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IRWIN, CAMPBELL & TANNENWALD, P.C.
ATTORNEYS AT LAW
1730 RHODE ISLAND AVENUE, N.W.
SUITE 200
WASHINGTON, D.C. 20036-3101
(202) 728-0400
FAX (202) 728-0354
<http://www.ictpc.com>

MICHELLE A. MCCLURE
(202) 777-3984
mmcclure@ictpc.com

March 2, 2006

RECEIVED

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VIA MESSENGER

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

Federal Communications Commission
Office of Secretary

Re: L-3 Communications, Interstate Electronics Corporation
Application for Earth Station Authority
File No.: SES-LIC-20020611-00939
Call Sign: E020160

Dear Ms. Dortch:

On behalf of L-3 Communications, Interstate Electronics Corporation ("IEC"), proposed applicant of the above-reference Ku-Band VSAT network, is a letter from parties operating satellites within 6 degrees of Intelsat Americas 5. A previous unsigned version had been provided and in order to complete the record, IEC is now submitting the fully executed letter.

Please contact the undersigned with any questions.

Very truly yours,



Michelle A. McClure
Counsel for L-3 Communications, Interstate
Electronics Corporation

cc: (date stamped copy via email)
Scott Kotler, FCC
Tom Murphy

INFORMATION | COMMUNICATIONS | TECHNOLOGY



ISCO/2004/IEC-affidavit
January 13, 2005

Federal Communications Commission
International Bureau
445 12th Street, S.W.
Washington, DC 20554

Subject: Engineering Certification of Intelsat concerning the use of ESV Ku-band antenna (2 m and 2.4m) with the Intelsat Americas 5 domestic satellite

To Whom It May Concern:

This letter certifies that Intelsat is aware that Interstate Electronics Corporation (IEC), a division of L-3 Communications in support of the U.S. Navy TRIDENT test program is filing to operate on Intelsat Americas 5 at 97° W.L. using two Ku-band transmit/receive Earth Stations on aboard Vessel (ESV)

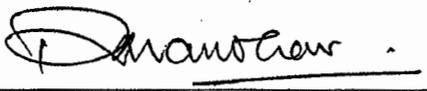
IEC network architecture consist of six fixed 2.4 meter Ku-band earth stations and two Earth Stations on aboard Vessel (ESV) - one fixed 2.0 meter (Model No. 8297) and one fixed 2.4 meter (Model No. 9997) SeaTel antennas. The Ku band antennas comply with the requirements of Section 25.209 of the FCC's rules.

The ESV antenna system is mounted on a three axis stabilization assembly that provides free motion with 3° of freedom. This assembly allows the inertia of the antenna system to hold the antenna pointed motionless in inertial space while the ship rolls, pitches and yaws beneath the assembly. Three low friction torque motors attached to each of the three free axes of the assembly provide the required force to overcome the disturbing torque imposed on the antenna system by cable restraints, bearing friction and small air currents within the radome. These motors are also used to re-position the antenna in azimuth and elevation. This insures that the ESVs will operate with a $\pm 0.2^\circ$ pointing accuracy of the exact position of the satellite.

In order to prevent potential unacceptable interference from antenna misalignment, Interstate Electronics Corporation (IEC) will align the ESV antennas to less than or equal to 0.2 degrees offset in the azimuth direction of the intended satellite. In addition, the uplink power density for the antennas operating on the Intelsat Americas 5 satellites will not exceed -14.0 dBW/4 kHz into the antenna flange.

Intelsat acknowledges that the use of the ESV antennas by Interstate Electronics Corporation (IEC), installed and operated in accordance with the above conditions, should not cause unacceptable interference into adjacent satellites in accordance with FCC's 2-degree spacing policy and that Interstate Electronics Corporation (IEC) will accept interference from adjacent satellites to the degree to which harmful interference would not be expected to be caused to an earth station employing an antenna conforming to the reference patterns defined in Section 25.209 of FCC rules. If the use of this antenna should cause unacceptable interference into other systems, Interstate Electronics Corporation (IEC), has agreed that it will terminate transmission immediately upon notice from the affected parties.

Respectfully,



Ram Manohar
Intelsat

Acceptance by Interstate Electronics Corporation (IEC):

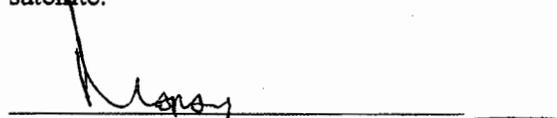
Interstate Electronics Corporation (IEC), testifies that the information provided to Intelsat and reflected in this Affidavit is true and accurate to the best of Interstate Electronics Corporation (IEC)'s knowledge.



Robert Huffman
President
Interstate Electronics Corporation (IEC)

Acceptance by PanAmSat :

PanAmSat agrees to the use of the ESV antennas (2 m and 2.4m) and the antenna alignment tolerances toward Intelsat Americas 5 at 97° WL and the power density levels into the antenna flange as stated in this letter, with respect to Galaxy satellite transponders that are within ± 6 degrees orbital spacing from the above Intelsat Americas satellite.



Mohammad Marashi
Vice President
Customer Support Engineering
PanAmSat Corporation



**UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION
RADIO STATION AUTHORIZATION**

Name: ORBIMAGE License Corp.

Call Sign: E980375

Authorization Type: Modification of License

File Number: SES-MOD-20050614-00745

Non Common Carrier

Grant Date: 01/10/2006

Expiration Date: 04/15/2009

Nature of Service: Earth Exploration Satellite Service

Class of Station: Fixed Earth Stations

A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)
1)	STATION 2	21700 ATLANTIC BLVD. DULLES, LOUDOUN, VA 20166	39°0'56.0"N	77°25'42.0"W	79.38	27

Subject to the provisions of the Communications Act of 1934, The Communications Satellite Act of 1962, subsequent acts and treaties, and all present and future regulations made by this Commission, and further subject to the conditions and requirements set forth in this license, the grantee is authorized to construct, use and operate the radio facilities described below for radio communications for the term beginning April 15, 1999 (3 AM Eastern Standard Time) and ending April 15, 2009 (3 AM Eastern Standard Time). The required date of completion of construction and commencement of operation is 00/00/0000. Grantee must file with the Commission a certification upon completion of construction and commencement of operation.

B) Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands.

The General Provision 1900 applies to all transmitting frequency bands.

For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarization Code	Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
1)	8394.0000-8394.0000	R	59K7G1D	Rx	0.00	0.00	8 GHz-2	OQPSK, Telemetry	via Orbview 5
2)	8210.0000-8210.0000	L	370MG1D	Rx	0.00	0.00	8 GHz-2	OQPSK, Data	via Orbview 5
3)	8210.0000-8210.0000	R	150MG1D	Rx	0.00	0.00	8 GHz-2	OQPSK, Data Link operates at 370 Mbps or Mbps via Orbview 5	
4)	8190.0000-8190.0000	R	150MG1D	Rx			8 GHz-2	Image data & telemetry via Orbview 3	
5)	8190.0000-8190.0000	R	36K0G1D	Rx			8 GHz-2	Image data & telemetry via Orbview 3	



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B) Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands.

The General Provision 1900 applies to all transmitting frequency bands.

For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarization Code	Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
6)	2092.6000-2092.6000	R	128KG1D	Tx	53.00	37.95	S-BAND-2		BPSK, Command via Orbview 5
7)	2092.6000-2092.6000	R	128KG1D	Tx	55.00	39.95	S-BAND-2		PSK, NRZ-S, LINEAR PM, 1 RADIANT Command & Control via Orbview 3
8)	2092.6000-2092.6000	R	NON	Tx	55.00	55.00	S-BAND-2		an unmodulated signal, transmit for less than one second on each pass of satellite (2 - 4 per day) via Orbview 3
9)	402.7200-402.7200	R	60K0F1D	Tx	34.26	22.50	UHF-2		FSK Command & Control Communications via Orbview 3
10)	401.5000-401.5000	R	60K0F1D	Rx	0.00	0.00	UHF-2		Telemetry via Orbview 3

C) Frequency Coordination Limits

#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.)		Elevation (Degrees)		Azimuth (Degrees)		Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
		East Limit	West Limit	East Limit	West Limit	East Limit	West Limit		
1)	402.7200-402.7200	NGSO		05.0-05.0		360.0-360.0		22.5	UHF-2
2)	401.5000-401.5000	NGSO		05.0-05.0		360.0-360.0			UHF-2
3)	2092.6000-2092.6000	NGSO		05.0-05.0		360.0-360.0		39.95	S-BAND-2
4)	2092.6000-2092.6000	NGSO		05.0-05.0		360.0-360.0		39.95	S-BAND-2
5)	8190.0000-8190.0000	NGSO		05.0-05.0		360.0-360.0			8 GHz-2
6)	8210.0000-8219.0000	NGSO		05.0-05.0		360.0-360.0			8 GHz-2
7)	8210.0000-8210.0000	NGSO		05.0-05.0		360.0-360.0			8 GHz-2
8)	8394.0000-8394.0000	NGSO		05.0-05.0		360.0-360.0			8 GHz-2



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D) Points of Communications

The following stations located in the Satellite orbits consistent with Sections B and C of this License:

- 1) STATION 2 to OrbView 5, U.S.-licensed satellite of the commercial remote sensing satellite system.
- 2) STATION 2 to OrbView 3, U.S.-licensed satellite of the commercial remote sensing satellite system.

E) Antenna Facilities

Site/Elevation: 79.38 (Meters) AMSL

Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
STATION 2	8 GHz-2	1	5.4	SCIENTIFIC ATLANTA	V8x-Y PEDESTAL	20.23 AGL/ 99.61 AMSL	
	Max Gains(s):	29.0 dBi @	8.1900 GHz				
	Maximum total input power at antenna flange (Watts) =						
	Maximum aggregate output EIRP for all carriers (dBW) =						
STATION 2	S-BAND-2	1	0	SCIENTIFIC ATLANTA	V8x-Y PEDESTAL	20.23 AGL/ 99.61 AMSL	
	Max Gains(s):	38.0 dBi @	2.0926 GHz				
	Maximum total input power at antenna flange (Watts) =				50.00		
	Maximum aggregate output EIRP for all carriers (dBW) =				55.00		
STATION 2	UHF-2	2		M2 ENTERPRISES	400 CP30M	20.02 AGL/ 99.4 AMSL	
	Max Gains(s):	24.8 dBi @	0.4027 GHz	12.0 dBi @	0.4015 GHz		
	Maximum total input power at antenna flange (Watts) =				8.83		
	Maximum aggregate output EIRP for all carriers (dBW) =				34.26		

G) Antenna Structure marking and lighting requirements:

None unless otherwise specified under Special and General Provisions

H) Special and General Provisions

A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

- 1010 --- Applicable to all receiving frequency bands. Emission designator indicates the maximum bandwidth of received signal at associated station(s). Maximum EIRP and maximum EIRP density are not applicable to receive operations.
- 1900 --- Applicable to all transmitting frequency bands. Authority is granted to transmit any number of RF carriers with the specified parameters on any discrete frequencies within associated band in accordance with the other terms and conditions of this authorization, subject to any additional limitations that may be required to avoid unacceptable levels of inter-satellite interference.



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H) Special and General Provisions

A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

- 2916 --- Transmitter(s) must be turned off during antenna maintenance to ensure compliance with the FCC-specified safety guidelines for human exposure to radiofrequency radiation in the region between the antenna feed and the reflector. Appropriate measures must also be taken to restrict access to other regions in which the earth station's power flux density levels exceed the specified guidelines.
- 3212 --- The licensee shall take extraordinary measures to ensure that multiple antennas co-located at the same site do not create potential exposure to radiofrequency radiation in excess of FCC safety guidelines. Antennas shall be surrounded by a fence, at least 2 meters tall with a locked gate, to prevent human exposure in excess of the FCC-specified safety limit of 1 mW/cm². Warning signs, such as those discussed in the FCC's OET Bulletin 65, shall be posted informing members of the public to keep outside the locked area. All operations must be in compliance with Section 1.1307 (b)(3) of the Commission's Rules. (See 47 CFR 1.1307 (b) (3)).
- 3213 --- All existing transmitting facilities, operations and devices must be in compliance with RF by September 1, 2000 or, if not, file an Environmental Assessment (EA). See 47 CFR 1.1307 (b) (5).
- 3449 --- Any use of the 2025-2110 MHz band by the Licensee for TT&C must be on a non-interference basis to all other systems operating under a primary or secondary status in the band. As a non-conforming user, Licensee will also be required to accept any interference to it that is caused by any of these allocated services.
- 3450 --- The use of the authorized frequency band has been approved by the Society of Broadcast Engineers (SBE) in the relevant state to 5 degree elevation angle.
- 3466 --- This authorization is subject to the conditions set forth in the Commission's Order (DA 99-353) released February 17, 1999. Any use of the 402-403 MHz band by the Licensee for TT&C must be on a non-interference basis to all other systems operating under a primary or secondary status in the band. As a non-conforming user, Licensee will also be required to accept any interference to it that is caused by any of these allocated services.
- 3848 --- The authorized frequency band(s) has (have) been cleared with the National Telecommunications and Information Administration.
- 5216 --- All operations shall be on a non-common carrier basis.
- 5419 --- ORBIMAGE's downlink operations on the frequencies centered at 8210 MHz and 8394 MHz with Orbview-5 should not interfere with the Federal Aviation Authority's fixed microwave links transmitting in a 20 megahertz bandwidth channel at 8390 MHz center frequency from Fort Meade, MD and Fairfax station, VA.
- 5420 --- ORBIMAGE's downlink operation on the frequency centered at 8394 MHz with Orbview-5 should not cause interference to the Defense Satellite Communications System satellite's uplink operations in Virginia and Earechson, Alaska.



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Expiration Date: 04/15/2009

H) Special and General Provisions

A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

8190 --- This authorization is subject to the following conditions: 1) Operations under the authority of this assignment (8190 MHz) are on a non-interference basis to existing DSCS earth station and existing government terrestrial stations on the same adjacent channel and no protection can be afforded by the government. 2) This non-government space station assignment is made with the understanding that protection cannot be guaranteed to reception of the non-government earth stations located at Barrow, AK and Dulles, VA due to existing transmitting earth stations and/or government fixed stations.

8191 --- Space Imaging L.P. filed comment on March 12, 1999, and requested the Commission to condition any grant of this application on Orbital Imaging Corporation's provision of all required technical information and coordination of the proposed earth station facility with Space Imaging's licensed E970270 earth station in Fairbanks, Alaska. Therefore, this authorization is subject to the completion of coordination with Space Imaging's licensed E970270 earth station in Fairbanks, Alaska in the affected frequency bands.



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B) This RADIO STATION AUTHORIZATION is granted subject to the additional conditions specified below:

This authorization is issued on the grantee's representation that the statements contained in the application are true and that the undertakings described will be carried out in good faith.

This authorization shall not be construed in any manner as a finding by the Commission on the question of marking or lighting of the antenna system should future conditions require. The grantee expressly agrees to install such marking or lighting as the Commission may require under the provisions of Section 303(q) of the Communications Act. 47 U.S.C. § 303(q).

Neither this authorization nor the right granted by this authorization shall be assigned or otherwise transferred to any person, firm, company or corporation without the written consent of the Commission. This authorization is subject to the right of use or control by the government of the United States conferred by Section 706 of the Communications Act. 47 U.S.C. § 706. Operation of this station is governed by Part 25 of the Commission's Rules. 47 C.F.R. Part 25.

This authorization shall not vest in the licensee any right to operate this station nor any right in the use of the designated frequencies beyond the term of this license, nor in any other manner than authorized herein.

This authorization is issued on the grantee's representation that the station is in compliance with environmental requirements set forth in Section 1.1307 of the Commission's Rules. 47 C.F.R. § 1.1307.

This authorization is issued on the grantee's representation that the station is in compliance with the Federal Aviation Administration (FAA) requirements as set forth in Section 17.4 of the Commission's Rules. 47 C.F.R. § 17.4.

The following condition applies when this authorization permits construction of or modifies the construction permit of a radio station.

This authorization shall be automatically forfeited if the station is not ready for operation by the required date of completion of construction unless an application for modification of authorization to request additional time to complete construction is filed by that date, together with a showing that failure to complete construction by the required date was due to factors not under control of the grantee.

Licensees are required to pay annual regulatory fees related to this authorization. The requirement to collect annual regulatory fees from regulatees is contained in Public Law 103-66, "The Omnibus Budget Reconciliation Act of 1993." These regulatory fees, which are likely to change each fiscal year, are used to offset costs associated with the Commission's enforcement, public service, international and policy and rulemaking activities. The Commission issues a Report and Order each year, setting the new regulatory fee rates. Receive only earth stations are exempt from payment of regulatory fees.