

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

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| In the Matter of |) | |
| |) | |
| Expanding Flexible Use in Mid-Band |) | GN Docket No. 17-183 |
| Spectrum Between 3.7 and 24 GHz |) | |

REPLY COMMENTS OF THE RURAL WIRELESS ASSOCIATION, INC.

The Rural Wireless Association, Inc. (“RWA”)¹ replies to the comments filed in response to the Federal Communications Commission’s (“FCC” or “Commission”) Notice of Inquiry² seeking input on potential opportunities for additional flexible access – particularly for wireless broadband services – in spectrum bands between 3.7 and 24 GHz (mid-band spectrum). RWA’s Reply Comments focus exclusively on use of the 3.7 – 4.2 GHz band.

I. THE COMMISSION SHOULD ISSUE A NOTICE OF PROPOSED RULEMAKING TO AUTHORIZE THE DEPLOYMENT OF HIGH-THROUGHPUT, LICENSED POINT – TO – MULTIPOINT FIXED WIRELESS BROADBAND SERVICES IN THE 3.7 – 4.2 GHZ BAND.

RWA is a member of the Broadband Access Coalition (“BAC”),³ which filed a petition for rulemaking to authorize and facilitate the deployment of licensed point-to-multipoint

¹ RWA is a Washington, DC – based trade association that ensures wireless carriers with fewer than 100,000 subscribers have a strong voice in our nation’s capital. RWA’s members have joined together to speed the delivery of new, efficient, and innovative communications technologies to underserved rural communities across the United States of America. RWA’s members are comprised of both independent wireless carriers and wireless carriers that are affiliated with rural telephone/broadband companies that are passionate about ensuring rural America is not left behind.

² *Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, [Notice of Inquiry](#), GN Docket No. 17-183 (rel. Aug. 3, 2017) (“*Mid-Band NOI*”).

³ The Coalition is a diverse and growing group of wireline and wireless broadband service providers, technology companies, equipment vendors, trade associations, frequency coordinators and non-profit advocacy groups that support the development and deployment of licensed point-to-multipoint (“P2MP”) service as a new means to enable affordable, high-throughput, last-mile broadband access in rural and other high-cost areas.

fixed wireless broadband service in the 3.7-4.2 GHz band in June 2017.⁴ RWA agrees that the 3.7-4.2 GHz band contemplated in the *Mid-Band NOI* is “prime spectrum for rural fixed wireless broadband deployment. This spectrum enables high bandwidth applications while still allowing for non-line-of-sight deployments over considerable distance,”⁵ and use of this spectrum via fixed wireless broadband deployment could help to alleviate the digital divide in rural areas by supporting economic development, telehealth and educational applications, agribusiness, and energy development.

The 500 megahertz of bandwidth in the 3.7-4.2 GHz band is not without incumbent users. This spectrum in the United States is currently allocated exclusively for non-federal use on a primary basis for Fixed Satellite Service (“FSS”) and terrestrial Fixed Service (“FS”).⁶ For FSS, the 3.7-4.2 GHz band (space-to-Earth or downlink) is associated with the 5.925-6.425 GHz band (Earth-to-space or uplink), and collectively these bands are the “conventional C-band.”⁷ For the FS, 20 megahertz paired channels are assigned for point-to-point common carrier or private operational fixed microwave links.⁸ This band was the original long-haul common carrier microwave band, providing spectrum for an analog transcontinental network for television and

⁴ *Petition for Rulemaking to Amend and Modernize Parts 25 and 101 of the Commission’s Rules to Authorize and Facilitate the Deployment of Licensed Point-to-Multipoint Fixed Wireless Broadband Service in the 3700 – 4200 MHz Band*, [Petition for Rulemaking](#) of the Broadband Access Coalition, RM-11791 (June 21, 2017) (“BAC Petition”).

⁵ *Petition for Rulemaking to Amend and Modernize Parts 25 and 101 of the Commission’s Rules to Authorize and Facilitate the Deployment of Licensed Point-to-Multipoint Fixed Wireless broadband Service in the 3700 – 4200 MHz Band, Expanding Flexible Use in Mid-Band Spectrum Between 2.7 and 24 GHz*, [Comments](#) of Frontier Communications Corporation, Windstream Services, LLC, and Consolidated Communications, Inc., RM-11791, GN Docket No. 17-183, at p. 4 (Oct. 2, 2017).

⁶ 47 CFR § 2.106, United States Table of Frequency Allocations.

⁷ See 47 CFR § 25.103 (Definitions).

⁸ See 47 CFR § 101.147(h).

long-distance telephone circuits.⁹ FS use of the band has declined as common carriers migrated to fiber or other FS bands that offered more channelization options without the interference risk or coordination difficulties.¹⁰ Current FS use of this band is relatively minimal (119 licenses).¹¹ RWA agrees that this spectrum is largely underutilized, and could be used more efficiently while still protecting incumbents.¹²

Recognizing the existing uses of the band, the Commission has sought comment regarding “the potential for more intensive use of the 3.7 – 4.2 GHz band for wireless broadband”¹³ and more specifically “whether to alter [its] existing service rules to permit more intensive fixed use in the 3.7-4.2 GHz band by allowing for the deployment of point-to-multipoint FS broadband services and by making the band more viable for shorter, last-mile point-to-point FS.”¹⁴ The *BAC Petition* “proposes specific and concrete rule changes that would enable the immediate introduction of P2MP fixed wireless broadband service into the 3700 – 4200 MHz band without disrupting incumbent operations.”¹⁵ Further, “implementing P2MP services can be done rapidly and simply, using existing Part 101 frequency coordination

⁹ See *Spectrum Usage for the Fixed Services*, NTIA Report 00-378, at 52; see also *Mid-Band NOI* at ¶ 15.

¹⁰ “In the 3700-4200 MHz band, terrestrial fixed links have problems sharing with fixed satellite downlinks. The existing fixed terrestrial links are leaving this band at a rapid rate, and the lack of any new narrowband channelization suggests that this band is likely to be relatively lightly used by terrestrial fixed systems in the future.” *Spectrum Usage for the Fixed Services*, NTIA Report 00-378 at 8. See also *Mid-Band NOI* at ¶ 15.

¹¹ In this band, there are 109 licenses in the Common Carrier Fixed Point-to-Point Microwave Service (41 of which authorize temporary fixed stations to use the 3.7-4.2 GHz band in a large geographic area, e.g., multi-state areas), one license in the Local Television and Transmission Service, and nine licenses in the Microwave Industrial/Business Pool.

¹² *BAC Petition* at pp. 15-17; see also *Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, [Comments](#) of the Broadband Access Coalition, GN Docket No. 17-183, at pp. 6-7 (Oct. 2, 2017) (“*BAC Comments*”).

¹³ *Mid-Band NOI* at ¶ 16.

¹⁴ *Id.* at ¶ 18.

¹⁵ *BAC Comments* at p. 2.

procedures.”¹⁶

RWA agrees with the BAC that the Commission should expeditiously issue a Notice of Proposed Rulemaking to authorize the deployment of high-throughput, licensed, point-to-multipoint fixed wireless broadband services in the 3.7 – 4.2 MHz band, and that these P2MP links could facilitate the rapid deployment of much-needed gigabit and near-gigabit fixed broadband service to rural and other underserved areas.¹⁷ The Wireless Internet Service Providers Association (“WISPA”) agrees, stating that “[c]onsideration of the Coalition’s petition for 3700 – 4200 MHz should not be delayed by the NOI.”¹⁸ Microsoft, too, believes that the Commission “should issue a Notice of Proposed Rule Making...to authorize a new licensed fixed point-to-multi point...wireless service,” and that “[s]uch a P2MP service offers the potential to be part of last-mile broadband access solutions in less densely populated areas.”¹⁹

II. THE COMMISSION CAN RAPIDLY MOVE FORWARD TO ENABLE P2MP IN THE 3.7 – 4.2 GHZ BAND WITHOUT PRECLUDING FUTURE USE FOR MOBILE SERVICES.

RWA’s carrier members comprise rural carriers that provide both fixed *and* mobile wireless broadband services. Access to spectrum is critical for each type of service. However, the 3.7 GHz – 4.2 GHz band is not now, and will not for several years, be suitable for mobile use

¹⁶ *BAC Comments* at p. 2.

¹⁷ *Id.* at p. 1.

¹⁸ *Petition for Rulemaking to Amend and Modernize Parts 25 and 101 of the Commission’s Rules to Authorize and Facilitate the Deployment of Licensed Point-to-Multipoint Fixed Wireless broadband Service in the 3700 – 4200 MHz Band, Expanding Flexible Use in Mid-Band Spectrum Between 2.7 and 24 GHz*, [Letter](#) from Stephen E. Coran, Counsel to WISPA to Ms. Marlene H. Dortch, Secretary, FCC, RM-11791, GN Docket No. 17-183, at p. 6 (Sept. 8, 2017); *see also Expanding Flexible Use in Mid-Band Spectrum Between 2.7 and 24 GHz*, [Letter](#) from Stephen E. Coran, Counsel to WISPA, to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 17-183, at p. 1 (Oct. 19, 2017) (noting WISPA’s membership and leadership in the BAC).

¹⁹ *Expanding Flexible Use in Mid-Band Spectrum Between 2.7 and 24 GHz*, [Comments](#) of Microsoft Corporation, GN Docket No. 17-183, at p. 7 (Oct. 2, 2017) (“*Microsoft Comments*”).

given the existing deployment of incumbent FSS and FS services.²⁰ RWA believes that access to spectrum to help deploy broadband in rural areas is necessary *now*, and agrees that the future possibility of using portions of the 3.7 – 4.2 GHz band for sharing among fixed and mobile services “should not, in any way, be allowed to delay immediate allocation and use of the band for P2MP services...action that can yield immediate and tangible public interest benefits without foreclosing future mobile use of the band.”²¹

The Commission can and should “implement rules for P2MP now that will not preclude future entry by mobile services, should the Commission elect to do so.”²² Microsoft agrees, stating that it believes “that [while] the Commission should issue an NPRM that authorizes a new fixed service, it should do so in a manner that doesn’t preclude the authorization of licensed or GAA-like mobile operations at some later date.”²³

RWA agrees with the Open Technology Institute’s comments that “the record strongly supports a rulemaking that could immediately address the high-capacity rural broadband gap by adding a new, licensed, point-to-multipoint fixed wireless service in the band to share spectrum with the largely unused airwaves occupied by Fixed Satellite Services.”²⁴ Further, RWA agrees that eventually “relatively small and flexible licensing areas would permit both

²⁰ *BAC Petition* at p. 6.

²¹ *BAC Comments* at p. 5.

²² *Id.*

²³ *Microsoft Comments* at p. 8.

²⁴ *Petition for Rulemaking to Amend and Modernize Parts 25 and 101 of the Commission’s Rules to Authorize and Facilitate the Deployment of Licensed Point-to-Multipoint Fixed Wireless broadband Service in the 3700 – 4200 MHz Band, Expanding Flexible Use in Mid-Band Spectrum Between 2.7 and 24 GHz*, [Letter](#) from Michael Calabrese, Director, Wireless Future Project, Open Technology Institute/New America, RM-11791, GN Docket No. 17-183, at p. 3 (Oct. 16, 2017) (“*OTI Letter*”).

fixed and mobile wireless operators to coordinate use in the unused portions of this large and grossly underutilized band.”²⁵

III. CONCLUSION.

For the reasons set forth above, and in the *BAC Petition*, RWA urges the Commission to expeditiously issue an NPRM to authorize the deployment of high-throughput, licensed, P2MP fixed wireless broadband services in the 3.7 – 4.2 GHz band. The rapid deployment of P2MP access points will significantly help to address the digital divide by enabling the provision of much-needed gigabit and near-gigabit fixed broadband service to rural and other underserved areas.

Respectfully submitted,

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²⁵ *OTI Letter* at p. 3.