ANNEX 1

PARAMETERS THAT NEED TO BE SUBMITTED BY AES NETWORK OPERATORS TO THE OFFICE

An AES network operator is required to submit to Office the following parameters and declaration.

1. A declaration that their system complies with the requirements of the Decision, including those specified in Annex A and as specified in the Office AES webpage.

SES hereby submits its notification of Aircraft Earth Stations pursuant to ECC Decision (05)11 and declares that its AES system complies with the requirements listed in that Decision.

2. The AES network operator is required to submit to the Office the following information:

- **Points of Contacts**

Network Operator's designated point of contact **Cecil Ameil**
Title of contact **Sr Mgr Regulatory Affairs**
Postal address **SES**
14 r. Pere de Deken
1040 Brussels
Belgium
Telephone and fax numbers **Tel:** +32 473741004
email address cecil.ameil@ses.com
Network Control Facility (NCF) designated point of contact
Title of contact **As above**
Postal address **As above**
Telephone and fax numbers **As above**
email address **As above**

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

AES Antenna 1

Antenna type **Parabolic (Horn with lens)**
Antenna size: **29cm**
Transmit peak gain **31.3 dBi @ 14.5GHz**
Max e.i.r.p. per carrier **41.9 dBW**
Transmit frequency bands **14.0 – 14.5 GHz**
Min. operating elevation **0°**
SES is aware of the fact that in some countries operation of AES when the aircraft is on the ground, is subject to prior agreement with administrations and/or airport authorities and/or Civil Aviation Authorities
Antenna pointing accuracy **Error <0.2° RMS (EL) & <0.2° RMS (AZ)**

AES Antenna 2

Antenna type **Flat panel phased array**
Antenna size: 2 rows of 32, 3.4x0.75 inch horns with lenses
Transmit peak gain **33.3 dBi**
Max e.i.r.p. per carrier **45.5 dBW**
Transmit frequency bands **14.0 – 14.5 GHz**
Min. operating elevation **10° when on the ground[1] and otherwise conformant to the requirements of EN 302 186**
SES is aware of the fact that in some countries operation of AES when the aircraft is on the ground, is subject to prior agreement with administrations and/or airport authorities and/or Civil Aviation Authorities
Antenna pointing accuracy **Error <0.4° RMS (EL) & <0.2° RMS (AZ)**

Waveform characteristics

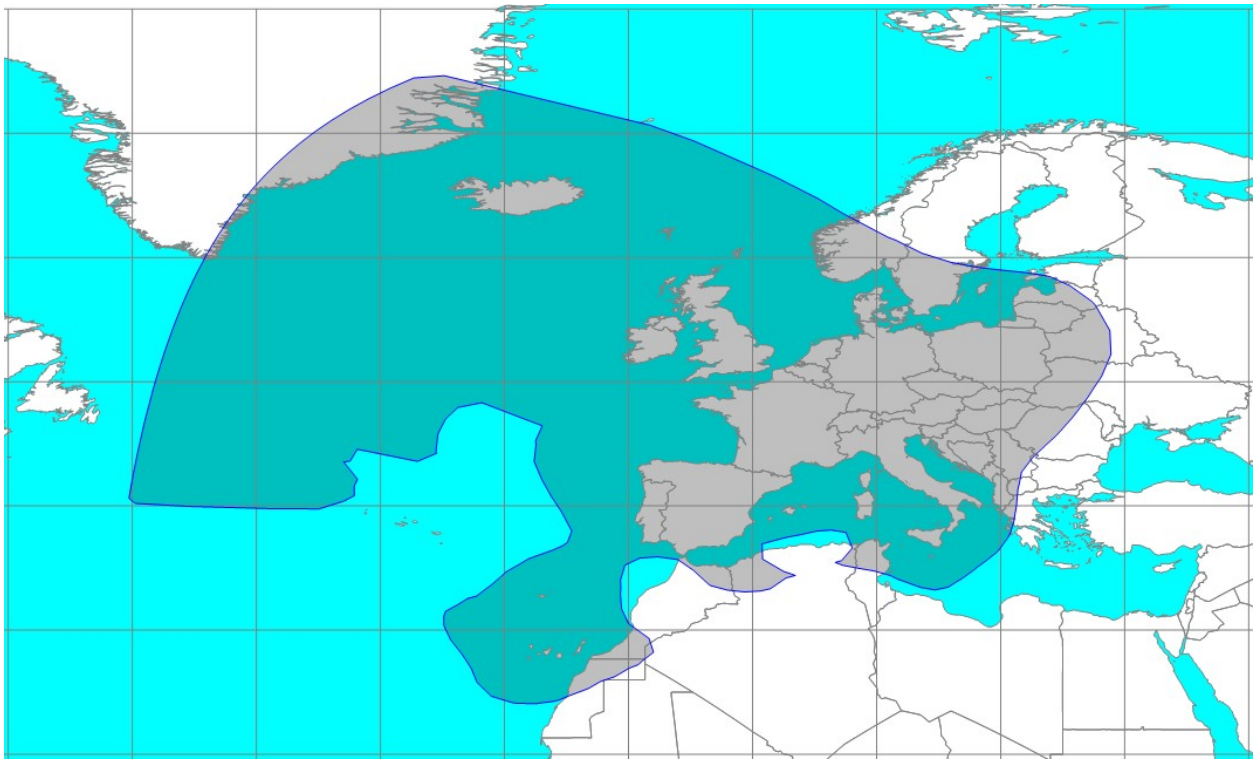
Number(s) of carriers per AES **4**
Occupied bandwidth(s) per carrier (as defined in Harmonised Standard EN 302 186) **2.5 MHz**
Carrier centre frequency(-ies) **14128.25, 14130.75, 14133.25, 14135.75 MHz**
Modulation **BPSK**
Multiple access scheme **TDMA**

Operating details of satellite

Astra 2F

ITU BR Filing Information

ITU BR filing satellite network name **LUX-28.2E**
ITU BR circular reference number **CR/C/68**
Satellite operator(s) (commercial) name **Astra-2F**
GSO longitude (East or West from Greenwich) **28.2°E**
Satellite service area (text description and/or a figure of the area)



Forward Channel details (Satellite to AES)
Transponder(s) centre frequency: **12610.5 MHz**
Transponder name 2.080
Transponder(s) downlink bandwidth **26 MHz**

Return Channel details (AES to satellite)
Transponder(s) uplink centre frequency: **14140 MHz**
Transponder name 2.082
Transponder(s) uplink bandwidth **26 MHz**

Other details

In addition the AES network operators need to notify the Office of the name of the airlines which will be using their network system. Alternatively, operators could provide to the Office a link to their webpage containing this information.

See https://www.ses.com/networks/aero