

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, DC 20554

In the Matter of	)	
	)	
Expanding Flexible Use in Mid-Band Spectrum	)	GN Docket No. 17-183
Between 3.7 and 24 GHz	)	

**REPLY COMMENTS OF WORLDVU SATELLITES LIMITED**

WorldVu Satellites Limited (“OneWeb”) replies to comments filed in response to the Notice of Inquiry adopted by the Commission in the above-captioned proceeding.<sup>1</sup> OneWeb understands the importance of Commission-led efforts to ensure there is adequate spectrum to support future 5G services. However, this goal must not be accomplished by reallocating or making secondary critical spectrum currently allocated for non-geostationary orbit (“NGSO”), fixed-satellite service (“FSS”) systems at precisely the moment they are being deployed and are poised to offer next-generation broadband connectivity for all. In particular, OneWeb opposes the request of the MVDDS 5G Coalition (the “Coalition”) for Commission action on its long-dormant petition for rulemaking in the 12.2-12.7 GHz band (the “12 GHz band”), as well as the fleeting suggestion by three other parties that the 12 GHz band should be investigated for potential wireless broadband use.<sup>2</sup>

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<sup>1</sup> *In re Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, Notice of Inquiry, 32 FCC Rcd 6373 (2017) (the “NOI”).

<sup>2</sup> *See generally* Comments of MVDDS 5G Coalition, GN Docket No. 17-183 (filed Oct. 2, 2017) (“Coalition Comments”); *see also* Comments of T-Mobile USA, Inc., GN Docket No. 17-183, at 22 (filed Oct. 2, 2017) (“T-Mobile Comments”); Comments of Cambridge Broadband Networks Limited, GN Docket No. 17-183, at 2 (filed Oct. 2, 2017) (“CBNL Comments”); Letter from Lisa Chandler Cordell, Attorney for Hammer Fiber Optics Investments, Ltd. to Marlene H. Dortch, Secretary, FCC at 4 (Sept. 21, 2017) (“Hammer Letter”).

**I. IMMINENT INTENSIVE USE OF THE 12 GHZ BAND BY NGSO FSS OPERATORS RENDERS IT UNSUITABLE FOR TERRESTRIAL WIRELESS BROADBAND**

In addition to the three specific bands highlighted for potential wireless broadband use in the NOI, the Commission also inquired about “other bands . . . that might be suitable candidates for expanded flexible wireless broadband use so that [the Commission] can understand any other interest in these mid-band frequencies.”<sup>3</sup> In response, the Coalition attempted to revive interest in its now eighteen month old petition for rulemaking by suggesting that “the time to act on the pending petition to make this 12 GHz Band spectrum available for 5G is now,” even though that petition has been languishing in a largely inactive proceeding.<sup>4</sup> Similarly, T-Mobile, CBNL, and Hammer reference the 12 GHz band as one that should be evaluated for potential terrestrial wireless broadband use.<sup>5</sup> As demonstrated below, action on the MVDDS Petition is not in the public interest and the 12 GHz band is not a “suitable candidate” for wireless broadband use because the planning, investment, and construction necessary to utilize this band for next-generation satellite-delivered broadband is *already* well underway. The NGSO FSS industry is not only “interested” in the 12 GHz band; it is actively building satellites specifically for use in this band to facilitate core satellite-to-user terminal communications that will provide connectivity to rural and remote areas in the U.S. and globally.<sup>6</sup>

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<sup>3</sup> NOI at ¶ 2.

<sup>4</sup> Coalition Comments at 2; *see also* Petition of MVDDS 5G Coalition for Rulemaking, RM-11768 (filed Apr. 26, 2016) (“MVDDS Petition”).

<sup>5</sup> *See* T-Mobile Comments at 22; CBNL Comments at 2; Hammer Letter at 4.

<sup>6</sup> The Commission granted OneWeb U.S. market access in the 12 GHz band in June 2017. *See In the Matter of WorldVu Satellites Limited; Petition for a Declaratory Ruling Granting Access to the U.S. Market for the OneWeb NGSO FSS System*, Order and Declaratory Ruling, 32 FCC Rcd 5366 (2017) (“OneWeb Market Access Grant”). In addition to OneWeb, the Commission

As justification for Commission action on the MVDDS Petition, the Coalition claims “[t]imes have changed. Consumers now demand two-way, mobile broadband data services. With 5G, consumers can expect, among other things, low-latency, high-performance video, gaming, and support for the Internet of Things.”<sup>7</sup> OneWeb wholeheartedly agrees that technology and consumer expectations have shifted dramatically in the last decade, and OneWeb is poised to satisfy the latest consumer expectations with its new NGSO FSS satellite service. MVDDS licensees have largely allowed the 12 GHz band to lie fallow and appear to be relying on the regulatory “Hail-Mary” of the MVDDS Petition to resurrect an otherwise vastly underutilized service. In marked contrast to the Coalition, OneWeb is working at breakneck pace to put its satellite spectrum to use. In June 2017, the Commission granted OneWeb U.S. market access to, among other things, utilize the 12 GHz band for user terminal downlinks.<sup>8</sup> OneWeb’s first satellites are under construction and are expected to be launched in May 2018.<sup>9</sup> Similarly, OneWeb’s worldwide ground network is currently under construction.<sup>10</sup>

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recently granted U.S. market access in the 12 GHz band to Space Norway for its NGSO constellation. *See Petition for a Declaratory Ruling Granting Access to the U.S. Market for the Arctic Satellite Broadband Mission*, Order and Declaratory Ruling, FCC 17-146 (rel. Nov. 3, 2017). Other NGSO FSS constellations have also sought licenses or U.S. market access in the 12 GHz band.

<sup>7</sup> Coalition Comments at 2.

<sup>8</sup> *See OneWeb Market Access Grant* at ¶¶ 6-8.

<sup>9</sup> *See OneWeb plans May 2018 launch*, ADVANCED TELEVISION (Oct. 31, 2017), <http://advanced-television.com/2017/10/31/inside-satellite-oneweb-plans-may-2018-launch/>.

<sup>10</sup> *See Hughes Signs \$190M Contract with OneWeb for Production of Ground Network System for Global Internet Services*, PR NEWswire (Nov. 7, 2017), <https://www.prnewswire.com/news-releases/hughes-signs-190m-contract-with-oneweb-for-production-of-ground-network-system-for-global-internet-services-300550543.html>.

The imminent deployment of OneWeb’s innovative, state-of-the-art NGSO FSS system will provide precisely the kind of two-way, low-latency, high-speed connectivity utilizing the 12 GHz band—including to unserved and underserved populations—that the Coalition can merely tout as a future benefit. OneWeb respectfully submits that no action on the MVDDS Petition, nor inclusion of the 12 GHz band in any subsequent mid-band spectrum rulemaking proceeding, is necessary in order for consumers to benefit in the near term from next generation broadband services utilizing this band. Therefore, the implicit rationale underlying the MVDDS Petition—*i.e.*, the 12 GHz band is underutilized—is even less compelling today than it was when filed more than eighteen months ago.

## **II. THE NOI PROCEEDING IS NOT THE APPROPRIATE FORUM TO RESOLVE THE SUBSTANTIAL LEGAL AND TECHNICAL ISSUES PRESENTED BY THE MVDDS PETITION**

OneWeb respectfully submits that *any* action on the MVDDS Petition is unnecessary and contrary to the public interest. However, in the event the Commission wishes to further examine issues related to the 12 GHz band, such action should be taken within the context of the existing proceeding the Commission opened to address the complex issues raised by the MVDDS Petition for the following three reasons.<sup>11</sup>

*First*, the Commission has rightly not sought specific comment on the 12 GHz band in the NOI. Instead, the Commission is prioritizing “the most viable repurposing proposals”<sup>12</sup> and specifically asking commenters to “address the circumstances they would expect to face in

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<sup>11</sup> See *Petition of MVDDS 5G Coalition for Rulemaking to Permit Use of the 12.2-12.7 GHz Band for Two-Way Mobile Broadband Service*, RM-11768, Public Notice, Consumer and Governmental Affairs Bureau Reference Information Center: Petition for Rulemaking Filed, Report No. 3042 (CGB May 9, 2016) (“MVDDS Proceeding”).

<sup>12</sup> *NOI* at ¶ 3.

deploying systems in bands they identify, such as the costs of such deployments, the availability and/or development of necessary technology, the desired timeframe for licensing and initiating service, and any suggested methods for balancing the needs for licensed and unlicensed access approaches.”<sup>13</sup> The Coalition Comments simply fail to provide any analysis addressing these critical considerations.<sup>14</sup> As discussed in Section I above, OneWeb will soon deploy hundreds of satellites pursuant to its grant of U.S. market access in the 12 GHz band, whereas any regulatory pathway to allow terrestrial wireless broadband in the 12 GHz band is likely a multi-year process.<sup>15</sup> Furthermore, the MVDDS Petition and the Coalition Comments implicitly acknowledge that 5G equipment for their use of this band is not readily available.<sup>16</sup>

*Second*, although the Coalition glosses over the strident opposition to the MVDDS Petition, the well-developed record in that proceeding underscores the significant, unresolved concerns raised by the Coalition’s proposals. In particular, OneWeb highlights for the Commission a study previously submitted by the Coalition conceding that under the Coalition’s

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<sup>13</sup> *Id.* at ¶ 37.

<sup>14</sup> Similarly, T-Mobile, CBNL, and Hammer also fail to provide the detailed analysis regarding the feasibility of wireless broadband in this band requested by the Commission.

<sup>15</sup> The Coalition attempts to downplay the recent NGSO revolution, stating that “no operational NGSO FSS system would be impacted by the elimination of [the NGSO co-primary allocation in the 12 GHz band].” Coalition Comments at 6. Of course, the Commission is well-aware of the potential for NGSO FSS systems to meaningfully contribute to closing the digital divide. *See, e.g., Statement of Chairman Ajit Pai regarding 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, IB Docket No. 16-408, FCC 17-122 (rel. Sept. 27, 2017) (“Statement of Chairman Pai”) (“As we strive to close the digital divide, we must be open to any and every technology that could connect consumers across the country. That’s why we once again look to the skies for inspiration--and in particular, to new satellite constellations that offer potential for bridging this gap.”).

<sup>16</sup> *See* MVDDS Petition at 5-6; Coalition Comments at 4-5.

proposed operating conditions for the 12 GHz band, “coexistence between MVDDS 5G operations and NGSO FSS operations is not possible without severe operational constraints on MVDDS, NGSO FSS or both services.”<sup>17</sup> Not only is effectively prohibiting NGSO FSS operations in the 12 GHz band inconsistent with the public interest, it is also directly at odds with the Commission’s recognition of the potential for NGSO FSS systems to provide critical connectivity to unserved and underserved communities.<sup>18</sup>

Without restating the other extensive critiques of the MVDDS Petition, both satellite and terrestrial operators expressed opposition to the MVDDS Petition, based on concerns ranging from potential interference to the direct broadcast satellite (“DBS”) service, to the potentially devastating impact on the burgeoning NGSO FSS satellite industry, to the flawed technical analysis provided by the Coalition.<sup>19</sup> The Coalition’s attempt to end-run this criticism by

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<sup>17</sup> *In re MVDDS 5G Coalition Petition for Rulemaking to Permit MVDDS Use of the 12.2-12.7 GHz Band for Two-Way Mobile Broadband Service*, Comments of the MVDDS 5G Coalition, RM-11768, Attachment I at 35 (filed June 8, 2016).

<sup>18</sup> *See Statement of Chairman Pai*; *see also* note 6 *supra*.

<sup>19</sup> *See, e.g.*, Opposition of Intelsat License LLC, RM-11768, at 1 (filed June 3, 2016) (opposing “both the proposal to allow mobile services in a DBS band and any degradation of the NGSO FSS allocation”); Statement of AT&T Opposing Petition for Rulemaking, RM-11768, at 1 (filed June 8, 2016) (stating that “AT&T cannot support the Petition for Rulemaking at this time without a more compelling explanation of how any changes would be consistent with protecting DBS services in the 12 GHz band.”); Opposition to Petition for Rulemaking of Space Exploration Technologies Corporation, RM-11768, at 4 (filed June 8, 2016) (arguing that “[t]he Petition presents no reason to now alter that carefully crafted balance, but instead asks the Commission to grant MVDDS license holders windfall mobile use rights and strand NGSO FSS investment as the industry is on the precipice of delivering the exact types of innovative services the Commission envisioned when it established the sharing regime in 2002.”); Reply of SES S.A., RM-11768, at 4 (filed June 23, 2016) (noting that “[t]hese flaws in the analysis completely undercut any confidence the Commission might have in the Coalition’s claims.”).

shoehorning consideration of their proposal into the instant proceeding is neither consistent with the aims of the *NOI* nor in the public interest.

*Third*, the Coalition offers no change in circumstance or compelling rationale for action on the MVDDS Petition. Instead, in its Comments, the Coalition largely recycles its previous submissions in the ongoing MVDDS Proceeding.<sup>20</sup> The Commission did not find these showings to be persuasive eighteen months ago and nothing in the Coalition Comments alters those findings. The only relevant change that has occurred since the filing of the MVDDS Petition is that OneWeb and other NGSO FSS systems are even closer to providing the next-generation broadband services that MVDDS services have long promised but thus far failed to deliver.

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<sup>20</sup> *See, e.g.*, Coalition Comments at 3-4 (stating that the rules applicable to the MVDDS service are overly-restrictive and outdated) and 7-8 (arguing that the technical studies submitted by the Coalition demonstrate potential co-existence with DBS licensees).

### III. CONCLUSION

The proposal to investigate the 12 GHz band for potential wireless broadband use, led by the Coalition, would undercut OneWeb and other NGSO FSS systems at the precise moment when they are poised to build and deploy constellations of satellites to provide transformative, satellite-based broadband services in favor of hypothetical benefits to be provided by MVDDS licensees far in the future. As pointed out by numerous parties, the MVDDS Petition was not in the public interest when it was filed more than eighteen months ago, and the Coalition has failed to articulate any reason to revive this proposal within the context of the above-captioned proceeding. Therefore, the Commission should decline to act on the long-pending MVDDS Petition and reject any effort to consider the 12 GHz band as part of the instant proceeding.

Respectfully submitted,

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