



September 29, 2017

**BY ELECTRONIC FILING**

Ms. Marlene Dortch, Secretary  
Federal Communications Commission  
455 12<sup>th</sup> Street SW  
Washington DC 20554  
Re: IB Docket 17-95

**Re: Amendment of Parts 2 and 25 of the Commission's Rules to Facilitate the Use of Earth Stations in Motion Communicating with Geostationary Orbit Space Stations in Frequency Bands Allocated to the Fixed Satellite Service, IB Docket No. 17-95**

Dear Ms. Dortch:

On September 27, 2017, Hughes Network Systems, LLC ("Hughes") met with members of the International Bureau ("Bureau") to discuss the Hughes filing in the above-referenced proceeding. Hughes was represented by Brennan Price, Senior Principal Engineer, Regulatory Affairs, and Jodi Goldberg, Associate Corporate Counsel, Regulatory Affairs. Representatives of the Bureau included Jose Albuquerque, Chip Fleming, Cindy Spiers, and Kerry Murray (by telephone).

The meeting participants discussed the attached talking points, setting out Hughes's views on certain aspects of the Commission's Notice of Proposed Rulemaking in this proceeding. Hughes and the Bureau also discussed issues relating to coordination in the 29.25-29.3 GHz band, as well as out of band emissions in the adjacent 27.5-28.35 GHz band.

Pursuant to the Commission's rules, this notice is being filed in the above-referenced dockets for inclusion in the public record. Please contact me should you have any questions.

Respectfully,

*/s/ Brennan Price*

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Attachments

cc: Meeting Participants listed above



## **Hughes Network Systems Supports Streamlined Rules for Earth Stations in Motion Communicating with Geostationary Orbit Space Stations**

**September 27, 2017**

- Hughes Network Systems, LLC (Hughes) is the largest provider of satellite broadband services in the United States and globally, with more than one million subscribers in North America. Hughes offers service in excess of FCC-defined broadband speeds across the continental United States and Southern Alaska. Since launching its new high-speed broadband service in March 2017, Hughes has added over 100,000 new satellite broadband subscribers in just the first two months.<sup>1</sup> Within the next few years, Hughes plans to launch its next-generation broadband satellite, designed to provide two-way internet service to an estimated two million households (five million people) throughout the United States, at speeds up to an estimated 100 Mbps down and 10 Mbps up.<sup>2</sup>
- An important focus of the Hughes broadband business is ensuring that its broadband service reaches users in motor vehicles, vessels, and airplanes utilizing earth stations in motion ("ESIMs"). Hughes has developed technology for ESIMs in the Ku and Ka bands for more than a decade,<sup>3</sup> and its technology is currently powering broadband services to aircraft around the world.<sup>4</sup>

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<sup>1</sup> Press Release, *HughesNet Gen5 Delivers True FCC-Defined Broadband, Attracts New Customers In Every Continental U.S. State*, June 5, 2017, available at <https://www.hughes.com/who-we-re/resources/press-releases/hughesnet-gen5-surpasses-100000-subscribers-just-two-months> (last accessed Sept. 21, 2017).

<sup>2</sup> See Hughes Application for HNS 95W space station, IBFS File No. SAT-LOA-20170621-00092 (filed June 21, 2017). Hughes plans to design HNS 95W to serve two million households, averaging 2.67 persons each.

<sup>3</sup> See Grant, experimental call sign WE2XEW, file number 0011-EX-PL-2006, issued May 24, 2007 (license subsequently renewed and modified; valid until June 1, 2019).

<sup>4</sup> See, e.g., Press Release, Hughes Demonstrates High Definition Video Over Satellite from Rotary Wing Aircraft, July 19, 2015, available at <https://government.hughes.com/who-we-are/resources/press-releases/hughes-demonstrates-high-definition-video-over-satellite-rotary> (last accessed Sept. 21, 2017); Press Release, Global Eagle Entertainment and Hughes Expand 10-Year Relationship to Bring High-Throughput Ka-band Connectivity Services to North American Airlines, available at <https://www.hughes.com/who-we-are/resources/press-releases/global-eagle-entertainment-and-hughes-expand-10-year> (last accessed Sept. 21, 2017); Press Release, Thales and SES Select Hughes for Next-Generation Aviation Connectivity Network to Provide Increased Capacity, Coverage and Redundancy Over the Americas, available at <https://www.thalesgroup.com/en/worldwide/aerospace/press-release/thales-and-ses-select-hughes-next-generation-aviation-connectivity> (last accessed Sept. 21, 2017).



- Hughes supports the adoption of rules for ESIMs that facilitate the effective delivery of broadband services to users in motion while also protecting other spectrum users, including other geostationary satellite operators, from undesired or misdirected transmissions from an ESIM. Accordingly, the Commission should:
  1. **Eliminate its antenna pointing accuracy requirements in favor of off-axis e.i.r.p. density limits.** While most ESIM operators will comply with an e.i.r.p. density limit by maintaining accurate antenna pointing, eliminating the antenna pointing accuracy requirement gives ESIM operators the alternatives of avoiding interference by reducing transmitted power or narrowing the ESIM's transmitted beam width in order to maintain compliance with the e.i.r.p. density limit. Replacing the antenna pointing accuracy requirement with an off-axis e.i.r.p. density limit will streamline the Commission's rules, and provide ESIM licensees with greater operational flexibility while ensuring protection of non-targeted space stations from harmful interference.
  2. **Eliminate unnecessary data logging requirements in favor of proactive interference avoidance.** The Commission's current rules require an ESIM operator to log details of ESIM transmissions at frequent intervals and provide these logs to the Commission or the National Telecommunications and Information Administration upon request. In its years as an ESIM operator, Hughes has never been asked to provide logs for its ESIM operations. In the absence of any specific examples of how logging data has been used to identify or resolve a case of interference, the requirement should be eliminated as unnecessary and onerous and unnecessary. Hughes supports the Commission's proposal to maintain cessation of emission and network control and monitoring center requirements, which are sufficient to proactively resolve cases of harmful interference as they occur.
  3. **Aggregate its rules governing Earth Stations in Motion into one rule part.** The three classes of ESIMs (on vehicles, aircraft, and vessels) fundamentally operate in the same manner: relying on a precisely directed and carefully tracked link between the ESIM and the space station with which it communicates. A single set of rules for all classes of ESIMs would substantially reduce regulatory burdens.