

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters	)	IB Docket No. 16-408
	)	
	)	

**OPPOSITION OF VIASAT, INC. TO PETITION FOR RECONSIDERATION OF  
WORLDVU SATELLITES LIMITED**

Viasat, Inc. (“Viasat”) opposes the petition for reconsideration filed by WorldVu Satellites Limited, d/b/a OneWeb (“OneWeb”),<sup>1</sup> of the Commission’s Report and Order adopting rules for NGSO FSS systems.<sup>2</sup> OneWeb seeks reconsideration of the Commission’s rule requiring NGSO networks to share spectrum through band segmentation during in-line events in the absence of a coordination agreement. Viasat opposes OneWeb’s Petition and requests that it be denied. All of the issues OneWeb raises in its Petition previously were vetted and factored into the recent *NGSO Order*. OneWeb has presented no valid basis for reconsideration.

**I. BACKGROUND**

In the *NGSO Order*, the Commission modified and expanded the default sharing mechanism for NGSO networks operating in the same frequency bands during in-line events. Previously, the Commission’s rules provided that, in the absence of a coordination agreement, NGSO FSS systems operating in the 10.7-14.5 GHz, 18.8-19.3 GHz, and 28.6-29.1 GHz bands were permitted to operate using the entire frequency band, except during “in-line” events, when

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<sup>1</sup> Petition for Reconsideration of WorldVu Satellites Limited, IB Docket No. 16-408 (filed Jan. 17, 2018) (“OneWeb Petition”).

<sup>2</sup> *Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Report and Order and Further Notice of Proposed Rulemaking, 32 FCC Rcd 7809 (2017) (“*NGSO Order*”).

the spectrum would be temporarily divided. The previous rule defined an “in-line” event as occurring when satellites of different NGSO FSS systems are physically aligned with an operating earth station of one of those systems, such that the angle between the satellites is less than 10 degrees as measured from the earth station. During such an in-line event, the previous rule provided the NGSO satellites must share the spectrum by dividing the band and operating only in the portion designated as that operator’s “home” spectrum.

In the recent *NGSO Order*, the Commission modified the previous rule in two respects: (i) by replacing the 10-degree separation angle as the threshold for defining in-line events, with one based upon a change in system noise temperature caused by interference, or  $\Delta T/T$ , of 6%, and (ii) by extending the default sharing rule to NGSO FSS systems operating in any frequency band. OneWeb does not challenge these modifications to the NGSO default sharing rule. Rather, OneWeb’s Petition disagrees with the Commission’s decision to maintain band segmentation during in-line events as a default where operators are unable to reach a coordination agreement, instead of adopting OneWeb’s proposal to “fall back on filing date priority as the overarching rule.”<sup>3</sup>

The Commission rejected proposals by OneWeb, Telesat and LeoSat that would rely on ITU filing date priority to determine spectrum use rights among NGSO systems.<sup>4</sup> In doing so, the Commission declined to adopt a mechanism that would “pick a single ‘winner’” and that would provide certainty only to the operators with the highest ITU priority positions—those who won the “footrace” to the ITU years ago. The Commission explained that systems with lower ITU priority would face uncertainty if higher priority systems are not ultimately deployed and

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<sup>3</sup> OneWeb Petition at 2.

<sup>4</sup> See *NGSO Order* at ¶¶ 47, 50.

would have to design around a hypothetical sharing environment,<sup>5</sup> which would stifle innovation and foreclose market entry. Moreover, in such a circumstance, the highest priority systems would have virtually no incentive to accommodate competing NGSO systems. Therefore, the Commission determined that adopting ITU priority as a default sharing mechanism “could unduly chill investment in competing systems.”<sup>6</sup> Instead, the Commission maintained the longstanding, default, band-splitting rule because such an approach puts NGSO applicants in the processing round on equal footing in coordination discussions.<sup>7</sup> Notably, this approach is consistent with the Commission’s determination that NGSO-like applications should continue to be processed through processing rounds in order to support entry by multiple NGSO operators, rather than through a first-come, first-served mechanism, as was adopted for GSO-like applications.<sup>8</sup>

## **II. ONEWEB’S PETITION FAILS TO RAISE ANY ISSUES THAT WERE NOT ALREADY ADDRESSED IN THE *NGSO ORDER***

In its Petition, OneWeb recycles the same arguments that it made during the comment cycle for the NPRM this proceeding and that the Commission has already rejected. In essence, OneWeb argues that defaulting to ITU priority to determine spectrum usage rights during in-line events in instances where the NGSO operators cannot agree on coordination would provide predictability and certainty to all NGSO operators, because OneWeb claims that lower priority operators would be free to design around the operating parameters that higher priority filers have put forth in their applications before the Commission.<sup>9</sup> Putting aside the flaws in this argument,

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<sup>5</sup> *See id.* at ¶ 50.

<sup>6</sup> *Id.*

<sup>7</sup> *See id.*

<sup>8</sup> *See infra* pp. 6-7 and note 25.

<sup>9</sup> *See* OneWeb Petition at 5.

OneWeb relied on this very argument in its reply comments,<sup>10</sup> and there has been no change to any facts or circumstances since the Commission issued its decision in the *NGSO Order* rejecting OneWeb's proposed approach.<sup>11</sup>

OneWeb elaborates upon the uncertainty that it perceives is created by band-splitting during in-line events, arguing that treating all NGSO systems in the processing round equally creates uncertainty for higher-priority network operators regarding their ability to access spectrum during in-line events, and thus undercuts predictability for such operators.<sup>12</sup> OneWeb claims that, based solely on ITU priority considerations, it took into account the system designs of the higher-priority networks of Telesat and O3b in designing its own system in order to avoid having to rely on band-splitting.<sup>13</sup> OneWeb suggests that it and other higher ITU priority system operators would somehow be harmed by having to consider sharing with lower priority systems.<sup>14</sup>

OneWeb's arguments fail to acknowledge that it (and others) proceeded with plans for NGSO systems based on a fifteen-year-old NGSO framework for the United States that had a default band-splitting mechanism governing all applicants in the processing round as its essential element. Band-splitting has been the default rule in portions of the Ku band since 2002, and in

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<sup>10</sup> See Reply Comments of OneWeb, IB Docket No 16-408, at 20-23 (filed Apr. 10, 2017); see also *OneWeb*, Notice of *Ex Parte* Presentation, IB Docket No. 16-408, at 2 (filed Sept. 20, 2017).

<sup>11</sup> See 47 C.F.R. § 1.429(b).

<sup>12</sup> See *OneWeb* Petition at 8.

<sup>13</sup> See *id.* at 6.

<sup>14</sup> See *OneWeb* Petition at 6; see also *id.* at n.22 (claiming that by “adopting a domestic rule that differs from the ITU’s long-established rules for perfecting rights to spectrum and orbital resources, the Commission also effectively deprives applicants with ITU priority of a superior right to spectrum access granted to them by an international organization to which the U.S. is a party”).

the Ka band since 2003.<sup>15</sup> Notably, O3b's NGSO authorization granted in 2015 (well before the current Ka-band processing round was conceived) expressly requires band-splitting during in-line events with any future NGSO systems.<sup>16</sup> Further, applicants reasonably could have expected that such a mechanism could be extended to other bands.<sup>17</sup> Therefore, OneWeb should have understood that relying on ITU priority alone would not be sufficient to ensure coexistence in the United States with other NGSO systems in the processing round.

### **III. THE COMMISSION'S REJECTION OF ITU PRIORITY AS A DEFAULT MECHANISM IS FULLY SUPPORTED BY THE RECORD**

In the *NGSO Order*, the Commission thoroughly explained its justification for rejecting the proposal that OneWeb reiterates on reconsideration. Namely, relying on ITU priority as a spectrum sharing default mechanism would tilt coordination in favor of a single "winner" and would weaken incentives for operators of systems with higher ITU priority to accommodate competing NGSO systems.<sup>18</sup> Further, such a regime would enable operators with higher priority to preclude deployment of systems with lower priority, thereby creating uncertainty for other NGSO operators in the processing round by reserving spectrum for use by hypothetical higher priority networks that ultimately may not be deployed.<sup>19</sup> In contrast, treating NGSO applicants in the processing round equally would facilitate greater sharing and more competition in the

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<sup>15</sup> See *The Establishment of Policies and Service Rules for the Non-Geostationary Satellite Orbit, Fixed Satellite Service in the Ku-band*, Report and Order, 17 FCC Rcd 7841, ¶ 27 (2002); *The Establishment of Policies and Service Rules for the Non-Geostationary Satellite Order, Fixed Satellite Service in the Ka-band*, Report and Order, 18 FCC Rcd 14708, ¶ 18 (2003).

<sup>16</sup> See O3b Limited, File Nos. SAT-LOI-20141029-00118, SAT-AMD-20150115-0004, S2935, Condition 12 (granted Jan. 22, 2015).

<sup>17</sup> *Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed Satellite Service Systems and Related Matters*, IB Docket No. 16-408, Notice of Proposed Rulemaking, FCC 16-170, at ¶ 23 (rel. Dec. 15, 2016).

<sup>18</sup> *NGSO Order* at ¶ 50.

<sup>19</sup> *Id.*

United States.<sup>20</sup> Nevertheless, OneWeb dismisses the Commission’s reasoning, baldly asserting that it does “not withstand scrutiny.”<sup>21</sup>

First, OneWeb disputes the Commission’s conclusion that relying on ITU priority will create a single “winner” and states that there is no basis in the record to support this conclusion.<sup>22</sup> However, OneWeb proceeds to describe scenarios in which operators with higher ITU priority can exert leverage and preclude or severely limit opportunities for lower priority system operators.<sup>23</sup> OneWeb concedes that the burden of coordination would be higher for later-filed system operators, but suggests that operators would benefit from the certainty of knowing that it will have to design its system around higher priority networks in order to exploit the more limited opportunities it will face.<sup>24</sup>

Significantly, OneWeb’s entire construct runs counter to the fundamental purpose underlying the Commission’s processing round framework for NGSO-like applications. Applicants in a processing round have always been required to negotiate in good faith with other applicants in the processing round and have always had access to spectrum on equal footing. The Commission has acknowledged that applying a first-come, first-served processing framework for NGSO-like networks would allow “the first qualified applicant [to] request authority to operate in so much of the orbit-spectrum resource that additional market entry would be precluded.”<sup>25</sup> In that context, the Commission established that band segmentation is

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<sup>20</sup> *Id.*

<sup>21</sup> OneWeb Petition at 3.

<sup>22</sup> *See id.* at 3-4 & nn.10 &12.

<sup>23</sup> *See id.* at 4-5.

<sup>24</sup> *See id.* at 5.

<sup>25</sup> *Amendment of the Commission’s Space Station Licensing Rules and Policies*, First Report and Order, 18 FCC Rcd 10760, ¶ 22 (2003).

preferable in these cases because it facilitates the potential for competitive market entry.<sup>26</sup> The Commission confirms this reasoning in the *NGSO Order*, concluding that treating NGSO FSS applicants equally promotes competition, creates more opportunities, and accommodates a larger number of systems than a first-come, first-served regime.<sup>27</sup>

Similarly, the Commission acknowledged that extremely large constellations could have a disproportionately burdensome impact on smaller systems.<sup>28</sup> The Commission noted the detailed technical showings supporting this conclusion regarding the impact of several large constellations proposed in the pending NGSO processing rounds on smaller systems.<sup>29</sup> Notably, no party rebutted these analyses. The Commission designed its default sharing rules to address the potential imbalance in coordination leverage among different system operators by declining to maintain a fixed angular separation to trigger NGSO spectrum sharing.<sup>30</sup> This coordination dynamic would be demonstrably harmed if the rules for spectrum access in the United States were based on ITU priority positions. Therefore, the Commission correctly rejected OneWeb’s proposal, as well as the similar proposals by Telesat and LeoSat.

Second, OneWeb claims that the Commission had no reasonable basis for deviating from the rules for spectrum sharing among NGSO networks that apply internationally, and instead adopting a domestic spectrum sharing rule that requires all NGSO operators in a processing round to coordinate U.S. operations on equal footing.<sup>31</sup> The Commission’s authority to establish

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<sup>26</sup> *Id.*

<sup>27</sup> *See NGSO Order* at ¶ 50.

<sup>28</sup> *See id.* at ¶ 47, n.111.

<sup>29</sup> *See id.* at ¶¶ 47 & n.113.

<sup>30</sup> *Id.* at ¶ 49 & n.113 (“good faith coordination also offers the best means to mitigate potentially unequal burdens for smaller NGSO FSS systems or those in highly elliptical orbits.”).

<sup>31</sup> *See OneWeb Petition* at 7.

domestic spectrum policies that are different from ITU regulations is well established. As the Commission explains in the *NGSO Order*, it has always taken a different approach than the ITU's date priority for settling NGSO sharing where coordination cannot be reached.<sup>32</sup> As discussed above, under the Commission's processing round procedures, systems within a given processing round have always coordinated with equal rights.

Moreover, the Commission has consistently declined to make determinations about the relative ITU date priority positions of satellite applicants. While the Commission routinely conditions grants of satellite authority on the outcome of international coordination,<sup>33</sup> the Commission's practice has been to refrain from weighing in on matters of ITU filing priority.<sup>34</sup> In addition, the Commission has diverged from the ITU's approach on spectrum allocations, including the long-established U.S. primary allocation for NGSO FSS in the 18.8-19.3 GHz and 28.6-29.1 GHz bands, which are allocated on a co-primary basis to GSO and NGSO FSS internationally.<sup>35</sup> Therefore, OneWeb's contention that the Commission erred simply by adopting a domestic rule that differs from the rules that apply internationally is baseless.

#### **IV. CONCLUSION**

For the reasons provided above, Viasat urges the Commission to dismiss OneWeb's Petition. OneWeb has not presented any legitimate basis for reconsideration of OneWeb's proposal to adopt a default sharing rule that relies on ITU priority during in-line events. The

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<sup>32</sup> See *NGSO Order* at ¶ 45.

<sup>33</sup> OneWeb's suggestion that it would be improper to establish a domestic policy that conflicts with the ITU's rules is entirely disingenuous. See OneWeb Petition at n.22.

<sup>34</sup> See, e.g., *EchoStar Satellite Operating Company*, 28 FCC Rcd 10412, ¶ 12 (2013) (affirming the order in which the International Bureau "appropriately declined to make determinations concerning the 'perfecting' of ITU filings of other Administrations, observing correctly that such determinations are for the ITU").

<sup>35</sup> See *NGSO Order* at ¶ 14.

Commission has correctly concluded that band segmentation would put applicants in a processing round on equal footing and would most effectively promote sharing and competition.

Respectfully submitted,

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February 20, 2018

## CERTIFICATE OF SERVICE

I, Kayla Ernst, hereby certify that on this 20th day of February, 2018, I served a true copy of the foregoing Opposition of ViaSat, Inc. to Petition for Reconsideration of WorldVu Satellites Limited via first-class mail upon the following:

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