ANNEX B

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.

Gogo LLC 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

Title of contact	**Greg Oliveau**
Postal address	**Gogo LLC** **1250 N Arlington Heights Road** **Itasca, IL 60143** **USA**
Telephone and fax numbers	**Tel: +1 877-350-0038**
email address	GOliveau@gogoair.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	**Flat panel phased array**
Antenna size	**32.5 inches x 7.5 inches**
Transmit peak gain	**33.3 dBi**
Max e.i.r.p. per carrier	**42.5 dBW**
Transmit frequency bands	**14 – 14.5 GHz**
Min. operating elevation	**10° when on the ground[1] and otherwise conformant to the requirements of EN 302 186**
Antenna pointing accuracy	**Error <0.4° RMS (EL) & <0.2° RMS (AZ)**

AES Antenna 2

Antenna type	**Flat panel phased array**
Antenna size	**74 inches x 35 inches x 4.0 inches**
Transmit peak gain	**36.7 dBi**
Max e.i.r.p. per carrier	**44.7 dBW**
Transmit frequency bands	**14 – 14.5 GHz**
Min. operating elevation	**10° when on the ground and otherwise conformant to the requirements of EN 302 186**
Antenna pointing accuracy	**Error <0.2° RMS (EL) & <0.2° RMS (AZ)**

Waveform characteristics

Number(s) of carriers per AES	**1**
Occupied bandwidth(s) per carrier (as defined in Harmonised Standard EN 302 186)	**3.6 MHz**
Carrier centre frequency(-ies)	**14481.77 MHz**
Modulation	**QPSK**
Multiple access scheme	**TDM**

[1] [1] Gogo 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

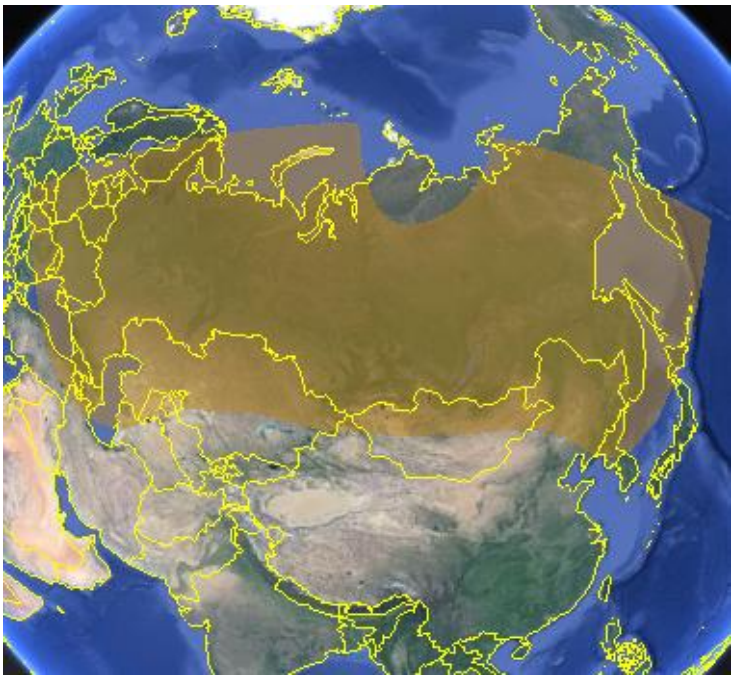
- **Operating details of the satellite**

Yamal-401

ITU BR Filing Information

ITU BR filing satellite network name	**EXPRESS-7**
ITU BR circular reference number	**IFIC 2805**
Satellite operator(s) (commercial) name	**Yamal 401**
GSO longitude (East or West from Greenwich)	**90° E**

Satellite service area (text description and/or a figure of the area)



Forward Channel details (Satellite to AES)

Transponder(s) downlink centre frequency	**11687.32 MHz**
Transponder(s) downlink bandwidth	**12 MHz**

Return Channel details (AES to satellite)

Transponder(s) uplink centre frequency	**14481.77 MHz**
Transponder(s) uplink bandwidth	**12 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 http://www.gogoair.com/gogo/cms/airlines.do