



17 March 2020

Via ECFS

Marlene H. Dortch, Esq.
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: ET Docket No. 20-36, *Unlicensed White Space Device Operations in the Television Bands*; CC Docket No. 02-6, *Schools and Libraries Universal Support Mechanism*; WC Docket No. 10-90, *Connect America Fund*; WC Docket No. 13-184, *Modernizing the E-rate Program for Schools and Libraries*; and WT Docket No. 18-353, *Request for Waiver of the Citizens Broadband Radio Service Transition Deadline*

Dear Ms. Dortch:

On Friday, 13 March, the undersigned, Paul Garnett, and Gunnar Halley – all from Microsoft Corporation – met via telephone conference call with Bill Davenport, Chief of Staff and Senior Legal Advisor for Commissioner Geoffrey Starks to discuss actions that could be taken in response to the Covid-19 pandemic, including matters related to the above-captioned dockets. Below, we discuss three steps that could aid the Commission's efforts: (1) grant a long-standing E-Rate petition clarifying that schools can wirelessly extend E-Rate subsidized connections to students at home; (2) proceed with proposed changes to technical rules for TV white space devices; and (3) grant a petition for waiver of Citizen Broadband Radio Service transition requirements.

The Commission should clarify that schools can use E-rate funded broadband connections to connect students for educational purposes in their own homes, consistent with the Petition filed nearly four years ago by Microsoft and its co-petitioners Mid-Atlantic Broadband Communities Corporation, Charlotte County Public Schools, Halifax County Public Schools, GCR Company, and Kinex Telecom.¹ Doing so would allow students without a home broadband connection to continue to learn while schools are not meeting on-premises. This clarification remains critical even when schools return to normal operations: in a recent study, the Quello Center at Michigan State University found "that students who do not have access to the Internet from

¹ *Wireline Competition Bureau Seeks Comment on Petitions Regarding Off-Campus Use of Existing E-rate Supported Connectivity*, CC Docket 02-6, WC Docket Nos. 10-90 and 13-184, Public Notice, 31 FCC Rcd 10510 (2016) ("Public Notice"). The Public Notice seeks comment on two petitions: (1) the Joint Petition for Clarification or, in the Alternative, Waiver of Microsoft Corporation, Mid-Atlantic Broadband Communities Corporation, Charlotte County Public Schools, Halifax County Public Schools, GCR Company, and Kinex Telecom, WC Docket No. 13- 184 (filed July 7, 2016) ("Virginia Petition") and (2) the Petition for Waiver of Samuelson-Glushko Technology Law & Policy Clinic on Behalf of Boulder Valley School District, WC Docket Nos. 13- 184, 10-90 (filed May 16, 2016) ("Boulder Valley Petition").

home or are dependent on a cell phone alone for access perform lower on a range of metrics, including digital skills, homework completion, and grade point average.”² In addition, issuing the clarification requested by the Virginia Petition would be fiscally responsible because it would allow schools to put E-rate funded broadband connections to more intensive use at no extra expense during periods of time when on-premises usage of those connections is very low.

Microsoft Airband partners are involved in several efforts to close the homework gap. Our first homework gap project in the United States was a pilot project launched in 2016 in Halifax and Charlotte Counties in rural southern Virginia and is the project that motivated the Petition referenced above. In counties in which approximately 3,500, or half the schoolchildren, lacked access to broadband, Microsoft teamed with the Mid-Atlantic Broadband Communities Corporation, the Charlotte County Public Schools, the Halifax County Public Schools, GCR Company, and Kinex Telecom to develop a solution utilizing TV White Space technology from Adaptrum to extend the broadband access of 18 schools in the Charlotte County and Halifax County public school districts to the homes of eligible students who live in those districts.³ The pilot project served one of Virginia’s neediest and most underserved student populations: median incomes in Charlotte and Halifax counties are roughly half the state average, the poverty rate in these counties is almost double the state average, and their college graduation rates are half the national average. The pilot project provided access to over 200 households which otherwise lacked access to broadband. While the pilot phase of this project ended before the Commission could reach a final decision on the petition for clarification, Adaptrum and B2X, a local ISP, continue to provide free connectivity to about 80 households, which Adaptrum continues to use as a testbed for release of new TV White Space products and features.

Building upon our early work in southern Virginia, Microsoft and Precision IT have recently teamed up with The Nebraska Education Service Unit and Grand Island Public Schools to help solve their homework gap problem. Many students in Grand Island, Nebraska lack broadband at home and are reliant on school Wi-Fi or other means for the higher speed connectivity required for homework assignments and other school projects. Precision IT will be deploying a single TV White Space base station at the school and will offer free TV White Space customer devices for the students to use at their homes. Microsoft Airband ISP partners deploying broadband access in unserved rural regions of several other states – many which already provide connectivity to E-Rate qualified rural schools – are interested in seeing how they can extend that connectivity to school children lacking broadband at home. Grant of the Virginia Petition and Boulder Valley Petition will aid ISPs and school districts in these efforts.

Meanwhile, Microsoft continues to work with Airband Partners to experiment with other use cases that could help close the homework gap. Microsoft teamed up with internet service provider Allband Communications and TV White Space radio manufacturer 6Harmonics,

² Hampton, K. N., Fernandez, L., Robertson, C. T., & Bauer, J. M., Broadband and Student Performance Gaps James H. and Mary B. Quello Center, Michigan State University, at p. 5 (March 2020) available at <<https://doi.org/10.25335/BZGY-3V91>>.

³ While the Southern Virginia homework gap pilot leveraged TV White Spaces technology to extend broadband connectivity from schools with school children at home, other low-cost wireless technologies can be used for these purposes, such as CBRS, 5.8 GHz, and other fixed wireless technologies.

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alongside the Alpena-Montmerancy-Alcona Educational Service District, to conduct a pilot in rural Hillman, Michigan which successfully demonstrated how TV White Space technology could be used to provide wireless connectivity to Wi-Fi hotspots on school buses during their morning and afternoon pickups and dropoffs. In rural Hillman, Michigan school bus rides can be as long as 1 ½ hours in each direction. The Commission recently issued a Notice of Proposed Rulemaking which would enable widespread adoption of this use case.⁴ In particular, the Commission proposes to permit school buses, tractors, and other moving vehicles to operate personal-portable TV White Space radios at higher power within predefined geofenced coordinates.⁵ Microsoft encourages the Commission to quickly adopt this proposed rule change.

An additional action the Commission could take to support effective COVID-19 response efforts would include granting the petition jointly filed by the Wireless Internet Service Providers Association (“WISPA”) and Utilities Technology Council (“UTC”) asking the Commission to waive its Citizens Broadband Radio Service (“CBRS”) transition rules (47 CFR §§ 90.1307(c) and (d)) and permit ISPs to continue using first generation CBRS equipment for another six months due to device certification, replacement, supply chain, and related challenges.⁶

For its part, Microsoft is providing significant resources to help in COVID-19 response efforts including, among other things, making software available for free to nonprofit organizations to facilitate remote work, contributing financially to a Seattle-area COVID-19 response fund, and enabling 13 active missions to help members of the disaster response community boost their operational effectiveness. Microsoft also has encouraged its ISP partners to take the Keep Americans Connected Pledge. More information on Microsoft’s contributions can be found here: <https://news.microsoft.com/covid-19-response/> .

Pursuant to the Commission’s rules, I have filed a copy of this notice electronically in the above-referenced dockets. If you require any additional information, please contact the undersigned.

Respectfully submitted,

/s/ Paula Boyd

Paula Boyd

Senior Director, Government and Regulatory Affairs

cc: William Davenport

⁴ *Unlicensed White Space Device Operations in the Television Bands*, ET Docket No. 20-36, Notice of Proposed Rulemaking, FCC 20-17 (rel. Mar. 2, 2020).

⁵ *Id.* at ¶ 39.

⁶ See *Ex Parte* Letter from Stephen E. Coran, Counsel to the Wireless Internet Service Providers Association (“WISPA”), *Request for Waiver of the Citizens Broadband Radio Service Transition Deadline*, WT Docket No. 18-353 (filed May 9, 2019).