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October 8, 2012

VIA ELECTRONIC FILING

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

Re: Application for License Modification of Panasonic Avionics Corporation; File No. SES-MFS-20120913-00818, Call Sign E100089; Satellite Operator Certification

Dear Ms. Dortch:

Panasonic Avionics Corporation ("Panasonic"), pursuant to Section 1.65 of the Commission's Rules, 47 C.F.R. § 1.65, hereby submits the enclosed satellite operator certification supporting international operations of the eXConnect Ku-band AMSS network proposed in the above-referenced license modification application.

Enclosed is the certification of Intelsat, operator of the IS-14 satellite, which Panasonic seeks to add as an authorized point of communication. Similar to the certifications of other satellite operators filed with the Commission on October 1, 2012 and October 4, 2012, this submission confirms that Panasonic's planned operations fall within the coordinated parameters of the satellite and that Intelsat has received no reports of unacceptable interference relating to Panasonic's operation of the eXConnect system. Additional certification letters from remaining satellite operators will be provided shortly.

Please feel free to contact the undersigned with any questions you may have or if Panasonic can provide any additional information to facilitate expeditious action on its application.

Respectfully submitted,

Squire Sanders (US) LLP

/s/ Carlos M. Nalda

Carlos M. Nalda

Counsel to Panasonic Avionics Corporation

cc: Paul Blais, FCC International Bureau
Stephen Duall, FCC International Bureau

Intelsat.

October 8, 2012

Mark DeFazio
Director, GCS Business Operations and Planning
26200 Enterprise Way
Lake Forest, 92630

Dear Mr. DeFazio:

You have requested that Intelsat confirm it has reviewed the technical characteristics of Panasonic Avionics Corporation's ("PAC") Ku-band aeronautical mobile-satellite service ("AMSS") operations with Intelsat's IS-14 satellite 45° W.L. and certify that such operations are consistent with Intelsat's coordination agreements and will not result in unacceptable interference.

The basic characteristics of the eXConnect phased-array AMSS terminal for operation with the Intelsat IS-14 satellite include:

Characteristic	AURA LE
Frequency	Tx: 14.0 GHz to 14.5 GHz Rx: 10.7 GHz to 12.75 GHz
Aperture Size	2 Apertures of 34.7" X 6.6" each
Max. EIRP	48.0 dBW @ 90 deg Elevation
G/T	11 dB/K @ 5°Elevation 14 dB/K @ 90° Elevation
Tracking Rate	40 deg/sec in Azimuth 20 deg/sec in Elevation
Az Pointing Accuracy	0.2 deg 1-sigma

The eXConnect phased-array AMSS AESs avoid interference to other satellite operations by limiting off-axis EIRP spectral density to no more than specified levels through various means, including: (i) limiting transmit power spectral density by controlling the transmit power of the terminal and using spread spectrum technology (selecting appropriate carrier bandwidths and spread factors); (ii) controlling the off-axis gain of the antenna along the GSO by inhibiting transmissions when the skew angle exceeds a specified threshold; and (iii) controlling pointing error and inhibiting transmissions when the pointing offset exceeds a threshold of 0.35 degrees.

The off-axis EIRP spectral density limits applied to AMSS operations are the same as those defined for ESV and VMES operations.[1] The off-axis EIRP spectral density generated by an AMSS terminal operating in a two-degree spacing environment should not exceed:

15–25log10 (Θ + 0.2)	dBW/4 kHz	for	$1.5° \leq \Theta \leq 7°$
−6	dBW/4 kHz	for	$7° < \Theta \leq 9.2°$
18–25log10(Θ + 0.2)	dBW/4 kHz	for	$9.2° < \Theta \leq 48°$
−24	dBW/4 kHz	for	$48° < \Theta \leq 85°$
−14	dBW/4 kHz	for	$85° < \Theta \leq 180°$

where Θ is the angle in degrees from the line connecting the focal point of the antenna to the orbital location of the target satellite. Where orbital spacing may be larger, off-axis EIRP spectral density limits may be coordinated to higher levels.

The Aura LE antenna will operate at an effective maximum input power density at the antenna waveguide flange of -21.1 dBW /4 kHz, assuming an antenna gain of 37 dBi and employing BPSK modulation. For skew angles between 0° and 35°, the maximum off-axis EIRP spectral density levels of the terminal are consistent with the Commission's two-degree spacing limits stated above. At all skew angles, the off-axis EIRP spectral density levels of the terminal are consistent with the values coordinated under the ITU regulations for the IS-14 satellite. Panasonic takes advantage of larger orbital spacing and/or coordination priority by operating at larger skew angles to increase the geographic coverage area of its service.

In the rare circumstance when transmitting at maximum pointing offset, this terminal is compliant with the applicable off-axis EIRP density level requirements for potential affected satellites up to and including 6° off-axis. PAC's conservative approach of including antenna pointing offsets in selecting the maximum power levels defined above ensures that the operation of the Aura LE, with the associated off-axis EIRP density envelope for each satellite point of communication, will not cause unacceptable interference into adjacent satellites.

Intelsat certifies that the maximum downlink satellite EIRP density of 13.0 dBW/4KHz, operational level of the Ku-band AMSS network operated by PAC, is routinely used without causing unacceptable interference to adjacent satellite operators.

In view of the foregoing and additional consultations between Intelsat engineering staff and PAC, as well as Intelsat's experience in supporting testing and operation of the eXConnect phased-array AMSS terminal for approximately two years, Intelsat hereby certifies the following:

1. Intelsat is familiar with the technical characteristics of the eXConnect phased-array AMSS terminal. *See, e.g.,* FCC Modification Application, File No. File No. SES-MFS-20120913-00818, and Experimental License, File No. 0281-EX-PL-2010.

2. Intelsat has incorporated the technical characteristics of the eXConnect phased-array AMSS terminal into its current operational planning and coordination agreements with adjacent satellite operators, including PAC's operations on the IS-14 satellite at 45° W.L.

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[1] Off-axis EIRP spectral density levels are set forth in analogous Ku-band earth stations onboard vessels ("ESV") and vehicle-mounted earth stations ("VMES") rules. *See* 47 CFR §§25.222 and 25.226.

3. Intelsat further certifies that there have been no reported cases of unacceptable interference relating to PAC's operation of the eXConnect system from other customers operating on Intelsat satellites or from adjacent satellite operators.

In sum, Intelsat confirms that operation of the eXConnect phased-array AMSS terminal will not cause unacceptable interference into other operations on IS-14, or adjacent satellites, and is otherwise in accordance with Intelsat's technical requirements.

Please let me know if you require any additional information regarding PAC's operation of the eXConnect phased-array AMSS terminal on the IS-14 satellite.

Sincerely,

Jose Albuquerque

Jose Albuquerque
Senior Director, Spectrum Strategy
Intelsat