Filed Electronically Via IBFS and ECFS

August 14, 2020

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

Re: IBFS File No. SAT-MOD-20200417-00037, Call Signs: S2983 and S3018; MVDDS 5G Coalition Petition for Rulemaking to Permit MVDDS Use of the 12.2-12.7 GHz Band for Two-Way Mobile Broadband Service, RM-11768

Dear Ms. Dortch:

Go Long Wireless, Ltd., Cass Cable TV, Inc., Story Communications, LLC, and Vision Broadband, LLC (collectively, the "MVDDS Licensees") hereby comment on: (1) the pending modification application (the "SpaceX Application")[1] of SpaceX which, among other things, requests additional authority to utilize the 12.2 – 12.7 GHz Band (the "12 GHz Band") as part of SpaceX's latest proposal to significantly modify its non-geostationary orbit ("NGSO") fixed satellite service system licensed under the referenced call signs; and, (2) the long-pending Petition for Rulemaking (the "5G Petition") seeking to update the Multichannel Video and Data Distribution Service ("MVDDS") service rules to enable the 12 GHz Band to be used to support terrestrial, two-way 5G services.[2] As discussed in greater detail below, the Commission should not grant the SpaceX Application as currently proposed, as that would needlessly limit the agency's options as it considers the highest and best use of the 12 GHz Band. In addition, the recent filings relating to the future of the 12 GHz Band only serve to confirm that the Commission should grant the 5G Petition and solicit comment from all stakeholders in order to facilitate a reasoned decision based on a comprehensive review of the relevant facts and policy issues.

The Interest of the MVDDS Licensees

The MVDDS Licensees are interested parties with respect to the SpaceX Application, the 5G Petition and the associated recent submissions. All of the MVDDS Licensees are small businesses licensed to operate in the 12 GHz Band. Despite the substantial challenges they

[1] *See* Application for Modification of Authorization for the SpaceX NGSO Satellite System, IBFS File No. SAT-MOD-20200417-00037, filed Apr. 17, 2020.
[2] *See* Petition of MVDDS 5G Coalition for Rulemaking, RM-11768, filed Apr. 26, 2016 ("5G Petition").

faced,[3] the MVDDS Licensees timely completed construction and are providing service in multiple markets of varying size throughout the United States.

The MVDDS Licensees also are original members of the coalition of MVDDS licensees (the "MVDDS 5G Coalition") that jointly submitted the 5G Petition. Significant developments since the 5G Petition was filed in 2016 resoundingly affirm the public interest benefits of revising the MVDDS rules in order to allow this well-situated 500 MHz of contiguous mid-band spectrum to be used in the development of 5G services in the United States. Consequently, MVDDS Licensees have a legitimate interest, and a substantial basis in experience for informed comment, in these proceedings.

The SpaceX Application

The SpaceX Application has generated considerable opposition. Viasat, Inc. filed an extensive petition raising significant interference and collision risk issues, as well as concerns regarding the SpaceX launch failure rate and the accuracy of various SpaceX performance claims.[4] SES Americom, Inc. and O3B Limited have raised similar interference and space safety issues, and have identified harms to authorized GSO operations.[5] And, both authorized Direct Broadcast Satellite ("DBS") service providers – DirectTV Enterprises LLC (an affiliate of AT&T Services, Inc.) and DISH Network L.L.C. – have raised serious concerns regarding the failure of SpaceX to submit an Equivalent Power Flux Density ("EPFD") analysis sufficient to demonstrate that the modified SpaceX system will not generate power levels beyond what a standard co-frequency DBS reference antenna can tolerate.[6] The Commission needs to give serious attention to the important issues raised in these comments by knowledgeable satellite industry carriers.

In addition, the SpaceX Application has been the target of considerable adverse comment by a diverse group of interested parties who are concerned about the negative impact of the SpaceX Application on the MVDDS band. RS Access, LLC ("RS Access") makes the case that granting the SpaceX Application will needlessly impair the ability of the Commission to

[3] Securing equipment for MVDDS operations has been one such challenge. When the time came for Go Long Wireless, Ltd. to order equipment in order to complete its initial construction on a timely basis, only a single supply source existed for equipment commercially designed to meet the technical standards in the 12 GHz Band. This challenge was exacerbated by the fact that all MVDDS licensees had a common construction deadline, complicating the timely delivery of equipment.

[4] *See* Petition to Deny or Defer of Viasat, Inc., IBFS File No. SAT-MOD-20200417-00037, filed July 13, 2020.

[5] *See* Petition to Deny or Defer of SES Americom, Inc and O3B Limited, IBFS File No. SAT-MOD-20200417-00037, filed July 13, 2020.

[6] *See* Comments of AT&T Services, Inc., IBFS File No. SAT-MOD-20200417-00037, filed July 13, 2020; *see also* Letter from Jeffrey Blum, DISH to Marlene Dortch, FCC, IBFS File No. SAT-MOD-20200417-00037, filed June 16, 2020 ("DISH 6/26 *Ex Parte"*); *see also* Letter from Jeffrey Blum, DISH to Marlene Dortch, FCC, IBFS File No. SAT-MOD-20200417-00037, filed August 6, 2020 ("DISH 8/06 *Ex Parte"*).

utilize the 12 GHz Band to meet the Commission priority to promote 5G services in the U.S.[7] Joint comments by the Computer & Communications Industry Association (CCIA) and INCOMPAS likewise recognize that the 12 GHz Band is particularly well-positioned to address the critical need for more spectrum, particularly low band and mid-band spectrum, to provide commercial 5G services, and express concern that granting SpaceX further authority in the 12 GHz Band will effectively prevent the Commission from meeting this high priority.[8] DISH, which is an MVDDS licensee as well as a provider of DBS services, echoes the point that the U.S needs additional mid-band spectrum for 5G services to maintain its leadership position, and that the SpaceX Application, if granted in its present form, will effectively preclude the 12 GHz Band from meeting this important need.[9]

Review of the MVDDS-related comments on the SpaceX Application reveals one uncontested point on which the Commission should rely to resolve this controversy -- the 12 GHz Band represents only a small fraction of the spectrum SpaceX is authorized to use in its NGSO system. The DISH 7/14 *Ex Parte* and the DISH 8/06 *Ex Parte* both contain copies of a chart reflecting the spectrum available to SpaceX for its NGSO Fixed Satellite Service ("FSS"). The chart shows that 12 GHz Band represents only 500 MHz, or a mere 3.6%, of the 15,550 MHz of available NGSO FSS spectrum. Notably, SpaceX cannot and does not challenge this calculation. CCIA, INCOMPAS and RS Access argue persuasively that SpaceX can and should rely upon other available spectrum for its NGSO service so as not to tie the Commission's hands as it considers the highest and best use of the 12 GHz Band.[10]

The ability of an NGSO operator to provide a robust satellite broadband service *without* use of the 12 GHz Band is conclusively demonstrated by the Commission's recent grant of Amazon's satellite project, Kuiper. The Commission has formally adopted an order granting Amazon conditional authority to launch a constellation of 3,200 satellites to provide high speed broadband services to consumers, government and businesses in the U.S.[11] Of direct relevance here, this grant does *not* include spectrum in the 12 GHz Band.[12]

---

[7] Letter from V. Noah Campbell, RS Access, LLC to Marlene Dortch, FCC, IBFS File No. SAT-MOD-20200417-00037, filed June 11, 2020 ("RS Access *Ex Parte*").

[8] *See* Letter from Vann Bentley, CCIA and Angie Kronenberg, INCOMPAS to Marlene Dortch, FCC, IBFS File No. SAT-MOD-20200417-00037, filed July 13, 2020 ("CCIA/INCOMPAS *Ex Parte*").

[9] *See* Letter from Jeffrey Blum, DISH to Marlene Dortch, FCC, IBFS File No. SAT-MOD-20200417-00037, filed July 14, 2020, at p. 5 ("DISH 7/14 *Ex Parte"*).

[10] *See* CCIA/INCOMPAS *Ex Parte* at p. 2; RS Access *Ex Parte* at p. 2.

[11] *See* Kuiper Systems, LLC, IBFS File No. SAT-LOA-20190704-0057; Call Sign S3051; *see also Kuiper Systems, LLC,* Order and Authorization, FCC 20-102 (rel. July 30, 2020) ("Kuiper Order").

[12] Specifically, Kuiper's application includes authority to deploy and operate its NGSO FSS system in the 17.7-17.8 GHz, 17.8-18.6 GHz, 18.8-19.3 GHz, 19.3-19.7 GHz, 19.7-20.2 GHz, 27.5-28.6 GHz, 28.6-29.1 GHz, 29.1-29.5 GHz, and 29.5-30.0 GHz bands, and to provide MSS, in addition to FSS, in the 19.7-20.2 GHz and 29.5-30.0 GHz bands,

SpaceX should not be heard to argue, as it tries in its latest *ex parte* filing,[13] that "SpaceX cannot simply move to other bands as it already has deployed an expansive network that depends on this [12 GHz Band] . . . [and because] NGSO operators do not have flexible-use licenses and cannot just change frequency bands."[14] As pointed out in the DISH 7/14 *Ex Parte*, SpaceX has access to approximately 8,300 MHz of spectrum for downlink alone, giving it ample downlink spectrum to utilize other than the 12 GHz Band.[15] Nor has SpaceX contended that its satellites lack frequency agility. In any event, SpaceX is launching additional satellites on a regular basis, giving it the ability to adjust its frequency plan on a going forward basis within the broad range of spectrum for which it is authorized.

To the extent SpaceX has configured its proposed modification to include the 12 GHz band, that election was completely ill-advised. SpaceX has been on notice for years that its use of the 12 GHz Band is subject to the outcome of the 5G petition. In 2017, the Commission put NGSO operator OneWeb on notice that it was subject to the risk that the Commission could authorize terrestrial use of the 12 GHz Band, which would constrain NGSO use of that band. The Commission even placed an explicit condition on a OneWeb authorization indicating that any investors in operations in the 12 GHz Band assume the risk that operations may be subject to additional conditions or requirements as a result of Commission action on the 5G Petition.[16] In taking this action, the Commission noted that, even if NGSO FSS systems were precluded entirely from the 12 GHz Band, they still could provide service because of the availability of other frequency bands for downlink use.[17]

Significantly, a similar condition was added to SpaceX's NGSO authorization indicating that it was subject to modification to bring it into conformance with subsequent rule changes.[18] The SpaceX claim in its July 10, 2020 *ex parte* that this a "more general" condition distinct from the OneWeb condition is incorrect. In granting authority to SpaceX, the Commission expressly noted "[a]s with the *OneWeb Order …* grant of the SpaceX application will not prejudice any

---

and to use MSS feeder links in the 19.4-19.6 GHz and 29.1-29.5 GHz bands, subject to certain conditions. *See* Kuiper Order, para 2.

[13] *See* Letter from David Goldman, Space Exploration Holdings, LLC to Marlene Dortch, FCC, RM-11768, filed August 6, 2020 ("SpaceX 8/6 *Ex Parte"*).

[14] *Id.* at p.2.

[15] DISH 7/14 *Ex Parte,* p. 5.

[16] *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, para. 6 (2017).

[17] *Id.*

[18] *See Space Exploration Holdings, LLC Application For Approval for Orbital Deployment and Operating Authority for the SpaceX NGSO Satellite System, et al.*, Memorandum Opinion, Order, and Authorization, 33 FCC Rcd 3391 n.88, ¶ 40(r) (2018) ("SpaceX 2018 Authorization") (reserving the Commission's right conditioning approval on any future changes to the 12 GHz Band).

decision, including a contrary action, in any future rulemaking proceeding."[19] The meaning was clear: any permission granted SpaceX to utilize the 12 GHz Band was conditional and without prejudice to whatever action the Commission might take on the 5G Petition, of which SpaceX had actual notice. To the extent SpaceX designed a system that incorporates 12 GHz Band spectrum, that is a problem of its own making; it provides no grounds for any concessions now to SpaceX.

SpaceX also argues against its interest by contending that coexistence in the 12 GHz Band between NGSO FSS and 5G MVDDS is not feasible.[20] Such a technical issue is, of course, best resolved in the context of the rulemaking proceeding that the MVDDS Licensees and other MVDDS interest holders requested years in advance of this latest SpaceX Application. SpaceX's own contention that shared use of the 12 GHz Band by 5G MVDDS and NGSO FSS is not feasible only confirms that the Commission would be improvidently cutting short the considerable 5G promise of the 12 GHz Band by allowing SpaceX to become entrenched in the 12 GHz Band before first initiating the requested rulemaking and resolving the important issues to be raised therein.

In sum, the MVDDS Licensees strongly urge the Commission not to allow the SpaceX Application to limit its options with respect the future uses of the 12 GHz Band, a particularly attractive band for 5G use because its 500 MHz of contiguous spectrum is relatively unencumbered, including no federal encumbrances. Given the significant amount of downlink spectrum available to NGSOs, and the myriad concerns raised by a broad cross-section of parties, the Commission should not grant the SpaceX Application in its current form. Even assuming all other challenges to the SpaceX proposal are resolved favorably to SpaceX, the 12 GHz Band should be excluded from any Commission license grant to SpaceX. SpaceX should either voluntarily remove the 12 GHz Band from the SpaceX Application, or the Commission should withhold authority for SpaceX to use it.

The 5G Petition

The 5G Petition has now been under consideration for more than four years without substantive action. During its pendency, a series of developments have resoundingly supported initiation of the requested rulemaking proceeding to consider the allowance of flexible use of the 12 GHz Band to enable mobile 5G services. To name a few:

- It has become the primary mission of the Commission for the United States to lead the world in the next generation of wireless connectivity— namely 5G. Under Chairman Pai,

[19] *See* Letter from David Goldman, Space Exploration Holdings, LLC to Marlene Dortch, IBFS File No. SAT-MOD-20200417-00037, filed July 10, 2020 at p. 4. ("SpaceX 7/10 *Ex Parte"*).
[20] *Id.* at p. 3.

the Commission is pursuing a comprehensive strategy to Facilitate America's Superiority in 5G Technology (the 5G FAST Plan). The Chairman's strategy includes three key components: (1) pushing more spectrum into the marketplace; (2) updating infrastructure policy; and (3) modernizing outdated regulations.[21]

- The 5G Petition recently garnered the support of a broad cross-section of industry representatives who recognize that this swath of contiguous spectrum is ideally suited to meet the ever-increasing demand for 5G spectrum, particularly in the mid-band. Specifically, comments in support of the requested rulemaking have been filed by the Competitive Carriers Association,[22] Public Knowledge, the Open Technology Institute at New America, Access Humboldt, the Center for Rural Strategies, Consumer Federation of America, the Institute for Local Self-Reliance, Next Century Cities, the National Consumer Law Center, the National Digital Inclusion Alliance, the Tribal Digital Village, X-Labs,[23] Federated Wireless,[24] CCIA, and INCOMPAS.

- The demand for 5G services has exceeded expectations due to a variety of factors including the COVID-19 pandemic, the appetite of the public for streaming video, the developing Internet of Things (IoT) market, the need to connect smart devices, and the introduction of cloud-based artificial intelligence (AI), augmented reality (AR) and virtual reality (VR) services. There is no evidence that this trend, which is driving the need for additional spectrum resources, is abating.

- The COVID 19 pandemic also has highlighted more than ever the critical need for universal high speed broadband service in order to promote economic opportunity, job creation, education, and civic engagement. As a result, one of Chairman Pai's top priorities is to close the digital divide between those who have access to cutting-edge communications services and those who do not. Lower band and mid-band spectrum is particularly crucial to this effort because of its ability to serve more efficiently end users in remote, rural and hard to serve areas.

[21] FCC Initiatives, https://www.fcc.gov/about-fcc/fcc-initiatives (last visited Aug. 14, 2020).

[22] Letter from Alexi Maltas, Competitive Carriers Association to Marlene H Dortch, RM-11768, filed July 21, 2020.

[23] Letter from Harold Feld, Public Knowledge, and Michael Calabrese, Open Technology Institute at New America to the Honorable Ajit Pai, FCC, RM-11768, filed July 9, 2020.

[24] Letter from Jennifer M. McCarthy, Federated Wireless, Inc. to Marlene H. Dortch, FCC, RM-11768, filed June 15, 2020.

- When the upcoming C-Band and 2.5 GHz auctions close, there will be left on the horizon only a limited amount of spectrum suitable and available for the potential provision of 5G services.

The AT&T *Ex Parte*

On August 6, 2020, AT&T filed an *ex parte* letter further commenting on the 5G Petition (the "AT&T *Ex Parte*").[25] In numerous respects, this letter is unremarkable because it merely repeats arguments with respect to the 5G Petition that have been stated and answered previously. For example, AT&T claims that allowing two-way services in the 12 GHz Band would be "fundamentally incompatible"[26] with DBS services, and attributes DBS service provider DISH's support for the 5G Petition to the fact that DISH's "incentives changed," presumably because it is a major holder of MVDDS spectrum. But, the MVDDS Coalition of which DISH is a part has made clear in multiple filings that its support for the 5G Petition is based upon its recognition that DBS and flexible use MVDDS can co-exist on an interference free basis.[27] Similarly, AT&T's expressed concern for "nascent NGSO services" fails to acknowledge that the 12 GHz Band constitutes only a small sliver of the total spectrum available to NGSO operators, as discussed above.

The last section of the AT&T *Ex Parte* is, however, noteworthy. There, AT&T contends that "[i]f the Commission wants to explore whether it could make 500 MHz of spectrum available for 5G in this band, it must proceed under the assumption that this process would involve clearing the band of incumbents."[28] AT&T refers to this as starting "with a clean sheet of paper."[29] This approach would "provide for the relocation of incumbents to alternative spectrum and reimburse reasonable relocation expenses."[30] AT&T cites the C-Band auction proceeding as one from which "lessons [can be] learned".[31]

Underlying AT&T's "clean sheet" discussion is an effective acknowledgement that the 12 GHz Band could be put to a higher and better use by being made available for 5G services. This, of course, is the essential point the MVDDS 5G Coalition has been making for years. And, AT&T's proposal is necessarily predicated on what MVDDS Licensees understand to be a new

[25] Letter from Michael Goggin, AT&T to Marlene H. Dortch, FCC, RM-11768, filed August 6, 2020 (the "AT&T *Ex Parte*").
[26] *See Id.* at p. 1.
[27] *See* Comments of the MVDDS 5G Coalition, RM-11768, filed June 8, 2016, Attachment I ("Co-Primary Service Coexistence"). *See also* Reply Comments of the MVDDS 5G Coalition, RM-11768, filed June 23, 2016, Appendix A ("Co-Primary Service Coexistence II").
[28] *See* AT&T *Ex Parte*, p. 6.
[29] *Id.* at p. 7.
[30] *Id* at p. 6.
[31] *Id.*

concession – AT&T's DBS service does not depend on its continuing use of the 12 GHz Band, or is not an important part of AT&T's business strategy going forward.[32]

To be sure, AT&T claims that, even if the Commission wishes to consider making the 12 GHz Band suitable for terrestrial 5G services, it should nonetheless dismiss the 5G Petition.[33] But, AT&T's claims – that the "benefits of the [MVDDS 5G Coalition's] proposal are minimal" and that the Coalition's proposal "neither protects incumbents nor promotes robust 5G services" – merely raise the kind of substantive issues that are well-suited to be resolved in a notice and comment rulemaking proceeding in which all interested parties are given the opportunity to participate.

AT&T also is incorrect to claim that it would be unlawful under Section 309(j) of the Communications Act for the Commission to forego an auction, allow incumbent MVDDS licensees to remain in the band, and modify the MVDDS rules to allow flexible mobile uses as proposed by the 5G Petition. The law is clear that Commission has ample discretion "to forgo an auction," so long as it "considers the public interest" and that these sorts of "judgments on the public interest are 'entitled to substantial judicial deference.'"[34] Significantly, AT&T itself previously has advocated this precise position at the FCC and, as a result, benefitted from the acquisition of millimeter wave licenses from FiberTower, repurposed by the Commission without an auction. In public comments filed in 2017, AT&T stated:

> Section 309(j) of the Communications Act does not compel an auction of FiberTower's licenses. . . The Commission has already determined that, in the interest of expedited deployment, it is more important to convert incumbent licenses to UMFUS than to re-auction them. See Spectrum Frontiers Order ¶¶ 38, 83 (finding that granting mobile rights to mmW incumbents will "minimize transaction costs and provide the fastest transition to expanded use of the band, which would benefit consumers"). To ensnare FiberTower's licenses for an uncertain period of time until the litigation is resolved and an auction could be held would be contrary to the public interest.[35]

---

[32] The apparent willingness of AT&T to consider the prospect of the repurposing of the 12 GHz band is not surprising. Reports indicate that substantial DirectTV subscriber losses have prompted AT&T to signal an intent to focus on over-the-top services, and not to launch any more satellites. Meg James, *Nearly 3 million subscribers ditched DirecTV last year. Will AT&T do the same?* LOS ANGELES TIMES, Jan. 31, 2020 *available at* https://www.latimes.com/entertainment-arts/business/story/2020-01-31/att-directv-subscriber-loss-sunday-ticket.

[33] AT&T *Ex Parte,* p. 5.

[34] *M2Z Networks, Inc. v. FCC,* 558 F.3d 554, 558, 563-64 (D.C. Cir. 2009) (citation omitted).

[35] AT&T's Joint Opposition of AT&T Mobility Spectrum LLC and FiberTower Corporation, ULS File Nos. 0007652635 and 0007652637, filed April 6, 2017 at note 50. https://wireless2.fcc.gov/UlsEntry/attachments/attachmentViewRD.jsp?applType=search&fileKey=1751284233&attachmentKey=20122552&attachmentInd=applAttach

The FiberTower holding is not isolated. There are numerous other instances in which the Commission has added flexible mobile uses to a previously licensed band and allowed incumbent licensees to operate under the new rules; even with the potential result of an increase in the value of the incumbents' licenses. For example, the Commission modified rules governing the AWS-4 band to authorize an incumbent to develop a stand-alone terrestrial network that could support wireless broadband services. The D.C Circuit rejected a claim that this action violated Section 309(j) of the Act or created an unlawful windfall.[36]

Of course, the Commission need not decide now how MVDDS incumbents will be treated in the course of revising and updating the rules governing the 12 GHz Band. Again, this issue is best resolved in a notice and comment rulemaking proceeding in which the positions of all interested and affected parties can be considered and weighed.

Conclusion

In the final analysis, the time has come for a proceeding to be initiated to develop a complete, current record which will enable the Commission to determine, with the benefit of input from all stakeholders and the general public, the highest and best use of the 12 GHz Band. In order to avoid prejudicing the outcome of this important inquiry, the Commission should deny the request of SpaceX to increase its use of the 12 GHz Band pending the outcome of the rulemaking proceeding.

Respectfully submitted,

Go Long Wireless, Ltd.

Cass Cable TV, Inc.

Story Communications, LLC

Vision Broadband, LLC

By: /s/ Bruce E. Fox

Managing Member of General Partner of Go Long Wireless, Ltd., and
Authorized Signatory for the MVDDS Licensees

[36] *NTCH, Inc. v. FCC*, 950 F.3d 871, 881 (D.C. Cir. 2020).