

**STATEMENT OF
COMMISSIONER GEOFFREY STARKS,
DISSENTING**

Re: *Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, GN Docket No. 18-238, 2019
Broadband Deployment Report.

The 2019 Broadband Deployment Report reaches the wrong conclusion. According to the report, the digital divide has narrowed substantially over the past two years and broadband is being deployed on a reasonable and timely basis. The rosy picture the report paints about the status of broadband deployment is fundamentally at odds with reality. While I would like to be able to celebrate along with the FCC's majority, our broadband deployment mission is not yet accomplished. If you are 10 steps away from your goal and you move a step-and-a-half forward, you don't have a victory party when your work isn't done. You give yourself a pat on the back and put your head down to achieve the remaining eight-and-a-half steps. And that's where we are – with over 21 million Americans without access to quality, affordable broadband, we are about eight-and-a-half steps behind and we must get back to work. The report masks the urgent need for continued and renewed action to address inequities in internet access in rural, tribal, and urban areas of the country.

The fundamental disconnect between the report and reality is reason enough for my dissent. But I am also compelled to speak out about the process that led to this report, which, when initially circulated, was based on massive, erroneous overstatements of high-speed internet deployment in the underlying data. The errors in the circulated report involved a broadband provider called Barrier Free that, in its first broadband service report to the FCC, reported that as of December 2017 it provided high-speed broadband service in an area where 62 million people live. If Barrier Free's reporting was correct (it was not – Barrier Free acknowledged the errors in its revised filing in March 2019) it would have gone from providing no service as of March 2017 to being the 4th largest ISP in the country as of December 2017. The fact that such a huge error was not flagged but instead was baked into the FCC's data underlying this report – the same data underlying much of the FCC's frequently criticized broadband mapping efforts – demonstrates the fundamental problems with the FCC's data analysis capabilities.

Let's briefly focus on the timeline at issue. Barrier Free's filing (which the Commission now admits contained erroneous data) was included in data due at the end of March 2018. In February 2019, the Chairman circulated a non-public draft broadband deployment report to the other Commissioners for their consideration. On the same day, the FCC issued a press release describing the draft report and stating that "the number of Americans lacking access to a fixed broadband connection meeting the FCC's benchmark speed of 25 Mbps / 3Mbps has dropped over 25%, from 26.1 million Americans at the end of 2016 to 19.4 million at the end of 2017."¹ At this point in time, the FCC had been in possession of Barrier Free's erroneous data for nearly eleven months! On March 5, 2019, Free Press, a non-profit public interest entity, filed a letter with the Commission identifying Barrier Free's erroneous reporting and detailing how it impacted the broadband deployment claims made in the FCC's February Press Release.²

¹ See Report: *America's Digital Divide Narrows Substantially*, FCC News Release, February 19, 2019, <https://docs.fcc.gov/public/attachments/DOC-356271A1.pdf>.

² Letter from Derek Turner, Research Director, Free Press, to Marlene H. Dortch, Secretary, Federal Communications Commission, March 5, 2019. GN Docket 18,-238, https://www.freepress.net/sites/default/files/2019-03/free_press_706_report_form_477_erroneous_data_ex_parte.pdf ("Free Press Letter"). The Free Press letter points out that Barrier Free submitted, as its coverage area for 940 Mbps download / 880 Mbps upload service, a list of "every single census block in each of the eight states where it claimed service: CT, DC, MD, NJ, NY, PA, RI, and VA", an area containing nearly 62 million people. That claim, if true, would make Barrier Free the 4th largest

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The FCC did not issue another press release acknowledging the errors Free Press found and correcting statements about declines in the digital divide from its February press release. And, even after Barrier Free admitted that the data it reported to the FCC was wrong, the FCC neither removed the draft Broadband Deployment Report from circulation nor committed to revising it. Instead, nearly two months passed before the Chairman circulated a corrected version of the report. Surprisingly, the conclusion in the report didn't change. In fact, very little in the report changed. It's incredible to me that an error this large – approximately 62 million in overstated broadband connections – didn't materially change the report.

The fact that a 2019 Broadband Deployment Report with an error of over 62 million connections was circulated to the full Commission raises serious questions. Was the Chairman's office aware of the errors when it circulated the draft report? If not, why didn't an "outlier" detection function raise alarms with regard to Barrier Free? Also, once the report was corrected, the fact that such a large number of connections came out of the report's underlying data without changing the report's conclusion, and without resulting in a substantial change to the report, calls into question the extent to which the report and its conclusions depend on and flow from data. These issues go to the core nature of the Deployment Report, and more broadly, our FCC mission – to determine where broadband service is and is not deployed, and to be grounded in and led by the actual facts and data.

The Commission's Data Processing

The facts surrounding Barrier Free's erroneous filing and the 2019 Broadband Deployment Report raise serious questions about the way the FCC evaluates data. Here's why the inability to spot this mistake is particularly troubling: the errors in the Barrier Free data are anomalous on multiple fronts. First, Barrier Free's growth rate, growing from no service to service in areas where 62 million people live is implausible. That anomaly alone should have resulted in Barrier Free's report being flagged for review. Second, Barrier Free claimed that it served 100% of the census blocks in every state in which it operated. Claims of 100% of nearly anything should flag a filing as an outlier. Third, the speeds Barrier Free reported providing, 940 Mbps upstream/880 Mbps downstream, don't track with the wireless technology reportedly used by the company. This mismatch should have further identified the company's data as an outlier requiring further review. And fourth, the combination of coverage and speeds claimed by Barrier Free – for example, covering the entire state of New York with fiber-to-the-home service – should have stuck out as an outlier on a "gut-check" level. Nobody familiar with broadband deployment in the U.S. would believe that the entire state of New York suddenly has fiber-to-the-home speed service available.

In the future, Commission staff must conduct data checks that would flag each of the issues listed above, ideally at the filing stage so that FCC analysts would never have had to grapple with Barrier Free's erroneous filing. And the FCC shouldn't stop at building in or perfecting checks. It should consider deploying machine learning models that can identify outliers and other patterns within the data that are likely to be anomalous. Such models could significantly reduce the manual data cleansing efforts currently built into the FCC's work with each data filing.

Issues With Data the Commission Collects to Inform Its Broadband Policy Decision-Making

Unfortunately, the Commission's problems with data simply don't end with the Barrier Free incident. One thing that members of Congress and nearly every industry stakeholder agree on is that the

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internet service provider in the U.S. The letter notes that this speed combination is unique to Verizon's Fiber-to-the-Home service, that Verizon is the only other filer to claim offering service at that speed, and that Barrier Free, according to its Website, does not market Fiber-to-the-Home at any speed. The Free Press letter then describes the role Barrier Free's over reporting played in the claims the FCC made in its press release announcing the 2019 Broadband Progress Report. Most notably, the Barrier Free over reporting accounted for 2 million of the approximately 6.4 million new homes served by fixed 25/3 broadband during 2017.

FCC's broadband mapping, and the data behind it, including the data used by the Commission to create its annual broadband deployment report, has serious flaws.³ We hear about these flaws frequently at a high level – but they are worth exploring in more detail. Three of the most frequently identified flaws are rooted in FCC interpretations of how to gather and use data. They are within our power to fix, and we must do so.

First, critics frequently attack the FCC's mapping for treating an entire census block as served if a service provider reports providing service at any location within the block. This methodology produces maps that overstate service deployment because it lumps together served and unserved locations in each census block. In fact, the FCC doesn't even provide a way for providers of fixed broadband service to report their service locations on a more granular basis. Here is what the instructions for the FCC's Form 477 direct fixed broadband service providers to report:

Report a list ... of all census blocks in which the filer (including affiliates) makes broadband connections available to end-user premises, along with the associated information on technology of transmission ..., [and] maximum upload and download speeds ...⁴

This direction does not require service providers to identify addresses within a census block where they provide service. Instead, providers must list census blocks where they make broadband connections available. To complicate matters, census blocks used in the 2010 census varied greatly in size. Generally, census blocks are small in area, for example, a city block bounded on all sides by streets. But census blocks in suburban and rural areas may be large and in remote areas may encompass hundreds of square miles.⁵ Large census blocks, combined with the FCC practice of considering an entire census block served if any single location within it is served, are the primary reasons why the FCC's maps based on its 477 data overstate the availability of broadband.

Another problem with the FCC's Form 477 data collection is that fixed broadband service providers may report areas as served if they "could" serve them, even if they do not actually provide service. Specifically, the Form 477 instruction for fixed broadband providers requires them to report, by census block, areas where they make service "available." The form defines "available" as follows:

For purposes of this form, fixed broadband connections are available in a census block if the provider does, or could, within a service interval that is typical for that type of connection—that is, without an extraordinary commitment of resources—provision two-way data transmission to and from the Internet with advertised speeds exceeding 200 kbps in at least one direction to end-user premises in the census block.⁶

This instruction allows service providers to report, as served, census blocks that they could deploy service to, resulting in data that contains an indistinguishable jumble of census blocks where service is actually and hypothetically available. Obviously, this mixture directly impacts the reliability of any map purporting to show where broadband service is actually available.

³ See Eggerton, J, (2018, August 16). Sen. Tester: FCC's Broadband Maps 'Stink', <https://www.multichannel.com/news/sen-tester-fccs-broadband-maps-stink>; Implementing the Agriculture Improvement Act of 2018: Hearing Before the S. Committee on Agriculture, Nutrition, and Forestry, 116th Cong. At 1:24:25 (statement of Sonny Perdue, Secretary, United States Department of Agriculture), <https://www.agriculture.senate.gov/hearings/implementing-the-agriculture-improvement-act-of-2018>.

⁴ See FCC, FCC Form 477 Local Telephone Competition and Broadband Reporting Instructions, Section 5.3, "Fixed Broadband Deployment" at 17 (Dec. 5, 2016), <https://transition.fcc.gov/form477/477inst.pdf> (*Form 477 Instructions*).

⁵ See <https://www.census.gov/prod/cen2010/doc/sf1.pdf> at A-10.

⁶ See *Form 477 Instructions* at 17, Section 5.3, "Fixed Broadband Deployment" (emphasis added).

A third problem with the FCC's Form 477 data—and with the maps based upon it—is rooted in mobile broadband service reporting. Service providers aren't required to report the speeds they are actually providing. Instead, they report “minimum advertised upload and download data speeds.” Here are the Form 477 instructions that tell mobile broadband service providers what they must report:

[P]roviders shall submit polygons in a shapefile format representing geographic coverage nationwide ... for each mobile broadband transmission technology ... deployed in each frequency band ... The data associated with each polygon should indicate the minimum advertised upload and download data speeds associated with that network technology in that frequency band ..., and the coverage area polygon should depict the boundaries where, according to providers, users should expect to receive those advertised speeds.⁷

Requiring service providers to report minimum advertised speeds results in data and maps that may not show actual speeds customers are likely to experience. This information falls short of what the FCC needs to guide our policy efforts to close the digital divide.

These problems are all symptomatic of a much larger issue with the FCC's data collection: the FCC's Form 477 does not collect the right data. Take for example one of the primary uses of the Form 477 data collection – measuring the effectiveness of the FCC's Universal Service programs in closing the digital divide. The right data would allow the FCC to measure the progress of the Universal Service program, to evaluate the effectiveness of programs and related strategies, to identify barriers to progress in the program, and to understand where it should target resources. But that's not what the data the FCC collects does. Because the data reports entire census blocks as served if just one location is served, the FCC cannot answer relevant program evaluation questions like how many Americans have broadband in their homes, businesses, and community anchor institutions. Similarly, it does not give the FCC tools needed to measure progress in closing the digital divide. And, it does not identify with sufficient granularity areas where the FCC should direct its Universal Service Fund resources. Luckily, the FCC doesn't need additional authority to fix these problems – it can do so within its rulemaking authority.

The FCC should change its data collection policies, so service provider reporting is granular and accurate. The FCC should also ensure that its Form 477 data set complies with the Open Government Data Act which requires it to publish much of its non-confidential data in machine-readable format. The FCC should lead the way in making data open. Doing so will encourage academics, researchers, and other stakeholders to use this data in innovative ways.

Industry has advanced numerous proposals to improve the FCC's data collections and mapping and the FCC has an open rulemaking proceeding to consider changes to how it collects data. I'll consider the work produced within the rulemaking when it comes to me and to my colleagues. I'm hopeful that this work will enable to Commission to map, at an address level, where broadband is available in the U.S. That's the level of granularity we need in order to understand where broadband is and is not available.

That brings me back to the purpose of my dissenting vote: to strongly voice my position that the FCC's 2019 Broadband Data Report reached the wrong conclusion. As of now, I don't believe that we know what the state of broadband deployment is in the U.S. with sufficient accuracy. I'm aware that last year's Broadband Progress Report engaged in legal gymnastics to change the standard the Commission uses to comply with its annual obligation to report to Congress on the state of broadband deployment in the U.S. I disagree with the majority's position that the statute requires the Commission to report on year-over-year provider deployment comparisons. Reading the test in this manner guarantees that the standard will be met if carriers report progress in meeting their deployment plans. More importantly, the test focuses on provider plans and how providers are meeting them, rather than whether any progress has been made bringing broadband to people who don't have it and who live outside of areas where service providers have, on their own, decided to deploy broadband. By reframing the test in this manner, the

⁷ See *Form 477 Instructions* at 24, Section 5.8 “Mobile Broadband Deployment” (emphasis added).

majority avoids the hardest question present in this debate — how to get broadband deployed to expensive and difficult to serve areas.

Regardless of the reporting standard here, the Commission’s mission is to close the digital divide. And we must have accurate data about the problem we are trying to solve and the progress we are making toward solving it in order to make effective, data-driven decisions.

For all of these reasons I dissent.

Notwithstanding my dissent, I recognize the work of the staff of OEA, WCB, and WTB that went into creating this report and I appreciate their efforts.