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July 16, 2018

**VIA ELECTRONIC FILING**

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

**Re: *Modernizing the FCC Form 477 Data Program*, WC Docket No. 11-10  
Notice of *Ex Parte* Presentation**

Dear Ms. Dortch:

On July 12, 2018, Chris Murphy of Viasat, Inc. and the undersigned counsel to Viasat met with the Commission staff copied below to discuss the Commission's efforts to improve the Form 477 data program, particularly in rural areas and in light of congressional concerns raised in the Consolidated Appropriations Act of 2018. The meeting focused on how the Commission might more appropriately account for the availability of satellite broadband service in collecting and analyzing data collected through FCC Form 477. During the meeting, Viasat noted that it has offered to submit Geographic Information System (GIS) shapefiles to provide more granular information about the availability of its service.<sup>1</sup> In addition, Viasat responded to staff inquiries with respect to how the FCC Form 477 data collection process might account for: (i) the nationwide coverage of satellite providers and (ii) the possibility of "line-of-sight" issues.

**A. Use of GIS Shapefiles**

As an initial matter, Viasat expressed its appreciation for the Commission's efforts to improve the quality and accuracy of broadband data. Viasat further observed that there are additional data sources that could be efficiently used without imposing undue burdens on the parties providing such data. Viasat highlighted the potential use of data found in the Geographic Information System (GIS) shapefile—an industry-standard electronic file format that incorporates simple geometric shapes (*e.g.*, points and lines) to define the satellite coverage area, and which would offer a number of benefits:

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<sup>1</sup> See Comments of Viasat, Inc., WC Docket No. 11-10 (Oct. 10, 2017).

- The GIS shapefile would provide an efficient way to succinctly capture coverage over broad geographic areas without the burden of listing every census block within that area.
- The perimeter depicted by the GIS shapefile could cut across pre-defined geographic lines (*e.g.*, the census block or country boundaries), thus providing more granular and accurate coverage information.
- The GIS shapefile would allow the Commission to zoom into a household level-view and see exactly which households are within the coverage area—and thus which households are served and which are not. The Commission would no longer need to assume the entire census block is served.

In light of these benefits, Viasat urged the Commission to incorporate the GIS shapefile into its plans for modernizing the Form 477 data program.

## **B. The Nationwide Coverage of Satellite Providers**

During the meeting, Commission staff acknowledged that satellite networks currently provide nationwide coverage, enabling consumers throughout the country to receive broadband service. However, staff also observed that satellite broadband networks do not currently offer sufficient capacity to serve all of the approximately 10 million locations that the Commission has deemed to be “unserved.”

As a general matter, Viasat noted that communications networks are not designed with capacity to simultaneously serve all users in a particular service area. Such an approach would be highly inefficient and would lead to implementation and operating costs that are prohibitively high. Instead, network operators make reasonable assumptions about, among other things: (i) how many consumers in a market will subscribe to the service; (ii) how often they will use the service; and (iii) how much capacity they will need at any given time. Based on these assumptions, networks are then designed to provision per-subscriber capacity at levels sufficient to ensure that subscribers receive service at a suitable level. And networks are expanded and extended over time to address growing consumer demand. There is no basis for expecting satellite networks to adopt a different approach.

Moreover, Section 706(b) establishes that the critical question in evaluating “availability” is whether service is being deployed to all Americans in a *reasonable* and *timely* fashion—both of which require consideration of whether a network is meeting existing demand and likely to be able to meet near-term increases in demand. In this regard, it should be noted that the types of investments required to expand satellite broadband capacity are conceptually no different than those needed to “scale” terrestrial networks. Viasat is making those investments—*e.g.*, through technological improvements, construction and launch of additional spacecraft, and connection of ground facilities to high-quality fiber to expand capacity over time to meet consumer demand. Viasat further explained that its newest spacecraft are capable of using more spectrum than they currently actually utilize, and that regulatory flexibility in how that spectrum is used would enable the scaling of those spacecraft to serve even more consumers.

As to capability of a given spacecraft to serve a certain number of consumers, Viasat explained that its satellite broadband capacity also is used to provide WiFi service on airplanes, and to serve enterprise and government users. In addition, Viasat noted that its latest spacecraft design has the ability to dynamically shift capacity where it is needed, when it is needed within the expansive satellite footprint. Thus, capacity can be allocated to areas where demand is the greatest at any point in time.

Viasat noted that information that may be of interest to the Commission—*e.g.*, relating to satellite network beam coverage, capacity, provisioning rates, and related technologies—is highly proprietary. Viasat stressed that operators could not reasonably be required to submit such information if the Commission could not ensure that it would be treated as confidential and exempt from public disclosure.

### **C. “Line-of-Sight”**

Staff asked about the extent of “line-of-sight” issues that could prevent a potential subscriber from being able to receive satellite broadband service in a given location. Viasat first clarified that it does not determine in advance whether a given location is likely to experience “line-of-sight” issues as these issues are extremely rare. Rather, Viasat attempts to execute a successful installation when a consumer orders service, which means that Viasat bears the cost of any unsuccessful installation attempt. Viasat also explained that such issues: (i) are exceedingly rare in the first instance; (ii) can often be overcome by trimming tree branches, installing the satellite antenna on a pole, etc.; and (iii) can result from a consumer’s decision to decline to use available solutions (*e.g.*, aesthetic reasons). Viasat further explained that such issues will become even rarer over time, as Viasat launches additional satellites providing additional satellite diversity and sight lines.

Respectfully submitted,

/s/ John P. Janka

John P. Janka

Jarrett S. Taubman

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