedule B which includes the complete data for all parts of the VSAT network. Provide a separate Schedule B, Page 1 for each part of the network, including one sheet for each hub station and one sheet for each remote unit variant. Include all hub and remote antennas, frequency coordination limits, and particulars of operation on Schedule B, Pages 2-4. Be sure to identify the associated site-id and antenna-id for each row of data. Attach continuation sheets for Pages 2-4 as needed. Provide a separate Schedule B, Page 5 for each hub site and remote variant. Be sure to identify the site-id on each Page 5.

Modifications to a VSAT network authorization should include only the data relevant to the portion of the network that is being revised. For example, if the modification affects only the hub station, do not include data relevant to the remote units (see Earth Station Modifications section above).

## SPECIFIC INSTRUCTIONS FOR THE MAIN FORM

### APPLICANT INFORMATION

Items 1-16. These items identify the applicant. If an authorization is granted, the information provided will become the licensee's name, address and telephone numbers of record, and the authorization will be sent to this address. Applicants must provide a current and valid mailing address. Failure to respond to FCC correspondence sent to the address of record may result in dismissal of an application, liability for forfeiture or revocation of an authorization. These items also identify the contact representative (e.g., a person at the headquarter's office of the applicant, the law firm of the applicant, or the company that prepared or submitted the application on behalf of the applicant).

### CLASSIFICATION OF FILING

Item 17a indicates whether the filing relates to an earth or a space station application. Do not combine both earth and space station actions within a single application -- check only one box. For example, file two separate applications for an Assignment of License that covers both the space segment and earth segment of a satellite system.

Item 17b indicates the type of application that is being filed. Do not combine different types of actions into a single application -- check only one box. For example, to modify and assign the authorization for a single station, you must file two separate applications. Schedule A must be attached to the Main Form if you have checked box 17b5 or 17b6. Schedule B must be attached to the Main Form if you have checked box 17b1, 17b2, 17b3 (if earth station), 17b4, or 17b7.

Item 18 If this filing is in reference to an existing station, provide the station's call sign. If this filing is in reference to multiple stations provide the call sign of the lead station.

Item 19 Where a pending application is to be amended, enter the date that the original pending application was filed. Also provide the file number of that original pending application, if known.

### TYPE OF SERVICE

Item 20 This item seeks information about the nature of service requested.

Item 21 This item indicates whether or not the applicant will operate this station as a common carrier.

Item 22 All earth station applications must identify whether or not U.S. licensed satellites are used. Check both boxes if this earth station will operate with both U.S. and foreign licensed satellites. If the earth station will operate with a non-U.S. licensed satellite, be sure to complete Item B3 on Schedule B.

Item 23 Only those applicants providing INTERNATIONAL COMMON CARRIER service need to indicate whether or not this facility is connected to the Public Switched Network. Appropriate Section 214 filings are required. See 47 CFR Part 63 of the Commission Rules.

Item 24 The proposed frequency band(s) are specified in this item. All C-band (4/6 GHz) earth stations require successful prior radio frequency coordination for both Fixed and Temporary-Fixed (including Satellite News-Gathering) operations. See Items B6, B11, and B12 on Schedule B.

### TYPE OF STATION

Item 25 This item identifies the class of station to be placed in service. Mark only one box. Transportable Satellite News-Gathering (SNG) trucks fall under the category "Temporary-Fixed Earth Station."

Item 26 This item identifies whether the earth station transmits and/or receives.

### PURPOSE OF MODIFICATION OR AMENDMENT

**Note:** An application that revises the data on a previous application that has NOT YET BEEN GRANTED is an "Amendment", whereas an application that revises the data on a previously GRANTED application (license or registration) is a "Modification". Existing authorizations are "modified" while pending applications are "amended".

Item 27 Purpose of the proposed modification or amendment highlights the various types of modifications or amendments generally requested. Mark all that apply. Provide the revised earth station data on Schedule B (see Earth Station Modifications section above).

### ENVIRONMENTAL POLICY

Item 28 This item is required for compliance with the National Environmental Policy Act of 1969, as amended, 42 U.S.C. 4321-4335. See also Part 1, Subpart I of the FCC rules (47 CFR 1.1301-1.1319). Examples of facilities that may have a significant effect on the environment include:

- o an antenna structure located in a residential area (as defined by applicable zoning laws) which will utilize high intensity aviation obstruction lighting
- o a facility located in an officially designated wilderness area, wildlife preserve or floodplain
- o a facility that affects a site significant in American history
- o a facility, the construction of which involves extensive changes in surface features

A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, and major amendments as Exhibit B. For information on preparing this study, consult OET Bulletin 65.

## **ALIEN OWNERSHIP**

Items 29-34 These items request information that will enable the FCC to determine whether an applicant is eligible under Section 310 of the Communications Act of 1934, as amended, to hold a station license. Earth station applicants not proposing to provide broadcast, common carrier, aeronautical en route or aeronautical fixed radio station services are not required to respond to Items 30-34.

## **BASIC QUALIFICATIONS**

Items 35-42 These items request information that enables the FCC to determine whether an applicant is basically qualified to hold an FCC authorization. Item 40 applies only to applicants for Space Station authorizations.

Item 43 Provide a summary of the nature of the application and services to be provided.

## **CERTIFICATION**

Items 44-48 To be acceptable for filing, applications, amendments, modifications and registrations must be signed in accordance with Part 1 of the FCC rules. The signer must be a person authorized to sign the application. Paper originals of applications must bear an original signature. Neither rubber-stamped nor photocopied signatures are acceptable.

### **SPECIFIC INSTRUCTIONS FOR SCHEDULE A**

Consent to Assignment of License/Transfer of Control  
Notification of Assignment or Transfer of Control of  
Receive-Only Registration

## **PURPOSE OF FILING**

Schedule A and the Main Form must be completed when requesting Consent to Assignment of License or Transfer of Control. Schedule A and the Main Form must be used when notifying the FCC of a completed Assignment of Receive-Only Registration or of a completed Transfer of Control of Receive-Only Registration. The Main Form and Schedule A collects information about the parties to the transaction in order to determine whether the requested consent, governed by 47 CFR Part 25, serves the public interest. The Main Form is to be completed by the prospective licensee or registrant in the case of an assignment (assignee) or the new controlling entity in the case of a transfer of control (transferee). Schedule A is to be completed by all involved parties.

Items A1-A9 and A22-A25 must be completed by the current licensee or registrant.

Items A10-A14 and A26-A29 must be completed by the entity assigning or transferring the license or registration (assignor/transferor) if different from the licensee or registrant.

Items A15-A21 and A30-A33 must be completed by the assignee/transferee.

## **SPECIFIC INSTRUCTIONS FOR SCHEDULE B** Technical and Operational Description of Earth Station(s)

### **PURPOSE OF FILING**

Schedule B is used for all earth station filings that do not involve Assignments or Transfers of Control. Schedule B and the Main Form must be completed when filing for both licenses and registrations for all new earth stations, all amendments to pending earth station applications, and all modifications to existing earth station authorizations. This includes VSAT networks. Schedule B collects technical and operational information relevant to the earth station.

### **LOCATION OF EARTH STATION SITE**

Item B1a-B1i identifies the location of the fixed earth station both by address and geographic coordinates; and the area of operation for temporary-fixed, mobile, and VSAT remote earth stations. For fixed earth stations, indicate whether the geographic coordinates are based on the North American Datum (NAD) of 1927 or 1983. Until further notice, you must provide the geographic coordinates based upon NAD-27. *See* FCC Public Notice, DA 92-1188 (released September 1, 1992).

Item B1b should be completed only when the application involves a VSAT network. The site identifier is used to identify the various parts of the VSAT network. The applicant should assign a unique identifier to each hub station and each remote variant that is part of a VSAT network (e.g., "HUB", "REMOTE1", "REMOTE2", etc.). Each hub station and each remote variant of a VSAT network must have its own completed Page 1 of Schedule B. The Points of Communications (Item B2) and Destination Points (Item B3) must be completed individually for each hub station and each remote variant.

### **POINTS OF COMMUNICATIONS**

Item B2 This is the list of satellites with which the earth station will communicate. If the earth station will communicate only with U.S. licensed satellites, then "ALSAT" is the notation needed under item B2. If, however, the earth station will operate with satellites licensed by countries other than the U.S.A., each and every non-U.S. licensed satellite must be individually listed here. If the earth station will operate with both U.S. licensed satellites and non-U.S. licensed satellites, include the notation "ALSAT" to cover the U.S. licensed satellites and then list each non-U.S. licensed satellite individually.

Item B6, Frequency Coordination Limits, must also be completed to indicate the satellite orbital arc range and frequency band limits over which the satellites will operate. This applies to both U.S. licensed and non-U.S. licensed satellite systems. Any authorization issued for the earth station will be valid only in the orbital arc range and frequency band range specified in Item B6.

## DESTINATION POINTS

Item B3 This is a list of all countries that the earth station will provide service to using non-U.S. licensed satellites. The countries for each non-U.S. licensed satellite must be listed separately. The ITU 3-letter country codes as specified in Table B1 to the Preface of the ITU's International Frequency List may be used to identify the countries to which service will be provided.

## EARTH STATION ANTENNA FACILITIES

Item B4a Site IDs should be provided only for applications relating to VSAT networks. Use the Site Identifier (Item B1b) to identify the portion of the VSAT network that each antenna belongs to.

Item B4b Applicants should assign a unique identifying number or name to each antenna. This ID should be used throughout Schedule B when referring to the frequencies, emissions, heights, satellite arcs, etc., that are associated with each antenna that comprises the earth station.

Item B4c Identify the number of units of each make and model of antenna installed at this earth station. For VSAT networks, identify the total number of units for each remote segment.

Item B4d-B4e Provide the manufacturer and model number of the antenna.

Item B4f Provide the diameter of the antenna for circular aperture antennas. For elliptical aperture antennas, provide the major and minor axes diameters of the antenna and its equivalent circular electrical diameter. All units must be provided in meters.

Item B4g Provide the antenna gain and reference frequency for both the transmit and receive frequency bands. The antenna gain should be characteristic of the center frequency of the frequency band in which it operates.

## ANTENNA HEIGHTS AND MAXIMUM POWER LIMITS

Item B5a See item B4b above.

Item B5b For earth station antennas that will be mounted on towers or are otherwise subject to the required FCC prior tower registration, provide the Tower ID number as listed in the FCC's Tower Database. See 47 CFR Part 17 for information concerning prior registration of towers.

Item B5c-B5d Enter the maximum overall height to the top of the antenna structure with respect to ground level and mean sea level. All units must be in meters. See Part 17 of the FCC Rules.

Item B5e-B5f If the antenna is located on a building or other structure, provide the height of the building above ground level, and the maximum height of the antenna above the top of the structure on which the antenna is located. Also attach a sketch of the site and other information required by 47 CFR Part 17.

Item B5g-B5h If the antenna transmits, provide the total input power (in Watts) at the antenna flange and the aggregate output EIRP (in dBW) for all r.f. carriers. These powers must be consistent with those provided in the Radiation Hazard Study in Exhibit B.

## FREQUENCY COORDINATION LIMITS

Item B6a See item B4b above.

Item B6b Provide the lower and upper frequency band limits over which the earth station has been frequency coordinated, or over which the earth station will operate.

Item B6c-B6d Provide the eastern most and western most geostationary satellite arc limits over which the earth station has been frequency coordinated, or over which the earth station will operate. For non-geostationary satellites, provide the notation "NON-GEO".

Item B6e-B6f Provide the elevation angle to the eastern most and western most geostationary satellite orbital arc limits. For non-geostationary satellites, provide the minimum elevation angle at which the earth station will operate.

Item B6g-B6h Provide the azimuth angle relative to true north to the eastern most and western most geostationary satellite orbital arc limits. For non-geostationary satellites, provide the maximum azimuthal angles at which the earth station will operate (e.g., 0-360 degrees).

Item B6i If the earth station transmits in this frequency band, provide the maximum EIRP density toward the horizon (in dBW/4kHz).

## PARTICULARS OF OPERATION

Item B7a See item B4b above.

Item B7b Enter the lower and upper frequency limits of the frequency band to which this emission is limited. Alternatively, provide the single center or carrier frequency of the emission.

Item B7c Indicate with a "T" or "R" whether the earth station transmits or receives this emission in this frequency band.

Item B7d Indicate the antenna polarization used with this emission.

Item B7e Enter the emission designator for the emission. (For proper emission designator format, see Section 2.201 of

the FCC Rules.)

Item B7f For transmit mode, provide the maximum EIRP, in dBW, for each r.f. carrier of the emission.

Item B7g For transmit mode, provide the maximum EIRP Density, in dBW/4kHz, for each r.f. carrier of the emission.

Item B7h Give a brief description of both the modulation and services provided by this emission. Examples of modulation include QPSK, BPSK, SCPC, etc. Examples of services include "video", "data", "voice", etc.

**Items B8-B13 Generally**

If the application is for a VSAT network, attach an individual Schedule B, Page 5 for each hub station and each different size or type of remote unit. Items B8-B13 require response with respect to each portion of the VSAT network. Identify the VSAT site by using the Site Identifier from Item B1b. For all other earth station applications not involving VSAT networks, respond to Items B8-B13 with respect to the earth station as a whole (*i.e.*, with respect to all antennas that comprise the earth station).

Item B8-B9 These questions indicate compliance with the antenna sidelobe standard specified in 25.209 of the FCC Rules. FSS operations using satellites located in the geostationary satellite orbit must comply with the more stringent standard (item B8), or provide a technical analysis showing that this operation is compatible with two-degree spacing policy. Earth stations operating with non-geostationary satellites (MSS, etc.) or non-FSS operations should indicate compliance with the less stringent antenna standard (item B9).

Item B10 If the earth station is operated from a remote location, give the location and telephone number of the control point.

Item B11-B12 If the earth station operates in frequency bands that are shared with other radio services, such as the C band (4/6 GHz), frequency coordination is required. In such cases, a Frequency Coordination Report and/or Coordination Contour map is required. Also see item B6, Frequency Coordination Limits. There are several private companies that will provide frequency coordination services for hire.

Item B13 The purpose of this item is to insure adherence to all regulations concerning the safety of air travel. *See* 47 CFR Part 17 for requirements concerning the notification and coordination of antenna structures with the FAA. *Also see* 47 CFR Part 25.113(c) concerning earth station filing requirements.