

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

In the Matter of)	
)	
Facilitating the Communications of Earth)	IB Docket No. 18-315
Stations in Motion with Non-Geostationary)	
Orbit Space Stations)	

REPLY COMMENTS OF MDS OPERATIONS, INC. AND RS ACCESS, LLC

MDS Operations, Inc. (“MDS Operations”) and RS Access, LLC (“RS Access”) file these reply comments in response to the Federal Communications Commission’s Notice of Proposed Rulemaking (“Notice” or “NPRM”) seeking comment on permitting communications between Earth Stations in Motion (“ESIMs”) and non-geostationary orbit (“NGSO”) satellites in certain bands.¹ RS Access intends to deploy spectrum in the 12.2-12.7 GHz band (“12 GHz band”) to support intensive, one-way point-to-multipoint data applications that may include: (1) supplemental downlink capacity for broadband operations; (2) remote video monitoring and video delivery services; (3) software delivery to smart devices and systems; (4) support for facilities that require secure, “high-side” systems to receive data from less secure, “low-side” networks (*e.g.*, military installations, utilities); and (5) alarm and remote monitoring systems.²

¹ See *Facilitating the Communications of Earth Stations in Motion with Non-Geostationary Orbit Space Stations*, Notice of Proposed Rulemaking, Docket No. 18-315, FCC 18-160 (rel. Nov. 16, 2018) (“NPRM”).

² In December 2018, RS Access purchased sixty Multichannel Video Distribution and Data Service (“MVDDS”) licenses in the 12 GHz band from MDS Operations. Shortly thereafter, RS Access and MDS Operations filed an assignment application with the Federal Communications Commission (“Commission” or “FCC”), which consented to the assignment on February 5, 2019. See ULS File No. 0008485654 (listing the status of assignment application as “Consented To” on February 5, 2019).

MDS Operations and RS Access support the Commission’s proposal to exclude the 12 GHz MVDDS band from the bands in which ESIMs may communicate with NGSOs.³ The request of WorldVu Satellites (“OneWeb”) to identify the 12 GHz band for ESIM use would stymie investment and innovation. OneWeb – the only party to advocate for authorizing ESIM use of the 12 GHz band – argues that “no compelling reason” exists for the band’s exclusion.⁴ OneWeb’s “might-as-well” principle of spectrum allocation is as untrue as it is unpersuasive: allowing ESIMs will impose serious constraints on MVDDS and frustrate or preclude the type of services that RS Access is deploying in the band today. Furthermore, the Commission has expressed its desire to “secure U.S. leadership in the next generation of . . . advanced spectrum-based services,”⁵ and the 12 GHz band provides additional spectrum to secure U.S. leadership.⁶ Permitting ESIM/NGSO links in the 12 GHz band would foreclose that opportunity.

To protect current 12 GHz band incumbent operations, the Commission should reject OneWeb’s call to permit ESIM/NGSO communications in the 12 GHz band. Allowing ESIM communications into the MVDDS band would introduce a number of problems.

³ See NPRM ¶¶ 9-13.

⁴ Comments of WorldVu Satellites Limited, IB Docket No. 18-315, at 4 (Feb. 11, 2019) (“In light of the potential near-term use of this spectrum by multiple NGSO FSS systems, there is no compelling reason to preclude mobile terminals . . . from extending the benefits of this newly provided NGSO connectivity to the 12 GHz band.”) (“OneWeb Comments”).

⁵ *Expanding Flexible Use of the 3.7 to 4.2 GHz Band, et al.*, Order and Notice of Proposed Rulemaking, 33 FCC Rcd 6915, ¶ 1 (2018).

⁶ For example, the MVDDS 5G Coalition has filed a pending Petition for Rulemaking that, if adopted, would contemplate use of the 12 GHz band for two-way mobile 5G services. See Petition of MVDDS 5G Coalition for Rulemaking, RM-11768 (Apr. 26, 2016) (“MVDDS 5G Coalition Petition”).

First, ESIM use of the 12 GHz band would upend the delicate balance among the three co-primary services authorized to occupy the band. MVDDS, NGSO Fixed Satellite Service (“FSS”), and Direct Broadcast Satellite (“DBS”) coexist on a co-equal basis through a series of major operational constraints and complex rules that govern sharing and coordination among licensees.⁷ For years, these investment-sapping restrictions have stymied MVDDS deployment in the United States.⁸ But OneWeb proposes to make a challenging situation worse by introducing new and unpredictable interference vectors into the band. The FCC acknowledged this threat when it: (1) omitted the 12 GHz band from the NPRM and (2) proposed permitting ESIM/NGSO communications primarily in frequency bands that have no terrestrial service allocations.⁹

Second, allowing ESIM/NGSO links in the 12 GHz band would create insurmountable coordination challenges for incumbent licensees. ESIMs could locate anywhere within the country. ESIMs’ mobility would prevent MVDDS from identifying – and avoiding – operation in the vicinity of ESIM receive antennas. The only practical means of avoiding harmful interference from ESIMs would be to terminate all MVDDS deployments. As a terrestrial, co-

⁷ See 47 C.F.R. §§ 2.106, n. 5.487A (allocating the 12 GHz band to NGSO FSS on a co-primary basis and requiring “application of the provisions of No. 9.12 for coordination with other [NGSOs] in the [FSS]”); 101.1421 (requiring coordination with adjacent MVDDS licensees and co-channel MVDDS licensees in adjacent areas); and 101.1440 (requiring MVDDS licensees to coordinate with and protect DBS licensees).

⁸ See, e.g., *Requests of Ten Licensees of 191 Licenses in the Multichannel Video and Data Distribution Service for Waiver of the Five-Year Deadline for Providing Substantial Service*, Order, 25 FCC Rcd 10097, ¶ 5 (WTB 2010) (granting requests of MVDDS licensees for waiver and extension of licensees’ five-year buildout deadlines because “a number of [equipment] manufacturers have cited the difficult coordination rules, the stringent power limits, and perceived resistance to alternative technologies by incumbents”).

⁹ See NPRM ¶¶ 9-11 (noting that the 11.7-12.2 GHz, 14.0-14.5 GHz, 18.3-18.6 GHz, 19.7-20.2 GHz, 28.35-28.6 GHz, and 29.5-30.0 GHz bands have no terrestrial allocations).

primary service in the 12 GHz band, MVDDS could not realistically coordinate around mobile ESIMs.

Third, OneWeb has failed to demonstrate a need for ESIM/NGSO links in the 12 GHz band. OneWeb has petitioned the Commission seeking access to the U.S. market for a total of 28,150 megahertz.¹⁰ In this proceeding, OneWeb has advocated that satellites be permitted to communicate with ESIMs for at least 5,750 megahertz of that spectrum, including the 500 megahertz that composes the 12 GHz band.¹¹ Despite co-primary status and regulatory protection from MVDDS systems, NGSO systems have never been deployed in the 12 GHz band. As contemplated in the NPRM, NGSO operators will have up to twelve *other* bands on which to communicate with ESIMs: (1) 10.7-11.7 GHz; (2) 11.7-12.2 GHz; (3) 14.0-14.5 GHz; (4) 17.8-18.3 GHz; (5) 18.3-18.6 GHz; (6) 18.8-19.3 GHz; (7) 19.3-19.4 GHz; (8) 19.6-19.7 GHz; (9) 19.7-20.2 GHz; (10) 28.35-28.6 GHz; (11) 28.6-29.1 GHz; and (12) 29.5-30.0 GHz.¹² OneWeb has not explained why this 5,250 megahertz of spectrum is insufficient for ESIM – or even NGSO FSS – use, especially when “there is not a single broadband NGSO FSS system operating in the 12.2-12.7 GHz band . . . anywhere in the world, and it is yet to be determined whether NGSO FSS could offer services of comparable value to 5G.”¹³

The 12 GHz band is well-suited for 5G. First, the 12 GHz band represents 500 megahertz of contiguous spectrum that the FCC can repurpose without disrupting DBS or other

¹⁰ See IBFS File No. SAT-AMD-20180104-00004.

¹¹ See OneWeb Comments at 1 (supporting the Commission’s proposal and recommending that the Commission “explicitly include the 12 GHz band within the list of frequencies authorized for ESIM communications with NGSO FSS systems”).

¹² See NPRM ¶¶ 9-13.

¹³ MVDDS 5G Coalition Petition at 23.

geostationary satellite operations. Second, the 12 GHz band’s propagation characteristics will more easily permit global harmonization by both equipment manufacturers and international regulators. Third, demand for additional spectrum opportunities exists and is only growing as policymakers and stakeholders recognize the enormous need for spectrum resources to support the diverse array of next-generation of applications and services that 5G will make possible. The Commission has noted that “a sound spectrum policy necessitates . . . exploring new opportunities for flexible broadband use in the mid-band frequencies . . . well-suited for next-generation wireless services.”¹⁴ Chairman Pai has emphasized this point, as well, stating that “the FCC is looking to free up mid-band spectrum for wireless innovation. As the world goes wireless, as consumers rely ever more heavily on their mobile devices, we need to keep up.”¹⁵ Numerous commenters have recognized this opportunity and have advocated using the 12 GHz band to support 5G mobile broadband operations.¹⁶ MDS Operations and RS Access therefore

¹⁴ *Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, Notice of Inquiry, 32 FCC Rcd 6373, ¶ 6 (2017) (“NOI”).

¹⁵ *Id.*, Statement of Chairman Ajit Pai, 32 FCC Rcd at 6389; *see also id.*, Statement of Commissioner Mignon L. Clyburn, 32 FCC Rcd at 6390 (“The unique properties of mid-band spectrum make it particularly attractive for deployment of next-generation wireless services.”).

¹⁶ *See, e.g.*, Reply Comments of the Computer & Communications Industry Association, GN Docket No. 17-183, at 4-5 (Nov. 15, 2017) (noting that the “[12 GHz] band has many characteristics that would make it suitable for two-way mobile communications and help carriers meet ever increasing demands for broadband traffic”); Reply Comments of T-Mobile USA, Inc., GN Docket No. 17-183, at 22 (Nov. 15, 2017) (asking the Commission to examine the 12 GHz band for “potential wireless mobile broadband use” and encouraging the Commission to “use this proceeding to further develop the record regarding the potential use of those bands for wireless mobile operations”); Comments of Competitive Carriers Association, RM-11768, at 9 (June 8, 2016) (noting that the 12 GHz band “presents an excellent opportunity to make spectrum available to support 5G mobile broadband technologies”); Letter from Senators Cory Gardner and Michael Bennet to Chairman Ajit Pai, WC Docket No. 18-19 (Apr. 13, 2018) (highlighting the importance of deploying 5G service and explaining that “the Commission has an opportunity

support and renew the MVDDS 5G Coalition’s request to eliminate the NGSO FSS allocation in the 12 GHz band, which – as explained above – deters use of MVDDS in the 12 GHz band.¹⁷

For these reasons, MDS Operations and RS Access urge the Commission to adhere to its proposal in the Notice and exclude the 12 GHz band from the frequencies on which NGSOs may communicate with ESIMs.

Respectfully submitted,

MDS Operations, Inc.

RS Access, LLC

/s/ Kirk Kirkpatrick
Kirk Kirkpatrick
President and CEO
800 SE Lincoln Avenue
Stuart, FL 34994

/s/ V. Noah Campbell
V. Noah Campbell
2001 L Street NW
Suite 500
Washington, DC 20036

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to build on their 5G efforts by considering the benefits of 5G mobile broadband use in the spectrum between 12.2-12.7 GHz”).

¹⁷ MVDDS 5G Coalition Petition at 22-24; *see also supra* at 2-3 (discussing how “investment-sapping restrictions have stymied MVDDS deployment”).