

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)	
)	
Connect America Fund)	WC Docket No. 10-90
)	
Universal Service Reform – Mobility Fund)	WT Docket No. 10-208
)	

APPLICATION FOR REVIEW OF VERIZON¹

The Commission should vacate the *Challenge Procedures Reconsideration Order*, in which the Wireless Telecommunications Bureau and Wireline Competition Bureau (the Bureaus) increased the buffer radius for the Mobility Fund challenge process from 250 meters to 400 meters.² The 400 meter buffer radius, which will allow challengers to successfully challenge a one square kilometer area with as few as two speed test points, is inconsistent with the Commission’s requirement that challengers submit speed tests with “sufficient density to reflect actual consumer experience throughout the entire challenged area.”³ The revised challenge process could result in widespread false positives, i.e., presumptively successful challenges of large areas that are in fact well-served by 4G LTE, particularly if providers cherry-pick test points with an aim of minimizing actual coverage.

¹ The Verizon companies participating in this filing are the regulated, wholly owned subsidiaries of Verizon Communications Inc.

² *Universal Service Reform – Mobility Fund*, Order on Reconsideration, WC Docket No. 10-90, WT Docket No. 10-208; DA 18-427 (WTB/WCB April 30, 2018) (“*Challenge Procedures Reconsideration Order*” or “*Order*”).

³ *Connect America Fund; Universal Service Reform – Mobility Fund*, Order on Reconsideration and Second Report and Order, 32 FCC Rcd 6282, ¶ 51 (2017) (“*MF-II Challenge Process Order*”).

I. Background

In the *Challenge Procedures PN*,⁴ the Bureaus acted under delegated authority to establish the detailed procedures for the Mobility Fund Phase II challenge process. Pursuant to those procedures, the Bureaus began by dividing unsubsidized carriers' coverage maps into one square kilometer grid cells.⁵ Challengers are now submitting the results of their speed tests, which purport to show that qualifying 4G LTE service (5 Mbps) is not available at a given location, to the Universal Service Administrative Company (USAC) challenge process portal. The challenge phase started on March 29th and is currently scheduled to end on August 27th, but Chairman Pai has directed the Rural Broadband Auctions Task Force to determine the procedural steps necessary to extend the challenge process window by 90 days.⁶ After challengers submit their speed test data, the USAC system will draw a "buffer" – a circular area – around each speed test point.⁷ If the total buffered area in a grid cell exceeds 75 percent of the cell's challengeable area, then the system will deem the challenge to be presumptively successful with respect to that cell.⁸

The "buffer" concept assumes that the speed measured at a test point is representative of the speed that consumers would experience in the buffer area around the test point. Because wireless signal strength varies from place to place, that assumption is valid only within "a short

⁴ *Procedures for the Mobility Fund Phase II Challenge Process*, Public Notice, 33 FCC Rcd 1985 (2018) ("*Challenge Procedures PN*").

⁵ *Id.*, ¶¶ 5, 7.

⁶ Letter from Ajit Pai, Chairman, FCC to Senator Roger Wicker (May 30, 2018), <https://docs.fcc.gov/public/attachments/DOC-351493A1.pdf>.

⁷ *Challenge Procedures PN*, ¶ 37.

⁸ *Id.*, ¶ 38.

distance around that [test] point,” i.e., if the buffer radius is small.⁹ The larger the buffer radius, the less likely it is that the speed measured at the test point will be representative of the speed experienced by consumers elsewhere in the buffer area.¹⁰ As the Bureaus explained in the *Challenge Procedures PN*, “[l]arger distances between speed tests would less accurately reflect a consumer’s on-the-ground experience at any given point.”¹¹

In order to ensure that the challenge process produces meaningful results, the Commission directed in the *MF-II Challenge Process Order* that challengers submit speed tests with “sufficient density to reflect actual consumer experience throughout the entire challenged area.”¹² To implement that requirement, the Bureaus initially set the buffer radius at 250 meters in the *Challenge Procedures PN*. The Bureaus found that a 250-meter buffer radius would “help to ensure the accuracy of the submitted speed test challenge data while balancing the burden on small challengers.”¹³ The Bureaus specifically rejected proposals for a buffer radius greater than 250 meters, finding that that “the alleged burden [of the 250-meter buffer] is outweighed by the increased accuracy of collecting speed test data pursuant to our adopted approach.”¹⁴

Only eight weeks later, however, the Bureaus reconsidered the 250-meter radius buffer on their own motion in the *Challenge Procedures Reconsideration Order*. Citing “new evidence in the record” – a single Rural Wireless Association ex parte filing – the Bureaus said that they were “now persuaded that applying a buffer radius of [250 meters] would be unduly burdensome

⁹ *Id.*, ¶ 23.

¹⁰ *Id.*

¹¹ *Id.*

¹² *Challenge Procedures PN*, ¶ 19 (citing *MF-II Challenge Process Order*, ¶¶ 47, 51).

¹³ *Id.*, ¶ 21.

¹⁴ *Id.*, ¶ 22.

to some challengers.”¹⁵ The Bureaus increased the buffer radius to 400 meters in order to “reduce the number of speed test measurements needed to file a successful challenge” and thus “significantly reduce the burden on potential challengers.”¹⁶ The Bureaus did not, however, analyze the impact of the larger buffer radius on the accuracy and reliability of the challenge process. Instead, the Bureaus simply asserted that increasing the buffer radius would “not unduly compromis[e] the Commission’s interest in collecting accurate data that reflects consumers’ experience.”¹⁷

II. The 400-Meter Buffer Radius is Inconsistent with the Commission’s Challenge Process Rules

The *Challenge Procedures Reconsideration Order*’s new 400-meter buffer radius is inconsistent with the *MF-II Challenge Process Order*’s requirement that challengers submit speed test measurements with “sufficient density” to reflect actual consumer experience “throughout the entire challenged area.” With a 400-meter buffer radius, the test points will be too far apart to produce a reliable picture of coverage in the challenged area.

The *Order* downplays the impact of the increased buffer radius on the reliability of the challenge process by characterizing the 400-meter buffer radius as only “slightly larger” than the original 250-meter radius.¹⁸ That characterization is inaccurate. A 400-meter radius is 60 percent larger than a 250-meter radius, and the area of a 400-meter radius buffer is over *two and*

¹⁵ *Challenge Procedures Reconsideration Order*, ¶ 4.

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.*

a half times that of a 250-meter radius buffer.¹⁹ Consequently, increasing the buffer radius from 250 meters to 400 meters cuts the density of the test points needed for a successful challenge by 60 percent.²⁰

The Bureaus themselves found in the *Challenge Procedures PN* that any increase in the buffer radius would “reduce the accuracy and reliability of a challenger’s speed test data.”²¹ Given that the increase in the buffer radius from 250 meters to 400 meters is substantial, and is in fact large enough to cut the density of the speed test points by more than half, the increased buffer radius could “unduly compromise” the accuracy of the challenge process.

With the original 250-meter radius buffer, a challenger would have had to collect at least four sub-5 Mbps tests, in different quadrants of a grid cell,²² in order to submit a presumptively successful challenge. Given the required number and distribution of test points, the original framework was at least a defensible implementation of the Commission’s requirement that challengers submit speed tests with sufficient density to reflect actual consumer experience throughout the entire challenged area.

The same cannot be said for the new framework adopted in the *Challenge Procedures Reconsideration Order*. Because a 400-meter radius circle has an area of about 0.5 square

¹⁹ A 400-meter radius buffer has an area of 0.503 square kilometers while a 250-meter radius buffer has an area of 0.196 square kilometers.

²⁰ A buffer circle with a 400 meter radius covers the same area as approximately 2.57 buffer circles with a 250 meter radius ($0.503/0.196$). Consequently, covering an area with 400 meter radius buffers would require about 60 percent fewer test points than covering the same area with 250 meter radius buffers ($((1-2.57)/2.57 = -61\%)$).

²¹ *Challenge Procedures PN*, ¶ 23.

²² See *Challenge Procedures PN*, ¶ 22. A buffer with a 250 meter radius has an area of 0.196 square kilometers. In order for a challenge to be presumptively successful, i.e., for the total buffered area to be at least 75 percent of a one square kilometer grid cell, requires at least four test points. However, the four test points must be well-placed in different quadrants of the cell with little overlap between the buffer areas.

kilometers, a challenger could reach the 75 percent coverage requirement for a presumptively successful challenge with, on average, fewer than two sub-5 Mbps speed tests per grid cell. Plainly, two test points do not provide “sufficient density” to represent the actual consumer experience “throughout” a one square kilometer area. A square kilometer is a relatively large area; for example, a square kilometer is the area from the Commission’s headquarters in Washington, DC north to Constitution Avenue and east almost to the base of Capitol Hill. Under the framework established by the *Challenge Procedures Reconsideration Order*, a square area of that size will be treated as unserved as long as the challenger can find – and perhaps cherry-pick – just two sub-5 Mbps test points somewhere in or near that square. Yet, because wireless signal strength can vary considerably across an area of that size, due to signal attenuation, clutter, and terrain, the speeds experienced by consumers elsewhere in the square could be very different from those measured at the two test points. As a result, the increased buffer radius could result in widespread false positives, i.e., presumptively successful challenges of large areas that are in fact well-served by 4G LTE.

In the *Challenge Procedures PN*, the Bureaus emphasized that they must balance the burdens on challengers “with the Commission’s need to collect data that reflects consumer experience as accurately as possible”²³ and found that the 250 meter buffer “strikes the appropriate balance.”²⁴ The *Challenge Procedures Reconsideration Order*, however, focused exclusively on reducing the burdens on challengers.²⁵ Consequently, the *Order* made it far easier to submit presumptively successful challenges for large areas, but at the same have weakened the

²³ *Challenge Procedures PN*, ¶ 21.

²⁴ *Id.*, ¶ 24.

²⁵ *Challenge Procedures Reconsideration Order*, ¶ 4.

standard for a presumptively successful challenge to the point that the challenge phase will provide neither an accurate nor reliable indication of coverage in the challenged area.

III. Conclusion

The Commission should vacate the *Challenge Procedures Reconsideration Order* and direct the Bureaus to reinstate the 250-meter buffer adopted in the *Challenge Procedures PN*.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on this 21st day of June, 2018, I served a copy of the foregoing Application for Review by U.S. Mail, postage prepaid to the parties on the following service list:

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