



Federal Communications Commission
Washington, D.C. 20554

August 15, 2016

John P. Janka
Latham & Watkins
555 Eleventh Street, NW
Suite 1000
Washington, D.C. 20004

Re: ViaSat, Inc.
IBFS File No. SAT-MOD-20160527-00053
Call Sign: S2902

Dear Mr. Janka:

This letter requests additional information regarding ViaSat, Inc.'s pending request to modify its grant of U.S. market access for the ViaSat-2 space station at the 69.9° W.L. orbital location by adding the 27.5-28.1 GHz (Earth-to-space) and 17.7-18.3 GHz (space-to-Earth) frequency bands to its grant of market access. To assist with the processing of this application, we request that ViaSat provide the following information:¹

- 1) For the frequency band 17.7-17.8 GHz (space-to-Earth) please provide the predicted transmitting antenna off-axis gain information specified in Section 25.264(a) of the Commission's rules, 47 CFR § 25.264(a). In addition, please perform the power flux-density (pfd) calculations based upon this off-axis antenna gain information as specified in Section 25.264(b) and identify each prior-filed U.S. Direct Broadcast Satellite (DBS) space station at whose location the coordination threshold pfd level of -117 dBW/m²/100 kHz is exceeded. Although ViaSat considers the 61.5° W.L. ITU Region 2 Broadcasting-Satellite Service (BSS) Plan location in its application, its pfd calculations must take into account all prior-filed U.S. DBS space stations as defined in Section 25.264(b)(1).
- 2) Please provide an interference analysis as described in Section 25.140(b)(4)(iii) of the Commission's rules, 47 CFR § 25.140(b)(4)(iii), demonstrating that ViaSat's proposed operations in the 17.7-17.8 GHz (space-to-Earth) band will not cause more interference to any current or future 17/24 GHz BSS satellite networks than if the applicant were located at the precise Appendix F orbital location from which it seeks to offset. ViaSat's orbital location, 69.9° W.L., is offset 1.1 degrees from the 71° W.L. Appendix F orbital location.² Accordingly, ViaSat's operations from this location must be at pfd levels that are reduced from those specified in Section 25.208(c) in accordance with the following calculation methodology:

¹ 47 CFR § 25.111(a).


² *The Establishment of Policies and Service Rules for the Broadcasting-Satellite Service at the 17.3-17.7 GHz Frequency Band and at the 17.7-17.8 GHz Frequency Band Internationally, and at the 24.75-25.25 GHz Frequency Band for Fixed Satellite Services Providing Feeder Links to the Broadcasting-Satellite Service and for the Satellite Services Operating Bi-directionally in the 17.3-17.8 GHz Frequency Band*, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 8842, Appendix F (rel. May 4, 2007).

For a given location on the surface of the Earth at which the required pfd reduction value needs to be determined, calculate the topocentric angular separation ' ϕ ' of the 71° W.L. and 67° W.L. geostationary orbital locations, and the corresponding off-axis gain $GCO1(\phi)$ of the antenna specified in Section 25.224(a)(1) of the Commission's rules at that angular separation. For the same location on the surface of the Earth, also calculate the topocentric angular separation of the 67° W.L. and 69.9° W.L. geostationary orbital locations, and the gain of the antenna $GCO2(\phi)$ specified in Section 25.224(a)(1) of the Commission's rules at that angular separation. Then, perform the subtraction $GCO2(\phi) - GCO1(\phi)$. The result is the required reduction in pfd from the value specified in Section 25.208(c).

Please demonstrate that under all atmospheric conditions, and for all angles of arrival, the pfd levels at the Earth's surface from ViaSat's transmissions in the 17.7-17.8 GHz (space-to-Earth) band will not exceed these calculated levels anywhere within the United States and its Territories.

ViaSat must amend its market access request to address this request for additional information by September 13, 2016. Failure to do so may result in the dismissal of ViaSat, Inc.'s request pursuant to Section 25.112(c) of the Commission's rules, 47 CFR § 25.112(c).

Sincerely,


Jose P. Albuquerque
Chief, Satellite Division
International Bureau