

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of

Panasonic Avionics Corporation

Application to Modify a Ku-band Very
Small Aperture Terminal (“VSAT”)
Network License

Call Sign E181213

File No. SES-MOD-_____

MODIFICATION APPLICATION

By this application, Panasonic Avionics Corporation (“Panasonic”) seeks to modify its existing very small aperture terminal (“VSAT”) network license, Call Sign E181213 (“*License*”),¹ by adding an additional terminal type. The modification sought herein will further support fixed operational testing and performance verification of earth stations aboard aircraft (“ESAA”) terminals and Panasonic’s ESAA network generally. This, in turn, will improve Panasonic’s ability to provide in-flight broadband connectivity to U.S. airline passengers and crew members. Pursuant to Section 25.117(c) of the Commission’s rules,² Panasonic includes an FCC Form 312 Schedule B and Technical Appendix to provide technical information pertaining to the proposed modification. The remaining information submitted in support of the *License* has not changed.

I. BACKGROUND

Panasonic provides advanced aeronautical broadband satellite services that enable in-flight entertainment and connectivity (“IFEC”) services to passengers and crew using Ku-band

¹ See Panasonic Avionics Corporation, File No. SES-LIC-20180724-01960, Call Sign E181213 (“*License*”).

² 47 C.F.R. § 25.117(c).

ESAA terminals.³ Panasonic also operates fixed Ku-band antennas in support of its ESAA system to monitor and test functionality, to support overall ESAA network operations, and to enhance the operations of the system. Panasonic has fully described its ESAA system in prior applications and hereby incorporates by reference the control functionality and other operational characteristics submitted in connection with such prior applications.⁴

II. DISCUSSION

Panasonic hereby seeks to modify its *License* to add a ThinKom ESAA terminal type that has previously been approved by the Commission.

A. Proposed New Terminal Type

Panasonic seeks to deploy seven ThinKom VICTS antennas (the “ThinKom terminal”) as fixed VSAT remotes operating in accordance with Section 25.218 of the Commission’s rules, 47 C.F.R. § 25.218. The ThinKom terminal has been previously licensed by the Commission for use in Ku-band frequencies at the same power levels.⁵

The ThinKom terminals will transmit at 14.0-14.5 GHz and receive at 10.95-11.2 GHz, 11.45-11.7 GHz, and 11.7-12.2 GHz consistent with the existing authority under the *License*. Technical information pertaining to the proposed terminal operations is included in FCC Form 312 Schedule B and the attached Technical Appendix, which includes a radiation hazard study and a datasheet for the ThinKom terminal. The ThinKom terminals will be located either at Panasonic’s Irvine, California campus or at other sites in the contiguous United States, Alaska,

³ See Panasonic Avionics Corporation, File No. SES-LIC-20100805-00992, Call Sign E100089, and subsequent filings and modifications (“*ESAA Blanket License*”).

⁴ See *id.*

⁵ *Intelsat InFlight Licenses LLC*, Call Sign E120106, File No. SES-MFS-20140801-00625 (granted Dec. 22, 2014). The ThinKom terminal also has significant similarities to that company’s vehicle-mounted earth station (“VMES”) antenna, which has also received approval. *ThinKom Solutions Inc.*, File No. SES-LIC-20120822-00768, Call Sign E120174 (granted March 8, 2013).

Hawaii, and U.S. Territories needed for satellite beam testing. To facilitate operational flexibility, Panasonic seeks authority to operate the ThinKom terminals with the FCC's Permitted List consistent with its current *License*. Panasonic will use utilize third-party gateway earth stations authorized to communicate with such satellites.

The attached FCC Form 312, Schedule B and associated exhibits to this application contain the relevant information required under the Commission's Rules. As discussed below, grant of the requested authority is in the public interest.

B. Remote Control Point

Network control and monitoring of the ThinKom terminals will be provided by the Panasonic Customer Performance Center ("CPC") on a 24/7 basis. The CPC makes use of a network management system ("NMS") to provide complete control and monitoring of all components in the Panasonic system. The NMS system has the capability of shutting down any component in the system that is malfunctioning. The primary points of contract at Panasonic's CPC facility are provided below and in the FCC Form 312, Schedule B.

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C. Public Interest Statement

The modified operations proposed herein are consistent with the Commission's rules and policies governing Ku-band earth station operations and would otherwise serve the public interest. The Commission has previously authorized operation of the ThinKom terminals in Ku-band frequencies at identical power levels. Moreover, because the terminals will communicate only with satellites on the Permitted List, transmissions will be conducted at power levels that

are compliant with the Commission's two-degree spacing rules. Thus, there is no potential for harmful interference or other adverse consequences resulting from the proposed operations.

Grant of the requested modification to the *License* will enable Panasonic to monitor and optimize its ESAA system to facilitate operations consistent with the Commission's rules, 47 C.F.R. § 25.227, and the terms of the *ESAA Blanket License*. This, in turn, will allow more efficient and effective provision of Panasonic's satellite-based mobile broadband services to the benefit of U.S. consumers and commercial airlines. It also will further enhance competition and U.S. leadership in aeronautical broadband connectivity services.

III. CONCLUSION

Panasonic respectfully requests that the Commission grant its request for a modification of the *License* to operate an additional Ku-band terminal type to support the function of its ESAA system. The terminals are compliant with Commission rules, have been previously authorized for similar operations, will communicate with satellites on the Permitted List consistent with two-degree spacing requirements, and will have significant operational benefits and no adverse impact on other users of the spectrum. Thus, grant of this modification application will serve the public interest.