



SAT-STA-20041217-00225
with attached conditions

Call Sign KS-35 Grant Date Feb 10, 2005
(or other identifier)

Term Dates _____ Approved by OMB
From See conditions To: See conditions 3060-0678

Approved: RLN Chief Satellite
Robert B. Nelson Engineering Branch

Date & Time Filed: Dec 17 2004 3:54:02:183PM
File Number: SAT-STA-20041217-00225
Callsign:

FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR SPACE STATION SPECIAL TEMPORARY AUTHORITY
FOR OFFICIAL USE ONLY

APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:
Request STA for MARISAT-F2—January 1—January 30

1. Applicant

Name:	Intelsat LLC	Phone Number:	202-944-7848
DBA Name:		Fax Number:	202-944-7860
Street:	3400 International Drive, N.W.	E-Mail:	susan.crandall@intelsat.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20008 -3006
Attention:	Susan H Crandall		

ATTACHMENT

MARISAT
SAT-STA-20041217-00225
Call Sign: KS-35
February 11, 2004

Intelsat LLC's ("Intelsat") request, File No. SAT-STA-20041217-00225, for special temporary authority¹ (STA) to provide UHF capacity on a non-interference basis via its MARISAT-F2 satellite at 33.9° W.L. orbital location (Call Sign KS-35) IS GRANTED. Accordingly, Intelsat is authorized to operate the MARISAT satellite in the UHF Narrowband Channel A (307.75 MHz Center Frequency (uplink) and 254.15 MHz Center Frequency (downlink)) and the UHF Narrowband Channel B (311.15 MHz Center Frequency (uplink) and 257.55 MHz Center Frequency (downlink)) ("UHF bands") on a non-interference basis for the period of February 11 until April 10, 2005, in accordance with the terms, conditions, and technical specifications set forth in its application, this Attachment and the Federal Communications Commission's Rules.

(1) Intelsat shall ensure that coordination of its UHF band operations at the 33.9° W.L. orbital location with existing satellites has been completed such that no unacceptable interference results from the operation of MARISAT at the 33.9° W.L. orbital location in the UHF bands.

(2) While operating at the 33.9° W.L. orbital location in the UHF bands, no harmful interference shall be caused by the MARISAT satellite to any other lawfully operating satellites or radiocommunication systems. Operations of the MARISAT satellite in the UHF bands shall cease immediately upon notification of such interference and Intelsat shall inform the Commission in writing immediately of such an event.

(3) While operating the MARISAT satellite in the UHF bands at the 33.9° W.L. orbital location, Intelsat is required to accept interference from other lawfully operating in-orbit satellites or other radiocommunication systems.

(4) Any action taken or expense incurred as a result of operations pursuant to this authority is solely at Intelsat's risk.

(5) This STA does not convey to Intelsat any authority to operate another satellite at the 33.9° W.L. orbital location in the UHF bands or any priority in the U.S. application-processing queue relative to applications for authority to operate a regularly authorized

¹ The Commission has previously authorized Intelsat to operate the MARISAT-F2 satellite at 33.9° W.L. orbital location and to provide C- and L-band service to the National Science Foundation. *See* Authorizations Granted, Applications of Comsat General Corporation, Lockheed Martin Global Telecommunications LLC, Comsat New Services, Inc., Intelsat LLC, and Intelsat MTC LLC to Assign Licenses and Authorizations and Request for a Declaratory Ruling on Foreign Ownership, DA 04-3418 (Oct. 27, 2004) (Public Notice).

satellite at this orbital position in the UHF bands. Further, grant of this STA is without prejudice to our action on Intelsat's request to modify its existing authorization to provide UHF operations on a non-interference basis.²

(6) Intelsat shall notify the Commission in writing no later than three business days after the MARISAT satellite has commenced operations of in the UHF bands at the 33.9° W.L. orbital location.

(7) Intelsat is required to inform its customers utilizing the UHF bands in writing, including end-users receiving service from resellers accessing capacity on MARISAT, that UHF service is being provided pursuant to a STA on a non-harmful interference basis as specified above.

(8) Intelsat's request to waive the table of allocations to the extent necessary to operate on a non-interference basis in the UHF bands is granted.

(9) This STA shall be limited to the purpose described in Intelsat's application, *i.e.*, support of NATO operations.

(10) This STA is conditioned upon the concurrence of National Telecommunications and Information Administration (NTIA) in the use of UHF bands. If NTIA withdraws its concurrence, the STA will be cancelled effective upon the date NTIA withdraws its concurrence.

(11) Intelsat must operate pursuant to the requirements set forth in the January 24, 2005 letter from Frederick R. Wentland, Associate Administrator, Office of Spectrum Management, NTIA to Donald Abelson, Chief, International Bureau, Federal Communications Commission.

(12) This grant is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective upon release.

² IBFS File No. SAT-MOD-20050204-00025

2. Contact

Name:	Carl Frank	Phone Number:	(202)719-7269
Company:	Wiley Rein and Fielding LLP	Fax Number:	(202) 719-7207
Street:	1776 K St. NW	E-Mail:	cfrank@wrf.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20006 -
Contact Title:		Relationship:	

(If your application is related to an application filed with the Commission, enter the file number below.)

3. Reference File Number

4a. Is a fee submitted with this application?

- If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).
- Governmental Entity Noncommercial educational licensee
- Other (please explain):

4b. Fee Classification CRY - Space Station (Geostationary)

5. Type Request

- Change Station Location Extend Expiration Date Other

6. Temporary Orbit Location
33.9 degrees W.L.

7. Requested Extended Expiration Date

8. 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.)

Applicant herein requests a grant of Special Temporary Authority for 30 days to enable it to provide UHF Space Segment capacity on a non-interference basis via its MARISAT-F2 satellite at 33.9 degrees W.L. to Paradigm Secure Communications in support of NATO. Applicant requests that the 30-day period begin on January 1, 2005 and end on January 30,

9. 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 No

10. Name of Person Signing
Patrick J. Cerra

11. Title of Person Signing
Vice President

12. Please supply any need attachments.

Attachment 1: Letter

Attachment 2:

Attachment 3:

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

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8. Description

Applicant herein requests a grant of Special Temporary Authority for 30 days to enable it to provide UHF Space Segment capacity on a non-interference basis via its MARISAT-F2 satellite at 33.9 degrees W.L. to Paradigm Secure Communications in support of NATO. Applicant requests that the 30-day period begin on January 1, 2005 and end on January 30, 2005.



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December 17, 2004

Carl R. Frank
202.719.7269
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VIA ELECTRONIC FILING

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 - 12th Street, SW
Washington DC 20554

Re: URGENT Request for Special Temporary Authority for MARISAT-F2
UHF Transponders

Dear Ms. Dortch:

Intelsat LLC ("Intelsat"), by its attorneys and pursuant to Section 25.120 of the Commission's rules, herein requests Special Temporary Authority ("STA") from January 1, 2005 through January 30, 2005 to enable it to provide UHF Space Segment capacity on a non-interference basis via its MARISAT-F2 satellite at 33.9° W.L. in support of NATO.¹ In support of this request Intelsat submits the following information.

The Commission has authorized Intelsat to operate the MARISAT-F2 satellite at 33.9° W.L. and to provide C- and L-band service to the National Science Foundation.² Intelsat has now received an urgent request from Paradigm Secure Communications for service in the two UHF narrowband channels in support of NATO. The UHF channel characteristics are as follows:

Narrowband Channel A:

Up-link: 307.75 MHz Center Frequency
Down-link: 254.15 MHz Center Frequency
Band-width: 24 kHz
EIRP: 23 dBW

¹ Intelsat has filed its STA request, this supporting letter, an FCC Form 159 and a \$735.00 filing fee electronically via the International Bureau's Filing System.

² See Authorizations Granted, Applications of Comsat General Corporation, Lockheed Martin Global Telecommunications LLC, Comsat New Services, Inc., Intelsat LLC, and Intelsat MTC LLC to Assign Licenses and Authorizations and Request for a Declaratory Ruling on Foreign Ownership, DA 04-3418 (Oct. 27, 2004) (Public Notice).

Wiley Rein & Fielding LLP

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EIRP pattern varies less than 1 dB over the earth's surface.

G/T: -18 dB/K
SFD: -151 dBW/m²
Pole: RHCP
Beam: Global

Narrowband Channel B:

Up-link: 311.15 MHz Center Frequency
Down-link: 257.55 MHz Center Frequency
Band-width: 24 kHz
EIRP: 23 dBW

EIRP pattern varies less than 1 dB over the earth's surface

G/T: -18 dB/K
SFD: -151 dBW/m²
Pole: RHCP
Beam: Global

Both MARISAT-F2 UHF narrowband channels were last coordinated and authorized by the Commission to operate from this orbital location in 2003 on a non-interference basis.³ Intelsat has discussed this request with NTIA, which has posed no objections to the service. NTIA is coordinating these frequencies within DoD and NATO to minimize the risk of harmful interference to other UHF spectrum users. Intelsat and NATO will abide by any operational constraints outlined by NTIA as a result of this coordination.

Intelsat anticipates that ITU registration of the UHF frequencies will remain under the purview of NTIA, consistent with past operation of these channels.

³ See COMSAT General Request for 180-day Special Temporary Authority (STA) for MARISAT F-2 UHF Transponder (granted by stamp-grant Jan. 17, 2003 for 30 days and subsequently renewed); COMSAT General Request for 30-day Special Temporary Authority (STA) for MARISAT F-2 "Narrowband B" UHF Transponder (granted by stamp-grant Jan. 31, 2003 and subsequently renewed).

Wiley Rein & Fielding LLP

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A grant of STA as requested herein will serve the public interest by allowing Intelsat to meet the urgent communications requirements of NATO. This, in turn, promotes the interest of the U.S. Government in ensuring the safety of its citizens.

Please direct any questions to Susan Crandall at (202) 944-7848 or to the undersigned.

Very truly yours,

/s/ Chin Kyung Yoo

Carl R. Frank
Chin Kyung Yoo
Counsel for Intelsat LLC

cc: Tom Tycz (via e-mail)
Andrea Kelly (via e-mail)
Bob Nelson (via e-mail)
Karl Kensinger (via e-mail)

WRFMAIN 12279865.1

S1. GENERAL INFORMATION Complete for all satellite applications.

a. Space Station or Satellite Network Name: MARISAT-F2		e. Estimated Date of Placement into Service: 1/1/1977	i. Will the space station(s) operate on a Common Carrier Basis: N
b. Construction Commencement Date:		f. Estimated Lifetime of Satellite(s): 5 Years	j. Number of transponders offered on a common carrier basis:
c. Construction Completion Date:		g. Total Number of Transponders: 2	k. Total Common Carrier Transponder Bandwidth: MHz
d1. Est Launch Date Begin: 10/14/1976	d2. Est Launch Date End:	h. Total Transponder Bandwidth (no. transponders x Bandwidth) 0.048 MHz	l. Orbit Type: Mark all boxes that apply: <input checked="" type="checkbox"/> GSO <input type="checkbox"/> NGSO

S2. OPERATING FREQUENCY BANDS Identify the frequency range and transmit/receive mode for all frequency bands in which this station will operate. Also indicate the nature of service(s) for each frequency band.

Frequency Band Limits				e. T/R Mode	f. Nature of Service(s): List all that apply to this band
Lower Frequency (.Hz)		Upper Frequency (.Hz)			
a. Numeric	b. Unit (K/M/G)	c. Numeric	d. Unit (K/M/G)		
254.138	M	254.162	M	T	Military SATCOM
257.538	M	257.562	M	T	Military SATCOM
307.738	M	307.762	M	R	Military SATCOM
311.138	M	311.162	M	R	Military SATCOM

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

a. Nominal Orbital Longitude (Degrees E/W): 33.9 W	b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection: MARISAT-F2 is currently authorized to operate at 33.9 W in the C & L Bands.
Longitudinal Tolerance or E/W Station-Keeping:	f. Inclination Excursion or N/S Station-Keeping Tolerance:	Range of orbital arc in which adequate service can be provided (Optional): Degrees E/W	
d. Toward West: 0.1 Degrees	e. Toward East: 0.1 Degrees	g. Westernmost: h. Easternmost:	
i. Reason for service are selection (Optional):			

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FCC Form 312 - Schedule S: (Technical and Operational Description)**

Page 2: NGSO Orbits

S4. ORBITAL INFORMATION FOR NON-GEOSTATIONARY SATELLITES ONLY

S4a. Total Number of Satellites in Network or System:

S4c. Celestial Reference Body (Earth, Sun, Moon, etc.):

S4b. Total Number of Orbital Planes in Network or System:

S4d. Orbit Epoch Date:

For each Orbital Plane Provide:

(e) Orbital Plane No.	(f) No. of Satellites in Plane	(g) Inclination Angle (degrees)	(h) Orbital Period (Seconds)	(i) Apogee (km)	(j) Perigee (km)	(k) Right Ascension of the Ascending Node (Deg.)	(l) Argument of Perigee (Degrees)	Active Service Arc Range (Degrees)		
								(m) Begin Angle	(n) End Angle	(o) Other

S5. INITIAL SATELLITE PHASE ANGLE For each satellite in each orbital plane, provide the initial phase angle.

(a) Orbital Plane No.	(b) Satellite Number	(c) Initial Phase Angle (Degrees)

NO NGSO DATA FILED

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S6. SERVICE AREA CHARACTERISTICS for each service area provide:

(a) Service Area ID	(b) Type of Associated Station (Earth or Space)	(c) Service Area Diagram File Name (GXT File)	(d) Service Area Description. Provide list of geographic areas (state postal codes or ITU 3-ltr codes), satellites or Figure No. of Service Area Diagram.
AOR-T	E		Atlantic Ocean Region
AOR-R	E		Atlantic Ocean Region

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S7. SPACE STATION ANTENNA BEAM CHARACTERISTICS For each antenna beam provide:

(a) Beam ID	(b) T/R Mode	Isotropic Antenna Gain		(e) Pointing Error (Degrees)	(f) Rotational Error (Degrees)	(g) Min. Cross- Polar Iso- lation (dB)	(h) Polar- ization Switch- able? (Y/N)	(i) Polarization Alignment Rel. Equatorial Plane (Degrees)	(j) Service Area ID	Transmit			Receive					
		(c) Peak (dBi)	(d) Edge (dBi)							(k) Input Losses (dB)	(l) Effective Output Power (W)	(m) Max. EIRP (dBW)	(n) System Noise Temp (k)	(o) G/T Max. Gain Pt. (db/K)	(p) Min. Saturation Flux Density (dBW/m2)	Input Attenuator (dB)		
																(q) Max. Value	(r) Step Size	
AOR-T	T	14	13	0.65	0.65		N		AOR-T	1.5	18	23						
AOR-R	R	15.4	14.4	0.65	0.65		N		AOR-R				31	-18	-151			

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S8. ANTENNA BEAM DIAGRAMS For each beam pattern provide the reference to the graphic image and numerical data:
Also provide the power flux density levels in each beam that result from the emission with the highest power flux density.

(a) Beam ID	(b) T/R Mode	(c) Co-or Cross Polar Mode ("C" or "X")	(d) GSO Ref. Orbital Longitude (Deg, E/W)	(e) NGSO Antenna Gain Contour Description (Figure/Table/ Exhibit)	(f) GSO Antenna Gain Contour Data (GXT File)	Max. Power Flux Density (dBW/M2/Hz)				
						At Angle of Arrival above horizontal (for emission with highest PFD)				
						(g) 5 Deg	(h) 10 Deg	(i) 15 Deg	(j) 20 Deg	(k) 25 Deg
AOR-T	T	C	-33.9	MARISAT.pdf		-148	-148	-148	-148	-148
AOR-R	R	C	-33.9	MARISAT.pdf						

**FEDERAL COMMUNICATIONS COMMISSION
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S9. SPACE STATION CHANNELS For each frequency channel provide: S10. SPACE STATION TRANSPONDERS For each transponder provide:

(a) Channel No.	(b) Assigned Bandwidth (kHz)	(c) T/R Mode	(d) Center Frequency (MHz)	(e) Polarization (H, V, L, R)	(f) TTC or Comm Channel (T or C)
A-T	24	T	307.75	R	C
B-T	24	T	311.15	R	C
A-R	24	R	254.15	R	C
B-R	24	R	257.55	R	C

(a) Transponder ID	(b) Transponder Gain (dB)	Receive Band		Transmit Band	
		(c) Channel No.	(d) Beam ID	(e) Channel No.	(f) Beam ID
A	170	A-R	AOR-R	A-T	AOR-T
B	170	B-R	AOR-R	B-T	AOR-T

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Page 7: Digital Modulation

S11. DIGITAL MODULATION PARAMETERS For each digital emission provide:

(a) Digital Mod. ID	(b) Emission Designator	(c) Assigned Bandwidth (kHz)	(d) No. of Phases	(e) Uncoded Data Rate (kbps)	(f) FEC Error Correction Coding Rate	(g) CDMA Processing Gain (dB)	(h) Total C/N Performance Objective (dB)	(i) Single Entry C/I Objective (dB)
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Page 10: TT and C

S14. Is the space station(s) controlled and monitored remotely? If Yes, provide the location and telephone number of the TT and C control point(s): Yes

Remote Control (TT C) Location(s):

S14a. Street Address: 22000			
S14b. City: Clarksburg	S14c. County: Montgomery	S14d. State/Country MD	S14e. Zip Code: 20871
S14f. Telephone Number: 301-428-1501		S14g. Call Sign of Control Station (if appropriate): E000355	

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Page 11:
Characteristics and
Certifications

S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

S15a. Mass of spacecraft without fuel (kg): 306.356	Spacecraft Dimensions (meters)	Probability of Survival to End of Life (0.0 - 1.0)
S15b. Mass of fuel and disposables at launch (kg): 655.441		
S15c. Mass of spacecraft and fuel at launch (kg): 392.942	S15f. Length (m): 2.159	S15i. Payload: 1
S15d. Mass of fuel, in orbit, at beginning of life (kg): 328.841	S15g. Width (m): 2.159	S15j. Bus: 1
S15e. Deployed Area of Solar Array (square meters):	S15h. Height (m): 3.81	S15k. Total: 1

S16. SPACECRAFT ELECTRICAL CHARACTERISTICS:

Spacecraft Subsystem	Electrical Power (Watts) At Beginning of Life		Electrical Power (Watts) At End of Life	
	At Equinox	At Solstice	At Equinox	At Solstice
Payload (Watts):	(a):	(f):	(k):	(p):
Bus (Watts):	(b):	(g):	(l):	(q):
Total (Watts):	(c):	(h):	(m):	(r): 202
Solar Array (Watts):	(d): 409	(i): 380	(n): 348	(s): 312
Depth of Battery Discharge (%):	(e) %	(j) %	(o) %	(t) 10 %

S17. CERTIFICATIONS:

a. Are the power flux density limits of § 25.208 met?:	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A
b. Are the appropriate service area coverage requirements of § 25.143(b)(ii) and (iii), or § 25.145(c)(1) and (2) met?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A
c. Are the frequency tolerances of § 25.202(e) and the out-of-band emission limits of § 25.202(f)(1), (2) and (3) met?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A
In addition to the information required in this Form, the space station applicant is required to provide all the information specified in Section 25.114 of the Commission's rules, 47 C.F.R § 25.114.			