

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:
STA for operations on IS-33E E172B, and E10A pending Modification, 27 December 2017-27 February 2017

1. Applicant

Name:	The Boeing Company	Phone Number:	206-218-8568
DBA Name:		Fax Number:	206-665-3374
Street:	PO Box 3707	E-Mail:	fmsfccorrespondence@boeing.com
Attn:	Attn		
City:	Seattle	State:	WA
Country:	USA	Zipcode:	98124 -2207
Attention:	Mr Ronald E Center		



File # SES-STA-20171207-01312

Call Sign E140097 Grant Date 12/27/2017
(or other identifier)

Term Dates

From 12/27/2017 To: 2/24/2018

Approved: Paul E. [Signature]

Applicant: The Boeing Company
Call Sign: E140097
File No.: SES-STA-20171207-01312

The Boeing Company ("Boeing") is granted a Special Temporary Authority for 60 days, beginning December 27, 2017 for communications between Earth Stations Aboard Aircraft (ESAA) stations with Intelsat IS-33E(S2939) satellite at the 60° E.L. orbital location using center frequencies 14234.95 MHz (Earth-to-space) and 11464.95 MHz (space-to-Earth), with the Eutelsat 10A satellite at the 10.0 E.L. orbital location using center frequencies 14107.0 MHz (Earth-to-space) & 11513.0 MHz (space-to-Earth) and Eutelsat 172B (S3021) satellite at the 172° E.L. orbital location in the frequency bands 14000-14500 MHz (Earth-to-space) and 11450-11700 MHz (space-to-Earth) under the following conditions:

1. Operations shall not cause harmful interference to or claim protection from other lawfully operating stations and it shall cease transmission(s) immediately upon notice of such interference.
2. Grant of this authorization is without prejudice to any determination that the Commission may make regarding pending or future Boeing applications.
3. Applicant shall utilize Antennas with the following output limits: Boeing Phased Array Antenna, MELCO Reflector Terminal, and TECOM KuStream 1500 with respective maximum aggregate output EIRP for all carriers of 51.2 dBw, 46.7 dBw and 44.8 dBw.
4. Grant of this authorization does not authorize U.S. Market Access of Eutelsat 10A for earth stations operating in the US&P. This grant authorizes operations with Eutelsat 10A only from ESAA stations operating outside the US&P.
5. 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 measure must also be taken to restrict access to other regions in which the earth station's power flux density levels exceed the specified guidelines. *See The FCC's OET Bulletin 65 (available on-line at www.fcc.gov/oet/rfsafety)*
6. Any action taken or expense incurred as a result of operations pursuant to this STA is solely at Boeing's risk.
7. Should an emergency situation exists the applicant must notify FCC OperationCenter@fcc.gov of the situation with a copy to paul.blais@fcc.gov.

This action is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. §0.261, and is effective immediately.



File # SES-STA-2017120701312
Call Sign E140097 Grant Date 12/27/2017
(or other identifier)
Term Dates
From 12/27/2017 To: 2/24/2018
Approved: Paul E. Blais

2. Contact	
Name: Allen S. Lindsay SR	Phone Number: 206-544-6053
Company: The Boeing Company	Fax Number: 206-665-3374
Street: PO Box 3707 Attn	E-Mail: allen.s.lindsay@boeing.com
City: Seattle	State: WA
Country: USA	Zipcode: 98124 -2207
Attention:	Relationship: Other
(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)	
3. Reference File Number SESAFS2017110801238 or Submission ID	
4a. Is a fee submitted with this application?	
<input checked="" type="radio"/> If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).	
<input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee	
<input type="radio"/> Other (please explain):	
4b. Fee Classification CGX - Fixed Satellite Transmit/Receive Earth Station	
5. Type Request	
<input checked="" type="radio"/> Use Prior to Grant <input type="radio"/> Change Station Location <input type="radio"/> Other	
6. Requested Use Prior Date 12/27/2017	
7. City N/A	
8. Latitude (dd mm ss.s h) 0 0 0.0 N	

9. State AK	10. Longitude (dd mm ss.s h) 0 0 0.0 W
11. Please supply any need attachments. Attachment 1: STA Narrative Attachment 2: Felony Statement Attachment 3:	
12. Description. (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.) <div style="border: 1px solid black; padding: 5px; min-height: 100px;">Boeing ESAA IS-33e, E10A, and E172B STA request.</div>	
13. By checking Yes, the undersigned certifies that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application"; for these purposes. <p style="text-align: right;">Yes <input checked="" type="radio"/> No <input type="radio"/></p>	
14. Name of Person Signing Ronald E. Center	15. Title of Person Signing Manager
WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).	

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

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THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.

Exhibit

Summary of Boeing Felony Convictions

Past Boeing Convictions: The Boeing Company has pled guilty to felonies on two occasions. In November 1989, Boeing pled guilty in federal court to two counts of violating 18 U.S.C. § 641 and § 642 (unlawful conveyance). These convictions relate to the activity of a Boeing employee in its Washington D.C. office who improperly conveyed two government documents.

In June 1982, Boeing pled guilty in federal court to forty counts of violating 18 U.S.C. §§ 1001 and 1002 (false statements). These convictions relate to false statements that Boeing made in applications to the Exim Bank as to whether payments were made to non regular agents in connection with sales of commercial aircraft.

Past Rockwell Convictions: In December 1996, The Boeing Company completed the acquisition of the aerospace units of Rockwell International Corporation. The acquired units became a wholly owned subsidiary of Boeing, named Boeing North American, Inc. The acquired units had the following felony convictions, all of them prior to the acquisition.

In March 1989, Rockwell pled guilty in federal court to one count of violating 18 U.S.C. § 371 (conspiracy to commit a fraud against the United States), one count of violating 18 U.S.C. § 401 (criminal contempt) and one count of violating 18 U.S.C. § 1001 (false statements). These convictions arose out of activity by the Satellite and Space Electronics Division of Rockwell which was performing work under contracts for the United States government on the Global Positioning System program. The convictions were due to failure to disclose facts relating to a subcontract the disclosure of which were required by the Truth in Negotiations Act, and submission of false claims for payment under a Global Positioning System contract in violation of a prior court injunction.

In March 1992, Rockwell agreed to plead guilty in federal court to five felony and five misdemeanor counts of violating the Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901 *et seq.*, and the Clean Water Act, 33 U.S.C. §§ 1251 *et seq.* These convictions arose out of activity performed by Rockwell in managing the Rocky Flats Nuclear Weapons Plant under contract to the Department of Energy.

In April 1996, Rockwell pled guilty in federal court to three counts of violating 42 U.S.C. § 6928 (for unlawful storage and disposal of hazardous waste). These convictions resulted from activity by employees of the Rockwell Rocketdyne division test site in Simi Hills, California.

Past McDonnell Douglas Convictions: In August 1997, Boeing completed the acquisition of McDonnell Douglas Corporation, now a wholly owned subsidiary of Boeing. McDonnell Douglas Corporation had the following felony convictions, all of them prior to the acquisition.

In September 1981, McDonnell Douglas Corporation pled guilty in federal court to five counts of violating 18 U.S.C. § 1001 (false statements), three counts of violating U.S.C. § 1341 (fraud by mail) and two counts of violating 18 U.S.C. § 1343 (fraud by wire). These convictions relate to false or incomplete statements made in Exim Bank filings concerning commission sales representatives used in the sale of commercial aircraft in five countries.

APPLICATION FOR SPECIAL TEMPORARY AUTHORITY

Pursuant to Section 25.120 of the Commission's rules, the Boeing Company ("Boeing") requests special temporary authority ("STA") to continue communications between its licensed Earth Stations Aboard Aircraft ("ESAA")¹ terminals and Intelsat IS-33E (IS-33E), Eutelsat 10A (E10A), and Eutelsat 172B (E172B) as authorized points of communication.²

The Boeing Broadband Satellite Network ("BBSN") currently operates on a STA for satellite points of communications, IS-33E and E10A under SES-STA-20170919-01031 that will expire on December 26, 2017, and E172B is currently authorized under SES-STA-20171006-01107 and it expires on January 17, 2018. In an effort to reduce applications at the Commission Boeing is consolidating this action in one application. IS-33E, E10A, and E172B support Boeing's operations on behalf of the United States Government. Boeing has therefore applied to modify its ESAA license to begin operating using IS-33E, E10A, and E172B.³ This STA request is filed to continue testing with the new satellites during the pendency of the modification/amendment application. Boeing requests that this approval be provided by December 27, 2017 and extend for a period of sixty days.

¹ Application of The Boeing Company for Authority to Operate Up to 100 Earth Stations Aboard Aircraft, Call Sign E140097, File No. SES-LIC-20140922-00748 (Granted Mar. 18, 2015) ("Boeing ESAA Application").

² IS-33E Call Sign S2939; Eutelsat E10A, W2A (M0311)

³ Application of The Boeing Company, File No. SES-AFS-20171108-01238 (Filed Nov. 8, 2017); SES-MFS-20170912-00997 (Filed Sept. 12, 2017).

I. SATELLITE POINTS OF COMMUNICATION AND NETWORK CONTROL

IS-33E, and E172B (once licensed) are U.S. licensed satellite listed on the Commission's Approved Space Station List.⁴ E10A, licensed in France has been approved for use under FCC grant E100089, however, Boeing only requests operations for its ESAA stations operating outside the US&P and thus does not request market access for operations in the US&P. Thus, all of the information normally required under Section 25.114, 47 C.F.R. § 25.114, has already been provided to, and approved by, the Commission in prior applications. To the extent necessary, Boeing incorporates that information by reference.⁵

The Boeing ESAA network uses variable power-density control of individual simultaneously transmitting co-frequency ESAA terminals in the same satellite receiving beam. Sections 25.227(a)(3)(ii) and 25.227(b)(3)(ii) of the Commission's rules require variable power systems to either operate 1 dB below the off-axis EIRP spectral density ("ESD") envelope defined in the Commission's rules, or to secure certificates from the target satellite operator indicating that such higher power levels have been coordinated with adjacent satellite operators within six degrees in each direction.

⁴ <https://www.fcc.gov/approved-space-station-list>.

⁵ Application of Panasonic Avionics Corporation, E100089, SES-MFS-20170312-00255 (Granted October 19, 2016)

Accordingly, in Attachment 1, Boeing provides the antenna's and maximum aggregate output EIRP for all carriers, and statements from Intelsat and Eutelsat certifying to the information required by the Commission's rules, including that the aggregate ESD limits that the Boeing ESAA system adheres to have been coordinated with adjacent satellite operators. The network control and measures for ensuring the protection of other spectrum users will be the same as described in Sections II.D and V of Boeing's ESAA application.⁶

II. PUBLIC INTEREST

Boeing's BBSN network exclusively serves the needs of the United States Air Force Air Mobility Command in support of critically-important air transport operations. BBSN is used by the Air Force to enable broadband capabilities on more than a dozen Very Important Personnel/Special Air Mission aircraft operated by the U.S. Air Force to transport senior leadership of the U.S. Government and the Department of Defense.

It is crucial that BBSN add this additional coverage and capacity as the capabilities required by Air Force Mobility Command has change. Boeing will need to do extensive testing of the BBSN system with these new satellites prior to an operational cutover. Therefore, extraordinary circumstances exist requiring this temporary authority and a delay in the institution of these temporary test operations would seriously prejudice the public interest.⁷

⁶ Boeing ESAA Application at 7, 15.

⁷ See 47 C.F.R. § 25.120(b)(1).

ATTACHMENT 1

Antennas

Model Number: Boeing Phased Array Antenna

Maximum aggregate output EIRP for all carriers 51.2 dBw

Model Number: Boeing Reflector Terminal

Maximum aggregate output EIRP for all carriers 46.7 dBw

Model Number: KuStream 1500

Maximum aggregate output EIRP for all carriers 44.8 dBw

Frequencies

IS-33E(S2939) satellite at the 60° E.L.

AC Tx: 14234.95 MHz

AC Rx: 11464.95 MHz

Eutelsat 10A satellite at the 10.0 E.L.

AC Tx: 14107.0 MHz

AC Rx : 11513.0 MHz

E172B satellite at 172°E

North Pacific transponder

AC Tx: 14040.25MHz

AC Rx: 11683.0MHz

SouthWest Pacific transponder

AC Tx: 14113.25MHz

AC Rx: 11593.0MHz

South Pacific transponder (Australia)

AC Tx: 14367.80MHz

AC Rx: 12601.80MHz

September 1st, 2017

To whom it may concern

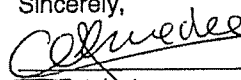
Re: Engineering Certification of Eutelsat

Eutelsat confirms and hereby certifies the following with respect to the operations proposed in the above reference application:

- a) The proposed Ku-band operation of BOEING's ESAA terminal has the potential to create harmful interference to adjacent satellite networks that may be unacceptable;
- b) BOEING will use Eutelsat capacity on the Eutelsat 10A and Eutelsat 172B satellites for other ESAA operations
- c) The proposed operation of the ESAA transmit/receive terminals at the power density levels defined between BOEING and Eutelsat is consistent with existing satellite coordination agreements with the adjacent satellites of the Eutelsat 10A and Eutelsat 172B satellites within 6 degrees of orbital separation from the satellite.

If the FCC authorizes the operation proposed by BOEING, Eutelsat will include the power density levels specified by BOEING, defined within the satellite coordination agreements, in all future satellite network coordination with operators of satellite that are adjacent to those satellites addressed by this letter.

Sincerely,



For Eutelsat

Filipe De Oliveira

Director of Resources Engineering

www.eutelsat.com



INTELSAT

Envision. Connect. Transform.

August 17, 2017

The Boeing Company
P.O. Box 3707
Seattle, WA 98124-2207

Re: Satellite Operator Coordination Certification of Boeing Earth Station Aboard Aircraft (ESAA) License Application

To Whom It May Concern:

Intelsat confirms and hereby certifies the following with respect to the operations proposed in the above referenced application:

- (a) The proposed Ku-band Earth Station Aboard Aircraft (ESAA) operation of the Boeing Company has the potential to create harmful interference to satellite networks adjacent to the target satellite(s) that may be unacceptable;
- (b) The power density levels that Boeing provided to this Satellite Operator are consistent with the existing coordination agreements between the IS-33e satellite at 60EL and the adjacent satellite networks within 6 degrees of orbital separation from the satellite, and
- (c) The power density levels of the proposed ESAA operations will be included in future coordination agreements in accordance with FCC rules and regulations.

Please let us know if additional information is required.

Sincerely,

Alexander Gerdenitsch
Manager, Spectrum Policy, Americas