SAT-GE

2 Bethesda Metro Center
Suite 600
Bethesda, MD 20814
USA

15 October 2008

Federal Communications Commission - International Bureau
445 12th Street, S.W.
Washington, D.C. 20554

Subject: Engineering Certification of GE International Holdings.

To Whom It May Concern:

This letter certifies that GE International Holdings ("SAT-GE") is aware that ViaSat, Inc. ("ViaSat") has been granted authority to operate a transmit/receive steerable antenna for aeronautical mobile-satellite services (AMSS), under Federal Communications Commission ("FCC") Grant Call Sign E050318 (FCC File No. SES-LIC-20051028-01494, as amended (FCC File No. SES-AMD-20060314-00440, and SES-AMD-20070309-00325), for using fixed-satellite service frequencies pursuant to ITU RR 5.504A, on a non-conforming, non-interference basis. ViaSat is seeking FCC authorization to utilize the SAT-GE satellite GE-23 at 172 degrees E.L. licensed by the FCC.

SAT-GE understands that, as described in ViaSat's application, the transmit/receive reflector antenna is an aircraft earth station steerable antenna manufactured by ViaSat. The aperture dimensions of the reflector antenna are 29.2 cm by 29.2 cm with a peak transmit gain of 31.27 dBi at 14.25 GHz and a peak receive gain of 29.62 dBi at 11.95 GHz. These antennas will actively point to the intended satellite using a method resistant to capturing and tracking adjacent satellites as per ITU-R M.1643.

When communicating with the GE-23 satellite, ViaSat will operate its reflector antenna within the 14.2 -14.5 GHz FSS uplink band, 11.4 - 11.7 GHz FSS downlink band with a maximum e.i.r.p. of 37.35 dBW, and a corresponding maximum power spectral density at the antenna flange of -29.36 dBW/4kHz. The sub-meter antenna is a non-conforming antenna because the off-axis gain exceeds the §25.209 antenna performance standard by at most 10.25 dB in the main-lobe region. ViaSat will therefore reduce the effective power spectral density into each individual antenna flange such that the aggregate reduction in power density will equal 10.25 dB. Thus, the network aggregate antenna flange density will be -24.25 dBW/4kHz, which is 10.25 dB below the limit of -14.0 dBW/4 kHz provided in the FCC's rules and coordinated with neighboring satellites. The nominal individual antenna flange density will be -34.64 dBW/4kHz. ViaSat will operate using direct sequence spread spectrum so that the aggregate off-axis e.i.r.p. transmissions, from all co-frequency AES terminals within the footprint of the satellite, are always equal to or less than that of routinely authorized VSAT transmissions. Specifically, ViaSat will operate its system so that the co-frequency aggregate off axis e.i.r.p from all AES antenna transmissions towards the intended geostationary satellite shall not exceed:

Angle off-axis	Maximum e.i.r.p. in any 4 kHz band
$1.25° \leq \Theta \leq 7.0°$	$15 - 25 \log \Theta$ dBW
$7.0° < \Theta \leq 9.2°$	-6 dBW
$9.2° < \Theta \leq 48°$	$18 - 25 \log \Theta$ dBW
$48° < \Theta \leq 180°$	-24 dBW

The forward downlink (hub to AES) maximum EIRP density will be compliant with the levels coordinated with adjacent satellites.

10/28/2008

ViaSat will maintain the forward downlink EIRP density and the return link aggregate off-axis EIRP values, by maintaining tight control of the system operation, which includes:

1) maintaining antenna pointing to the intended satellite in a manner consistent with ITU_R M.1643;

2) network management that inhibits transmission within 1 second of receive link loss from same transponder;

3) fault detection system that terminates transmissions when out of tolerance conditions (including the antenna pointing error) are detected;

4) continuous monitoring/oversight by ground network operations center; and

5) the continuous monitoring of the number of simultaneous co-frequency transmissions made by the remote terminals, and thereby the resulting aggregate return-uplink EIRP. The congestion control algorithm manages and controls both the aggregate EIRP and the CDMA multiple access to maintain the aggregate off-axis EIRP density to within prescribed limits.

SAT-GE acknowledges that the use of the above referenced transmit/receive reflector antenna by ViaSat, installed and operated in accordance with the above conditions, is within the levels coordinated with the adjacent satellite operators and should not cause unacceptable interference into adjacent satellites operating in accordance with FCC's 2-degree spacing policy. If the FCC authorizes the operations proposed by ViaSat in the Application, SAT-GE will include the antenna, as described above, in all future satellite network coordinations. ViaSat shall comply with all such coordination agreements reached by the satellite operators.

In order to prevent unacceptable interference into adjacent satellites, SAT-GE has been informed and ViaSat acknowledges that the antennas will be installed and operated in accordance with the above conditions and/or any other operational requirements specified in the FCC authority granted to ViaSat. Furthermore, ViaSat agrees that it 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, ViaSat has agreed that it will terminate transmissions immediately upon notice from the affected parties.

Sincerely,

Date: 28 October 2008

Vince Walisko
VP, Engineering
SAT-GE

Acceptance by ViaSat:

ViaSat testifies that the information provided to Intelsat and reflected in this affidavit letter is true and accurate to the best of ViaSat's knowledge.

Date: 28 October, 2008

Daryl T. Hunter, P.E.
Director, Regulatory Affairs
ViaSat, Inc.

Acceptance by INTELSAT:

Intelsat agrees to operation of the above-described AMSS terminals by Viasat, with the technical parameters described herein, with respect to IS-605 at 174° E.L. or its replacement satellite nominally at 174° E.L. (both with a nominal geocentric separation of two degrees with respect to GE-23 at 172° E.L), IS-2 at 169° E.L. (with a nominal geocentric separation of three degrees with respect to GE-23 at 172° E.L.), IS-8 at 166° E.L. (with a nominal geocentric separation of six degrees with respect to GE-23 at 172° E.L.) and any satellites operated in the future by Intelsat at the 176° E.L. or 178° E.L. orbital positions.

Jose Albuquerque

Date: 28 October 2008

Jose Albuquerque
Senior Director, Spectrum Engineering
Intelsat