

June 4, 2020

VIA ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, DC 20554

Re: *Notice of Ex Parte Communication, RM-11768*

Dear Ms. Dortch:

This letter is in response to a May 26, 2020, letter (the “May 26 Letter”),¹ echoing arguments made in a 2016 petition for rulemaking (the “2016 Petition”) with regards to the 12.2-12.7 GHz band (the “12 GHz Band”).² While the May 26 Letter addresses only whether to add terrestrial mobile services to the band, the underlying 2016 Petition is premised on the incorrect assertion that the co-primary non-geostationary satellite orbit (“NGSO”) fixed-satellite service (“FSS”) allocation in the band is “unused.” Nothing could be further from the truth. In fact, as demonstrated in the record in this proceeding and below, the 12 GHz Band has become a premier workhorse band for satellite consumer service and represents a major success for the Federal Communications Commission (“Commission”) in its ongoing efforts to close the digital divide. Proceeding with any proposal that would undermine current and future satellite use of the 12 GHz Band would place at risk the achievements in this band and impede the deployment of critical broadband services for consumers, including in the most rural and remote areas of the country.

As the COVID-19 pandemic has made clear, no one should be left unconnected. To meet this goal, Space Exploration Technologies Corp. (“SpaceX”) strongly supports the Commission’s ongoing efforts to close the digital divide using whatever technology best suits consumer needs, including 5G. One essential part of serving all Americans—no matter where they live—is powerful next-generation satellite services that can reach all corners of the country. The 12 GHz Band is an essential component to delivering high-throughput, low-latency downlink connections to consumers from these next-generation satellite systems. Unfortunately, the May 26 Letter overlooks the benefits these satellite services will bring to consumers, beginning in just the next few months.

¹ Letter from Alexi Maltas, Senior Vice President & General Counsel, Competitive Carriers Association *et al.*, to the Honorable Ajit Pai, Chairman, FCC, RM-11768 (filed May 26, 2020).

² 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 (filed Apr. 26, 2016)

The May 26 Letter also fails to recognize the careful balance that the Commission struck in the 12 GHz Band to allow both fixed terrestrial and FSS technologies to serve consumers. The Commission should not upset that balance now, just as investment and development is at an all-time high and NGSO operators are poised to bring revolutionary broadband access services to market. And while SpaceX does not comment on the degree to which the MVDDS licensees have succeeded in serving consumers to date, the rules enabling satellite operations in the 12 GHz Band have been an overwhelming success in bringing broadband access to all Americans, regardless of where they live.

Facts on the Ground Undercut the Premise of the 2016 Petition

The proposals in the 2016 Petition depend on a demonstrably false assumption that the 12 GHz Band is “unused” by NGSO operators.³ The record generated in response to the 2016 Petition made plain that this contention was false.⁴ But however wrong this claim was in 2016, it verges on the absurd in 2020. Yet, despite the patent inaccuracy of the assumptions underpinning the 2016 Petition, the May 26 Letter parrots these assertions by claiming that the rules that protect all other users of the band from harm by MVDDS are somehow “obsolete.”⁵ These claims are belied by the facts:

- The Commission issued NGSO FSS licenses authorizing use of the 12 GHz Band in 2017;⁶
- In just the past year, NGSO operators authorized to use the 12 GHz Band have launched over 500 satellites using that band;⁷
- Several hundred more satellites using this band will be deployed in the next several months—including 60 just yesterday and many more in the next few weeks;⁸
- The Commission authorized earlier this year one million user terminals using this band;⁹

³ 2016 Petition at 22.

⁴ See, e.g., Space Exploration Technologies Corporation Opposition to Petition for Rulemaking, RM-11768 (filed June 8, 2016); Opposition of WorldVu Satellites Limited, RM-11768 (filed June 8, 2016); Opposition of Intelsat, RM-11768 (filed June 3, 2016); Reply of SES, RM-11768 (filed June 23, 2016).

⁵ May 26 Letter at 3.

⁶ See *WorldVu Satellites Limited Petition for a Declaratory Ruling Granting Access to the U.S. Market for the OneWeb NGSO FSS System*, IBFS File No. SAT-LOI-20160428-00041, Order and Declaratory Ruling, FCC 17-77 (2017); *Space Norway Petition for a Declaratory Ruling Granting Access to the U.S. Market for the Arctic Satellite Broadband Mission*, IBFS File No. SAT-PDR-20161115-00111, FCC 17-146 (2017); *Telesat Canada Petition for Declaratory Ruling to Grant Access to the U.S. Market for Telesat’s NGSO Constellation*, IBFS File No. SAT-PDR-20161115-00108, FCC 17-147 (2017).

⁷ See, e.g., Clark, S., “SpaceX’s Starlink network surpasses 400-satellite mark after successful launch,” SPACEFLIGHT NOW (Apr. 22, 2020), available at <https://spaceflightnow.com/2020/04/22/spacexs-starlink-network-surpasses-400-satellite-mark-after-successful-launch/> (last accessed June 3, 2020).

⁸ See, e.g., SpaceX, Launches, available at <https://www.spacex.com/launches/> (last accessed June 3, 2020).

⁹ See *Satellite Communications Services Information re: Actions Taken*, Report No. SES-02250, Public Notice, at 6 (IB rel. Mar. 18, 2020) (granting SpaceX blanket authorization to operate Ku-band user terminals); Radio Station Authorization, Call Sign E190066, IBFS File No. SES-LIC-20190211-00151 (granted Mar. 13, 2020).

- The Commission recently initiated a new NGSO processing round in which applicants announced plans for tens of thousands of additional satellites to serve consumers using the 12 GHz Band;¹⁰ and
- SpaceX is poised to initiate consumer service this year across the United States using the 12 GHz Band.¹¹

Contrary to the unsupported claims in the May 26 Letter, the 12 GHz Band has been home to some of the largest investments and most exciting developments in advanced broadband technology over the past few years. The Commission's rules have enabled in just three years as much satellite innovation in the 12 GHz Band as in any other band.

Moving Forward with the 2016 Petition Would Exacerbate the Digital Divide

Not only would moving forward with the proposals in the 2016 Petition threaten the incredible development in the 12 GHz Band, grant of the rule changes proposed in the 2016 Petition would do little to close the digital divide. As an initial matter, SpaceX is poised to offer commercial service to consumers in the coming months using the 12 GHz Band.¹² Because SpaceX is using the 12 GHz Band for downlinks from SpaceX satellites to consumer terminals, any action to degrade the utility of the 12 GHz Band will directly harm consumers in the near term. By contrast, the theoretical terrestrial services proposed in the 2016 Petition are at best years away from deployment and, if ever deployed, are likely to track the same geography as today's terrestrial networks.

Aside from the immediacy of service, the physics and economics of the 12 GHz Band make it ideal for satellite services to help connect the unserved. Specifically, satellite operators are driven to use high-band spectrum like 12 GHz to provide service across all geographic areas, including the most rural and remote areas. By contrast, the propagation characteristics of high-band spectrum like 12 GHz force terrestrial operators to focus their efforts on offering high-throughput services in concentrated urban areas where the business model is less affected by the path loss characteristic of these frequencies. This focus comes at the expense of service to less densely populated areas and the Americans who reside there. As a result, moving forward with the 2016 Petition risks impeding near-term service to Americans in all parts of the country in exchange for an uncertain benefit for only those living in the most concentrated areas.

NGSO Satellite Operators Cannot Simply Move to Other Bands

The 2016 Petition makes several assertions about NGSO operations that appear to be based on fundamental misunderstandings about satellite operations under the Commission's rules. Supporters of the 2016 Petition often describe NGSO licensees as though they have exclusive access to spectrum. In fact, the opposite is true. NGSO

¹⁰ *Cut-Off Established for Additional NGSO FSS Applications or Petitions for Operations in the 10.7-12.7 GHz, 12.75-13.25 GHz, 13.8-14.5 GHz, 17.7-18.6 GHz, 18.8-20.2 GHz, and 27.5-30 GHz Bands*, Report No. SPB-279, Public Notice, DA 20-325 (IB rel. Mar. 24, 2020).

¹¹ See SpaceX, Starlink, available at <https://www.starlink.com/> (last accessed June 3, 2020).

¹² *Id.*

operators like SpaceX must share every single megahertz of spectrum that they are authorized to use. These obligations of satellite operators (which are often more limiting than those applied to MVDDS licensees) mean that NGSO operators cannot simply switch frequencies whenever another licensee wants to claim more rights for itself, as the supporters of the 2016 Petition claim.

Specifically, in the scattered bands in which they are authorized to operate, NGSO operators must share their spectrum with radio astronomy operations, Federal users like the Department of Defense, other NGSO operators, geostationary satellite operators, terrestrial 5G systems, and others. To accommodate the myriad users in these bands, NGSO operators must lower power levels, work around large geographic exclusion zones, split spectrum, or entirely avoid channels in which they are nominally authorized to operate. Yet, despite these limitations, NGSO operators like SpaceX have developed cutting-edge technologies that allow them to provide advanced broadband services to consumers. Notwithstanding these successes, adding the harmful interference proposed by the 2016 Petition significantly reduce the satellite use of the spectrum and risk major degradation and disruption for consumer downlink services. Moreover, as noted above, hundreds of authorized NGSO FSS satellites have already been deployed, with hundreds more in the near-term pipeline. These ongoing, in-space operations cannot simply be reconfigured to accommodate the fundamental changes in the 12 GHz Band proposed in the 2016 Petition.

The Record Contains No Evidence that the 12 GHz Band Can Be Shared

The May 26 Letter diverges sharply on a crucial assumption underlying the 2016 Petition. Specifically, the letter states its request is based on the signatories' unsupported, conclusory understanding that "increasing current power limitations in the band and allowing two-way use would result in little or no disruption to existing co-primary operations." But the 2016 Petition forcefully argues that any additional rights for MVDDS licensees *must* come at the expense of satellite operations in the band. In fact, in the years since the 2016 Petition was filed, its supporters have provided no technical analysis to demonstrate that its proposals are compatible with any other uses of the band, including those holding long-standing co-primary allocations, such as NGSO FSS and direct broadcast service. As recently as December 2019, members of the MVDDS Coalition have claimed that "concurrent sharing of spectrum between co-primary 5G and NGSO FSS operations is not viable in the 12 GHz Band."¹³

SpaceX agrees with separate filings from Public Knowledge—one of the signatories of the May 26 Letter—that the uses proposed in the 2016 Petition "should not create harmful interference with proposed satellite broadband."¹⁴ To that end, SpaceX has offered, in the record and elsewhere, to explore ways to share the band more extensively.

¹³ Letter from Alison Minea, DISH Network L.L.C. and SOUTH.COM LLC, to Marlene H. Dortch, Secretary, FCC, RM-11768, at 3 (filed Dec. 2, 2019) (filed

¹⁴ Letter from Harold Feld, Senior Vice President, Public Knowledge, to Marlene H. Dortch, Secretary, FCC, RM-11768 *et al.*, at 1 (filed Feb. 24, 2020).



But given the significant investment and deployment in the 12 GHz Band in the past few years, the Commission cannot move forward on the 2016 Petition.

The dynamic growth of next-generation satellite services in the 12 GHz Band has been a major success for the Commission and represents a significant step forward in the efforts to close the digital divide. Moving forward with the 2016 Petition risks undercutting this success and stranding the consumers—particularly those in rural, underserved, and unserved areas—poised to benefit from the massive innovation and investment in the 12 GHz Band.

Very best regards,

/s/ David Goldman

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