Before the FEDERAL COMMUNICATIONS COMMISSION Washington, DC 20554

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In the Matter of

Application of Panasonic Avionics Corporation to Modify its Earth Stations Aboard Aircraft ("ESAA") Blanket License Call Sign E100089

File No.

APPLICATION TO MODIFY ESAA BLANKET LICENSE

By this application, Panasonic Avionics Corporation ("Panasonic") seeks to modify its existing earth stations aboard aircraft ("ESAA") blanket license, Call Sign E100089,¹ by adding new satellite points of communication for its previously-licensed ESAA terminals, and by increasing the power levels of its ESAA operations with certain existing satellite points of communication. Panasonic also seeks minor administrative corrections to its *ESAA Blanket License*. The modifications sought herein will allow Panasonic to make next-generation, in-flight broadband connectivity services available to U.S. passengers and to enhance the network capabilities of Panasonic's eXConnect system.

Pursuant to Section 25.117(c) of the Commission's rules, 47 C.F.R. § 25.117(c), Panasonic herein includes the FCC Form 312 Schedule B and Technical Appendix to provide new technical information pertaining to the requested modification. The remaining information in support of its *ESAA Blanket License* has not changed.

¹ See Panasonic Avionics Corporation, File No. SES-LIC-20100805-00992, Call Sign E100089, and subsequent filings and modifications ("*ESAA Blanket License*"); Panasonic Avionics Corporation Application for Authority to Operate Up to 50 Technically Identical Aeronautical Mobile-Satellite Service Aircraft Earth Stations in the 14.0-14.4 GHz and 11.7-12.2 GHz Frequency Bands, Order and Authorization, DA 11-1480 (rel. Aug. 31, 2011).

I. BACKGROUND

Panasonic's *ESAA Blanket License*, which supports its global ESAA operations on U.S.licensed and non-U.S. licensed aircraft communicating with a network of U.S. and foreign satellites (the "eXConnect system"), was recently modified to add satellite points of communication for its previously licensed Single Panel Antenna ("SPA") and Panasonic Phased Array ("PPA") antenna and to add the TECOM Ku-Stream 1000 ("TECOM") terminal for longterm commercial operations.² The licensed ESAA terminals are fully certified for operation on the subject commercial aircraft and operate in accordance with the terms of the *Panasonic Order*, the *ESAA Blanket License*, and Section 25.227 of the Commission's rules, 47 C.F.R. § 25.227, governing ESAA operations.

Panasonic's eXConnect system is a state-of-the-art aeronautical satellite services that enables in-flight voice and broadband Internet access to passengers and crew. Panasonic has fully described the eXConnect system in prior submissions and hereby incorporates by reference the technical showing regarding the control functionality and other operational characteristics submitted in connection with prior applications. ³ The operations proposed herein—to communicate with new satellite points of communication and operate with existing satellites at higher power levels—are consistent with the coordinated parameters of the proposed satellites and the Commission's rules and policies governing Ku-band ESAAs,⁴ and will allow Panasonic to optimize its ESAA network by utilizing next-generation technology to support its operations.

² See Panasonic Avionics Corporation, File No. SES-MFS-20170312-00255, Call Sign E100089 (granted on July 26, 2017).

³ Supra n.1.

⁴ See 47 C.F.R. § 25.227; see also Revisions to Parts 2 and 25 of the Commission's Rules to Govern the Use of Earth Stations Aboard Aircraft Communicating with Fixed-Satellite Service Geostationary-Orbit Space Stations Operating in the 10.95-11.2 GHz, 11.45-11.7 GHz, 11.7-

II. DISCUSSION

Panasonic seeks to make the following modifications to its *ESAA Blanket License:* (i) to add six new satellites as authorized points of communication for its ESAA terminals; (ii) to operate the ESAA terminals with certain previously-authorized satellite points of communication at power levels higher than those currently authorized in the *ESAA Blanket License;* and (iii) to correct certain administrative errors in the *ESAA Blanket License*.

A. Proposed New Satellite Points of Communication

The following table provides an overview of the basic parameters of ESAA operations with each individual satellite point of communication. A complete table reflecting all satellites in the eXConnect network is included in the Technical Appendix. Unless otherwise stated, Panasonic seeks to operate each satellite in Table 1 with the SPA, PPA, and TECOM ESAA terminals.

Satellite	Licensing	Orbital	Downlink	ITU	Serves	ITU Satellite
	Admin.	Location	Freq. (GHz)	Region	U.S.	Network
Express AM5 ⁶	Russia	140° E	10.95-11.2;	1	No	EXPRESS-10B
			11.45-11.7;			
			12.5-12.75			

 Table 1 - Proposed Satellite Points of Communication⁵

^{12.2} GHz and 14.0-14.5 GHz Frequency Bands; Service Rules and Procedures to Govern the Use of Aeronautical Mobile Satellite Service Earth Stations in Frequency Bands Allocated to the Fixed Satellite Service, IB Docket Nos. 12-376 & 05-20, Notice of Proposed Rulemaking and Report and Order, FCC 12- 161 (rel. Dec. 28, 2012) ("ESAA Order").

⁵ The ESAA terminals will operate in the uplink direction within the 14.0-14.5 GHz band consistent with satellite operator coordination agreements, the Commission's rules and applicable international requirements.

⁶ At this time, Panasonic seeks to add the Express AM5 satellite as a point of communication for the PPA and SPA terminals only.

Express AM6 ⁷	Russia	53° E	10.95-11.2;	1	No	EXPRESS-5B
			12.5-12.75			
IS-21	U.S.	58° W	11.45-12.2	1, 2	Yes	U.Slicensed
SES-15	Gibraltar	129.15° W	10.7-12.28	2	Yes	GIBSAT-129W, GIBSAT-129W-B, GIBSAT-FSS-G14- 129W
EUTELSAT 117WA ⁹	Mexico	116.8° W	11.7-12.2	2	Yes	MEXSAT-116.8-KU- EXT
EUTELSAT 172B	U.S.	172° E	10.95-11.2; 11.45-11.7; 12.2-12.75	1, 2, 3	Yes	U.Slicensed ¹⁰
EUTELSAT 172B	France	172° E	11.2-11.45	1, 3	No	F-SAT-E-30B-172E

1. Express AM5 and Express AM6

Express AM5 and Express AM6 ("AM5 and AM6") are non-U.S.-licensed satellites that are licensed by Russia, a member of the World Trade Organization ("WTO"), for services covered under the WTO Basic Telecommunications Agreement. Panasonic seeks authority to use AM5 and AM6 capacity for ESAA uplink operations in the 14.0-14.5 GHz band (Earth-to-space), and downlink operations in the 10.95-11.2 GHz, 11.45-11.7 GHz, and 12.5-12.75 GHz bands (space-to-Earth). The AM5 and AM6 satellites will serve the Africa and Europe regions with no service to or from the territorial United States. Because the AM5 and AM6 satellites have not been

⁷ At this time, Panasonic seeks to add the Express AM6 satellite as a point of communication for the PPA and SPA terminals only.

⁸ In the 10.7-10.95 GHz band, Panasonic will limit its ESAA receive operations to outside of the United States consistent with footnote NG52 of the FCC's Table of Allocations (limiting the use of the 10.7-10.95 GHz band by GSO FSS satellites to international systems (i.e., other than domestic systems)). *See* 47 C.F.R. § 2.106, fn. NG52.

⁹ Panasonic seeks to add the EUTELSAT 117WA satellite as a point of communication for the MELCO terminal only. Panasonic is currently authorized to communicate with EUTELSAT 117WA, a Permitted List satellite, with the PPA and SPA terminals.

¹⁰ Panasonic understands that Eutelsat has provided operational parameters for EUTELSAT 172B in an ITU satellite network filing designated as USASAT-60Y.

previously authorized to serve the United States, this application is also a request for U.S. market access for the AM5 and AM6 satellites to enable the ESAA operations proposed herein.

Pursuant to Section 25.137(d) of the Commission's Rules, 47 C.F.R. § 25.137(d), Panasonic provides the attached Technical Appendix and Schedule S with all required technical and operational information for the AM5 and AM6—including orbital debris mitigation statements—to demonstrate that the satellites comply with all applicable Commission requirements for non-U.S. licensed satellites to communicate with U.S. earth stations.

Panasonic notes that because AM5 and AM6 are in orbit and currently operating, the Commission's requirements relating to the posting of bond, milestones, and reporting are not applicable.¹¹ Moreover, Panasonic is not required to make the effective competitive opportunities showing set out in Section 25.137 of the Commission's rules, 47 C.F.R. § 25.137, because Russia is a member country in the WTO.¹²

Panasonic proposes to communicate with AM5 and AM6 at off-axis ESD levels in excess of those specified in Section 25.227(a)(1) of the Commission's rules. Accordingly, Panasonic seeks ESAA operating authority with AM5 and AM6 pursuant to Section 25.227(a)(2) of the Commission's rules and provides information regarding the operational characteristics of the ESAA terminals with AM5 and AM6 in Form 312 Schedule B. Panasonic has confirmed with the

¹¹ 47 C.F.R. § 25.137(d)(4); see also 47 C.F.R. § 25.164(a) & § 25.165(d).

¹² See 47 C.F.R. § 25.137(a)(2); see also Amendment of the Commission's Regulatory Policies to Allow Non-U.S. Licensed satellites Providing Domestic and International Service in the United States, Report and Order, IB Docket No. 96-111, 12 FCC Rcd 24094, ¶ 39 (1997) ("We adopt our proposal to apply a presumption in favor of entry in considering applications to access non-U.S. satellites licensed by WTO members to provide services covered by the U.S. commitments under the WTO Basic Telecom Agreement."); Id., ¶ 64 ("[W]e will not evaluate the effective competitive opportunities in the route market for non-U.S. satellites licensed by a WTO Member providing WTO covered services. Thus, we will not perform an ECO-Sat test on any route, whether a WTO route market or a non-WTO route market.").

operator of AM5 and AM6—the Russian Satellite Communications Company ("RSCC") —that RSCC has reviewed the technical characteristics of the relevant ESAA terminal operations and such operations are consistent with their coordination agreements and will not result in unacceptable interference to other satellites within +/- 6 degrees of AM5 or AM6. Attached in the Technical Appendix is a letter confirming that the power levels associated with Panasonic's ESAA terminal operations with AM5 and AM6 have been coordinated with operators of adjacent satellites.¹³

2. IS-21

IS-21 is a U.S.-licensed satellite that has been previously authorized by the Commission to provide fixed-satellite service ("FSS") to and from the United States.¹⁴ Accordingly, the technical and operational parameters of IS-21 are well known to the Commission and no new showing regarding these issues is required.

Although Panasonic currently has authority to operate its ESAA terminals with any U.S.licensed or non-U.S. licensed satellite on the Permitted List, it seeks to communicate with IS-21 independent of such authority because it will operate at off-axis ESD levels in excess of those specified in Section 25.227(a)(1) of the Commission's rules.¹⁵ Accordingly, Panasonic seeks ESAA operating authority with IS-21 pursuant to Section 25.227(a)(2) of the Commission's rules. Information regarding the operational characteristics of the ESAA terminals with IS-21 is provided in the Form 312 Schedule B. Panasonic incorporates by reference the antenna performance information and off-axis ESD data previously submitted for the SPA, PPA, and TECOM ESAA

¹³ See Technical Appendix, III.

¹⁴ See Intelsat License LLC, File No. SAT-RPL-20120326-00061, Call Sign S2863.

¹⁵ See 47 C.F.R. § 25.227(a)(12) (limiting ESAA Permitted List authority to ESAAs "that comply with the off-axis EIRP spectral-density limits in paragraph (a)(1)(i) of this section.").

terminals.16

Panasonic has confirmed that Intelsat, operator of the IS-21 satellite, —that it has reviewed the technical characteristics of the relevant ESAA terminal operations and such operations are consistent with their coordination agreements and will not result in unacceptable interference to other satellites within +/- 6 degrees of IS-21. Attached hereto is a letter confirming that the power levels associated with Panasonic's ESAA terminal operations with IS-21 have been coordinated with operators of adjacent satellites.¹⁷

3. SES-15

The Gibraltar-licensed SES-15 satellite is on the Commission's Permitted Space Station List ("Permitted List") and is authorized to serve the U.S. market in the subject Ku-band frequencies.¹⁸ Accordingly, its technical and operational parameters are well known to the Commission and no new showing regarding these issues is required.

Although Panasonic currently has authority to operate its ESAA terminals with any U.S.licensed or non-U.S. licensed satellite on the Permitted List, it seeks to communicate with SES-15 independent of such authority because it seeks to operate with SES-15 in Ku-band downlink frequencies that are not authorized for ESAA receive operations in Section 25.227 of the

¹⁶ See Panasonic Avionics Corporation, File No. SES-MFS-20120913-00818, Call Sign E100089 at Technical Appendix (providing off-axis ESD plots for the PPA terminal) and File No. SES-MFS-20160819-00730, Call Sign E100089 at Technical Appendix (providing off-axis ESD plots for the SPA terminal); *see also* Row44 Inc., File No. SES-MFS-20150928-00635, Call Sign E080100 (providing off-axis ESD plots for the TECOM terminal).

¹⁷ See Technical Appendix, III.

¹⁸ See SES Satellites Limited, File No. SAT-PPL-20160126-00007, Call Sign S2951.

Commission's rules (i.e., in the 10.7-10.95 GHz and 11.2-11.45 GHz bands).¹⁹ At all times, Panasonic will operate its ESAA terminals with SES-15 in compliance with the Commission's offaxis ESD masks codified in Section 25.227(a)(1); however, Panasonic seeks to add SES-15 separately to ensure that the ESAA terminals are authorized to communicate with SES-15 in the 10.7-10.95 GHz and 11.2-11.45 GHz bands.

Panasonic will operate in the 10.7-10.95 GHz band consistent with the requirements of the FCC's Table of Allocations, limiting its ESAA receive operations in the band to outside of the United States.²⁰ Moreover, as discussed below, Panasonic agrees to communicate with SES-15 in the 11.2-11.45 GHz band on a non-conforming, non-interference basis outside of the United States only.²¹ In the 10.95-11.2 GHz, 11.45-11.7 GHz and 11.7-12.2 GHz bands, Panasonic will operate with SES-15 consistent with its Permitted List authority.

4. EUTELSAT 117WA

Panasonic seeks to add the EUTELSAT 117WA satellite as a point of communication for the MELCO terminal only. As noted, Panasonic is currently authorized to communicate with EUTELSAT 117WA, a Permitted List satellite, with the PPA and SPA terminals. The MELCO terminal does not currently operate pursuant to Permitted List authority and thus Panasonic seeks to add the EUTELSAT 117WA satellite as an independent point of communication. At all times,

¹⁹ The Commission's rules permit ESAA receive operations in the 10.95-11.2 GHz, 11.45-11.7 GHz and 11.7-12.2 GHz bands. *See* 47 C.F.R. § 25.227.

²⁰ *Supra* n.10.

²¹ Panasonic was previously granted a waiver of the FCC's Table of Allocations to operate ESAA terminals in the 11.2-11.45GHz downlink band. Panasonic understands, however, that current Commission practice is to allow such ESAA receive operations (outside of the United States only) on a non-conforming, non-interference basis through license conditions. *See* Section II.C., below.

Panasonic will operate the MELCO terminal with EUTELSAT 117WA in compliance with the Commission's off-axis EIRP spectral density ("ESD") mask in Section 25.227(a)(1) of the Commission's rules.

5. EUTELSAT 172B

Under its *ESAA Blanket License*, Panasonic is currently authorized to operate the SPA, PPA, and TECOM ESAA terminals with the EUTELSAT 172A satellite. EUTELSAT 172A was recently replaced by EUTELSAT 172B at the 172° E.L. orbital location and currently operates from the 174° E.L. orbital location on a temporary basis²² during the pendency of its application to provide long-term commercial services from its new location. ²³ Moreover, the satellite operator, ES 172 LLC—an indirect, wholly owned subsidiary of Eutelsat S.A. ("Eutelsat")—was recently granted authority by the Commission to operate the EUTELSAT 172B to replace existing EUTELSAT 172A operations at the 172° E.L. orbital location.²⁴

The EUTELSAT 172B satellite is a critical element of Panasonic's global eXConnect inflight entertainment and connectivity ("IFEC") system. In particular, the availability of Ku-band high-throughput satellite ("HTS") spot beams on EUTELSAT 172B will enhance the capacity and efficiency of eXConnect services provided in the Asia-Pacific region to U.S. airlines and U.S. consumers. Panasonic currently has a special temporary authorization ("STA") to communicate

²² See ES 172 LLC, File No. SAT-STA-20171205-00166, Call Sign S2610 (expires on Feb. 04, 2018).

²³ See ES 172 LLC, File Nos. SAT-MOD-20171122-00159 and SAT-AMD-20171205-00165, Call Sign S2610.

²⁴ See ES 172 LLC, File No. SAT-RPL-20170927-00136, Call Sign S3021 ("*EUTELSAT 172B Application"*). Panasonic seeks to conduct Ku-band ESAA operations with both U.S.-licensed and French-licensed payloads on EUTELSAT 172B.

with the EUTELSAT 172B satellite during the pendency of this modification application, and has submitted a request to extend its existing short-term authority, the *EUTELSAT 172B Application*.²⁵

In the *EUTELSAT 172B Application*, ES 172 LLC provides the information required by Section 25.114 of the Commission's rules, 47 C.F.R. § 25.114, including substantial technical showings and Schedule S data. Panasonic hereby incorporates by reference the satellite operational parameters and other information set forth in the *EUTELSAT 172B Application* associated with the Ku-band ESAA operations proposed herein. The attached Technical Appendix and Form 312 Schedule B provide information regarding the operational characteristics of the ESAA terminals with the EUTELSAT 172B satellite.

In addition to the U.S.-licensed payloads, Panasonic seeks to operate with certain Frenchlicensed payloads in the 11.2-11.45 GHz band. Therefore, this modification application constitutes a request to communicate with a foreign-licensed satellite under the Commission's rules.²⁶ EUTELSAT 172B was launched and will operate with non-U.S. payloads pursuant to authority granted to Eutelsat by France, which is a member of the WTO, for services covered under the WTO Basic Telecommunications Agreement. Thus, there is a presumption in favor of U.S. market access for the EUTELSAT 172B satellite.²⁷

Panasonic seeks to operate its ESAA terminals with EUTELSAT 172B at off-axis ESD levels in excess of those set forth in Section 25.227(a)(1) of the Commission's rules. Thus,

²⁵ *See* Panasonic Avionics Corporation, File Nos. SES-STA-20171003-01104 (expires on Jan. 16, 2018) and SES-STA-20180104-00010 (filed on Jan. 4, 2018), Call Sign E100089.

²⁶ See 47 CFR § 25.137. In the interest of administrative convenient and efficiency, Panasonic respectfully requests that incorporation by reference of the *EUTELSAT 172B Application* be deemed to satisfy the technical information requirements of Section 25.137(b) and (d). *See* 47 CFR § 25.137(b), (d).

²⁷ See generally 47 CFR § 25.137(a)(2).

Panasonic will operate the ESAA terminals pursuant to Section 25.227(a)(2) of the Commission's rules and incorporates by reference the antenna performance information and off-axis ESD data previously submitted for the SPA, PPA, and TECOM ESAA terminals.²⁸ The antenna performance characteristics of these previously-licensed ESAA terminals are well understood and will not change.

Eutelsat has reviewed the technical characteristics of Panasonic's proposed ESAA operations at the identified off-axis ESD levels and such operations are consistent with relevant coordination agreements and will not result in unacceptable interference to other satellites within +/- 6 degrees of EUTELSAT 172B. Attached hereto is a letter confirming that the power levels associated with Panasonic's ESAA terminal operations are consistent with the coordinated parameters of the satellite.²⁹

B. Ground Segment

The gateway earth stations associated with the proposed satellite points of communication are identified in Table 2, below.

Satellite	Satellite Operator	Gateway Earth Station Location	Country	Gateway Operator	FCC Call Sign
Express AM5	RSCC	Khabarovsk	Russia	AltegroSky	N/A
Express AM6	RSCC	Moscow	Russia	AltegroSky	N/A

 Table 2. Gateway Earth Stations Table

²⁸ *Supra* n.17.

²⁹ See Technical Appendix, III.

Satellite	Satellite Operator	Gateway Earth Station Location	Country	Gateway Operator	FCC Call Sign
EUTELSAT 117WA	Eutelsat Americas	Brewster, WA	Brewster, WA U.S.		E120043
EUTELSAT 172B (Spot/Wide)	Eutelsat S.A.	Kapolei, HI	Kapolei, HI U.S. Hi Pa Te		E150010 ³⁰
EUTELSAT 172B (NP/SEP)	Eutelsat S.A.	Brewster, WA	U.S. USEI		E120043
EUTELSAT 172B (SP)	Eutelsat S.A.	Bayswater	Australia SpeedCast		N/A
IS-21	Intelsat	Sussex, NJ	U.S.	USEI	E150116
SES-15 (Beam 51)	SES	Somis, CA	U.S. SES Americom		KA318
SES-15 (Beam 48)	SES	Mount Airy, MD	U.S. SES Americom		E050287
SES-15 (Beam 52)	SES	Brewster, WA	U.S. SES Americom		E920585

Network control and monitoring of the earth stations and the eXConnect System will continue to be provided by the Panasonic Mission Control Center ("MCC") in Lake Forest, California, on a 24/7 basis. The MCC makes use of the Network Management System ("NMS") to provide complete control and visibility to all components the eXConnect network. The NMS system has the capability of shutting down any component in the system that is malfunctioning.

³⁰ The Kapolei, HI gateway will operate in Ka-band frequencies and will be operated by Hawaii Pacific Teleport, L.P. ("HPT"). HPT has filed an earth station application to communicate with the satellite in Ka-band uplink and downlink frequencies that remains pending with the Commission. *See* File Nos. SES-MFS-20170721-00787 and SES-AFS-20171007-01112, Call Sign E150010.

The primary points of contact at Panasonic's MCC facility have been previously provided to the Commission by Panasonic.³¹

C. Non-Conforming, Non-Interference Operations

The FCC's Table of Allocations permits use of the 10.95-11.2 GHz and 11.45-11.7 GHz (space-to-Earth) bands on an unprotected basis, and the 11.7-12.2 GHz (space-to-Earth) and 14.0-14.5 GHz (Earth-to-space) bands on a primary basis for ESAA operations.³² In this application, Panasonic seeks to communicate with EUTELSAT 172B in the 11.2-11.45 GHz and 12.2-12.75 GHz downlink bands; with AM5 and AM6 in the 12.5-12.75 GHz downlink band; and with SES-15 in the 11.2-11.45 GHz downlink band. Such use of this downlink (receive) spectrum is essential to Panasonic's in-flight broadband connectivity offerings in Ku-band spectrum. Accordingly, Panasonic seeks to utilize this additional downlink capacity on an unprotected, non-harmful interference basis outside the United States.

Panasonic was previously granted a waiver of Section 2.106 of the Commission's rules, 47 C.F.R. § 2.106, to operate ESAA terminals in the 11.2-11.45 GHz and 12.2-12.75 GHz downlink bands. Panasonic understands, however, that current Commission practice is to allow such ESAA receive operations (outside of the United States only) on a non-conforming, non-interference basis through license conditions.

In light of the Commission's current practice, and given that its ESAA receive operations present a negligible risk of interference to other spectrum users, Panasonic requests that the Commission permit ESAA operations in the 11.2-11.45 GHz, 12.5-12.75 GHz and 12.2-12.75

³¹ See Panasonic Avionics Corporation, File No. SES-MFS-20160819-00730 (Call Sign E100089), Technical Appendix.

³² See 47 C.F.R. § 2.106 and n. NG52 and NG55; 47 C.F.R. § 25.227.

GHz bands consistent with its current approach of granting authority to operate ESAA terminals outside the United States on a non-conforming, non-interference basis.

D. Existing Satellite Points of Communication with Higher Power Levels

In addition to the new satellite points of communication identified in Table 1, Panasonic seeks to operate its ESAA terminals with previously-authorized satellite points of communication that are at power levels higher than those currently authorized in the *ESAA Blanket License* and that exceed the off-axis ESD masks codified in Section 25.227(a)(1) of the Commission's rules.

Satellite	Licensing Admin.	Orbital Location	Downlink Freq. (GHz)	ITU Region	Serves U.S.	Associated ESAA Terminals
Anik-G1	Canada	107.3° W	11.7-12.2	2	No	PPA, SPA, TECOM
Apstar 6	China	134° E	10.7-12.75	3	No	PPA, SPA
Apstar 7	China	76.5° E	10.7-12.75	1, 3	No	PPA, SPA
EUTELSAT 70B	France	70.5° E	10.95-11.7; 12.5-12.75	1, 3	No	PPA, SPA
EUTELSAT 115WB	Mexico	114.9° W	11.7-12.2	2	Yes	SPA, PPA, TECOM
IS-14	U.S.	45° W	11.45-11.95; 12.25-12.75	1, 2	Yes	SPA, PPA
IS-15	U.S.	85° E	12.25-12.75	3	No	PPA, SPA
IS-29e	U.S.	50° W	10.95-12.2	1, 2	Yes	PPA, SPA, TECOM
IS-33e ³³	U.S.	60° E	10.95-11.2; 11.45-12.2; 12.5-12.6	1,3	No	PPA, SPA
Superbird C2	Japan	144° E	12.2-12.75	3	No	PPA, SPA
Telstar 11N	U.S.	37.5° W	11.45-12.2	1, 2	Yes	PPA, SPA, TECOM
Telstar 12V	U.S.	15° W	10.95-12.2	1	No	PPA, SPA

 Table 3. Existing Satellites with Higher Power Levels

³³ Panasonic updates the gateway earth station information for the IS-33e satellite in the Technical Appendix, V. No other gateway information has changed.

Telstar 14R	Brazil	63° W	11.45-12.2	2	Yes	PPA, SPA,
						TECOM
Yamal 401	Russia	90° E	10.95-11.2;	1, 3	No	PPA, SPA
			11.45-12.75			

Each of these satellites is individually authorized in the *ESAA Blanket License* to communicate with the associated ESAA terminal.³⁴ As the Commission is aware, Panasonic's *ESAA Blanket License* currently authorizes operations pursuant to both Sections 25.227(a)(1) and 25.227(a)(2) of the Commission's rules. In some cases, the ESAA terminals operate with off-axis ESD levels in excess of those specified in Section 25.227(a)(1) and in other cases they operate consistent with the Commission's two-degree spacing policies embodied in those levels.

Here, Panasonic proposes to operate with each of the satellites in Table 3 pursuant to Section 25.227(a)(2) of the Commission's rules because it will operate at power levels that exceed the off-axis ESD levels in Section 25.227(a)(1). In Form 312 Schedule B, Panasonic provides the updated power levels and operational particulars of the ESAA operations proposed in this application. These increased power levels are essential to ensure that Panasonic's ESAA operations reflect the full capabilities of the eXConnect network, allowing it to support next-generation satellite services that are optimized for performance.

Pursuant to the Commission's rules, for each satellite identified in Table 3, Panasonic has confirmed with the satellite operators that they have reviewed the technical characteristics of Panasonic's ESAA terminal operations at the increased off-axis ESD levels and that such operations are consistent with their coordination agreements and will not result in unacceptable interference to other satellites within +/- 6 degrees of the subject satellite point of communication. Attached hereto are letters confirming that the power levels associated with Panasonic's ESAA

³⁴ The only exceptions are the EUTELSAT 115WB and Telstar 14R satellites, which communicate with the TECOM terminal pursuant to Permitted List authority.

terminal operations with each satellite point of communication have been coordinated with operators of adjacent satellites.³⁵

E. Revisions to the ESAA Blanket License

In addition to the ESAA license modifications described above, Panasonic would like to take this opportunity to request that the Commission correct certain administrative errors in its *ESAA Blanket License*. First, Section B (Particulars of Operations) of the *ESAA Blanket License* omits the 10.95-12.2 GHz downlink band for the SPA terminal, which is authorized to receive transmissions in this band from the Telstar 12V satellite.³⁶ Similarly, Section B of the *ESAA Blanket License* omits the 12.2-12.75 GHz downlink band for the PPA terminal, which is authorized to receive transmissions in this band from the Superbird C2 satellite.³⁷

In addition, in multiple rows of Section C (Frequency Coordination) of the *ESAA Blanket License*, the satellite arcs for the Telstar 14R and Apstar 7 satellites are shown as "63.0E-63.0E" and "134.0W-134.0W," respectively. Telstar 14R is located at the 63° W.L. orbital location and Apstar 7 is located at the 134° E.L. orbital location. Thus, Panasonic requests that Section C of the *ESAA Blanket License* be revised to show the correct satellite arc location of the Telstar 14R and Apstar 7 satellites. Panasonic respectfully requests that the above revisions be made to its *ESAA Blanket License* in order to accurately reflect its ongoing ESAA terminal operations.

Finally, Panasonic requests that the Commission remove the EUTELSAT 172A satellite as

³⁵ See Technical Appendix, III.

³⁶ The receive emission designators associated with the 10.95-12.20 GHz downlink band are 1M20G7D and 54M0G7D. This band is correctly included for PPA operations with Telstar 12V.

³⁷ The receive emission designators associated with the 12.20-12.75 GHz downlink band are 1M20G7D and 36M0G7D. This band is correctly included for SPA operations with Superbird C2.

an authorized point of communication from its license. The EUTELSAT 172B satellite has replaced the broadband satellite services offered by EUTELSAT 172A at the 172° E.L. orbital location and the ESAA terminals will no longer communicate with the EUTELSAT 172A satellite.

F. Public Interest Statement

Panasonic's eXConnect system uses the company's global Ku-band aeronautical network to deliver broadband connectivity to aircraft flying all over the world. Grant of the requested modification will serve the public interest by extending the coverage, increasing the capacity, and improving the operational capabilities of eXConnect. This will provide a direct benefit to U.S. consumers who will be able to access significantly-improved in-flight broadband applications and will further enhance competition and U.S. leadership in aeronautical broadband connectivity services.

The additional satellites will provide added bandwidth for the eXConnect system and ensure that Panasonic has sufficient capacity to meet increasing demand and enhance the in-flight user experience domestically and internationally. Moreover, increasing the ESAA power levels as described herein will improve the network capabilities of the eXConnect system and allow Panasonic to enhance its network offerings with next-generation satellite services to consumers.

III. CONCLUSION

Based on the foregoing, Panasonic respectfully requests that the Commission grant its request to modify its *ESAA Blanket License*, Call Sign E100089, by adding new satellite points of communication for its previously licensed ESAA terminals and increasing the ESAA power levels associated with existing satellite points of communication, and making the revisions sought to Panasonic's *ESAA Blanket License* to ensure that its authorization accurately reflects its global ESAA operations.