

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Establishing the Digital Opportunity Data Collection)	WC Docket No. 19-195
)	
Modernizing the FCC Form 477 Data Program)	WC Docket No. 11-10

COMMENTS AND PETITION FOR RECONSIDERATION OF CTIA

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September 8, 2020

TABLE OF CONTENTS

I. INTRODUCTION AND SUMMARY..... 1

II. THE COMMISSION SHOULD RECONSIDER ITS DISPARATE TREATMENT OF MOBILE AND FIXED WIRELESS PROVIDERS AND ITS REQUIREMENT FOR IN-VEHICLE COVERAGE MAPS. 3

III. THE DODC ORDER ACCOMPLISHES THE CORE OBJECTIVES OF THE BROADBAND DATA ACT. 7

IV. THE COMMISSION SHOULD DEFER DECISION ON ISSUES THAT GO BEYOND THE REQUIREMENTS OF THE BROADBAND DATA ACT..... 9

V. GIVEN THE SIGNIFICANT REFORMS TO THE COLLECTION OF COVERAGE MAPS AND THE VARIETY OF VERIFICATION TOOLS NOW AVAILABLE, COLLECTION OF INFRASTRUCTURE INFORMATION AND ON-THE-GROUND TESTING FOR VERIFICATION IS UNNECESSARY AND COST-PROHIBITIVE..... 12

VI. A MINIMUM VALUE FOR SIGNAL STRENGTH IS NOT REQUIRED BY THE BROADBAND DATA ACT AND WOULD NOT IMPROVE THE ACCURACY OF COVERAGE MAPS..... 16

VII. THE CHALLENGE PROCESS SHOULD ENSURE THAT CHALLENGES ARE WELL FOUNDED AND GIVE PROVIDERS FLEXIBILITY TO RESPOND..... 17

VIII. CONCLUSION..... 22

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CTIA respectfully submits these comments proposing a clear roadmap for implementing the remaining provisions of the Broadband DATA Act (“Act”). CTIA also submits a narrow petition for reconsideration of two aspects of the Second Digital Opportunity Data Collection Report and Order (“DODC Order”) regarding the confidential treatment of link budgets for mobile wireless providers and the duplicative and burdensome collection of maps by technology as described below.¹

I. INTRODUCTION AND SUMMARY.

CTIA commends the Federal Communications Commission (“Commission” or “FCC”) for its tremendous efforts to develop new broadband coverage maps and its ongoing efforts to develop mechanisms to verify coverage data as required by the Act.² CTIA agrees that more granular mobile wireless coverage data is essential to vital public policy initiatives, including the Commission’s efforts to close the digital divide and implement the new 5G Fund.

¹ See 47 C.F.R. § 1.429; *In re Establishing the Digital Opportunity Data Collection*, Second Report and Order and Third Further Notice of Proposed Rulemaking and Order, WC Docket Nos. 19-195, 11-10, FCC 20-94 (rel. July 17, 2020) (“DODC Order” or “DODC FNPRM,” respectively).

² Broadband Deployment Accuracy and Technological Availability Act, Pub. L. 116-130, 134 Stat. 228 (2020).

The DODC Order takes several major steps toward implementing the Act,³ and the DODC Order itself accomplishes the primary goals of the Act: developing improved broadband coverage maps and mechanisms to verify the accuracy of those maps.⁴ Although CTIA generally supports the DODC Order, CTIA respectfully requests that the Commission reconsider two aspects of its decision: (1) treating sensitive, confidential link budget information of mobile and fixed wireless providers differently; and (2) requiring modeling of in-vehicle usage coverage in addition to outdoor stationary coverage for each mobile wireless technology.⁵ Neither of these aspects of the DODC Order is adequately explained, and there are strong policy reasons for reconsidering both.

CTIA supports the Commission's efforts to implement the verification measures required by the Act. The Commission will now be able to avail itself of audits, confidential submissions from providers about their link budgets, insights gleaned from crowdsourced data, and the challenge process to identify any potential inaccuracies in mobile wireless coverage maps. Given all of these new and enhanced disclosure requirements and verification tools, the Commission's proposals for regular collection of infrastructure information and mandatory on-the-ground testing for verification purposes are unnecessary, extremely burdensome, and beyond what Congress contemplated.

Further, CTIA supports the Commission's efforts to develop a user-friendly challenge process to allow state and local governments, third parties, and consumers to support the continual improvement in the accuracy of coverage maps. In so doing, CTIA encourages the Commission to make sure that challenges are based on reliable data and use methods that can help to reveal

³ *Id.*

⁴ *See* S. Rep. No. 116-174, at 1 (2019).

⁵ *See* DODC Order ¶¶ 48-49; 47 C.F.R. § 1.429.

material discrepancies in coverage data. CTIA also encourages the Commission to give providers flexibility in choosing how to respond to these challenges.

Because the Commission has already made tremendous progress implementing the Act on a short time frame—and considering that Congress intended for the Commission to leverage the DODC as an iterative and ongoing process—CTIA encourages the Commission to focus on the limited actions necessary to implement the Act and decline to adopt rules not required by Congress at this time.

II. THE COMMISSION SHOULD RECONSIDER ITS DISPARATE TREATMENT OF MOBILE AND FIXED WIRELESS PROVIDERS AND ITS REQUIREMENT FOR IN-VEHICLE COVERAGE MAPS.

CTIA respectfully urges that the Commission reconsider two aspects of the DODC Order: (1) treating the confidential link budget information of mobile and fixed wireless providers differently; and (2) requiring modeling of in-vehicle usage coverage in addition to outdoor stationary coverage for each mobile wireless technology.⁶ Under Section 1.429 of the Commission’s rules, reconsideration is warranted when, as here, the petition demonstrates that the original order contains a material error or omission or presents a “reason warranting reconsideration.”⁷ These two aspects of the DODC Order plainly warrant reconsideration. Indeed, neither of these aspects of the DODC Order is adequately explained or supported by the Act, and there are strong policy reasons for reconsidering both.

⁶ See DODC Order ¶¶ 48-49; 47 C.F.R. § 1.429.

⁷ 47 C.F.R. § 1.429(l)(1); *In re Connect America Fund*, Order on Reconsideration and Second Report and Order, 32 FCC Rcd 6282, 6286 ¶ 7 (2017) (granting CTIA’s petition to reconsider the Commission’s use of Form 477 data as the basis for determining 4G LTE deployment for the map of areas presumptively eligible for MF-II support) (“*MF-II Order on Reconsideration*”); *In re Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, Order on Reconsideration, 29 FCC Rcd 7515, 7518 ¶ 7 (2014) (“Reconsideration is generally appropriate only where the petitioner shows either a material error or omission in the original order or raises additional facts not known or not existing until after the petitioner’s last opportunity to respond.”).

First, the DODC Order includes a presumption that link budgets are confidential if submitted by fixed wireless providers but *not* confidential if submitted by mobile wireless providers.⁸ CTIA has explained why link budgets are proprietary and competitively sensitive,⁹ and it urges the Commission to confirm that, like those of fixed wireless providers, mobile wireless providers' link budgets submitted to facilitate the Commission's verification of coverage maps will be presumed confidential with respect to access by third parties. The DODC Order recognizes that the commercial sensitivity and security concerns warrant "presumptively non-public" for fixed wireless providers, and the Commission should apply the same conclusion to the link budgets of mobile wireless providers.¹⁰ Any other outcome would conflict with both the Act and the Administrative Procedure Act ("APA").

The Act directs the Commission to "protect the security, privacy, and confidentiality of . . . non-public or competitively sensitive information."¹¹ Congress plainly intended for the Commission to ensure that providers' competitively sensitive information is protected. To comport fully with the Act, the Commission should at a minimum presume that all link budgets are confidential.

Moreover, the APA requires the Commission to "examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made."¹² By affording confidential treatment to the link budgets of fixed wireless

⁸ Compare DODC Order ¶ 31 with *id.* ¶ 49.

⁹ Letter from Matthew Gerst, Vice President, Regulatory Affairs, CTIA, to Marlene H. Dortch, Secretary, FCC, WC Docket Nos. 19-195, 11-10, at 5-6 (July 6, 2020).

¹⁰ DODC Order ¶ 31.

¹¹ 47 U.S.C. § 642(a)(1)(B)(ii).

¹² *Motor Vehicle Mfrs. Ass'n of the U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (internal quotation marks omitted); *EchoStar Satellite L.L.C. v. FCC*, 704 F.3d 992, 1001 (2013).

providers but not those of mobile wireless providers, the DODC Order does not comport with these standards. The DODC Order does not offer any explanation for this disparate treatment. And on the merits, there is no basis for treating link budgets differently depending on what type of provider submitted them. The same considerations that warrant confidential treatment of fixed wireless providers' link budgets warrant the same confidential treatment of mobile wireless providers' link budgets. Accordingly, CTIA respectfully requests that the Commission reconsider this aspect of the DODC Order to afford the same treatment of presumed confidentiality of link budgets to both fixed and mobile wireless providers.

Second, the DODC Order requires mobile wireless providers to submit maps for their 3G, 4G LTE, and 5G-NR services that predict outdoor coverage, including both stationary usage and “in-vehicle mobile usage.”¹³ CTIA respectfully requests that the Commission reconsider and eliminate the requirement to model in-vehicle mobile usage because there is no evidence that doubling the number of coverage maps is necessary, particularly considering the increased burden and confusion that will result from requiring wireless providers and challengers to submit multiple maps for each wireless technology.

As an initial matter, the Commission added the requirement that providers model in-vehicle mobile usage—which doubles the number of maps a provider must submit—without giving adequate notice in the Second FNPRM or explaining why it is necessary to require two sets of maps to model outdoor coverage. Notably, there was no record support for this requirement. While the DDOC Order points to the filings of Verizon to support its approach, Verizon only encouraged the Commission to “specify before the initial filing deadline the type of coverage that

¹³ DODC Order ¶ 48.

should be depicted by the propagation maps”¹⁴ Verizon did not call for two sets of maps to predict outdoor coverage, and the record does not support that approach. The DODC Order also lacks any cost-benefit analysis to determine whether requiring two maps per technology, for a total of over eight maps, is in the public interest, or if the benefits of this requirement outweigh its burdens. Under the DODC Order, there is no explanation regarding the need for both stationary and in-vehicle coverage. It also remains unclear how the Commission expects to use the additional information regarding in-vehicle usage coverage.

Furthermore, in-vehicle coverage maps may inordinately complicate the modeling and challenge process, which, as noted below, is also contrary to Congress’s intent. At a minimum, designing in-vehicle coverage maps would require providers to know the specific parameters on which to base the model, such as where a device should be positioned inside or outside the vehicle, the speed of the vehicle and in what condition (e.g., with windows up or down), and the in-vehicle penetration loss. Further, the Commission undermines the goals of a user-friendly challenge process by requiring in-vehicle usage modeling because a challenger would have to replicate those precise parameters in order for its challenge to be credible. If challengers are able to test while moving in-vehicle, it will also be difficult for providers to respond, and for the Commission to evaluate alleged discrepancies in coverage data. For example, in addition to matching the precise modeling parameters, providers and the Commission will also need to know the exact location where a challenge test was taken, what devices were used, the vehicle that was used, and what direction the vehicle was traveling, among other conditions of testing. Providers will not be able to respond adequately to challenges without this information, and once they do, recreating these in-vehicle test conditions would be difficult and unduly burdensome.

¹⁴ DODC Order ¶ 48 n.136.

A cost-benefit analysis would reveal that the burdens of this requirement plainly outweigh its benefits. Indeed, requiring just one 4G LTE coverage map fully complies with Congress's directives in the Act.¹⁵ Moreover, requiring multiple maps per technology will cause consumer confusion about which maps pertain to them and will unnecessarily complicate the mapping, verification and challenge processes. By contrast, requiring outdoor stationary maps only will establish clear guidelines and allow consumers to develop clear expectations regarding mobile broadband coverage in their areas. Given these added complexities, CTIA submits that predicting stationary coverage is an adequate model of a provider's outdoor coverage and that the Commission should not require in-vehicle coverage maps.

In short, reconsidering these two aspects of the DODC Order is consistent with the Act and will improve the efficiency of the mapping process without diminishing the quality of the coverage maps or the Commission's ability to verify coverage data.

III. THE DODC ORDER ACCOMPLISHES THE CORE OBJECTIVES OF THE BROADBAND DATA ACT.

In an effort to close the digital divide, Congress, in the Act, directed the Commission to completely overhaul its process for collecting and mapping both fixed and mobile broadband coverage data. What is more, Congress directed the Commission to adopt certain rules within 180 days regarding the collection of coverage data from providers, procedures for the verification of coverage data, and rules regarding the confidential treatment of non-public and competitively sensitive data.¹⁶ With the DODC Order, the Commission has already made significant progress toward satisfying these requirements. CTIA applauds the Commission's efforts, which will ensure

¹⁵ In fact, the Act requires only coverage maps of 4G LTE coverage that take into account clutter and reflect 5/1 Mbps with a cell edge probability of not less than 90 percent, and a cell loading factor of not less than 50 percent. *See* 47 U.S.C. § 642(b)(2)(B).

¹⁶ *See id.* § 642(a)(1).

the development of more granular and transparent coverage maps and ample procedures for the Commission to verify the data submitted by mobile wireless broadband providers.

Among other things, the Act requires the Commission to adopt uniform standards for broadband providers to map their coverage areas and report the quality of their services to the Commission, including complex standards for how fixed and mobile wireless providers should model their coverage areas in the submitted maps.¹⁷ The DODC Order accomplishes this by adopting new mobile wireless coverage maps as required by the Act.¹⁸ In fact, the DODC Order goes even further by requiring providers to submit separate maps for different broadband technologies, from 3G, to 4G LTE, to 5G-NR.¹⁹ This goes well beyond the 4G LTE coverage maps required by the Act.²⁰ The Commission also adopted rules to enhance transparency and required mobile wireless providers to submit link budgets and other parameters they use to model their coverage areas.²¹

The Act also requires the Commission to establish processes to verify the accuracy of coverage data reported by broadband providers, including by conducting regular audits and collecting and processing crowdsourced data on broadband coverage.²² The DODC Order accomplishes this by adopting a set of overlapping procedures for verifying the accuracy of the

¹⁷ *Id.* § 642(a)(1).

¹⁸ DODC Order ¶¶ 32-51.

¹⁹ *Id.* ¶ 33.

²⁰ 47 U.S.C. § 642(b)(2)(B).

²¹ DODC Order ¶¶ 48-49.

²² 47 U.S.C. §§ 642(a)(1)(B)(i), 644(a)-(b).

coverage data submitted by broadband providers.²³ The DODC Order also establishes how the Commission will collect and use crowdsourced data to verify the accuracy of coverage data.²⁴

In addition, the Act requires the Commission to establish a user-friendly process for various entities to challenge the accuracy of coverage data and procedures for the Commission to adjudicate those challenges.²⁵ The Commission is on the cusp of adopting rules for the challenge process,²⁶ and it will have ample opportunity to refine the challenge process over time. Moreover, challenges to coverage maps will not begin until after the new coverage data has been collected, processed, and published. As a result, the Commission has ample time to finalize the details of the challenge process.

With the core rules required by the Act in place, CTIA encourages the Commission to adopt the challenge process but otherwise not rush to adopt requirements beyond what Congress required. Doing so will allow the Commission to evaluate the maps and verification data before further revising its rules. This result is consistent with Congress’s intent “to ensure the accuracy of propagation models” and “improve the usefulness of the coverage maps.”²⁷

IV. THE COMMISSION SHOULD DEFER DECISION ON ISSUES THAT GO BEYOND THE REQUIREMENTS OF THE BROADBAND DATA ACT.

Given that the Commission has largely implemented the Act, it should focus on the key remaining issue—the challenge process. Other outstanding issues should be deferred until the Commission has time to evaluate the record and the coverage maps submitted in accordance with the DODC Order. This is precisely what Congress intended. The process of crafting improved

²³ See, e.g., DODC Order ¶ 56.

²⁴ See *id.* ¶¶ 66-67.

²⁵ 47 U.S.C. § 642(b)(5).

²⁶ DODC Order ¶¶ 126-166.

²⁷ 47 U.S.C. § 642(a)(3).

coverage maps was never meant to be a one-time event. Rather, Congress gave the Commission authority to revise its rules as necessary, recognizing that this process will necessarily be an iterative one.

The text and structure of the Act make clear that Congress did not mandate that the Commission finalize all of the rules governing the mapping and verification processes within 180 days. Section 642(a)(2) of the Act requires the Commission to “develop a process” for the collection of verified data from third parties and governmental entities.²⁸ But unlike the rules described in subsection (a)(1), Congress did not require that comprehensive rules under Section 642(a)(2) must be in place within 180 days.

The Commission already satisfied Section 642(a)(2) by adopting the requirement to collect verified data from governmental entities and third parties and “direct[ed] the Bureaus and Offices to implement the details of the process.”²⁹ Likewise, the Commission will fully satisfy the requirement of Section 642(b)(5) by adopting rules establishing the core structure of the challenge process and ensuring that a challenge process is in place in time for the first collection of deployment data under the DODC. The Commission does not need to take the further step of adopting a comprehensive set of rules governing every aspect of these challenge processes by the 180-day deadline.

In particular, Section 642(a)(1) of the Act directs the Commission “not later than 180 days after the date of enactment” of the Act to adopt final rules governing the collection of coverage data from providers, processes to verify the accuracy of this data, and the confidential treatment of certain non-public data.³⁰ But Congress did not include the phrase “[n]ot later than 180 days

²⁸ *Id.* § 642(a)(2).

²⁹ DODC Order ¶ 82.

³⁰ 47 U.S.C. § 642(a)(1).

after the date of enactment” in Section 642(a)(2). Nor did Congress specifically direct the Commission to adopt “final rules” governing these processes. Rather, Congress directed the Commission to develop these processes in concert with the rules it adopts governing the collection and verification of coverage data. The Commission has already cleared that bar. These textual differences indicate that, although Congress expects the Commission to adopt final rules regarding verified data and challenges, it did not expect the Commission to decide all of the multi-faceted issues related to these processes by September of this year.

As further evidence of this intent, Congress recognized that the rules for these processes would continue to evolve as Section 642(a)(3) directs the Commission to revise its rules as necessary to ensure the accuracy of propagation models and the usefulness of the coverage maps.³¹ By mandating revisions going forward, Congress clearly did not expect the Commission to resolve all of the issues raised in the DODC FNPRM once and for all within 180 days.

The legislative history confirms this reading of the Act. The Senate Report explained that the rules the Commission must adopt under Section 642(a)(1) (which includes rules regarding the collection of coverage data, verification of coverage data, and the protection of non-public and competitively sensitive information) must be finalized no later than 180 days.³² But the Senate Report said nothing of the kind with respect to the processes the Commission is required to develop pursuant to Section 642(a)(2) (the collection of verified third-party and government data).³³

³¹ *Id.* § 642(a)(3).

³² S. Rep. No. 116-174, at 10 (2019) (“Subsection (a)(1) of this section would require that, not later than 180 days after the date of enactment of this Act, the FCC issue final rules for the collection of accurate and granular data on the availability of terrestrial fixed, fixed wireless, satellite, and mobile broadband internet access service from providers on at least a biannual basis.”).

³³ *See id.* at 10, 13-14.

Because the submission of new coverage maps will not occur until 2021, the Commission has ample time to give full consideration to the various issues raised in the DODC FNPRM concerning these processes. Furthermore, comprehensive rules governing the collection and use of verified data and challenges need not be in place for mobile providers to submit their initial round of coverage data in 2021. Accordingly, taking additional time to consider all of the relevant issues at stake will not disrupt the development of new coverage maps on the timetable Congress envisioned.

V. GIVEN THE SIGNIFICANT REFORMS TO THE COLLECTION OF COVERAGE MAPS AND THE VARIETY OF VERIFICATION TOOLS NOW AVAILABLE, COLLECTION OF INFRASTRUCTURE INFORMATION AND ON-THE-GROUND TESTING FOR VERIFICATION IS UNNECESSARY AND COST-PROHIBITIVE.

In the DODC Order, the Commission required mobile wireless providers to submit substantial disclosures about propagation models, including link budgets, and adopted measures for verifying coverage data submitted by mobile providers, including audits and the collection of crowdsourced data.³⁴ In particular, mobile wireless providers must submit copious information about their confidential link budgets and provide parameters used in those link budgets.³⁵ This information will give the Commission further insight into how providers' coverage maps are formulated and allow the Commission to identify potential sources of inaccuracies. And as required by the Act, the Commission is now developing processes for collecting verified data and adjudicating challenges.

In the DODC FNPRM, the Commission also seeks comment on the collection of infrastructure information, which it states could “help Commission staff independently verify the

³⁴ See DODC Order ¶ 49.

³⁵ *Id.*

accuracy of provider coverage propagation models and maps submitted by mobile wireless service providers.”³⁶ Collecting infrastructure information on a regular basis is unnecessary and unduly burdensome. The information is also highly confidential, and its disclosure could lead to significant competitive harms to providers and could compromise the security of providers’ cell sites.³⁷ If the other verification processes identify a specific issue regarding a provider’s coverage data, the Commission could request targeted cell site location information from a provider specific to the service area in question in order to facilitate verification or resolution of the challenge process. Even in that scenario, the Commission should ensure that any submission of infrastructure information is treated confidentially, as Congress intended under the Act.³⁸

Although Congress did not deem on-the-ground testing as a necessary means of verifying coverage in the Act, the Commission seeks comment on requiring mobile wireless providers to submit a statistically significant sample of on-the-ground test data on a regular basis.³⁹ There is no need for mandatory on-the-ground testing to verify providers’ coverage maps because it is both unnecessary and extremely burdensome.⁴⁰ CTIA’s member companies would have to commit a tremendous amount of resources each year to conduct this testing, over tens of millions of dollars annually, even for a statistically significant sample of their networks, as discussed below. CTIA therefore encourages the Commission to utilize the array of other verification measures required by Congress before adopting more burdensome requirements like on-the-ground testing. These

³⁶ DODC FNPRM ¶ 101.

³⁷ *See id.* ¶ 101; Letter from Matthew Gerst, Vice President, Regulatory Affairs, CTIA, to Marlene H. Dortch, Secretary, FCC, WC Docket Nos. 19-195, 11-10 at 5 (July 6, 2020).

³⁸ *See* 47 U.S.C. § 642(a)(1)(B)(ii).

³⁹ DODC FNPRM ¶¶ 107-108.

⁴⁰ Comments of CTIA at 12, WC Docket Nos. 19-195, 11-10 (Sept. 23, 2019).

measures are more appropriate to quickly identify any material inaccuracies of submitted coverage maps

As Verizon has previously pointed out, it is prohibitively expensive to conduct these tests at the scale needed to provide a relevant sample on a regular basis.⁴¹ AT&T has recently estimated that testing just 25 percent of its nationwide 4G LTE network would cost \$45 million each year and that testing even 10 percent of its network would cost up to \$18 million each year.⁴² Unfortunately, sampling is not a realistic solution for mitigating these costs. As the Commission acknowledges, a statistically significant sample of a nationwide network would still require a very large number of measurements under controlled conditions.⁴³ Indeed, U.S. Cellular previously testified before Congress that it spent \$2 million to perform drive testing as part of the Mobility Fund Phase II challenge process.⁴⁴ Such costs divert resources from deploying and maintaining broadband services and are an unnecessary expense not contemplated by Congress.

⁴¹ See Verizon Comments at 11, WC Docket Nos. 19-195, 11-10 (Sept. 23, 2019).

⁴² Letter from Brendan F. Haggerty, AT&T, to Marlene H. Dortch, Secretary, FCC, WC Docket Nos. 19-195, 11-10, at 2 (Aug. 18, 2020) (“AT&T August 18 Ex Parte”); see also Letter from Steve B. Sharkey, Vice President, Government Affairs, Engineering and Technology Policy, T-Mobile USA, Inc., to Marlene H. Dortch, Secretary, FCC, WC Docket Nos. 19-195, 11-10, at 3 (Aug. 17, 2020) (stating that on-the-ground testing is “extremely expensive and burdensome” and would cost “millions of dollars each year”) (“T-Mobile August 17 Ex Parte”).

⁴³ DODC FNPRM ¶ 106 n.309.

⁴⁴ *Legislating to Connect America: Improving the Nation’s Broadband Maps: Hearing Before the H. Comm. on Energy and Commerce Subcomm. On Communications and Technology*, at 4 (Sept. 11, 2019) (statement of Grant B. Spellmeyer, Vice President – Federal Affairs and Public Policy, United States Cellular Corporation), available at https://energycommerce.house.gov/sites/democrats.energycommerce.house.gov/files/documents/Spellmeyer_Testimony.pdf. In 2018, Panhandle Telecommunications Systems, Inc. reported to the Commission that it had conducted comprehensive testing of Verizon’s 4G LTE coverage in the panhandle of Oklahoma as part of the MF-II challenge process. This area comprised approximately 14,877.47 square kilometers and constitutes only a small sliver of Verizon’s nationwide network. Letter from Erin P. Fitzgerald, Counsel to Panhandle Telecommunications Systems, Inc., to Marlene H. Dortch, Secretary, FCC, WT Docket No. 10-208, WC Docket No. 10-90, at 1 (Dec. 6, 2018). Panhandle reported that it drove 124,241 miles—equivalent to nearly 5 trips around the world—and spent 6,720 employee hours to test this area. *Id.* at 2-3. All told, Panhandle estimated that it would incur approximately \$1 million in expenses to complete these tests. *Id.* at 4. Panhandle’s experience demonstrates how time-consuming and expensive drive testing will be. Given the Commission’s goals of encouraging broadband deployment and closing the digital divide, such resources would be better

Moreover, a cost-benefit analysis does not support on-the-ground testing for verification purposes. The Commission will have ample measures to verify the accuracy of coverage data, including (1) collection of crowdsourced data; (2) collection of verified data from various third-party entities; (3) a challenge process; and (4) regular audits by the Commission, which could include targeted testing in identified areas. Given all of the other verification measures the Commission has in place, it is unlikely that regular on-the-ground testing will reveal a substantial number of inaccuracies that other measures will miss. The utility of blanket on-the-ground testing is also very limited as a way of measuring coverage. Drive tests are, by necessity, a snapshot in time. But mobile networks continue to evolve over time, and drive-testing conducted at a particular time will not necessarily show where coverage is available and the qualities of that coverage at the time of the challenge. For all of these reasons, the benefits of regular on-the-ground testing in order to verify the submitted coverage maps do not justify the substantial burdens this requirement would impose on providers.

If the Commission finds that myriad other ways of verification of coverage data are not adequate, the Commission can always revisit the need for more extensive verification measures in the future. Indeed, the Act directs the Commission to revise its rules as necessary “to ensure the accuracy of propagation models” and “improve the usefulness of the coverage maps.”⁴⁵

dedicated to mobile broadband deployment and 5G, particularly given the availability of alternative verification tools.

⁴⁵ 47 U.S.C. § 642(a)(3).

VI. A MINIMUM VALUE FOR SIGNAL STRENGTH IS NOT REQUIRED BY THE BROADBAND DATA ACT AND WOULD NOT IMPROVE THE ACCURACY OF COVERAGE MAPS.

The Commission seeks comment on whether to prescribe minimum values for signal strength (such as Reference Signal Received Power (“RSRP”) or Received Signal Strength Indicator (“RSSI”)) as additional propagation modeling standards.⁴⁶ CTIA urges the Commission not to adopt signal strength as an additional modeling standard, as this will increase the complexity of the mapping process without improving the accuracy of coverage maps.

Signal strength is not a required parameter under the Act—and for good reason. As CTIA has previously explained, modeling mobile wireless coverage is a highly complex process that must be tailored to the unique features of each mobile network and geographies and morphologies being served.⁴⁷ Because no two mobile networks are the same—and because modeling mobile wireless coverage is probabilistic and multi-factored by necessity⁴⁸—the Commission should proceed with caution before setting additional standardized parameters for propagation modeling.

That is especially true for a minimum signal strength. Signal strength is not a reliable proxy for throughput because, as the Commission acknowledges, “RSRP and RSSI values may vary based on factors such as spectrum band, network design, or device operating capabilities.”⁴⁹ Because signal strength often fails to track actual speeds available in a given geographic area, and because signal strength varies depending on factors that are not indicative of service quality, CTIA

⁴⁶ DODC FNPRM ¶ 97.

⁴⁷ See Reply Comments of CTIA at 1-2, WC Docket Nos. 19-195, 11-10 (Oct. 7, 2019).

⁴⁸ *In re Establishing the Digital Opportunity Data Collection*, Report and Order and Second Further Notice of Proposed Rulemaking, 34 FCC Rcd 7505, 7549, 7553-54 ¶¶ 112, 123 (2019).

⁴⁹ DODC FNPRM ¶ 97.

recommends that the Commission decline to adopt a minimum value for signal strength.⁵⁰ The Commission will still have ample insight into providers' network speeds without adding this metric or the many complications and downsides that would come with adding signal strength to the propagation modeling process.

VII. THE CHALLENGE PROCESS SHOULD ENSURE THAT CHALLENGES ARE WELL FOUNDED AND GIVE PROVIDERS FLEXIBILITY TO RESPOND.

CTIA supports the Commission's efforts to design a challenge process that is efficient and user-friendly for state and local governments, third parties, and consumers, while also ensuring that only challenges demonstrating a material discrepancy in submitted coverage data warrant a provider response and Commission consideration. To do so, the Commission should require challenges to be based on data that is consonant with a provider's coverage maps, include sufficient information to enable the provider to assess the challenges, and include a material number of outdoor stationary tests that demonstrate consistent and repeatable failures based on a sufficiently robust set of data. And because the process of improving coverage data is an iterative and continuing process, the Commission should give providers flexibility in deciding how to respond and sufficient time to revise maps in response to meritorious challenges.

After establishing the structure of the challenge process as recommended below, the Commission can and should refine the process over time.⁵¹ This is in keeping with the Commission's approach to implementing the Act's requirement to collect and use verified third-party data,⁵² and it would give the Commission a chance to develop the record further and consider competing proposals more thoroughly while complying with the Act. Moreover, because

⁵⁰ See, e.g., T-Mobile August 17 Ex Parte at 2; AT&T August 18 Ex Parte at 1; Reply Comments of Verizon at 5, WC Docket Nos. 19-195, 11-10 (Oct. 7, 2019) ("Verizon Reply Comments").

⁵¹ See 47 U.S.C. § 642(a)(3).

⁵² See DODC Order ¶ 82.

the challenge process will not commence until after the new coverage data is first collected, processed, and published, the Commission has ample time to finalize the details of the process. For these reasons, CTIA encourages the Commission to focus on implementing the core structure of the challenge process and to defer decision on precisely how the challenge process will operate. To help assess the process over time, the Commission can also direct staff to prepare a report on the status of implementation of the challenge process to satisfy the Commission's obligation under the Act to submit a report to Congress within 18 months of the adoption of the challenge process rules.⁵³

For all challenges, the Commission should require challengers to base their tests on outdoor, stationary coverage, to disclose certain information about how their testing was conducted, and to meet a materiality threshold to be considered valid for a provider response.

1. *Outdoor Stationary Testing.* To the extent applicable, challenges should use the same parameters as the coverage maps they are challenging. Otherwise, a challenge should not be considered valid because it is testing a different coverage map than what the provider submitted. The Commission should also require that all tests be conducted outdoors from a stationary position—even if the Commission does not grant CTIA's petition for reconsideration. This will allow for reliable testing of coverage without introducing the many complications that would arise from providers trying to recreate the conditions of in-vehicle coverage tests. As noted above, excluding in-vehicle tests from the challenge process will obviate the need for providers to determine (among other things) when exactly a test was taken, exactly what stretch of road was used, what direction the vehicle was traveling in, the speed of the vehicle, the in-vehicle penetration loss, and whether the vehicle's windows were down. Further, excluding in-vehicle

⁵³ 47 U.S.C. § 642(b)(5)(D).

tests from the challenge process will ease the burden on challengers by avoiding parameters that are resource intensive and difficult to replicate (e.g., speed, vehicle make and condition (windows up/down), and device placement).

2. *Minimum Information.* To be considered a “verified” challenge calling for a response from providers, the Commission should require all challengers to complete certain information fields as part of the challenge in-take process, including: latitude and longitude, time of test, download and upload speeds, latency, provider, device used, device ID, measurement method, the name of the measurement application used, and the measurement server location. This will give providers the information they need to respond adequately to challenges and the information the Commission needs to determine whether a given challenge is based on faulty test data. For example, requiring challengers to disclose information about the devices they used to test coverage will identify situations where the challenger has mistakenly used a device that is incompatible with the technology being tested (e.g., using a 4G device to test 5G coverage). CTIA also encourages the Commission to release a list of approved speed-test applications for use in the challenge process, which will ensure that challengers are using reliable methodologies to test coverage.

3. *Materiality Threshold.* The Commission should require that all challenges are based on an adequate sample of test data for the relevant coverage data, as well as data from testing at different times of the day. These tests should be conducted between 6:00 AM and 12:00 AM to ensure realistic testing results. The Commission should also require that challenges meet a minimum materiality threshold that identifies consistent and repeatable failures, rather than anomalies. For example, a single failed test should not be considered a valid challenge. Rather, challengers should be required to demonstrate a consistent and repeatable lack of coverage. This

will ensure that the challenge process is not invoked based on an unreasonably small number of—and potentially anomalous—speed tests. Challengers must also be required to report the results of all of their tests, not just the failed tests that support their challenges.

These requirements should also apply to all challenges, including consumer challenges. Congress intended the consumer challenge to be different than crowdsourced data. As a result, it should not be enough for a consumer challenger to run a single speed test on their device and submit the results to the Commission. Otherwise, the consumer challenge process will be duplicative of the Commission’s process for collecting crowd-sourced speed tests and similar data.

With respect to third-party and government challenges, challengers should be required to have a qualified engineer certify the results of the data offered in support of the challenge and certify to the methods used to collect this data. The Commission should also ensure that these challengers deploy reliable procedures for testing coverage.

Challenges that fail to meet all of these requirements, to the extent applicable, should not be eligible for submission through the Commission’s online portal.

4. *Flexibility for Providers Responding to Challenges.* Finally, the Commission’s rules should give providers flexibility to decide how best to respond to a valid challenge. In some situations, a drive test or similar measures may be warranted to respond to a challenge. But in other situations, and perhaps most commonly, a provider may be able to respond adequately through less cumbersome means like transmitter monitoring software capable of recording the latitude and longitude of actual device use.⁵⁴ The most appropriate response to a given challenge will depend on the nature of the scope and rigor of the challenge at issue. For that reason, the

⁵⁴ Comments and Petition for Reconsideration of CTIA at 18, 21, WC Docket Nos. 10-90, 10-208 (April 26, 2017).

Commission’s rules should not mandate that providers respond in a particular way to all challenges.⁵⁵

In responding to challenges, CTIA agrees with USTelecom and NTCA that 30 days, as proposed in the DODC FNPRM, is not enough time to respond to consumer challenges.⁵⁶ Instead, providers should have at least 60 days to respond to these challenges.⁵⁷ Otherwise, providers could easily become inundated with challenges, which will both make the challenge process unworkable and undermine the Commission’s goals of designing an effective mechanism for correcting coverage maps.

And if the challenge process reveals a material discrepancy that requires a revision of the coverage maps, the provider should also be allowed to update its coverage map as part of its next DODC filing, provided that the filing is no more than three months away from the resolution of the challenge. This will allow for an orderly process for revising the coverage maps, and it is consistent with the Commission’s rules requiring coverage maps as of June 30 and December 31 to be filed in September and March, respectively.⁵⁸

Implementing these measures now will establish a solid foundation for the challenge process by making clear when a challenge is sufficiently well supported to warrant a response from a provider, how providers can respond if and when they choose to dispute a given challenge, and

⁵⁵ The Commission adopted this flexibility for MF-II although the challenge process never got to the point of allowing providers to respond. *MF-II Order on Reconsideration*, 32 FCC Rcd at 6312 ¶ 60.

⁵⁶ Letter from B. Lynn Follansbee, Vice President – Policy & Advocacy, USTelecom, to Marlene H. Dortch, Secretary, FCC, WC Docket Nos. 19-195, 11-10 at 3 (Aug. 14, 2020) (“USTelecom August 14 Letter”); Reply Comments of NTCA–The Rural Broadband Association at 5 n.12, WC Docket Nos. 19-195, 11-10 (Oct. 7, 2019).

⁵⁷ USTelecom August 14 Letter at 3 (“USTelecom also indicated its support for NTCA’s request for sixty days to respond to a consumer challenge because, particularly in the initial stages of the implementation of this process, there will likely be a lot of data to analyze.”).

⁵⁸ DODC Order ¶ 55.

when a provider must revise its coverage maps in response to a meritorious challenge. The Commission can continue to build on this foundation in the coming months before the challenge process begins, and CTIA fully encourages the Commission to do so.

VIII. CONCLUSION.

CTIA supports the Commission's efforts to develop new maps of mobile broadband coverage, consistent with Congress' intent. CTIA looks forward to working with the Commission in the future on refining the collection and verification processes and supporting the Commission's goals of bridging the digital divide and expanding access to broadband across the country.

Respectfully Submitted,

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September 8, 2020