



1300 I Street N.W.
Suite 500 East
Washington DC 20005

Alan Buzacott
Executive Director
Federal Regulatory and Legal Affairs

July 8, 2020

Ex Parte

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

Re: Establishing the Digital Opportunity Data Collection, WC Docket No. 19-195

Dear Ms. Dortch:

On July 6, 2020, Tamara Preiss, Scott Townley, and Alan Buzacott of Verizon met by telephone with Kirk Burgee and Chelsea Fallon of the Wireline Competition Bureau and Garnet Hanly, Erin Boone, Monica DeLong, Janet Young, Tom Tran, and Jennifer Salhus of the Wireless Telecommunications Bureau to discuss the *Draft Order* in the above-captioned proceeding.¹

We noted that the *Draft Order* does not specify whether broadband providers will be required to submit propagation maps that depict outdoor coverage, as was required by the Mobility Fund Phase II (MF-II) mapping rules, or whether they should instead depict a different type of coverage, such as in-vehicle coverage. We explained that a map of in-vehicle coverage would be smaller than a map of outdoor coverage, due to the combined impact of the penetration loss from the vehicle and the reduction in throughput experienced by users traveling at highway speeds.²

¹ *Establishing Digital Opportunity Data Collection*, Draft Second Report and Order and Third Further Notice of Proposed Rulemaking, WC Docket Nos. 19-195 & 11-10; FCC-CIRC2007-07 (draft rel. June 25, 2020) (“*Draft Order*”).

² A vehicle adds at least 6 dB of vehicle penetration loss. See Letter from Cathleen Massey, T-Mobile, to Marlene Dortch, FCC, *Mobility Fund II Coverage Maps Investigation*, GN Docket No. 19-367, at 2 (Feb. 17, 2020) (“*T-Mobile Letter*”). See also “Final Report - In-car Mobile Signal Attenuation Measurements,” LS Telecom for Ofcom, at 33 (Nov. 8, 2017) https://www.ofcom.org.uk/data/assets/pdf_file/0019/108127/in-car-mobile-signal-attenuation-report.pdf (reporting a median attenuation value of 8.9 dB). And testing at highway speeds adds significant Doppler shift and spread to the both the downlink and uplink signals, resulting in a reduction in throughput compared to the same signal

To achieve the Commission's goal of standardizing propagation maps and to avoid subsequent apples to oranges comparisons, the Commission must specify before the initial filing deadline the type of coverage that should be depicted by the propagation maps. It should make clear whether the propagation maps should depict outdoor coverage or in-vehicle coverage, and whether the maps should depict coverage for a stationary user or at highway speeds.

In addition to specifying the coverage type for the propagation maps, the Commission should ensure that the verification regime is consistent with the coverage type specified for the maps. If, for example, Commission requires that the propagation maps depict outdoor coverage for a stationary user, then it should give little or no weight to third-party, crowdsourced, or challenge process data that is collected under conditions that differ from the mapping specifications (e.g., using speed tests conducted from inside a vehicle traveling at highway speeds) or under unknown conditions. In this way, the Commission will avoid some of the deficiencies associated with the *MF-II Investigation Staff Report*.³ Whereas the MF-II rules directed carriers to map an "outdoor level of coverage,"⁴ Commission staff conducted speed tests from inside a moving vehicle,⁵ which reduced the measured speeds. As a result, the differences between the MF-II maps and the speeds measured by staff reflected to a significant degree a mismatch between the testing procedures and the MF-II mapping

conditions but for a stationary user. The Commission recently recognized the impact of highway speeds on throughput in the *5G Fund NPRM. Establishing a 5G Fund for Rural America*, Notice of Proposed Rulemaking and Order, 35 FCC Rcd 3944, ¶ 118 (2020) ("*5G Fund NPRM*") ("low speed or stationary throughput measurements are typically higher than high mobility throughput measurements").

³ *Mobility Fund Phase II Coverage Maps Investigation*, Staff Report, GN Docket No. 19-367, DOC-361165 (Dec. 4, 2019) ("*MF-II Investigation Staff Report*").

⁴ *Connect America Fund; Universal Service Reform – Mobility Fund*, Order on Reconsideration and Second Report and Order, 32 FCC Rcd 6282, ¶ 39 (2017) ("*MF-II Challenge Process Order*").

⁵ *MF-II Investigation Staff Report*, ¶ 58. The staff's speed tests did not account for vehicle penetration loss or throughput loss at highway speeds. See *supra* fn.2.

specifications, rather than showing that the maps were inconsistent with the Commission's mapping requirements.⁶

Finally, we sought further explanation of the following provisions of the *Draft Order*: (1) the requirement that carriers "affirm[] that the coverage model has been validated and calibrated using drive test and/or other real-world measurements;"⁷ (2) the requirement that carriers specify "the propagation models used, including a description of the conditions for use ... and any sites where conditions deviate;"⁸ (3) the requirement that carriers provide "the name" of clutter datasets, and "a description of each category and clutter factor;"⁹ (4) the requirement that carriers provide both "the geographic location of cell sites" and "the latitude and longitude of each transmitter;"¹⁰ and (5) the requirement that carriers provide "the per site classification (e.g., urban, suburban, or rural)."¹¹

This letter is being filed electronically in the above-referenced dockets pursuant to Section 1.1206 of the Commission's rules. Please contact the undersigned with any questions.

Sincerely,



Alan Buzacott

⁶ *T-Mobile Letter*, at 2 fn.6 ("when the FCC collected speed test data to evaluate T-Mobile's maps, it failed to follow commonly-accepted coverage testing procedures as well as its own MF-II instructions"); Letter from David A. LaFuria, United States Cellular, to Marlene H. Dortch, FCC, *Mobility Fund II Coverage Maps Investigation*, GN Docket No. 19-367, Attachment at 2, 7-8 (June 18, 2020) ("Testing was in-vehicle ignoring MF-II requirement that tests be conducted outdoors.").

⁷ *Draft Order* ¶ 45.

⁸ *Id.*

⁹ *Id.*, ¶ 46.

¹⁰ *Id.*, ¶ 49.

¹¹ *Id.*