

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

In the Matter of)	
)	
Expanding Flexible Use of the 12.2-12.7 GHz Band)	WT Docket No. 20-443
)	
Expanding Flexible Use in Mid-Band Spectrum Between 3.7-24 GHz)	GN Docket No. 17-183
)	
)	

COMMENTS OF T-MOBILE USA, INC.

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T-Mobile USA, Inc. (“T-Mobile”)^{1/} submits these comments in response to the *Notice of Proposed Rulemaking* (“*NPRM*”) in the above-referenced proceedings that seek information on how to maximize efficient use of the 12.2-12.7 GHz (“12 GHz”) band.^{2/} T-Mobile applauds the Commission initiating this *NPRM*. As demand for mobile wireless capacity continues to skyrocket, the Commission should evaluate as many spectrum bands as possible, including the 12 GHz band, for possible mobile use pursuant to a competitive auction process. While the Commission assesses the potential competing uses of the 12 GHz band, it should take no action that would prejudice the use of the band for mobile wireless operations. Further, the Commission should not evaluate the future use of the 12 GHz band in a vacuum. As it evaluates the options for various services to meet their spectrum needs, the Commission should also include in this proceeding consideration of the future use of other spectrum bands, including the 17.3-17.8 GHz (“17 GHz”) and 12.7-13.25 GHz (“13 GHz”) bands. Doing so will allow the Commission to evaluate a more complete picture of spectrum available for different uses.

^{1/} T-Mobile USA, Inc. is a wholly-owned subsidiary of T-Mobile US, Inc., a publicly traded company.

^{2/} See *Expanding Flexible Use of the 12.2-12.7 GHz Band, et al.*, Notice of Proposed Rulemaking, 36 FCC Rcd 606 (2021) (“*NPRM*”).

I. INTRODUCTION AND SUMMARY

T-Mobile applauds the Commission’s continued efforts to make more spectrum available for mobile wireless services.^{3/} As CTIA recently reported and the pandemic has highlighted, the need for mobile wireless capacity is substantial and continues to increase rapidly. In the past year alone, mobile usage increased approximately 40 percent.^{4/} And carriers have worked hard to meet those demands. Not only did the wireless industry help connect 2.4 million students as they began learning from home for the first time, but carriers also strengthened their networks, increasing median wireless speeds in the U.S. nearly 50 percent.^{5/}

As the Commission observes,^{6/} current use of the 12 GHz band – by Direct Broadcast Satellite (“DBS”) operators under the primary Broadcasting Satellite Service (“BSS”), non-geostationary orbit (“NGSO”) systems operating under the co-primary Fixed Satellite Service (“FSS”) (but on a non-harmful interference basis to DBS), and Multi-Channel Video and Data Distribution Service (“MVDDS”) licensees operating under the co-primary Fixed Service (but also on a non-harmful interference basis to DBS) – warrants a fresh look. The rules for this spectrum were adopted before there was an urgent national need to make more spectrum available for 5G mobile services, and the parties in this proceeding suggest that there may be new opportunities for shared use and coexistence between DBS, mobile terrestrial, and NGSO FSS operations. T-Mobile supports the Commission’s decision to carefully examine the

^{3/} See NPRM ¶ 14.

^{4/} See Meredith Attwell Baker, *Wireless in the Time of COVID-19*, CTIA Blog (Mar. 15, 2021), <https://www.ctia.org/news/blog-wireless-in-the-time-of-covid-19>.

^{5/} See *id.*

^{6/} See NPRM ¶¶ 1, 13, 20.

characteristics of the 12 GHz band before deciding whether and, if so, how to make it available for terrestrial mobile operations.^{7/}

While it conducts that assessment, the Commission should not authorize additional use of the band, particularly by NGSO licensees and applicants that would prejudice its potential future use for mobile wireless services.^{8/} NGSO licensees have expressed concerns about their ability to coexist with mobile operations in the 12 GHz band and allowing their additional use could complicate the Commission's evaluation or foreclose options. In fact, the Commission should consider, if the 12 GHz band cannot be shared between mobile wireless and NGSO operations, whether the 12 GHz band should continue to be preserved for use by NGSO licensees at all. NGSO systems have access to the entire 2 gigahertz at 10.7-12.7 GHz in which they may conduct downlink operations. Moreover, their operations in the 12 GHz band today cannot claim protection from BSS stations. There is simply no reason for them to remain in the 12 GHz band if their use of the band is not compatible with mobile operations.

If the Commission determines that the 12 GHz band can be shared between terrestrial mobile and satellite operations, it should designate the terrestrial use of the band for *mobile* use only and no longer preserve the band for MVDDS operations. And, in issuing licenses for mobile operations, it should conduct an auction of flexible, exclusive-use licenses so that all new potential licensees have the opportunity to obtain this spectrum. The Commission should *not* simply assign any new terrestrial mobile service rights to existing licensees, conduct an auction of overlay licenses, or authorize underlay use of the band. Rather, it should relocate the few

^{7/} See *id.* ¶ 1.

^{8/} As noted below, the Commission has approved SpaceX's request for modification of its existing NGSO license, but explicitly conditioned its action on a requirement that SpaceX bring its operations in conformance with, among others, any decision in this proceeding.

MVDDS licensees that have *actively* deployed their spectrum to other bands. The Commission may use the *Emerging Technologies* framework, if necessary, to compensate existing licensees for relocating, including potentially using accelerated relocation payments similar to those implemented in the C-band proceeding.

Finally, the 12 GHz band is only one of the bands below 24 GHz whose use the Commission should re-evaluate. The Commission should consider more broadly in this proceeding other spectrum bands, including the 17 GHz and 13 GHz bands, for potential terrestrial mobile operations. The 17 GHz band is complementary to the 12 GHz band and is ripe for consideration for terrestrial wireless use. The 13 GHz band is likewise a suitable band based on its proximity to the 12 GHz band, and existing licensees in that spectrum can also be relocated to other bands. Consideration of multiple bands in this proceeding will allow the Commission to assess the needs of various spectrum users across a range of options and potentially provide it with greater flexibility to reconfigure more of the spectrum landscape to better meet the public's needs. As Commission action in the 3 GHz band has demonstrated, consideration of spectrum adjacent and complementary to the 12 GHz band would make the Commission's evaluation more efficient and best rationalize the use of this spectrum.

II. IF SHARED NGSO AND MOBILE TERRESTRIAL USE IS NOT FEASIBLE, THE COMMISSION SHOULD EVALUATE WHETHER CONTINUED USE BY NGSOs IS IN THE PUBLIC INTEREST

The Commission seeks comment on adding a mobile service allocation to the 12 GHz band and the technical parameters that could allow additional terrestrial use of the band without causing harmful interference to incumbent operations.^{9/} T-Mobile supports adding a mobile allocation to the 12 GHz band, provided that the spectrum can be licensed for mobile services

^{9/} See NPRM ¶¶ 20, 22.

pursuant to a competitive auction. Making available additional spectrum, particularly in higher mid-band frequencies, is important for the continued deployment of 5G.

RS Access, LLC has stated that spectrum sharing between NGSO constellations and mobile services may be possible.^{10/} In contrast, NGSO interests continue to assert that shared use between NGSOs and mobile terrestrial operations in the 12 GHz band is not feasible and that expanding two-way mobile service into the 12 GHz band would create harmful interference to their operations. For example, Space Explorations Holdings, LLC (“SpaceX”) asserts that if 5G mobile services are deployed in the band, they would overwhelm NGSO operations. SpaceX points to technical studies previously submitted by MVDDS licensees in 2016 as evidence that mobile terrestrial operations “cannot co-exist with other services in the band.”^{11/} Similarly, several NGSO operators jointly argue that “ubiquitous two-way mobile services cannot successfully coexist with incumbent satellite operations” in the 12 GHz band.^{12/} They contend that while MVDDS licensees have since submitted technical analyses from RS Access that

^{10/} See Letter from Trey Hanbury, Counsel, RS Access, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 20-443, at 2 (Mar. 15, 2021) (reporting that RS Access, LLC (“RS Access”) has indicated that its “preliminary engineering analysis indicates that spectrum sharing” with NGSO licensees is possible); see also *NPRM* ¶¶ 28-31 (explaining that DISH contends that, given the large number of satellites contemplated by these systems, an NGSO antenna should be expected to operate with a much narrower field of view, making them more similar to a fixed BSS licensee (and therefore easier to coordinate)).

^{11/} See *NPRM* ¶ 27; Letter from David Goldman, Director of Satellite Policy, Space Explorations Holding, LLC, to Marlene H. Dortch, Secretary, FCC, RM-11768, at 1 (filed Jan. 5, 2021); see also 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, at 33 (filed Aug. 12, 2016) (providing the MVDDS 12.2-12.7 GHz Co-Primary Service Coexistence study).

^{12/} See Letter from Ruth Pritcher-Kelly, *et al.*, Senior Advisor, OneWeb, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 20-443, at 1 (filed Mar. 12, 2021); see also Letter from Brian D. Weimer, Counsel, OneWeb, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 20-443, at 1-2 (filed Feb. 10, 2021).

demonstrate terrestrial 5G operations could successfully coexist with incumbent satellite operations, those studies have not yet been made available and submitted in the record.^{13/}

Accordingly, T-Mobile expects that the Commission’s analysis will focus on two questions. *First*, whether mobile operations can coexist with *any* of the existing services in the band, and under what conditions. And *second*, if mobile operations can coexist in the band, whether any modification of the use of the band by incumbent services is required to facilitate that coexistence.^{14/} As noted above, the record is already replete with information designed to address these questions, and T-Mobile expects that the record will be even further developed as this proceeding progresses.

But in the interim, and in order to not prejudice the potential outcome of the proceeding, the Commission should hold in abeyance any further requests for use of the 12 GHz band by NGSOs. T-Mobile recognizes that the Commission recently granted SpaceX’s request for a modification of its license for its NGSO FSS constellation,^{15/} allowing SpaceX, among other things, to decrease the number of satellites in its constellation and decrease the altitude for 2,824

^{13/} See Letter from Ruth Pritcher-Kelly, *et al.*, Senior Advisor, OneWeb, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 20-443, at 2 (filed Mar. 15, 2021) (“Unfortunately, RS Access has failed to provide the RS Sharing Studies to other 12 GHz stakeholders or introduce the studies into the record.”); *see also* Letter from David Goldman, Director of Satellite Policy, SpaceX, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 20-443, at 2-3 (filed Mar. 22, 2021) (“Without these updated RS Access Studies, stakeholders have no way to know what has changed and what the MVDDS licensees are now proposing.”).

^{14/} Of course, the Commission can also find that mobile terrestrial use cannot coexist with existing services and decide to relocate all existing operations from some or all of the band, as it did in the C-band proceeding. While the Commission should always consider this option, T-Mobile does not advocate for it in this case.

^{15/} See *Space Exploration Holdings, LLC; Request for Modification of the Authorization for the SpaceX NGSO Satellite System*, Order and Authorization and Order on Reconsideration, FCC 21-48 (rel. Apr. 27, 2021) (“*SpaceX Third Modification Order*”); *Space Exploration Holdings, LLC, Request for Modification of the Authorization for the SpaceX NGSO Satellite System*, IBFS File No. SAT-MOD-20200417-00037 (filed Apr. 17, 2020); *see also Space Exploration Holdings, LLC, Request for Modification of the Authorization for the SpaceX NGSO Satellite System*, Order and Authorization, 36 FCC Rcd 122 (2021).

satellites for purposes of offering a high-speed, low-latency broadband service to underserved and unserved areas of the U.S. and around the world. The Commission expressly conditioned SpaceX’s grant “subject to any modification necessary to bring it into conformance with future actions in Commission rulemakings, including but not limited to the 12 GHz proceeding”^{16/} Consistent with that decision, the Commission should not allow any action taken with respect to the *SpaceX Third Modification Order* or SpaceX’s deployment to prejudice any aspects of this proceeding, particularly for terrestrial mobile use.^{17/} And the Commission should refrain from entertaining any additional modifications or applications for use of the 12 GHz band at this time.

If, based on the technical record in the proceeding, the Commission determines that sharing between terrestrial mobile and BSS operations is feasible, but sharing with NGSOs is not, then it should consider whether continued use of the band by NGSOs, including by SpaceX, should be permitted. The history of NGSOs’ use of the 12 GHz band demonstrates that the Commission has consistently reminded NGSO applicants and licensees that their operations may not prejudice potential future terrestrial use in the 12 GHz band. For example, in granting OneWeb’s request to use the 12 GHz band for NGSO operations, the Commission stated that OneWeb “assume[s] the risk that operations may be subject to additional conditions or

^{16/} *SpaceX Third Modification Order* ¶ 50.

^{17/} As the record indicates, several parties have questioned whether SpaceX’s operation could increase the likelihood of harmful interference in the band. *See e.g.*, Letter from Pantelis Michalopoulos, Counsel, DISH Network Corporation, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 20-443, at 1 (filed Apr. 23, 2021) (attaching EPFD Assessment of SpaceX with multiple frequency reuse into DISH Ku-band GSO receivers located in the United States); *see also* Letter from Suzanne Malloy, Vice President, Regulatory Affairs, O3b Limited, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 20-443, at 2 (filed Apr. 6, 2021); Letter from Douglas A. Svor, Counsel, OneWeb, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 20-443, at 7 (filed Apr. 1, 2021).

requirements as a result of such Commission actions.”^{18/} The Commission used similar wording when granting the requests of other NGSO operators to use the 12 GHz band, placing these operators on notice that their use of the band would not “prejudge any decision, including a contrary action, in any pending or future rulemaking proceeding.”^{19/} The *SpaceX Third Modification Order* likewise confirms that “SpaceX proceeds at its own risk.”^{20/}

In addition, NGSO operators have been authorized to use the entire 10.7-12.7 GHz band and others for downlink operations, meaning that they may continue providing service without using the 12 GHz band. Indeed, one of the reasons the Commission granted OneWeb’s request to operate an NGSO system in the 12 GHz band despite the then-pending MVDDS 5G Coalition Petition for Rulemaking that requested, among other things, the Commission permit expanded, flexible terrestrial use of the band, was because OneWeb’s request included several other frequency bands. The Commission observed that OneWeb would still have flexibility to provide its services on those other bands “even if NGSO FSS systems were precluded entirely from the

^{18/} *WorldVu Satellites Limited, Petitions for Declaratory Ruling Granting Access to the U.S. Market for the OneWeb NGSO FSS System*, Order and Declaratory Ruling, 32 FCC Rcd 5366 ¶ 6 (2017) (“*OneWeb Order*”).

^{19/} *Space Norway AS, Petition for a Declaratory Ruling Granting Access to the U.S. Market for the Arctic Satellite Broadband Mission*, Order and Declaratory Ruling, 32 FCC Rcd 9649 ¶ 13 (2017); *see also, e.g., Space Exploration Holdings, LLC Application for Approval for Orbital Deployment and Operating Authority for the SpaceX NGSO Satellite System*, Memorandum Opinion Order and Authorization, 33 FCC Rcd 3391 ¶ 17 (2018) (“*SpaceX Order*”); *Karousel Satellite LLC, Application for Authority to Launch and Operate a Non-Geostationary Earth Orbit Satellite System in the Fixed Satellite Service*, Memorandum Opinion, Order and Authorization, 33 FCC Rcd 8485 ¶ 13 (2018) (“*Karousel Order*”); *Kepler Communications, Inc. Petition for Declaratory Ruling to Grant Access to the U.S. Market for Kepler’s NGSO FSS System*, Order, 33 FCC Rcd 11453 ¶ 29 (2018) (“[A]ny investments made toward operations in the bands authorized in this order by Kepler in the United States assume the risk that operations may be subject to additional conditions or requirements as a result of any future Commission actions.”) (“*Kepler Order*”); *Theia Holdings A, Inc., Request for Authority to Launch and Operate a Non-Geostationary Satellite Orbit System in the Fixed-Satellite Service, Mobile-Satellite Service, and Earth-Exploration Satellite Service*, Memorandum Opinion, Order and Authorization, 34 FCC Rcd 3526 ¶ 36 (2019) (“*Theia Order*”).

^{20/} *SpaceX Third Modification Order* ¶ 50.

12.2-12.7 GHz band.”^{21/} Other NGSO operators in the 12 GHz band are similarly situated. And there is no evidence in the record that those other bands are insufficient to meet NGSOs’ business plans.

In any case, NGSO use of the band has also been required to protect BSS operations, making their allocation effectively secondary, at least with respect to BSS use. Accordingly, NGSOs rights to the 12 GHz band have always been limited, and any harm from relocating NGSOs from the band would be minimal.

III. MOBILE TERRESTRIAL RIGHTS SHOULD BE AUCTIONED

The Commission seeks comment on how it should assign any new mobile terrestrial rights in the 12 GHz band.^{22/} It asks whether it should modify existing incumbents’ licenses using its Section 316 authority to afford them increased terrestrial operational flexibility.^{23/} Alternatively, it asks whether new terrestrial, flexible-use licenses should be assigned using an overlay auction or by authorizing underlay use of the band.^{24/}

If the Commission determines that terrestrial mobile operations can coexist with some satellite use and adds a mobile service allocation to the 12 GHz band, it should not simply grant terrestrial mobile rights to existing MVDDS licensees. Not only has the Commission recently rejected that approach, but it would essentially provide MVDDS licensees with an undeserved windfall. In the C-band proceeding, for instance, the Commission rejected all scenarios that would enable incumbent FSS licensees to be “the sole conveyors of newly-created flexible use

^{21/} *Id.* ¶ 6.

^{22/} *See NPRM* ¶ 33.

^{23/} *See id.* ¶¶ 33-34.

^{24/} *See id.* ¶ 33.

rights in the band,” and, instead, found that a public auction is the preferable approach.^{25/} And, as AT&T notes, “[t]o bestow new flexible use rights on MVDDS licensees . . . would merely deprive the U.S. Treasury of revenue and violate Section 309 of the Telecommunications Act,”^{26/} which requires a public auction whenever mutually exclusive applications are filed.

Moreover, the Commission should not assume that only existing terrestrial licensees should be permitted to offer mobile service because only a single licensee can coordinate both forms of terrestrial use or terrestrial/satellite use. As others observe, MVDDS licensees have underutilized the spectrum for several years and should not be rewarded for their lack of use.^{27/} In fact, the Commission recognizes in the *NPRM* that MVDDS licensees “have failed to provide meaningful commercial service in the band” since being granted rights to operate in 2004 and points out that most of the spectrum remains fallow.^{28/} Indeed, MVDDS licensees have continuously failed to satisfy their substantial service buildout requirements, submitting several requests for extension of time to fulfill their obligations, sometimes even on top of already extended requirements.^{29/} Currently, there is only one meaningful commercial MVDDS

^{25/} *Expanding Flexible Use of the 3.7-4.2 GHz Band*, Report and Order and Order of Proposed Modification, 35 FCC Rcd 2343, ¶ 40 n.124 (2020) (“*C-band Order*”).

^{26/} Letter from Michael P. Goggin, Assistant Vice President – Senior Legal Counsel, AT&T, to Marlene H. Dortch, Secretary, FCC, RM-11768, at 2 (filed Aug. 6, 2020).

^{27/} *See, e.g.*, Letter from Michael P. Goggin, Assistant Vice President – Senior Legal Counsel, AT&T, to Marlene H. Dortch, Secretary, FCC, RM-11768, at 3 (filed Aug. 6, 2020) (“More than 15 years after MVDDS licenses were awarded, few if any services are being provided to the public using MVDDS.”); *see also* Letter from Alexi Maltas, Senior Vice President & General Counsel, Competitive Carriers Association, to Marlene H. Dortch, Secretary, FCC, RM-11768, at 1 (filed Dec. 31, 2020) (“The 12 GHz band historically has been underutilized and, given the persistent demand for more spectrum for terrestrial 5G wireless services, the band warrants a fresh examination.”).

^{28/} *NPRM* ¶ 40.

^{29/} *See 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 (2010). For many MVDDS licensees, the Commission granted an extension of their buildout requirements until July 26, 2019, and MVDDS licensees appear to have filed their substantial service showings by the applicable deadline. All of these construction notifications are currently pending at the

deployment, and the other MVDDS licensees based their substantial service construction showings on the safe harbor established for MVDDS,^{30/} meaning they are only minimally active.

The AWS-4 proceeding further demonstrates that granting additional rights to incumbent licensees, particularly when they have not made adequate use of their existing spectrum holdings, is contrary to the public interest. There, the Commission granted the incumbent satellite licensee – *i.e.*, DISH – rights to use the spectrum for terrestrial mobile services.^{31/} As T-Mobile has explained,^{32/} while DISH has received terrestrial rights to operate in AWS-4 spectrum nearly a decade ago, it has yet to make use of the spectrum. The Commission should not make the same mistake again.

The Commission should instead relocate the few existing *active* MVDDS operations to other microwave bands and auction mobile terrestrial rights in the 12 GHz band. Similar to the approach implemented in the C-band proceeding,^{33/} the Commission may use its authority under Section 316 of the Act to modify MVDDS licensees’ authorizations and relocate them to other

Commission, and, similar to NGSO applications, the Commission should continue to hold these notifications in abeyance pending the outcome of this proceeding.

^{30/} See *NPRM* ¶ 40. The Commission established a “safe harbor” for point-to-multipoint use of the MVDDS spectrum of delivery of service to customers via four separate transmitting locations per million population.

^{31/} See *Service Rules for Advanced Wireless Services in the 2000-2020 MHz and 2180-2200 MHz Bands*, Report and Order and Order of Proposed Modification, 27 FCC Rcd 16102, ¶ 180 (2012) (reasoning that the public interest would be best served by continuing to permit a single licensee to operate both satellite and terrestrial services using the same authorization).

^{32/} See Letter from Steve B. Sharkey, Vice President, Government Affairs, Technology and Engineering Policy, T-Mobile USA, Inc., to Marlene H. Dortch, Secretary, FCC, WT Docket No. 19-348, *et al.*, at 3 (filed Mar. 10, 2021).

^{33/} See *C-band Order* ¶¶ 124, 126 (explaining that “[t]he Commission has long relied on section 316 to change or reduce the frequencies used by a licensed service where it has found that doing so would serve the public interest” and that it has modified the authorizations of incumbent licensees “by altering their assigned frequencies and, in many cases, their geographic service areas, in a way that ensured that the spectrum usage rights under the modified licenses were comparable to those under the originally configured licenses”).

bands if they can provide the same service as they currently do.^{34/} In fact, relocation may provide MVDDS licensees with an *even better* opportunity to provide microwave service if they are relocated to spectrum that does not require coordination with other licensees, as they are required to do today with BSS licensees.

The Commission may use the *Emerging Technologies* framework to compensate 12 GHz incumbent licensees for the relocation costs associated with their move to comparable facilities, similar to the framework it adopted to relocate incumbent FSS operations out of the lower 300 megahertz of the C-band and secondary, non-federal radiolocation licensees out of the 3.45-3.55 GHz band.^{35/} As the Commission has recognized, the *Emerging Technologies* framework “allows for new licensees to incentivize a swift transition while requiring those licensees to hold incumbents harmless during the transition.”^{36/} The *Emerging Technologies* framework appropriately balances the interests of new licensees with incumbent licensees’ desire to experience as little disruption as possible while also being made whole.^{37/}

In addition, the Commission may consider including accelerated relocation payments similar to those adopted for relocating satellite operators from the C-band, as AT&T has suggested and the Commission has proposed.^{38/} Such payments, however, should only be made available to licensees that will expeditiously relocate out of the band. MVDDS licensees should

^{34/} See 47 U.S.C. § 316.

^{35/} See *C-band Order* ¶ 111; *Facilitating Shared Use in the 3100-3550 MHz Band*, Second Report and Order, Order on Reconsideration, and Order of Proposed Modification, FCC 21-32, ¶¶ 155-59 (rel. Mar. 18, 2021).

^{36/} *C-band Order* ¶ 21.

^{37/} See *Amendment of Part 2 of the Commission’s Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Services*, Ninth Report and Order and Order, 21 FCC Rcd 4474, ¶ 11 (2006).

^{38/} See Letter from Michael P. Goggin, Assistant Vice President – Senior Legal Counsel, AT&T, to Marlene H. Dortch, Secretary, FCC, RM-11768, at 6 (filed Aug. 6, 2020); *NPRM* ¶¶ 19, 38.

not receive a bonus payment from holding spectrum that they did not use. And, regardless of whether the Commission adopts accelerated relocation payments, it should afford new licensees the flexibility to enter into individual negotiations and agreements with incumbents to clear the spectrum early.

Mobile terrestrial rights should not be issued on an overlay or underlay basis with respect to MVDDS use of the spectrum. An overlay auction – in which auction winners of terrestrial authorizations would be subject to continued protection of MVDDS licensees – would create uncertainty and would compromise the ability of new licensees to fully implement next-generation wireless services in the band. Authorizing underlay use with respect to MVDDS operations would be similarly problematic. As the Commission explains, authorizing underlay use of the spectrum would presume low-power operations in the band on an opportunistic basis.^{39/} But low-power operations are contrary to wireless carriers’ needs for high-power operations to support robust 5G deployments. Instead, assuming that the Commission determines that sharing between satellite and terrestrial use can occur, the Commission should establish a sharing regime between satellite and terrestrial operators through service rules and conduct a standard auction of exclusive-use licenses that allow for full-power commercial operations in the band, consistent with that regime. Because geographic sharing is not feasible based on the wide distribution of satellite stations throughout the U.S., the Commission should not employ a database mechanism to facilitate sharing in the spectrum.

^{39/} See *NPRM* ¶ 39.

IV. THE COMMISSION SHOULD EXPAND THIS PROCEEDING TO CONSIDER OTHER RELATED BANDS

As recently submitted pleadings have demonstrated, there are other spectrum bands that are used by entities that also use the 12 GHz band. The 17.3-17.8 GHz band is the companion feeder uplink band to the 12 GHz downlink band for DBS. Indeed, in the *17 GHz NPRM*, the Commission describes the relationship between the two bands, noting that both bands work in tandem.^{40/} And the 17.7-18.3 GHz band is allocated to the terrestrial Fixed Service, which is used to support wireless backhaul, on a primary basis and to the terrestrial Mobile Service internationally, making it a prime consideration for terrestrial mobile operations.^{41/} Because decisions related to the 12 GHz band may affect current and future uses of the 17 GHz band, that band should also be included in this proceeding.^{42/}

In addition, there are bands adjacent to 12 GHz band that, when combined with 12 GHz band, may represent a significant amount of potential 5G spectrum. In particular, the Commission should include consideration of the 13 GHz band in this proceeding. The 13 GHz band, which is primarily used for the Broadcast Auxiliary Service (“BAS”) and the Cable

^{40/} See *Amendment of Parts 2 and 25 of the Commission’s Rules to Enable GSO Fixed-Satellite Service (Space-to-Earth) Operations in the 17.3-17.8 GHz Band, to Modernize Certain Rules Applicable to 17/24 GHz BSS Space Stations, and to Establish Off-Axis Uplink Power Limits for Extended Ka-Band FSS Operations*, Notice of Proposed Rulemaking, 35 FCC Rcd 13239, ¶ 5 (2020) (“*17 GHz NPRM*”).

^{41/} See Comments of CTIA, IB Docket No. 20-330, at 4 (filed Mar. 3, 2021).

^{42/} Some commenters in response to the *17 GHz NPRM* have asserted that the outcome of the 12 GHz band has “no bearing” on the Commission’s decisions in the 17 GHz band. See, e.g., Reply Comments of SES Americom, Inc., Hughes Network Systems, LLC, Telesat Canada, Intelsat License LLC, Eutelsat S.A., The Boeing Company, Lockheed Martin Corporation, and Thales Avionics, Inc., IB Docket No. 20-330, at 6 (filed Mar. 18, 2021); see also Reply Comments of Hughes Network Systems, LLC, IB Docket No. 20-330, at 9 (filed Mar. 18, 2021). Those arguments are not only belied by the Commission’s own recognition that the 17 GHz band is the companion uplink band for 12 GHz DBS service, but are also contrary to sound spectrum planning. Indeed, in initially evaluating the C-band for mobile operations, the Commission included the paired 5.925-6.425 GHz uplink band in its inquiry. See *Expanding Flexible Use in the 3.7-4.2 GHz Band, et al.*, Notice of Proposed Rulemaking and Order, 33 FCC Rcd 6915, ¶¶ 10, 12 (2018) (referencing *Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, Notice of Inquiry, 32 FCC Rcd 6373 (2017)).

Television Relay Service (“CARS”), is already allocated to the terrestrial Mobile Service on a primary basis.^{43/} And, as T-Mobile and others have explained, there is other spectrum, such as in the 2 GHz band, that is available for BAS and the CARS licensees operating in the band.^{44/} Reconfiguring the 13 GHz band along with the 12 GHz band can optimize the spectrum for 5G use while still allowing existing operations to continue. If the Commission considers the future use of all of these bands (and potentially others) in a single proceeding, it will be better able to assess the needs of different services and retain flexibility to potentially address those needs across multiple bands, rather than within a single band.

V. CONCLUSION

T-Mobile welcomes the Commission’s efforts to maximize efficient use of the 12 GHz band. The Commission should evaluate the record carefully to determine whether coexistence between satellite operations and terrestrial mobile use is feasible and hold in abeyance any additional requests to use the band during its evaluation. If the Commission determines that coexistence between satellite and terrestrial mobile operations is feasible, it should designate the band for terrestrial mobile use. It should also auction the spectrum to new licensees instead of granting terrestrial mobile rights to incumbents. Finally, the Commission should expand this proceeding to consider other related bands, including the 17 GHz band and 13 GHz band, to most effectively, across multiple bands, address how best to satisfy spectrum needs of multiple services.

^{43/} See 47 C.F.R. § 2.106 (U.S. Table of Frequency Allocations).

^{44/} See Comments of T-Mobile USA, Inc., GN Docket No. 17-183, at 19 (filed Oct. 2, 2017); Comments of CTIA, ET Docket No. 18-295, *et al.*, at 12 (filed Feb. 15, 2019).

Respectfully submitted,

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