

DECLARATION OF COMPLIANCE WITH THE REQUIREMENTS DEFINED IN THE
ECC DECISION (ECC/DEC(05)11)
ON THE FREE CIRCULATION AND USE OF AIRCRAFT EARTH STATIONS (AES) IN
THE FREQUENCY BANDS
14.0-14.5 GHZ (EARTH-TO-SPACE),
10.7-11.7 GHZ (SPACE-TO-EARTH) AND
12.5-12.75 GHZ (SPACE-TO-EARTH)

The following are the information on the Connexion by BoeingSM (CBB) Broadband Satcom Network required for compliance with the ECC Dec. (05)11 on the Free Circulation and Use of Aircraft Earth Stations (AES) operating in the Frequency Bands 14.0-14.5 GHz (Earth-to-Space), 10.7-11.7 GHz (Space-to-Earth) and 12.5-12.75 GHz (Space-to-Earth).

With this submission CBB declares its compliance with the ECC Decision (05)11.

- **Points of Contacts**

Network Operator's designated point of contact

| | |
|----------------------------|--|
| Title of contact: | Director, Regulatory Policy and International Spectrum Management |
| Postal address: | Connexion by Boeing Ireland Limited c/o Boeing UK Ltd Heathrow House Bath Road TW5 9QQ Hounslow U.K. |
| Telephone and fax numbers: | Tel. +44 20 8235 5600 Fax. +44 20 8235 5608 |
| email address | Mohamed.ElAmin@Boeing.com |

Network Control Facility (NCF) designated point of contact

| | |
|----------------------------|--|
| Title of contact: | Network Manager NOC |
| Postal address: | BBSN NOC, The Boeing Co. Kent Space Center Washington U.S.A. |
| Telephone and fax numbers: | +1 253 773-0609 (NOC) |
| Email address: | john.w.schultz@boeing.com |

- **Technical Specification(s) of AES equipment type(s) used in the network**

AES Antenna

| Antenna type | Phased Array | NGA Reflector Elliptical | TECOM KuStream 1500 Horn Array | ViaSat KuKarray |
|---------------------------|----------------|-----------------------------|-----------------------------------|--------------------|
| Antenna size | 38 cm diameter | 65cm x 19.6cm | 81 cm x 20 cm | 76 cm x 15 cm |
| Transmit peak gain | 34 dBi | 32 dBi | 28 dBi | 33.6 dBi |
| Max e.i.r.p. per carrier | 49 dBW | 47 dBW | 44.7 dBW | 47.0 dBW |
| Transmit frequency bands | 14.0-14.5 GHz | 14.0-14.5 GHz | 14.0-14.5 GHz | 14.0-14.5 GHz |
| Min. operating elevation | 15° | 5° | 5° | 0° |
| Antenna pointing accuracy | < 0.2 deg. rms | < 0.2 deg. rms | < 0.2 deg rms | < 0.2 deg rms |

Waveform characteristics

| | | | |
|----------------------------|--|---|---|
| Number of carriers per AES | 1 | | |
| Occupied BW | (Satellite) E36B I-907 27.5W T11N 37.5 W | (Bandwidth) 32.4 MHz 6.8 MHz 13.50 MHz | |
| Carrier center frequency | (Satellite) E36B I-907 27.5W T11N 37.5 W | (Frequency) 14 193.00 MHz 14 043.95 MHz 14 106.00 MHz | (Polarization) Horizontal Horizontal Vertical |
| Modulation | Offset-QPSK | | |
| Multiple access | Code Re-use Multiple Access | | |

- **Details of each Operating Satellite**

ITU BR Filing Information

| | E36B | I-907 | T11N |
|---|--|---|---|
| Operator | Eutelsat | Intelsat | Eutelsat |
| ITU BR filing satellite network name | EUTELSAT B1-36E | Intelsat-9 332.5E | USASAT-26A |
| ITU BR Circular reference number and date of publication | AP30/E dated 20 Nov 2008 | AR11/A/2295 dated 28 Jul 1998 API/A/2082 dated 30 Oct 2001 AR11/C/3401 dated 27 Jun 2000 AR11/C/3401 Mod 1 dated 26 Jun 2001 | AR11/C/1832 dated 12 Mar 1991 AR11/C/2456 Dated 19 Sep 1995 AR11/C/2456 Dated 24 Oct 1995 CR/C/652 dated 28 Jan 2003 |
| GSO longitude | 36 East | 27.5 West | 37.5 West |
| Satellite service area | Europe, North Atlantic, Middle East (Figure 1) | North Atlantic, Western Europe (Figure 2) | North Atlantic (Figure 3) |

Forward Channel details (Satellite to AES)

| | E36B | I-907 | T11N |
|---|-------------|--------------|-------------|
| Transponder center frequency (MHz) | 11 658.33 | 11 555 | 11 526.5 |
| Transponder bandwidth (MHz) | 72 | 36 | 36 |

Return Channel details (AES to satellite)

| | E36B | I-907 | T11N |
|---|-------------|--------------|-------------|
| Transponder center frequency (MHz) | 14 208.33 | 14 042.5 | 14 090 |
| Transponder bandwidth (MHz) | 72 | 77 | 27 |

- **Other details**

- As of 1 January 2007, CBB system has been renamed Boeing Broadband Satcom Network (BBSN). Equipment of BBSN has been installed exclusively on-board US government VIP aircraft.
- As of 1 July 2010, the following coverage applies for CEPT (including French Oversea Territories and Azores for Portugal).

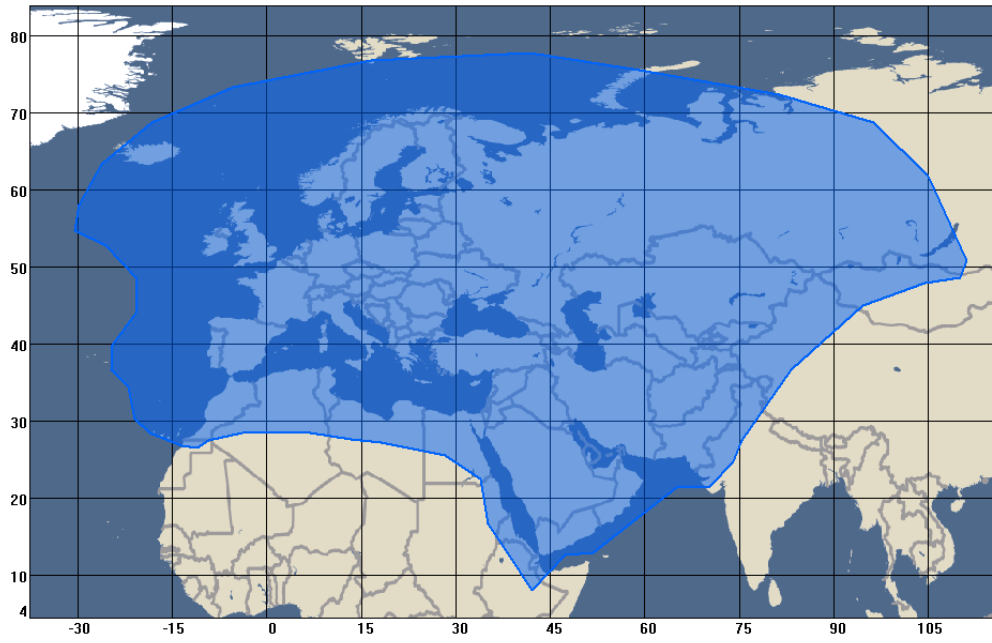


Fig. 1: Eutelsat E36B

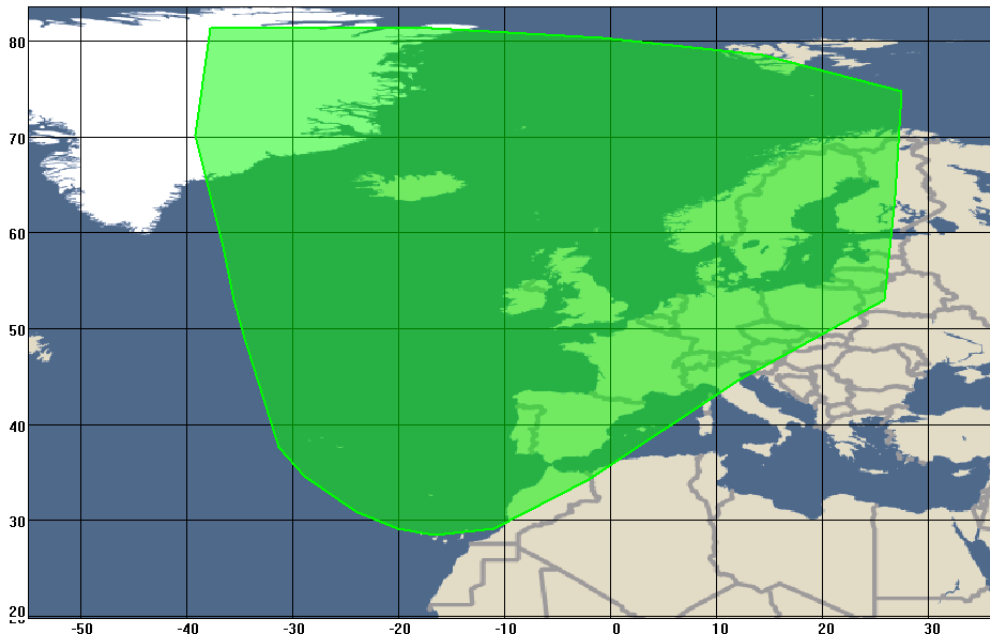


Fig. 2: Intelsat I-907

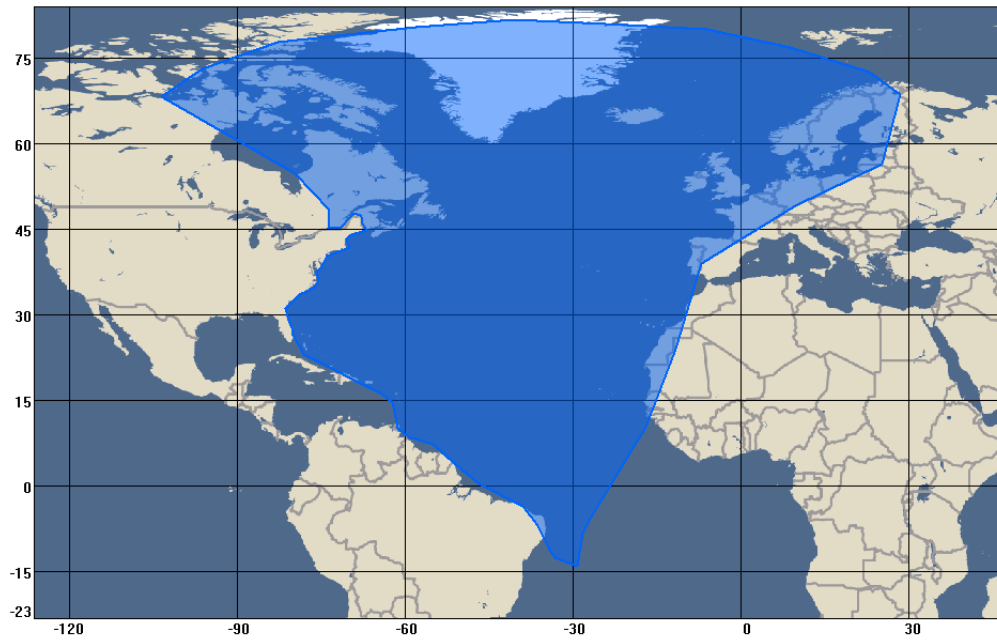


Fig.3: T11N North Atlantic Coverage