AT&T, T-Mobile fight speed tests that could prove their coverage maps wrong

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AT&T and T-Mobile are fighting a Federal Communications Commission plan to require drive tests that would verify whether the mobile carriers' coverage claims are accurate.

The carriers' objections came in response to the FCC seeking comment on a plan to improve the nation's inadequate broadband maps. Besides submitting more accurate coverage maps, the FCC plan would require carriers to do a statistically significant amount of drive testing.

"In order to help verify the accuracy of mobile providers' submitted coverage maps, we propose that carriers submit evidence of network performance based on a sample of on-the-ground tests that is statistically appropriate for the area tested," the FCC proposal issued in July 2020 said.

This could prevent repeats of cases in which carriers exaggerated their coverage in FCC filings, which can result in government broadband funding not going to the areas where it is needed most. Small carriers that compete against the big three in rural areas previously had to conduct drive tests at their own expense in order to prove that the large carriers

didn’t serve the areas they claimed to serve.

FCC Chairman Ajit Pai did not punish Verizon, T-Mobile, and US Cellular after finding that the carriers exaggerated their 4G coverage in official filings. But Pai is moving ahead with plans to require more accurate maps as mandated by Congress.

AT&T and T-Mobile complain about testing cost

AT&T objected to the proposed drive-testing requirement in a filing to the FCC on Tuesday this week, saying that annual “drive testing is not the proper solution for verifying nationwide coverage maps” and that there is “potential difficulty in determining how to formulate a statistically valid sample for areas given the terrain variability nationwide.”

AT&T complained about costs while further explaining its position:

> *With respect to cost, AT&T estimates that to drive test just 25 percent of the square kilometers of its nationwide 4G LTE coverage would cost approximately $45 million each year and that drive testing only 10 percent of its coverage would still cost as much as $18 million/year. Requiring that all carriers conduct such nationwide drive tests, especially on a regular basis, is simply too costly especially at a time when investment in 5G deployment is a top national priority. The [FCC order] proposes to use a statistically valid sample where carriers would be expected to conduct a certain amount of drive tests “that is statistically appropriate for the area tested.” However, there is no indication of how an “area” would be defined, which makes it difficult to assess the feasibility of developing a sample.*

Instead of drive testing, AT&T suggested that the FCC could

“collect certain confidential tower site location information, which would be a better verification tool compared to drive testing.”

T-Mobile raised similar objections in a filing submitted Monday:

> *[T]he Commission should not require providers to conduct regular on-the-ground testing. The Commission has considered and rejected similar requirements several times in the past, for the simple reason that on-the-ground testing at scale is “highly complex, time-consuming, and expensive.” Drive tests and similar procedures are extremely expensive and burdensome to conduct, especially at the scale needed for a statistically significant sample of a nationwide network. A blanket requirement to perform regular on-the-ground testing will force providers to spend millions of dollars each year on tests, resources that would be better spent investing in our network and deployment in rural America.*

Verizon had objected to the possibility of a nationwide drive-test requirement in a September 2019 filing, saying that “Verizon conducts drive tests in a more targeted manner to calibrate its propagation model and to confirm the accuracy of the model.” With the FCC deciding to require only a statistically significant sample, Verizon’s more recent filings either didn’t mention drive testing or merely sought clarification on the FCC drive-test plan.

Calif. agency pushes for drive testing

Extensive drive testing is supported by the California Public Utilities Commission, which told the FCC in February that “the data and mapping outputs of propagation-based models will not result in accurate representation of actual wireless

coverage.” The CPUC said that, based on its experience, “drive tests are required to capture fully accurate data for mobile wireless service areas.”

In another filing in September 2019, the CPUC included a graphic showing how the agency’s own drive tests in California revealed that the map submitted by one unnamed national carrier dramatically overstated coverage:

“We have found such overstatement of [mobile] providers’ submitted coverage footprints to be the case for all providers in all years we conducted tests, not just for the anonymized single example shown above,” the CPUC told the FCC. “Inaccurate data resulting from propagation modeling will have serious impacts on infrastructure grant programs aimed at eliminating the digital divide. We have no reason to believe

that the technical and statistical parameters for propagation modeling on which the [FCC] seeks comments will produce more accurate propagation results."

A Vermont state official conducted speed tests while driving more than 6,000 miles in the fall of 2018, and found "wide disparities" between actual coverage and the coverage reported by carriers.

The FCC said its tentative plan for carrier-submitted speed tests would at a minimum require "that the speed tests include downlink, uplink, latency, and signal strength measurements and that they be performed using an end-user application that measures performance between the mobile device and specified test servers." The FCC also proposed "that speed tests must be taken outdoors" and in a "combination of mobile and stationary tests to accurately verify the coverage speed maps."

The FCC could change its plan after evaluating comments, and it said it would use input from the public to help develop a methodology that carriers would have to follow in testing. Among other things, the FCC's request for comments said it is trying to determine how the tests should be distributed between urban and rural areas, how to "ensure that the speed test measurements represent the typical user case for the area covered," and how to "prevent providers from performing their tests close to their towers where signal strength is greatest." The FCC is also considering whether to "specify the types of equipment that providers can use, including the handsets and any other special equipment necessary for the testing."

Last year, AT&T and other carriers tried to convince the FCC to avoid requiring 5G maps. But the FCC's current plan proposes requiring submission of 5G maps in addition to maps of 3G and 4G networks.

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