

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
)
Expanding Use of the 12.7-13.25 GHz Band for) GN Docket No. 22-352
Mobile Broadband of Other Expanded Use)

COMMENTS OF THE 5G FOR 12 GHz COALITION

The 5G for 12 GHz Coalition (“Coalition”) submits these comments in response to the Federal Communications Commission’s (“Commission”) *Notice of Inquiry* seeking information on whether the 12.7-13.25 GHz band is suitable for mobile broadband and other expanded use and how the Commission can make more efficient use of the band.¹

I. INTRODUCTION & SUMMARY

The 5G for 12 GHz Coalition is a multilateral coalition of 5G leaders whose mission is to unleash the power of 5G by making the 12.2-12.7 GHz band (“12 GHz band”) available for terrestrial wireless services.² The various stakeholders in the Coalition, including public interest

¹ *Expanding Use of the 12.7-13.25 GHz Band for Mobile Broadband or Other Expanded Use*, Notice of Inquiry and Order, GN Docket No. 22-352, FCC 22-80 (rel. Oct. 28, 2022) (“*Notice*” or “*NOI*”).

² The 5Gfor12GHz Coalition consists of 37 diverse and prominent public interest groups, trade associations, and companies in the telecommunications sector, calling on the FCC to act swiftly to allow the 12 GHz band to unlock the power of 5G for all Americans. The Coalition has steadily grown since its formation and now consists of the following members: A Side Technology, Airspan, AtLink, Benton Institute for Broadband and Society, BroadbandOne, Cambridge Broadband Networks Group, Center for Educational Innovation, Center for Rural Strategies, Ceragon, Computer & Communications Industry Association, DISH, Dell Technologies, Etheric Networks, Federated Wireless, Geolinks, Globtel, Go Long Wireless, Granite, Incompas, MMwave Tech LLC, MVD53, Mavenir, Mixcomm, New America, NextLink, Public Knowledge, RS Access, Resound Networks, Rise Broadband, Rural Wireless Association, Starry, Tilson, VM Ware, WeLink, White Cloud, X Lab, and Xiber.

organizations, trade associations, and private companies, have a shared goal of unlocking licensed mid-band spectrum in order to secure U.S. global leadership, spur competition, and provide next generation connectivity for all Americans. While the 5G for 12 GHz Coalition is primarily interested in maximizing the lower 12 GHz band for two-way terrestrial and 5G mobile and fixed services,³ the Coalition supports the agency’s efforts to expand opportunities for additional operations in this adjacent spectrum. The Coalition is confident that, under the appropriate sharing framework, the 550 megahertz of mid-band spectrum in the 13 GHz band can be brought to market for mobile and fixed broadband and other terrestrial uses and can serve as another important tool in helping close the digital divide in communities across the country.

II. ADDING THE 13 GHZ BAND TO THE NATION’S MID-BAND PORTFOLIO WOULD MAKE IDEAL SPECTRUM RESOURCES AVAILABLE FOR 5G AND MOBILE BROADBAND

In the *Notice*, the Commission expresses interest in “explor[ing] the potential for broadening the use of the 12.7 GHz band to support terrestrial mobile broadband or other expanded use.”⁴ To achieve this result, the Commission seeks comment on how certain aspects of the band, including the licensing and authorization framework and service rules governing the band, could be modified to promote these additional operations. Given the urgent need to make additional spectrum available for 5G and future wireless services, the Coalition urges the Commission to consider changes to the 13 GHz band that would align federal regulations with advancements in spectrum sharing and enable an ecosystem where mid-band spectrum drives

³ See Reply Comments of the 5G for 12 GHz Coalition, WT Docket No. 20-443, GN Docket No. 17-183 (filed July 7, 2021) (urging the FCC to maximize the potential of the 12.2-12.7 GHz band by modernizing the band’s operational rules and expanding its allocation to include two-way terrestrial and mobile 5G services).

⁴ *Notice* at para. 12.

innovation, new technologies, and next-generation connectivity for American consumers and businesses.

Making the 12 GHz band and the 13 GHz band available for flexible use is critical for the country's global 5G leadership, its economic interests, and national security.⁵ Adding 500 megahertz of 12 GHz spectrum and 550 megahertz of spectrum in the 13 GHz band to the nation's mid-band spectrum portfolio would allow the U.S. to overtake several international competitors, including China, and propel the country back into a global leadership position in 5G competitiveness.

Furthermore, the Coalition asserts that the 13 GHz band shares important characteristics with the 12 GHz band that make this mid-band spectrum ideal for 5G deployment. In a study conducted on the suitability of the 12 GHz band for 5G services, the Coalition found that the band "combines the propagation characteristics and coverage advantages of lower mid-band spectrum with the high capacity and throughput of the millimeter-wave ("mmW") bands."⁶ The 12 GHz and 13 GHz spectrum bands maintain significant advantages with respect to signal range and coverage area over mmW bands which carry significant cost advantages, as fewer towers would be necessary for providers to deploy terrestrial services. As DISH notes, "it is the mid-

⁵ See, e.g., Spectrum Policy, CTIA, <https://www.ctia.org/spectrum> (last visited Nov. 18, 2022) ("To meet consumer demand and lead the world in 5G innovation, wireless networks need more capabilities and capacity. That means hundreds of megahertz of new licensed spectrum, with an emphasis on making more mid-band available to help reverse the U.S.'s mid-band deficit and realize 5G's potential.")

⁶ See Roberson and Associates, LLC, The 12 GHz Band: Analysis of Physical Characteristics and Applicable Technologies (July 7, 2021) ("Roberson Report"), appended to Reply Comments of RS Access, LLC, WT Docket No. 20-443, GN Docket No. 17-183 (filed July 7, 2021). Based on these findings, the study's authors were able to conclude that "[n]etwork architectures, spectrum deployment techniques, and equipment development standards currently used for 5G in other bands can readily extend to the 12 GHz band. Given that these are adjacent bands, the Coalition is confident that the 12.7-13.25 GHz band shares these technical characteristics.

band spectrum that allows spectrum reuse, densification, and high bandwidth capacity at relatively low cost,” positioning the country with the largest reserves of mid-band spectrum “to win the 5G race.”⁷ Given that this spectrum is ideally suited for mobile and fixed broadband and could be used to better position the U.S. in its efforts to deploy next generation services, like 5G, the Commission should accord significant weight to the option of expanding the 13 GHz band’s service rules to accommodate these additional operations.

III. RESOLVING THE COMMISSION’S OPEN PROCEEDING ON THE 12 GHZ BAND WILL FACILITATE COMMISSION RULEMAKING ON SHARING IN THE 13 GHZ BAND

As it considers changes to the 13 GHz band, the Commission should also act now to allocate the 12 GHz band to permit mobile and fixed use.⁸ As spectrum-sharing technology advances, it enables additional bands of spectrum to be opened up for new or more flexible uses. The Coalition and its members have repeatedly demonstrated that the 12 GHz band can be shared under new operational rules without putting incumbent services at risk of harmful interference.⁹ Adopting service rules in the 12 GHz band that permit flexible use on the basis of the robust facts of record in WT Docket No. 20-443 would lay the predicate for the Commission to explore in the *NOI* a very real opportunity to expand the docket’s benefits by making over

⁷ Comments of DISH Network Corporation, WT Docket No. 20-443, GN Docket No. 17-183, 11-13 (filed May 7, 2021) (“DISH Comments”).

⁸ See *Expanding Flexible Use of the 12.2-12.7 GHz Band, Expanding Flexible Use in Mid-Band Spectrum Between 3.7-24 GHz*, Notice of Proposed Rulemaking, 36 FCC Rcd 606 (rel. Jan. 15, 2021).

⁹ See, e.g., Letter of Pantelis Michalopoulos, Counsel to DISH Network Corporation, to Marlene Dortch, Secretary, FCC, WT Docket No. 20-443, GN Docket No. 17-183 (filed Aug. 8, 2022) (responding to a DIRECTV interference filing); Letter of V. Noah Campbell, CEO, RS Access, to Marlene Dortch, Secretary, FCC, WT Docket No. 20-443, (filed July 15, 2022) (submitting a supplemental report from RKF Engineering Solutions responding to a Starlink interference filing).

1000 megahertz of contiguous spectrum between 12.2-13.25 GHz available for two-way terrestrial services and mobile broadband. In any case, it will be easier for the Commission to make concrete proposals about how the adjacent 13 GHz band is to be shared, licensed, and protected once the Commission has resolved these issues in the now-ripe-for-action 12 GHz band proceeding.

Multiple provider coexistence in the 12 GHz band, which has only a limited number of satellite companies seeking protection from new terrestrial services, will serve as a blueprint for the 13 GHz band. That latter band is currently allocated on a primary basis for non-Federal use to fixed services, (primarily broadcasters), satellite services, and mobile services and according to the *Notice*, the band has thousands of licensed users.¹⁰ Additionally, NASA, the lone Federal user, operates a receive-only earth station in the band. Therefore, as in the 12 GHz proceeding, spectrum sharing in the 13 GHz band will require the Commission to adopt a framework that accommodates terrestrial and satellite users. Implementation of the changes in the 12 GHz proceeding will necessarily inform action in the 13 GHz band. Given the number of incumbent licensees in the 13 GHz band, it will be easier for the Commission to establish a method for 13 GHz spectrum sharing that includes 5G and satellite services after it implements the framework that enables two-way terrestrial and satellite coexistence in the 12 GHz proceeding.

IV. CONCLUSION

Increased competition in mobile and fixed broadband through the broader use of mid-band spectrum supports free markets that encourage competition, more choices, and greater opportunities for American families. Maximizing the number of potential providers in the 12 GHz band and 13 GHz band offers the best chance for consumers to access

¹⁰ See *Notice* at para. 4.

reliable, affordable broadband and mobile services throughout the United States. Leveraging 5G through increasing the licensed U.S. mid-band spectrum allocation is not only about facilitating faster speeds, but also building next-generation, open RAN networks that will transform the way American businesses serve American families. Building next-generation 5G networks for enterprise customers will help modernize how hospitals, power grids, factories, and farms operate. Doing so will allow these entities to deploy new automation tools to better serve hardworking Americans who rely on them. With this in mind, the Coalition urges the Commission to consider changes to the service rules governing the 13 GHz band to further promote mobile and fixed broadband and other expanded use.

Respectfully submitted,

5G for 12 GHz Coalition

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