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December 17, 2012

VIA ELECTRONIC FILING

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

Re: Notice of *Ex Parte* Presentation; IBFS File Nos. SES-LIC-20120427-00404; SES-STA-20120815-00751, Call Sign E120075

Dear Ms. Dortch:

On Thursday, December 13, 2012, Daryl Hunter of ViaSat, Inc. ("ViaSat"), and John Janka and Elizabeth Park of Latham & Watkins LLP, met with the following staff members of the International Bureau regarding the above-captioned application proceedings: Andrea Kelly, Stephen Duall, William Bell, Paul Blais, Kathyrn Medley, Alyssa Roberts, Kal Krautkramer and Cindy Spiers.[1] During the meeting, the attendees discussed a number of issues relating to ViaSat's proposed operation of aeronautical earth station ("AES") terminals pursuant to the authority requested in its license application and STA request.

Coordination. In response to questions from staff, ViaSat confirmed that it in fact has coordinated its proposed operations with all GSO Ka band satellite operators that operate (or are expected within the next few years to operate) satellite networks that are co-frequency and co-coverage with ViaSat's satellite points of communication, and that are located +/-30º from those points of communication (*i.e.*, ViaSat-1 at 115.1º W.L.; WildBlue-1 and Anik-F2 at 111.1º W.L.). Specifically, ViaSat has coordinated with Hughes Network Systems, SES, DIRECTV, Intelsat, EchoStar and Telesat. ViaSat has also coordinated the operations of the AES terminals with O3b, which plans to operate an NGSO Ka band network.

Control Point and Hub Stations. ViaSat confirmed that the single control point for the aeronautical terminals will be ViaSat's network operations center ("NOC") in Denver, as identified in the Form 312. The AES terminals will be capable of operating with each of ViaSat's Ka band gateway hubs that are used in ViaSat's existing Ka band satellite broadband

[1] Daryl Hunter and Kathyrn Medley participated via teleconference.

service network and that communicate with the ViaSat-1, WildBlue-1 and Anik-F2 satellites. These hubs currently include the following:

E110015	E110026	E110033	E110036
E110043	E110044	E110045	E110046
E110047	E110048	E110049	E110050
E110051	E110052	E110064	E110065
E060158	E060159	E040213	E010155
E010153	E010151		

The network also includes two Canadian-licensed gateways located in Winnipeg, Canada. To the extent that ViaSat adds gateway hubs to its broadband service network, the aeronautical terminals may communicate with those hubs as well.

The specific hub terminal used at any point in time will depend on the geographic location of the AES terminal and the satellite being used to provide service. However, the single point of contact at the Denver NOC will have the capability of shutting down any of the AES terminals operated within the network no matter which gateway in the network is being used at the time.

Data Logging. Staff asked ViaSat for details about the data logging capabilities of the proposed network, which ViaSat indicated it would provide in the near term.

Network Management. ViaSat clarified that the communications over the proposed AES terminals will be managed in the network using time division multiple access ("TDMA") techniques. As ViaSat indicated in the Technical Description of its license application, the proposed antenna will operate with the same SurfBeam 2-based network architecture as its Ka band consumer broadband system authorized under call sign E100143.[2] Contention access protocol is used solely on the initial ranging and login of terminals on to the network – a brief process lasting only seconds.[3] During this initial ranging and login process, which is the same as for the consumer SurfBeam 2 earth stations, the transmitted power densities of bursts from the AES fall within the values specified in ViaSat's application. Otherwise, the network does not employ the types of contention protocols in which multiple co-frequency transmissions occur

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2 ViaSat, Inc. Application, IBFS File No. SES-LIC-20120427-00404, Attachment 1 Technical Description at 1.

3 The Commission allows reasonable use of contention access protocols. *See 2000 Biennial Regulatory Review – Streamlining and Other Revisions of Part 25 of the Commission's Rules Governing the Licensing of, and Spectrum Usage by, Satellite Network Earth Stations and Space Stations*, Eighth Report and Order, 23 FCC Rcd 15099 ¶ 81 (2008).

simultaneously. Thus, this network architecture differs from that of ViaSat's Ku band AES network that the Commission previously reviewed and approved.[4]

The MF-TDMA architecture of the SurfBeam 2 network is designed to operate at the highest symbol rate supported while at the same time using the lowest power density modulation and code point necessary to close the link. The network employs active power control and reduced power when conditions permit, keeping the Es/No margin at 1 dB or less. When the modem has sufficient excess transmit capability, it will automatically switch to the next symbol rate and increase data rate, keeping the e.i.r.p. density at the lowest possible level that will close the link. Changes in symbol rate, modulation and coding, and frequency may occur as frequently as every 40 ms under control of the SurfBeam 2 management system.

Antenna Pointing. As indicated in ViaSat's application, the pointing error at three standard deviations (3σ, or 99.73% of the time) is +/-0.27º in the azimuth direction. The pointing error in azimuth will be less than 0.2º for 97.5 percent of the time. These levels of pointing accuracy reflect trade-offs in system performance and managing the risk of interference into adjacent spacecraft---which risk is significantly mitigated not only by the fact that the pointing error in azimuth will exceed 0.2º only approximately 2.5 percent of the time, but also because ViaSat's coordination with other satellite operators assumed worst-case antenna pointing and geographic skew conditions, taking into account the maximum possible off-axis EIRP power spectral density levels under those conditions. Currently, there are no Ka band satellites that are +/- 2º of the spacecraft with which this network will communicate, but in any case ViaSat would have to coordinate its operations with any new spacecraft that may be located within 2º, and ViaSat confirms that it will do so.

STA Operations. ViaSat clarified that the requested STA is intended to allow test operations relating to the IP networking and performance of the broadband service, rather than the RF aspects.

Coordination Methodology. In coordinating with each of the Ka band satellite operators identified above, ViaSat followed the methodology for obtaining satellite coordination established in Article 9 of the ITU Radio Regulations. Pursuant to those procedures, ViaSat provided to the other satellite operators the salient technical details of ViaSat's proposed AES terminal operations, and its calculations for evaluating the impact on the adjacent satellite, based on the particular operating parameters of such satellite. At the vast majority of longitudes along the GSO arc, the grating lobes would not intersect with the GSO arc under any set of expected operating conditions. However, for the few longitudes along the GSO arc at which a grating lobe could, at certain conditions, directly "land" on another satellite, the coordination analysis assumed that the maximum possible off-axis e.i.r.p. density of the applicable grating lobe would land on the subject satellite (*e.g.*, the calculation assumed the minimum symbol rate and the maximum e.i.r.p.). In each case, the ΔT/T calculated was less than 2 percent for the applicable satellite coverage and AES operating area.

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4 *ViaSat, Inc., Application for Blanket Authority for Operation of 1,000 Technically Identical Ku-Band Aircraft Earth Stations in the United States and Over Territorial Waters*, 22 FCC Rcd 19964, ¶¶14-15 (2007)

As the Commission has recognized, the satellite operators are sophisticated and are capable of assessing the impact on their own systems.[5] Therefore, the specific data evaluated by satellite operators during coordination typically are not provided to the Commission, and the terms of coordination are confidential. Consistent with industry practice, ViaSat and each operator mutually resolved any concerns that were raised.

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Please contact the undersigned if you have any questions regarding this submission.

Respectfully yours,

/s/

John P. Janka
Elizabeth R. Park

cc: Robert Nelson
Andrea Kelly
Stephen Duall
William Bell
Howard Griboff
Paul Blais
Joseph Hill
Byung K. Yi
Alyssa Roberts
Kathyrn Medley
Kal Krautkramer
Cindy Spiers
Hsing Liu
David Keir, Counsel to Row 44, Inc.

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5 *Row 44, Inc., Application for Blanket Authority to Operate up to 1,000 Technically Identical Aeronautical Mobile Satellite Service Transmit/Receive Earth Stations Aboard Commercial and Private Aircraft*, 24 FCC Rcd 10223 ¶ 24 (2009).