

FCC tries to bury finding that Verizon and T-Mobile exaggerated 4G coverage

Enlarge / Ajit Pai, chairman of the Federal Communications Commission, during an interview in New York, on Tuesday, Nov. 5, 2019.

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Verizon, T-Mobile, and US Cellular exaggerated their 4G coverage in official filings to the Federal Communications Commission, an FCC investigation found. But FCC officials confirmed that Chairman Ajit Pai does not plan to punish the three carriers in any way. Instead, the FCC intends to issue an enforcement advisory to the broader industry, reminding carriers “of the penalties associated with filings that violate federal law.”

“Overstating mobile broadband coverage misleads the public and can misallocate our limited universal service funds, and thus it must be met with meaningful consequences,” FCC staff said in an investigative report released today.

But there won’t be any meaningful consequences for Verizon, T-Mobile, and US Cellular. “Based upon the totality of the circumstances, the investigation did not find a sufficiently clear violation of the MF-II [Mobility Fund Phase II] data collection requirements that warranted enforcement action,” an FCC spokesperson told Ars via email.

In a call with reporters, a senior FCC official said that commission staff was unable to determine whether the carriers' exaggerations were deliberate. The official said that the investigation did not establish a clear violation of a specific rule. The FCC official said that maps submitted by carriers were based on industry-standard propagation models and that the FCC's own tests made it clear that those industry models do not reflect on-the-ground experience.

FCC officials conducted drive tests to determine whether the providers' reported coverage matched reality. The FCC staff report said:

Only 62.3 percent of staff drive tests achieved at least the minimum download speed predicted by the coverage maps—with US Cellular achieving that speed in only 45.0 percent of such tests, T-Mobile in 63.2 percent of tests, and Verizon in 64.3 percent of tests. Similarly, staff stationary tests showed that each provider achieved sufficient download speeds meeting the minimum cell edge probability in fewer than half of all test locations (20 of 42 locations). In addition, staff was unable to obtain any 4G LTE signal for 38 percent of drive tests on US Cellular's network, 21.3 percent of drive tests on T-Mobile's network, and 16.2 percent of drive tests on Verizon's network, despite each provider reporting coverage in the relevant area.

FCC buries news

The FCC in 2017 required carriers to file maps and data indicating their 4G LTE coverage in order to help the commission determine which rural areas should get \$4.5 billion in Mobility Fund money over 10 years. But small, rural carriers pointed out that big carriers exaggerated their coverage, potentially preventing those small carriers from getting funding to improve connectivity in areas that lack good service. The small carriers' complaints triggered an FCC

investigation in December 2018.

The FCC's announcement of that investigation's findings today came in an odd manner that seemed designed to minimize the amount of attention it gets. A finding that some of the biggest wireless carriers in the US exaggerated mobile broadband coverage is certainly important enough to be mentioned in the headline of an FCC announcement.

Instead, Pai's office announced the issuance of the investigative report in the third paragraph of a press release titled, "Chairman Pai announces plan to launch \$9 billion 5G fund for rural America." Pai's press release referred generally to carriers overstating coverage, but it did not name any of the specific carriers that did so.

Pai's office also held a press call with reporters in which FCC officials focused almost entirely on the new 5G fund rather than the carriers' inaccurate filings. As a result, early news coverage of the announcement focused more on the 5G fund than on the carriers' misdeeds.

The two announcements are related, as the FCC said it will try to improve the accuracy of data collection for the 5G fund, which will replace the old Mobility Fund plan. The 5G fund will supply \$9 billion to carriers over 10 years, while the Mobility Fund would have distributed \$4.5 billion over 10 years for 4G coverage. The money comes from the Universal Service Fund, which is paid for by Americans through fees on their phone bills.

New data-collection system recommended

FCC officials didn't voluntarily bring up the topic of whether Verizon, T-Mobile, and US Cellular will be punished for exaggerating coverage. But FCC officials confirmed that Pai

does not intend to take enforcement action in response to a question from a reporter during the press call and in response to a question from Ars via email.

But Pai does agree with all of the recommendations FCC staff made in its report, including the recommendation to issue an enforcement advisory to the industry, a senior FCC official said. While the FCC said it found no evidence of a violation of Mobility Fund rules, the commission has yet to determine whether carriers violated rules in the separate Form 477 data-collection program.

FCC staff recommended the following:

[T]he Commission should analyze and verify the technical mapping data submitted in the most recent Form 477 filings of Verizon, US Cellular, and T-Mobile to determine whether they meet the Form 477 requirements. Staff recommends that the Commission assemble a team with the requisite expertise and resources to audit the accuracy of mobile broadband coverage maps submitted to the Commission. The Commission should further consider seeking appropriations from Congress to carry out drive testing, as appropriate. While Form 477 currently affords providers significant discretion in determining the extent of their mobile broadband coverage, this discretion does not encompass reporting inaccurate mobile coverage across extended areas in which consumers cannot receive any wireless signal whatsoever.

FCC staff also recommended that the commission terminate the “challenge process” that resulted in small carriers pointing out errors in big carriers’ maps.

“The MF-II coverage maps submitted by several providers are not a sufficiently reliable or accurate basis upon which to complete the challenge process as it was designed. The MF-II Challenge Process was designed to resolve coverage disputes regarding generally reliable maps; it was not designed to

correct generally overstated coverage maps,” the staff report said.

The FCC should come up with a better system to replace the challenge process, FCC staff said:

Mobile broadband coverage data specifications should include, among other parameters, minimum reference signal received power (RSRP) and/or minimum downlink and uplink speeds, standard cell loading factors and cell edge coverage probabilities, maximum terrain and clutter bin sizes, and standard fading statistics. Providers should be required to submit actual on-the-ground evidence of network performance (e.g., speed test measurement samplings, including targeted drive test and stationary test data) that validate the propagation model used to generate the coverage maps. The Commission should consider requiring that providers assume the minimum values for any additional parameters that would be necessary to accurately determine the area where a handset should achieve download and upload speeds no less than the minimum throughput requirement for any modeling that includes such a requirement.

Exaggerated coverage has been a problem both for mobile and home broadband, as Form 477 rules have long allowed each ISP to count an entire census block as served even if it can serve just one home in the block. The FCC voted in August to finally collect more accurate data, with a new requirement that home Internet providers give the FCC geospatial maps of where they provide service instead of merely reporting which census blocks they offer service in.

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