

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Further Streamlining Part 25 Rules	)	IB Docket No. 18-314
Governing Satellite Services	)	
	)	

**COMMENTS OF VIASAT, INC.**

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Viasat, Inc. (“Viasat”) submits these comments in response to the Commission’s Notice of Proposed Rulemaking proposing to adopt a streamlined process for authorizing geostationary fixed-satellite service (“GSO FSS”) networks, and to repeal or modify certain Part 25 rules governing satellite services.<sup>1</sup>

**I. INTRODUCTION AND SUMMARY**

Viasat applauds the Commission’s commencement of this proceeding seeking to simplify the licensing and regulatory procedures for GSO FSS networks. As a leading provider of satellite-based broadband services to consumer, enterprise, and government users, Viasat has pioneered satellite broadband technologies that have revolutionized the provision of broadband service over satellite. The most prominent example of these advances is Viasat’s innovation of Ka band satellite designs that maximizes the utility of spectrum and reduces the “cost per bit” of delivering service. These revolutionary advances have enabled Viasat to provide high-quality services to consumers in their homes, at their businesses, throughout their communities, and on

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<sup>1</sup> *Further Streamlining Part 25 Rules Governing Satellite Services*, IB Docket No. 18-314, Notice of Proposed Rulemaking, FCC 18-165 (rel. Nov. 15, 2018) (“*Notice*”).

airplanes, and to afford millions of Americans an effective competitive alternative to wired and wireless terrestrial services.

These increases in satellite capacity are dependent upon an increase in the total bandwidth of the satellite network, including its gateway earth stations. Increasing the number of aggregation and interconnection points within a satellite network enables greater throughput for the connection of users to the internet. Viasat and other satellite operators continue to design, build, and operate newer generations of high-capacity and ultra-high-capacity satellites employing greater numbers of gateways. Therefore, streamlining of gateway earth station licensing is critical as satellite technologies continue to advance.

Allowing applicants to provide technical specifications and particulars of operation of these earth stations, which are substantially (if not entirely) identical, would significantly reduce the regulatory and administrative burdens for both Commission staff and applicants. Therefore, Viasat supports the Commission's proposal to adopt a unified satellite network authorization that includes operating authority for earth stations, as well as the associated streamlined procedures. Viasat urges the Commission to extend these procedures to requests for market access and also to satellite networks operating using frequencies shared with other uses. Viasat also concurs with the Commission's proposal to allow streamlined procedures for approval of earth stations requiring site-based coordination within the unified license. Applicants also should be allowed to continue to apply for earth station authority separately from a unified network license.

Furthermore, Viasat supports the Commission's proposals to modify the rules to further streamline satellite and earth station regulatory requirements. Specifically, Viasat supports aligning the buildout deadline for earth stations with the associated satellite launch and operate milestone, and requests that operators be afforded additional flexibility to bring earth stations

into operation within one year after the commencement of operations of the satellite network. Viasat also supports the elimination of the satellite annual report filing and the adoption of the ITU limits for out-of-band emissions. Viasat generally agrees that satellite applicants should be permitted a reasonable amount of time to make corrections and submissions to address application deficiencies to avoid losing its place in the first-come, first-served satellite application queue or in a processing round, as long as such changes do not constitute a major amendment or revise fundamental aspects of the application. Finally, Viasat agrees with proposals to eliminate the notice requirement for certain minor modifications of earth stations that would not impact other operators.

## **II. UNIFIED SATELLITE NETWORK AUTHORIZATION**

The Commission proposes to adopt a licensing framework for GSO FSS space stations and earth stations in which it would issue a single authorization to cover the entire network, obviating the need for separate earth station applications and licenses. The proposed application requirements for the unified license would be modeled after the current space station application process and would contain all necessary authority to operate space stations and broadly-deployed earth stations, as well as conditional authority to operate earth stations requiring individual coordination. Earth stations that would operate in bands shared with primary uses, such as terrestrial operators, would be required to submit evidence of site-based coordination through a separate filing but would not be subject to a separate license application process. The Commission concludes that such a mechanism would streamline and simplify application procedures and the review of technical information, and would expedite the deployment of earth stations and service to the public.<sup>2</sup> However, the Commission proposes to limit the unified

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<sup>2</sup> Notice at ¶¶ 6-8.

network authorization to GSO FSS space stations and earth stations in bands in which the Commission has adopted standard power limits under its two-degree spacing policy: 10.95-11.2 GHz, 11.45-12.2 GHz, 13.75-14.5 GHz, 18.3-18.8 GHz, 19.7-20.2 GHz, 28.35-28.6 GHz and 29.25-30 GHz.<sup>3</sup>

Viasat fully supports the adoption of the proposed licensing framework and agrees with the Commission's conclusions regarding the benefits of this approach. Most significantly, allowing the submission of a single application covering the parameters of both the space station and earth station components of a GSO FSS network would be more efficient because it would eliminate duplicative reviews of technical and operating parameters in separate applications for the space station, and again when associated earth station authority is sought. Satellite coordination typically covers both satellite and ground network components operating in concert, and thus, a unified process for authorizing satellite networks accurately reflects the integrated nature of the space and ground segment operations.

Viasat requests that the Commission extend this streamlined licensing framework to market access requests, as well as to networks operating in bands where standard two-degree spaced power limits do not apply. Viasat also comments on the procedures for authorizing individual, site-based earth stations, and maintaining separate earth station licensing as an option.

#### **A. Market Access Requests and Additional Frequency Bands**

Viasat urges the Commission to make the unified network authorization procedures available more broadly to GSO FSS networks. As a threshold matter, the Commission should apply the unified network authorization framework equally to non-U.S.-licensed satellites networks seeking market access, including the earth stations that will be located within the

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<sup>3</sup> *Id.* at ¶ 9 & n.12.

United States.<sup>4</sup> Adopting the same structure for petitions for declaratory ruling for market access and licensing of U.S.-licensed satellite networks would maintain the parity that currently exists in the Commission's application processes. In addition, the benefits of eliminating duplicative reviews of technical information are equally applicable to market access applications and non-U.S.-licensed systems serving the United States, because the technical reviews for earth stations and space stations, whether the spacecraft is licensed in the U.S. or abroad, are identical. Therefore, there is no reason to limit the unified network authorization to U.S.-licensed systems.

Moreover, Viasat urges the Commission to make the proposed streamlined procedures and unified network authorization available to systems operating beyond the portions of the Ku and Ka bands where standard two-degree spacing power limits apply. Most next-generation satellite networks will utilize additional spectrum to achieve the capacity needed to meet the demands of high-bandwidth applications that are prevalent today and that will grow exponentially in the future. For instance, many GSO FSS Ka band networks today utilize the 18.8-19.3 GHz and 28.6-29.1 GHz band segments on a secondary basis to NGSO FSS within the United States, and the Commission has recognized the importance to satellite operators of having access to the 27.5-28.35 GHz band segment. In addition, the Commission has recently added secondary allocations for FSS in the 17.8-18.3 GHz, 19.3-19.4 GHz, and 19.6-19.7 GHz, recognizing that power flux-density limits on space station downlink transmissions are sufficient to protect any terrestrial uses.<sup>5</sup> Notably, the Commission anticipates that the unified authorization would include these other frequencies, because it proposes a streamlined mechanism in the *Notice* for submitting UMFU coordination showings under Section 25.136.

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<sup>4</sup> See *id.* at ¶ 9.

<sup>5</sup> *Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Report and Order, 32 FCC Rcd 7809 ¶¶ 7, 19 (2017).

The practical reality is that most satellite operators would not be able to avail themselves of the unified licensing approach if the Commission were to limit the procedures to the Ku and Ka bands identified in the *Notice*, and there is no reason for the Commission to do so. The same rationale for streamlining the review and combining earth stations and space station technical information into a single filing also are relevant to bands where secondary use analyses are provided. For instance, in the bands permitting GSO use on a secondary basis with NGSO FSS operations within the United States, an applicant could make the secondary use demonstration once in the unified application. Indeed, the benefits of a unified license would be substantially diminished if separate space station and earth station authorizations were still necessary for certain frequency bands.

**B. Site-Based Coordination for Earth Stations**

With respect to the submission of coordination demonstrations for gateway operations in the 27.5-28.35 GHz band, Viasat urges the Commission to establish a submission interface that is capable of accepting site-based information in a streamlined manner. As the Commission contemplates, any earth station particulars of operation related to the antenna characteristics would not need to be duplicated in these filings, and thus, only entry of site-specific location information, and supporting showings and coordination documentation would be required. This limited information could be entered on a single screen, or potentially uploaded for multiple earth stations through a text or Excel file. Moreover, any application processing fees for individual, site-based earth station submissions should be commensurate with the lower rates



applicable to additional earth stations in an assignment or transfer of control application, or an additional site-based application.<sup>6</sup>

### **C. Option for Separate Earth Station Licensing**

Finally, the Commission asks whether it should maintain separate licenses for earth stations communicating with GSO FSS space stations.<sup>7</sup> Viasat agrees that separate licensing should remain an option for earth station operators that are utilizing capacity on a satellite that it does not operate or control. There may be circumstances where parties want to make clear in the Commission's records that the earth station operator controls the ground station and is itself directly responsible to the Commission for complying with all regulatory obligations.

## **III. ALIGNING SPACE STATION AND EARTH STATION BUILDOUT REQUIREMENTS**

In the *Notice*, the Commission proposes to align the buildout requirements for space stations and associated gateway earth stations, such that the earth stations would need to commence operations at the time of the buildout milestone for the spacecraft, but would be allowed no less than the one-year period currently applicable to earth stations.<sup>8</sup> This proposal would allow satellite network operators to obtain authorizations for gateway earth stations throughout the five-year period during which the GSO FSS satellite is being constructed, rather than to wait until the last year before launch to obtain earth station authorizations. Currently, satellite network operators typically apply for gateway earth station licenses closer to the launch

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<sup>6</sup> See, e.g., *International and Satellite Services Fee Filing Guide*, at 12-13 (effective Sept. 4, 2018) (establishing filing fees for an assignment or transfer of fixed transmit/receive earth stations at \$5490 for the first station and \$200 for each additional station, and for fixed transmit/receive earth stations of less than 2 meters operating in the 4/6 GHz band at \$6,615 for the lead application and \$70 for each routine application).

<sup>7</sup> *Notice* at ¶ 11.

<sup>8</sup> *Id.* at ¶ 16.

of the satellite, so that the earth station operations can commence when the satellite is operational *and* within one year of the earth station license grant.

Viasat agrees that the proposed modifications to the earth station buildout requirements would allow greater certainty to satellite network operators that its gateway locations can be secured and authorized once the satellite design is completed, even if the satellite will not be completed within a year's time. Coordinating gateway locations in shared frequencies and seeking approval throughout the five-year satellite construction period would also enable filers to stagger the submission of applications, which would alleviate time pressures for the Commission's reviews and other approvals that must be sought closer to the time of the satellite launch (*e.g.*, STAs for orbit raising and testing activities).

Viasat requests, however, that operations be allowed an additional one-year period beyond the satellite launch and operate milestone to bring gateway earth stations into use. The next generation of high-throughput satellites will have large numbers of gateways that may not all be brought into operation upon the launch of the satellite, as there is likely to be a period of ramp-up of traffic over the satellite network. Allowing additional flexibility to accommodate the transition to full operations would avoid the need to seek an extension of the deadline for bringing earth stations into operation.

#### **IV. ELIMINATION OF ANNUAL REPORTING REQUIREMENTS**

Viasat supports the Commission's proposal to eliminate the satellite annual report filing requirement in Section 25.170.<sup>9</sup> Despite the previous streamlining of the informational requirements in the annual report, the filing burden still outweighs any benefits, since the

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<sup>9</sup> See Notice at ¶ 17.

Commission admittedly does not make use of most of the reports.<sup>10</sup> Requiring satellite operators to confirm annually that its point of contact information is current, as the Commission proposes, certainly would be far less burdensome. However, Viasat urges the Commission simply to update Section 25.171 to require authorized satellite operators to maintain accurate contact information on file for purposes of resolving interference disputes, and to update the information within 10 days of any change.

Furthermore, in the event that the rule changes adopted in this proceeding would not take effect before June 30, 2019—the deadline for filing the next satellite annual report—Viasat requests that the Commission waive the filing requirement for this year.

## **V. OUT-OF-BAND EMISSIONS**

Viasat supports the Commission’s proposal to harmonize its rules for out-of-band emissions with the international standard in Recommendation ITU-R SM.1541-6, which provides a smooth transition starting at the band edge.<sup>11</sup> The ITU limit provides greater clarity than the limit currently in Section 25.202(f) of the Commission’s rules. Because the ITU limit reflects a signal that diminishes at a logarithmic rate, it is more consistent with characteristics of radio signals than the Commission’s current limit, which presumes an abrupt drop-off of the signal. Moreover, because satellite networks have long been subject to the ITU limit, harmonizing U.S. rules with international standards would be consistent with current expectations and would not disrupt any existing operations. Satellite operators have been designing and operating networks subject to these constraints, and thus, terrestrial and other

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<sup>10</sup> *See id.*

<sup>11</sup> *See id.* at ¶ 19.

operators in adjacent bands would not experience any different impact if the ITU limits are adopted in the United States.

## **VI. DISMISSAL OF APPLICATIONS**

As the Commission notes in the *Notice*, satellite applications must be substantially complete when filed and an application that is not substantially complete will be returned without the ability to correct the substantial defects and maintain its original filing.<sup>12</sup> EchoStar has proposed that applicants be allowed to correct any errors or omissions within 60 days of a Commission request to avoid losing its place in the satellite application processing queue. EchoStar also suggests that applications be accepted for filing automatically within 30 days of filing unless the Commission determined otherwise.

Given the critical nature of maintaining a satellite application, both under first-come, first-served queues for GSO-like systems, and processing rounds for NGSO-like systems, Viasat is in favor of implementing satellite application processing procedures that do not rely on a “letter-perfect” standard for acceptance of such applications. Penalizing satellite applicants for obvious “foot-faults” is unnecessarily punitive, given the dire consequences of losing a place in the first-come, first-served queue or a processing round. In recent years, the Commission’s approach to satellite application processing generally has been reasonable: the Commission typically has issued requests for specific technical demonstrations, supporting information or clarifications, allowing a reasonable timeframe for a response, rather than dismiss an application outright. Viasat supports codification of such an approach as needed, including timeframes for responses or periods for initial Commission review, as EchoStar proposes.

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<sup>12</sup> *Id.* at ¶ 20.

However, the Commission should make clear that the types of corrections and modifications that can be made within such a period must not constitute “major” modifications as defined in Section 25.117 of the Commission’s rules.<sup>13</sup> Further, the types of corrections and changes that are allowed to be made should be to defects that are consistent with those specified in Section 25.112(a)(1) of the rules: “the application is defective with respect to completeness of answers to questions, informational showings, internal inconsistencies, execution, or other matters of a formal character.”<sup>14</sup> Allowing corrections or changes to change aspects of the application that would be deemed substantial non-compliance with the FCC’s rules or would constitute wholesale changes to fundamental aspects of the requests in the application should not be permitted to “save” a place in the queue or in a processing round.

## **VII. NOTIFICATION OF MINOR EARTH STATION MODIFICATIONS**

Viasat agrees with Iridium’s proposal to allow minor modifications to licensed earth stations without any notification to the Commission as long as the modifications do not involve: (i) an increase in EIRP or EIRP density; (ii) additional operating frequencies; (iii) a change in polarization, (iv) an increase in antenna height; (v) antenna repointing beyond any coordinated range, or (iv) a change from the originally authorized coordinates of more than 1 second in latitude or longitude for stations operating in frequency bands shared with terrestrial systems, or more than 10 seconds of latitude or longitude for stations operating in frequency bands not shared with terrestrial systems.<sup>15</sup> Modifications that do not implicate these factors would not

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<sup>13</sup> See 47 C.F.R. § 25.117.

<sup>14</sup> See *id.* at § 25.112(a)(1).

<sup>15</sup> See *Notice* at ¶ 22; see also 47 C.F.R. § 25.118(a)(4).

change the operating parameters in a way that would risk greater interference to other operations, and therefore, there is no need to change any licensing information or notify the Commission.

Viasat also agrees that the addition of new transceiver and antenna combinations to an existing blanket earth station license should not require prior Commission notification when they meet these requirements. Replacement of such components in a manner that complies with the minor modification rules would be within the envelope of the earth station license, and thus would not be associated with any change in characteristics that would impact other users.

Eliminating the notice requirement in these cases would not cause licensing information to be less reliable. Other users still would have all relevant information regarding the envelope of the operations and would be able to plan their operations accordingly. In any event, the Commission's proposals to streamline the information required for conforming earth stations under a unified network authorization approach would eliminate many of the specific informational requirements for earth station licenses.

Therefore, Viasat supports adoption of the proposal to eliminate the notice requirement for the minor modifications currently described in Section 25.118(a)(4). As a practical matter, these enumerated minor modifications could be moved to Section 25.118(b), which addresses earth station modifications for which notice is not required.<sup>16</sup>

## **VIII. CONCLUSION**

For the foregoing reasons, Viasat respectfully requests that the Commission adopt the proposals, with Viasat's suggested adjustments, to streamline satellite and earth station licensing procedures. The rule modifications discussed in these comments would help speed the deployment of next-generation satellite networks and technologies, enabling satellite operators to

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<sup>16</sup> See 47 C.F.R. § 25.118(b).

operate more efficiently and to bring high-capacity connectivity and critically important services to consumers, businesses and government users.

Respectfully submitted,

/s/

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