17 August 2013

Mr Thomas Weber European Communications Office Peblingehus Nansensgrade 19 DK-1366 Copenhagen K DENMARK

Dear Mr Weber,

AMENDMENT OF NOTIFICATION BY ROW 44 UNDER ECC DECISION (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)

Row 44 hereby submits to the ECO this amended notification of Aircraft Earth Stations under ECC/DEC/(05) 11. This amendment updates Row 44's previous notification, to reflect changes in the satellites and the transponders used, by adding additional capacity on SES-6. The system and AES data required by Annex B of ECC/DEC/(05) 11 are attached to this letter. The Row 44 system will comply with the requirements of that decision.

Please do not hesitate to contact me if you require any further clarification. We would appreciate confirmation of receipt of our notification.

Yours sincerely,

DocuSigned by: Michael Pigott -94D0976DEA5E42B...

Mike Pigott Vice President Legal Affairs and General Counsel Row 44, Inc.

INFORMATION REQUIRED BY ANNEX B OF ECC/DEC/(05) 11 FOR ROW 44 AMSS SYSTEM

Network Operator's designated point of contact

Title of contact: Chris Brown Postal address: 820 Springer Drive, Lombard, IL, USA 60148-6413 Telephone and fax numbers: phone +1.630.620.0472 • fax +1.630.268.1308 email address: <u>cbrown@row44.com</u>

Network Control Facility (NCF) designated point of contact

Title of contact: Michael Dromnitzki, Vice President Network Operations
Postal address:
Hughes Network Systems GmbH
Ottostraße 9
64347 Griesheim, Germany

Telephone and fax numbers: phone +0049 6155 844 144 • fax +49 (0)6155 844-280 email address: M.Dromnitzki@Hugheseurope.com

Technical Specifications of AES Equipment Used in the Network

Antenna type: KuStream 1000, Horn Array Antenna size: 62.5 cm x 15.7 cm Transmit peak gain: 28.8 dBi Max e.i.r.p. per carrier: 42.8dbW Transmit frequency bands: 14.0 – 14.25 GHz Min. operating elevation: 0 degrees Antenna pointing accuracy: <0.2 degrees peak

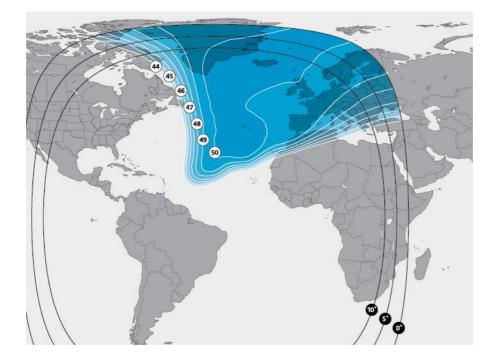
<u>Waveform characteristics</u> Number(s) of carriers per AES: 1 Occupied bandwidth(s) per carrier (as defined in EN 302 186): 1.5 MHz Carrier centre frequency(-ies): 14010,515 MHz and 14011,845 MHz (2 carriers) Modulation: QPSK Multiple access scheme: TDMA

ITU BR Filing Information

1. Satellite notified: SES-6

ITU BR filing satellite network name: NSS-18, NSS-35, NSS-57 ITU BR special section reference: CR/C 526 date of publication: 26.11.2002 Satellite operator(s) (commercial) name: SES-6 GSO longitude: (East or West from Greenwich) 40.5 degrees East Satellite service area:

Figure 1: Ku Band North Atlantic Coverage area for SES-6



Forward Channel details (Satellite to AES)

Transponder(s) downlink centre frequency: 11039.00 MHz Transponder(s) downlink bandwidth: 15.3 MHz

Return Channel details (AES to satellite)

Transponder(s) uplink centre frequency: 11241.00 MHz and 11217.00 MHz (2 channels)

Transponder(s) uplink bandwidth: 2 x 3 MHz

The most current list of the airlines which will use the Row 44 network system is listed on the Row 44 website: <u>http://www.Row44.com</u>. As of the date of this filing, Row 44 provides service to Norwegian Air Shuttle, TransAero (TSO) and UTAir.