Federal Communications Commission
Washington, DC 20554

International Bureau

April 23, 2009

Stephen D. Baruch, Esq.
Leventhal, Senter & Lerman, PLLC
2000 K Street, NW Suite 600
Washington, DC 20006

Re: Hughes Network Systems, LLC; File Nos. SAT-LOI-20080603-00118; SAT-LOI-20080618-00129; and SAT-LOI-20080618-00130

Dear Mr. Baruch:

This letter requests additional information concerning the three above referenced applications filed by Hughes Network Systems, LLC (Hughes). The three Hughes applications seek access to the United States market using non-U.S. Licensed Ka-band Fixed Satellite Service (FSS) geostationary satellite orbit (GSO) space stations authorized by the United Kingdom to be located at the 107° W.L., 109° W.L. and 90° W.L. orbital locations, respectively. We have reviewed Hughes's applications and request that Hughes provide us with additional information outlined below within 45 days of the date of this letter to allow us to continue processing the three applications referenced above.

Section 25.137(c). Under Section 25.137(c) of the Commission's rules, a non-U.S. licensed GSO-like satellite system seeking to serve the United States can have its request placed in the Commission's processing queue and considered in the order filed, if (1) the system is in orbit and operating; (2) has a license from another administration; or (3) has been submitted for coordination to the International Telecommunications Union (ITU).[1] In its applications, Hughes states that the each "satellite's authorization from the United Kingdom is held by a subsidiary of Hughes."[2] Hughes further states that filings for the satellites have been published at the International Telecommunication Union (ITU) under the designation UKSAT-14, UKSAT-15 and UKSAT-16.[3] In a September 1, 2008 letter to the Commission, Ofcom states that "the 3 satellite network filings UKSAT-14, -15 and -16 were submitted to the ITU on behalf of the UK operator Hughes Networks Systems Limited. Coordination requests for these networks were received by the ITU on 5 December 2007 and published on BR IF1C 2617 of 15 April 2008."[4]

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[1] 47 C.F.R. § 25.137(c).

[2] Hughes Network Systems, LLC, IBFS File Nos. SAT-LOI-20080603-00118 Narrative at 7; SAT-LOI-20080618-00129 Narrative at 7 ; SAT-LOI-20080618-00130, Narrative at 7.

[3] SAT-LOI-20080603-00118 Narrative at 1 footnote 1; SAT-LOI-20080618-00129 Narrative at 1 footnote 1; and SAT-LOI-20080618-00130, Narrative at 1 footnote 1.

[4] Letter to Kathyrn Medley, Engineering Branch Chief, Satellite Division, International Bureau, Federal Communications Commission from Steven Limb, Manager International Co-ordination, OfCom, Office of Communications (September 1, 2008).

Ofcom further states that the ITU cost recovery for these networks has been paid and coordination is being pursued in accordance with the ITU Radio Regulations.[5]

To assist the Commission in processing these applications, please provide information concerning the Hughes subsidiary that will or may be involved in the implementation of the satellite network, including details concerning the subsidiaries' officers, directors, and direct and indirect shareholders, and any arrangements concerning network implementation.

Requests for partial waiver of the Section 25.114 information requirements. In each application, Hughes requests waiver of the following Commission rules: Section 25.114(d)(3), Section 25.114(c)(4)(ii), Section 25.114(c)(iii), and Section 25.114(c)(4)(vi).[6] Based on our review of the applications, we find that the technical information provided by Hughes in lieu of full compliance with the information showings of these rules is not sufficient to allow us to determine whether the space stations will operate in conformance with the Commission's rules and will not cause interference to other systems. Accordingly, we request that Hughes provide additional information to allow us to continue to process these applications.

Section 25.114(d)(3) of the Commission's rules requires each space station applicant to provide "predicted space station antenna gain contours for each transmit and receive beam requested."[7] In its application, Hughes includes the antenna gain contours for one representative uplink and downlink spot beam. Hughes states that because each satellite will utilize 112 receive spot beams and plans to use multiple spot beams or one wide area coverage beam on the downlink it would be burdensome to include all of the approximately 900 beams its application. Hughes also states that it will provide additional gain contour files for other spot beams upon Commission request.[8] In light of Hughes' claim that including the contour information for each beam is burdensome, Hughes may, in lieu of providing the information as set forth in the rules, either:

> A. Provide a text file with a table listing a representative sample of at least 20% of transmit receive beams (labeled by city and state), the boresight latitude, the boresight longitude, the EIRP at boresight, and the associated antenna beamwidth (major and minor axis for each beam, as well as the orientation of the major axis, as required to generate the beams in GIMS). Within the same text file, Hughes must include a second table containing the half cone angle (in degrees) for each contour level (-2, -4, -6, -8, -10, -15, and -20 dB) for the representative co-polarized contours of the spot beams. The beams selected should be from all regions Hughes proposes to serve and the highest power beams; or
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> B. Provide a text file with a table listing a representative sample of at least 20% of all 900 transmit/receive beams (labeled by city and state), the boresight

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[5] *Id.*

[6] 47 C.F.R. §§ 25.114(d)(3), 25.114(c)(4)(ii), 25.114(c)(4)(iii), and 25.114(c)(4)(vi).

[7] 47 C.F.R. § 25.114(d)(3).

[8] SAT-LOI-20080603-00118 Narrative at 16-17; SAT-LOI-20080618-00129 Narrative at 17; and SAT-LOI-20080618-00130, Narrative at 17.

latitude and the boresight longitude, along with the predicted space station antenna gain contours for each transmit and receive beam (a total of 180 beams) in .pdf format showing the contour levels (-2, -4, -6, -8, -10, -15, and -20 dB) of the spot beams. The beams selected should be from all regions Hughes proposes to serve and the highest power beams.

Section 25.114(c)(4)(ii) of the Commission's rules requires applicants to provide emission designators, allocated bandwidth of emission, and final amplifier output power information for their proposed satellite system.[9] In its application, Hughes provides the maximum downlink EIRP.[10] Hughes contends that the SPACEWAY satellites do not use a single high-power amplifier on the downlink; and thus Hughes cannot provide the final amplifier output power and losses to the spacecraft transmit antenna that are called for in this rule. In lieu of providing the information as set for in the rules, Hughes may provide the peak output power for the entire array.

Section 25.114(c)(4)(iii) of the Commission's rules requires applicants to identify which antenna beams are connected or switchable to each transponder and to the telemetry, tracking and command operations (TT&C).[11] In its application, Hughes lists the uplink half-links separately from the downlink half links to reflect the on-board processing capability of the satellite.[12] Hughes states that the SPACEWAY satellites support 784 uplink half-link combinations and there are 784 downlink half-link combinations. Accordingly, Hughes contends that it is not practical to provide a complete list of all possible interconnections between transponders and antenna beams.[13] In lieu of providing the information required in the rules, Hughes may provide at least 20% of the possible interconnections between transponders and antenna beams.

Section 25.114(c)(4)(vi) of the Commission's rules requires applicants to disclose the gain of each transponder channel including any adjustable gain step capabilities.[14] Hughes does not provide any alternative information showing for this rule. Instead, Hughes states the SPACEWAY satellites demodulate all of the packets received, and there is a disconnect between the uplink and downlink paths that preclude the calculation of a gain value. Hughes also states that as a result, any gain value would necessarily be a range of values reflecting the variations in power both on the uplink and downlink path.[15] In lieu of providing the information as set forth in the rule, Hughes may provide a typical range of values reflecting the variations in power both on the uplink and downlink path.

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[9] 47 C.F.R. § 25.114(c)(4)(ii).

[10] In Section S7(m) of the Schedule S portion of FCC Form 312.

[11] 47 C.F.R. § 25.114(c)(4)(iii).

[12] In Section S10 of the Schedule S portion of FCC Form 312.

[13] SAT-LOI-20080603-00118 Narrative at 13-14; SAT-LOI-20080618-00129 Narrative at 14; and SAT-LOI-20080618-00130, Narrative at 14.

[14] 47 C.F.R. § 25.114(c)(4) (vi).

[15] SAT-LOI-20080603-00118 Narrative at 15; SAT-LOI-20080618-00129 Narrative at 15-16; and SAT-LOI-20080618-00130, Narrative at 15-16.

Hughes Network Systems, LLC must file its response in the form of amendments to each of the underlying applications within 45 days of the date of this letter with a courtesy copy to Joseph Hill of my staff. If the information is not provided within this time period, the applications may be dismissed pursuant to Sections 25.112(c) and 25.152(b) of the Commission's rules.[16] Please contact Joseph Hill if you have any questions.

Sincerely,

Robert G. Nelson
Chief, Satellite Division
International Bureau

cc: Steven Doiron,
Hughes Network Systems, LLC
11717 Exploration Lane
Germantown, MD 20876

[16] 47 C.F.R. §§ 25.112(c) and 25.152(b)