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

In the Matter of
Modernizing the FCC Form 477 Data Program

WC Docket 11-10

COMMENTS OF AT&T

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COMMENTS OF AT&T

Introduction and Summary

AT&T Services, Inc. on behalf of its affiliates (collectively, AT&T) respectfully submits the following comments in response to the Commission’s Further Notice of Proposed Rulemaking on the Form 477 data collection program.1

AT&T has long supported the Commission’s goal of collecting useful, relevant data on broadband and voice services in the U.S. and agrees that the Commission must, from time-to-time, review the collection and explore how to revise the program to increase its usefulness to the Commission, Congress, the industry and public.2 In so doing, the Commission has a duty to approach this review with the same guiding principles that date back to the inception of the program: to limit the data collection to needs for policymaking; to collect data in the least burdensome way possible; and to protect confidential data from public disclosure. Indeed, the


2 Id. at para. 1.
The Further Notice proposes numerous changes, many of which seek data at a more granular level, to collect more accurate information. AT&T agrees that more granular data is desirable, but not when it results in a significant increase in the financial burden for filers, or when the increased granularity sacrifices the confidentiality of competitively sensitive data. This view is consistent with the Commission’s stated principles of the program noted above. As discussed fully below, AT&T supports several of the Commission’s proposals where changes can be made with relatively moderate increases in costs and where competitive sensitivities can be maintained, such as certain modifications to the mobile broadband deployment collection. On the other hand, AT&T does not support changes such as the proposed changes to the mobile subscription and fixed broadband deployment collections, where the increased financial burden of the proposals is substantial.

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I. The Commission Should Update and Streamline the Mobile Broadband Deployment Collection.

Currently, facilities-based mobile broadband providers are required to submit polygons in shapefile format representing their geographic coverage nationwide for each transmission technology deployed in each frequency band.\(^4\) For each polygon, providers are required to indicate the minimum advertised upload/download data speeds (or, if the carrier does not advertise speeds, the upload/download speeds their users should expect to receive in the polygon) associated with the network technology in that frequency band.\(^5\) The polygons illustrate the boundaries where users should expect to receive those speeds. Pursuant to the current reporting requirements, mobile broadband providers control the coverage area depicted in their polygons based on their unique methodologies for determining the reported speeds and coverage. The Further Notice asserts that these various methodologies make it difficult for the Commission to make comparisons across providers,\(^6\) and seeks comment on how to revise this collection to achieve that result. As discussed below, AT&T suggests the Commission update the mobile broadband deployment collection to require mobile broadband service providers to submit coverage maps depicting the service area by technology based on a propagation model.

\(^4\) FCC, FCC Form 477 Local Telephone Competition and Broadband Reporting Instructions, Section 5.8, “Mobile Broadband Deployment” (Dec. 5, 2016) (“Form 477 Instructions”).

\(^5\) Id.

\(^6\) Further Notice at para. 10.
using standardized modeling parameters established by the Commission as it did in the Mobility Fund Phase II proceeding.

In the Mobility Fund Phase II (“MF-II”) proceeding, the Commission initially planned to use Form 477 data as the basis for determining the geographic areas that would be presumptively eligible for MF-II support for deployment of qualified 4G LTE services. The Commission ultimately decided to forego using the Form 477 data for this purpose. It found that, because filers are not required to use a unified set of assumptions and methodology to generate Form 477 data, relying on such data would needlessly delay the MF-II funding process while the Commission and participating parties sought to understand the various assumptions and methodologies underlying each carrier’s 477 data set. Instead, the Commission adopted an industry consensus proposal to conduct a one-time data collection of 4G LTE coverage maps based on the specific parameters established by the Commission.

Specifically, in the MF-II proceeding, the Commission ordered providers to file propagation maps and model details indicating their current 4G LTE coverage, using the following standardized parameters, (1) download speeds of 5 Mbps at the cell edge with 80 percent probability, and (2) a 30 percent cell loading factor. Each carrier is required to submit

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9 Id.

10 Id. at para. 34.
coverage maps, which will allow the Commission to easily visualize the carrier’s 4G LTE footprint where service meets or exceeds the parameters (and importantly for the MF-II proceeding, where 4G LTE service may not meet these parameters). Since all carriers will use the same parameters, this collection should expedite the Commission’s overall process for determining the areas eligible for MF-II support.

The Commission could significantly improve the utility of the 477-mobile broadband deployment collection if it followed a similar process here, and adopted standardized parameters for 477 deployment data. The Commission should update the 477 mobile broadband deployment instructions to require carriers to develop coverage maps using a propagation model with a standard cell edge probability of attaining specific download speeds for each technology (3G/4G, 4G LTE and 5G), and set a standard cell loading factor based on the geographic service area (e.g. 30% for rural areas; 50% for urban/suburban areas). Once implemented, the Commission, industry, and public could easily visualize the coverage areas meeting the standardized parameters, and increasing confidence in any comparison of coverage areas across providers.

Although the MF-II special data collection requires carriers to submit other propagation model details, such as signal strength and clutter factors, there is no need for the Commission to collect these details in the 477 collection. The 477 collection is a routine collection designed to

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11 If the Commission adopts a standard for cell edge probability, the Commission should not standardize additional factors like signal strength or signal quality because they will vary by network to achieve the cell edge download probability.

12 Although AT&T supports this change, the Commission should wait until after the MF-II collection is complete, and review its experience with that collection before it standardizes the propagation model parameters for the 477 collection.
give the Commission a high-level view of the voice and broadband markets at a snapshot in time. There is no need to collect the other parameters of the propagation model to understand where carriers provide service. Furthermore, these details are proprietary and confidential to each carrier and should not be publicly available. In fact, in the MF-II proceeding, the Commission adopted a process to ensure confidential treatment of this information.\textsuperscript{13} Here, the Commission should acknowledge that there is no need for carriers to submit this confidential information in the 477 collection in the first instance, but if the Commission requires carriers to submit the propagation model details, the Commission should protect the additional parameters from disclosure pursuant to 47 C.F.R. § 0.457.

In addition to adopting standardized parameters for submitting mobile broadband deployment data, there are other ways the Commission could improve this collection while reducing the burden on filers. First, the Commission could further reduce the burden of this collection by changing the required format of the files from shapefiles to rasters. As the Commission recognized, shapefiles are created from rasters,\textsuperscript{14} so providers could skip the step of converting its deployment data into shapefiles if the Commission allows carriers to submit raster files at the outset.

\textsuperscript{13} MF-II Second Report and Order at note 82. See also FCC, Public Notice, Instructions for Filing 4G LTE Coverage Data to Determine Areas Presumptively Eligible for Mobility Fund II Support, WC Docket No. 10-90, WT Docket No. 10-208 at p.7 (rel. Sept. 22, 2017).

\textsuperscript{14} Further Notice at note 20.
Second, the Commission should eliminate the requirement to submit deployment data by spectrum band,\textsuperscript{15} and further simplify the filing process by requiring providers to file coverage maps for only three technology categories, 3G/4G, 4G LTE and 5G, instead of continuing to require them to file coverage by nine technology codes.\textsuperscript{16} If the Commission eliminated these requirements, filers could submit significantly fewer coverage files.\textsuperscript{17} Moreover, the Commission acknowledges that it is unaware of any need for the deployment data to be filed by spectrum band.\textsuperscript{18} Based on this fact alone, the Commission should eliminate this requirement without delay.

The Commission could further reduce the burden on carriers by eliminating the requirement to publish speeds for each technology. If the Commission requires carriers to submit coverage data based on a propagation model with standardized parameters as discussed above, carrier-specific speeds would become unnecessary because the deployment coverage area submitted will, by definition, illustrate the area that has access to at least the pre-determined speed (for MF-II purposes, 5 Mbps) at the cell edge and thus, speeds would be expected to be

\textsuperscript{15} Form 477 Instructions at p. 31 (Available spectrum codes include, 700 MHz Band, Cellular Band, Specialized Mobile Radio (SMR) Band, Advanced Wireless Services (AWS) 1 Band, Broadband Personal Communications Service (PCS) Band, Wireless Communications Service (WCS) Band, Broadband Radio Service/Educational Broadband Service Band, Satellite, Unlicensed, 600 MHz, H Block, Advanced Wireless Services (AWS) 3 Band, Advanced Wireless Services (AWS) 4 Band).

\textsuperscript{16} Id. (Requiring separate shapefiles for the following nine technologies, WCDMA/UMTS/HSPA, HSPA+, EVDO/EVDO Rev A, LTE, WiMAX, CDMA, GMS, Analog, Other).

\textsuperscript{17} See e.g. Further Notice at note 29 (A provider that currently provides 4G LTE in four spectrum bands would only have to submit one shapefile/raster file rather than four shapefiles).

\textsuperscript{18} Id. at para. 19.
higher elsewhere within the coverage area. Moreover, speeds should no longer be reported because they are inherently fluid due to the many variables that affect a mobile network, such as network utilization, distance, topography, and device capability.\(^1\) To, the extent the FCC has a regulatory need to collect “on the ground” mobile broadband speed data (as the Further Notice suggests\(^2\)), the Commission could obtain that data from 3rd party sources such as Ookla and RootMetrics. These companies routinely collect and/or conduct broadband speed tests on a statistically significant basis throughout the United States, and the Commission has frequently used their data in its industry analysis.\(^3\) Since these data are already available from other sources, the Commission should relieve carriers of the burden of producing the data in the 477 collection.

II. The Commission Should Simplify the Mobile Voice Deployment Mapping Requirements.

Form 477 also currently requires mobile voice providers to submit polygons in a shapefile format representing geographic coverage nationwide for each technology (e.g. GSM,

\(^{19}\) See Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, Twentieth Report, WT Docket No. 17-69, at para. 87 (rel. Sept. 27, 2017) (“Twentieth Mobile Competition Report”) (“Mobile broadband speeds experienced by consumers may vary greatly with a number of factors, including the service provider’s received signal quality, cell traffic loading and network capacity in different locations, as well as the capability of consumers’ devices.”).


CDMA or analog) and frequency band.\textsuperscript{22} The Commission could significantly reduce the burden of this information collection on providers by eliminating this requirement. Simply put, there is no need to distinguish between various voice technologies as they all have the same capabilities and regulatory requirements. Thus, the Commission should revise this collection to simply allow providers to submit one coverage map representing all voice technologies.\textsuperscript{23}

III. \textbf{The Commission’s Proposal to Collect More Granular Mobile Broadband and Voice Subscription Data is Overly Burdensome and Should Not Be Adopted.}

In the interest of obtaining more granular data for market share analysis, the Commission proposes to change the filing requirements for mobile broadband and voice subscription data from the state level to the census tract level based on the billing address of the subscriber.\textsuperscript{24} AT&T acknowledges that this proposal would provide a more detailed view of where consumers are subscribing to these services within a state. However, AT&T opposes this proposal because it will significantly increase the filing burden.

Specifically, to file subscription data by census tract, filers would be required to geocode the billing address of all subscribers. Based on Form 477 data as of June 2016, this would require filers to work with address-level data to geocode more than 265 million mobile

\textsuperscript{22} Form 477 Instructions at p. 26.

\textsuperscript{23} In addition, the Commission should require filers to submit the same geospatial format for mobile broadband deployment and mobile voice deployment maps, i.e. if the Commission changes the format to rasters for mobile broadband deployment, it should require the same for mobile voice.

\textsuperscript{24} \textit{Further Notice} at paras. 26-28.
broadband subscribers, and 337 million mobile voice subscribers industry-wide.\textsuperscript{25} Doing so would be an enormous undertaking because address-level data is inherently difficult to work with given the lack of uniformity in subscriber address information.\textsuperscript{26} AT&T would require an additional 30-45 days for the geocoding process based on its current subscribership levels. As a result, the Commission should not adopt this proposal because it would significantly increase the burden of the collection.\textsuperscript{27}

IV. The Commission Should Adopt Changes to the Fixed Broadband Deployment Collection that Reduce, Not Increase, the Burden on Carriers.

AT&T supports the Commission’s proposal to eliminate separate reporting of available contractual or guaranteed data throughput rates (committed information rates (CIR)) for business/enterprise/government services.\textsuperscript{28} The Commission acknowledges that this data does not provide any “useful insight.”\textsuperscript{29} Accordingly, carriers should be relieved from the burden of

\textsuperscript{26} See \textit{infra} pp. 13-15 (discussing the burdens associated with reporting address-level information for fixed broadband deployment).
\textsuperscript{27} To the extent the Commission seeks this level to ascertain where subscribers actually use their devices as opposed to the location associated with the subscription, there is no meaningful correlation between billing address and where subscribers use their devices. (See \textit{Further Notice} at para. 29). This is especially true for business/enterprise/government subscribers where the billing address is often a corporate/headquarters address, but the devices could be located and used anywhere in the nation.
\textsuperscript{28} \textit{Further Notice} at 31.
\textsuperscript{29} \textit{Id.}
reporting these data. Instead, the Commission should limit the collection to the maximum best efforts speed offered, and maintain the indicators for consumer and business data, which enable providers to report any distinction in speeds offered to business or mass market customers. AT&T finds these distinctions useful from a market analysis perspective.

Next, the Commission seeks comment on whether it should require fixed broadband providers to indicate (for each census block reported) three distinct data points for each technology code: (1) areas in which a provider serves existing customers and could readily serve additional customers within a standard interval using a particular technology, (2) areas in which a provider serves existing customers, but cannot serve any additional customers using a particular technology, and (3) areas in which a provider does not yet serve existing customers, but will serve new customers within a standard interval, using a particular technology. The Commission should not adopt this requirement. Although AT&T can indicate generally whether customers can be added to a technology code within a census block, AT&T does not have a mechanized process to collect or report this information at a sub-census block level, e.g. address or street segment level.

To satisfy the Commission’s proposal, AT&T would be required to develop and implement a new process, which would involve: 1) querying each living unit address that does not currently subscribe to an AT&T broadband service; 2) determining which of the three data points described above is met; 3) geocoding the addresses to determine the sub-census block

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30 Id. at 34.
details; and (4) creating a new reporting format that captures these data.\(^1\) Given AT&T’s size, this would be a massive undertaking and would only be workable if it were automated, which is estimated to be a costly and time-consuming project, requiring at least 500 development hours.

Furthermore, this proposal should not be adopted because it essentially transforms fixed broadband deployment data into fixed broadband subscription data at the sub-census block level, which introduces confidentiality issues as well as the complexities of working with address-level data.\(^2\) At bottom, this proposal requires providers to disclose where they have subscribers and where they do not at a sub-census block level. Since the inception of the 477 program, the Commission has recognized the competitive sensitivities associated with granular subscription reporting and granted the procedural protections provided by the Commission’s confidentiality rules to protect these data.\(^3\) To be sure, the market is even more competitive now than it was when the program was created, and competitors would assuredly use these data to develop marketing strategies, as discussed below.

In any event, this information would be of little use for regulatory purposes because broadband service availability is very fluid below the census block level. Service availability is

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\(^1\) This proposal also requires the Commission to align the technology codes required to file fixed broadband deployment with the technology codes required for fixed broadband subscription, e.g. Form 477 instructions require fixed broadband deployment to be reported using technology codes 10 for Asymmetric xDSL, code 11 for ADSL2, ADSL2+, and code 12 for VDSL, while the fixed broadband subscription instructions require the reporting of all DSL subscriptions in technology code 10.

\(^2\) See infra pp. 13-15 (Discussing the complexities of address-level reporting).

\(^3\) See 2000 Local Competition and Data Collection Order at para. 89 (“[W]e will honor all parties’ requests for confidential treatment of information that they identify as competitively sensitive until persons requesting confidential treatment are afforded all of the procedural protections provided by our confidentiality rules . . . [W]e agree with those commenters who suggest that we can aggregate much of the data — for example, by carrier class and to the state level — so that it does not identify the individual provider in our regularly published reports.”).
based on a variety of changing factors, such as the number of existing customers subscribed to the platform, the speed tiers associated with existing subscriptions, and customer churn on the technology and/or speed tier. Thus, if the Commission had a regulatory need to assess whether customers could subscribe to service using a specific technology at a specific address, or subsection of a census block, it could not rely on data submitted by carriers 2-6 months before the need is identified. The Commission would need to conduct a special collection to evaluate the service availability in real-time. In sum, the burden to collect this information significantly outweighs any possible usefulness of the data collected, and accordingly, the Commission should not adopt this as an on-going requirement of the 477-data collection program.

The Commission also seeks comment on giving fixed broadband filers the option of reporting deployment data by filing geospatial data illustrating coverage areas instead of reporting a list of census blocks. The Commission should not adopt this proposal. The data set will be more difficult to analyze because there would be no uniformity of the data collection if some filers submitted their data as census blocks in csv files and others submitted geospatial shapefiles. Further, the Commission would have difficulty analyzing and comparing coverage areas even among filers who submitted shapefiles unless the Commission adopted standards for (1) the version of census block maps to use (e.g. Census Block map vs. Census Tiger Street map), (2) the map vintage, and (3) the geographical projection elements to be used when geocoding the data. Due to the complexity that this option would add to the analysis and comparison of the data set, the Commission should not give filers the option to submit fixed broadband deployment in a geospatial format.
Finally, the *Further Notice* seeks comment on collecting fixed broadband deployment data at a sub-census block level, i.e. address level, on the theory that more granular data could assist with the future disbursement of high-cost funds, universal service reverse auctions, or assist consumers with locating broadband services in their areas.\(^{34}\) The Commission should not adopt address level reporting because it will inject a significant level of inaccuracies into the data collection, and because address-level reporting would exponentially increase the burden on filers.

First, based on AT&T’s experience accuracy actually decreases when granularity increases to the address level. That is so because “addresses” are *not* necessarily recorded in a standardized, uniform manner by all of the nearly 2,600 service providers that are required to submit Form 477 broadband deployment data. Indeed, unlike Census unit designations which are defined and maintained by a single entity (the Census Bureau), the “address level” data the Commission seeks would be produced separately by each one of these nearly 2,600 Form 477 filers using the various address descriptions those filers happen to have in their records.

For example, a hypothetical subscriber living in Apartment B at 123 Main Street in Anytown, Anystate, may have his or her address listed as “123 Main Street, Apartment B, Anytown, Anystate, 12345” in one provider’s records, while the same address may appear as “123 Main, Unit B, Anytown, Anystate, 12345-6789” in another provider’s records, and “123 Main Rd., #B, Anytown, Anystate, 12345” in still another provider’s records. In fact, a single provider that serves two or more occupants living in the same household, and bills those occupants separately, may have recorded the address for this single household differently for

\(^{34}\) *Further Notice* at 39.
each occupant depending on how the individual occupants described the address to the provider when they each originally initiated service.\textsuperscript{35}

To be sure, many addresses may be recorded in the same manner in the databases of multiple providers. But with more than 130 million households in the U.S., and more than 104 million total fixed broadband connections reported on Form 477\textsuperscript{36} that would need to be matched to a specific address, an address level data production requirement would likely produce \textit{millions} of instances in which addresses are described in different ways by at least some of the nearly 2,600 Form 477 filers. In the end, the Commission would be left with the monumental task of attempting to “scrub” a massive data set to determine which addresses refer to the same physical location and which do not. Thus, rather than giving the Commission a more “accurate” picture of the market for broadband services, an address level reporting requirement would significantly cloud the understanding of that market while creating an administrative nightmare for the Commission.

In addition, requiring address level reporting would impose an enormous incremental data production burden on service providers. As the Commission notes, the current 477 collects fixed broadband deployment at the census block level. There are approximately 6.5 million Census Blocks in the U.S., as compared to more than 130 million housing units (and many

\textsuperscript{35} Although the Master Street Address Guide (MSAG) validation process for wireline voice 911 purposes in many localities may have the effect of reducing the number of address disparities associated with wireline voice services that have 911 obligations, there is no corresponding process for broadband services.

housing units represent multiple addresses within a single housing unit, e.g. multi-family developments). Thus, the imposition of address level reporting obligations would represent a potential industry-wide data production obligation that is at least 20 times larger than the data in the current production. AT&T estimates that address level reporting would increase the size of its submission by at least 35 times for the 2.6 million census blocks it serves.

Furthermore, AT&T does not currently have a system capable of reporting broadband deployment data at the address level. AT&T would be required to invest in new software development and systems integration projects to implement this requirement, which is estimated to cost at least $2 million and would take at least one year to complete.

As the Commission notes, it previously considered and rejected address level reporting due to the “added complexity and burden,” and as illustrated above, the Commission must conclude the same here, as the complexity and burden continue to exist and continue to increase as the number of housing units increases each year. To the extent the Commission requires granular level data to inform specific policy decisions, it should initiate special address level collections for census blocks with low population density.

V. The Form 477 Collection Should Be Submitted Annually.

When it first established the Form 477 program in 2000, the Commission adopted a semi-

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38 See Further Notice at ft. 64.

39 Recognizing that broadband deployment is likely to be consistent in census blocks with a high population density whereas, the likelihood for differences in broadband availability is higher in larger census blocks with a low population density.
annual (rather than annual) reporting requirement because it “best balance[d] [the agency’s] need for timely information with our desire to minimize the reporting burden on respondents.”  But at the time, those burdens amounted to a total of nearly 30,000 hours of extra labor each year for filers of Form 477. Today, after significant expansions of the Form 477 data program in 2004, 2008, and 2013, the yearly industry-wide burden from this program now exceeds 1.6 million hours. Thus, whatever “balance” may have originally existed in a semi-annual reporting requirement, it has long since tipped toward imposing excessive burdens on Form 477 filers. Accordingly, it is now appropriate for the Commission to transition to an annual filing requirement.

Moving to an annual filing requirement would cut the current burden in half without impairing the Commission’s ability to fulfill its statutory obligations under the Act. Indeed, in section 332(c)(1)(C) of the Act, Congress directed the Commission to prepare an “annual report” on the state of competition in the mobile wireless market.43 Likewise, in section 706 of the Act, Congress instructed the Commission to conduct an inquiry “annually” into the state of broadband deployment in the U.S.44 Thus, requiring Form 477 to be filed on an annual basis would be fully

40 2000 Local Competition and Broadband Reporting Order at para. 56.

41 FCC, Public Information Collections Approved by Office of Management and Budget, 65 FR No. 241, (December 14, 2000).


consistent with Congress’s direction regarding the frequency of Commission reports on the communications marketplace.

Further, deployment and subscription data do not change so quickly as to make annual filing inadequate or insufficient. Although the Commission publishes reports derived from this data more than once per year, the Commission’s analyses of the data in these reports are routinely made by comparing the data year-over-year, not over 6 month periods.45 Thus, consistent with the Commission’s longstanding commitment to collect only the data it needs in the least burdensome manner possible, AT&T urges the Commission to revise the Form 477 program to reduce the filing frequency to once per year.

VI. Confidentiality Issues

Finally, the Commission proposes to make certain 477 data publicly available. AT&T agrees with the Commission’s proposals in principle, but reiterates that the Commission should only publish data that is not confidential or competitively sensitive. As discussed above, mobile broadband providers are required to submit the minimum advertised (or expected) upstream and downstream speeds associated with their network technology in a frequency band for each polygon in their shapefiles. Currently, the Commission treats the speeds associated with these filings as confidential, and accordingly, this data is not disclosed by the Commission in its publications. The Further Notice proposes to make the 477 mobile deployment speed data

45 See 2017 Internet Access Service Report, including data as of June 2016 (For example, “The total number of Internet connections increased by about 8% between June 2015 and June 2016 to 369 million.”); 2017 Voice Services Report, including data as of June 2016 (Stating, “Over the three-year period presented in Figure 1, interconnected VoIP subscriptions increased at a compound annual growth rate of 10%, mobile voice subscriptions increased at a compound annual growth rate of 3%, and retail switched access lines declined at 11% per year.”) (emphasis added).
available to the public, and in support of this proposal, notes that carriers routinely make this information available on their websites. AT&T acknowledges that the speeds included in its 477 deployment submissions mirror the speeds it posts on its website, which represents the range of speeds consumers can expect to receive at the CMA level. As discussed above, AT&T believes the Commission should no longer require carriers to file mobile broadband speed data in the 477 collection, but if the Commission retains this requirement, AT&T does not object to the public disclosure of speed data at the CMA level. If the Commission requires carriers to submit speeds at a lower level of granularity than carriers disclose publicly, the Commission should not make those data publicly available.

Similarly, the Further Notice proposes to make public the number of fixed broadband subscribers at each reported speed on a national level to create a new metric on broadband adoption in the U.S. AT&T does not object to a national broadband subscribership metric. However, AT&T’s support is limited to a metric where the data is aggregated across all providers and at the national level. Provider-specific subscribership data at or below the state level remains competitively sensitive data that could be used by competing carriers to develop business plans, such as marketing profiles of cities and neighborhoods, developing strategic marketing offers, or deciding to avoid deployment where the market is saturated. The Commission should, therefore, continue to treat subscribership data at or below the state level as confidential.

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46 Further Notice at para. 51.

47 Further Notice at para. 53 (The proposal confirms that this new metric would be aggregated across all providers and the names of the specific providers would not be disclosed).
The *Further Notice* also seeks comment on whether there is a timeframe when subscribership data would no longer be competitively sensitive. However, the Commission should not attempt to develop a date whereby it could publicly disclose disaggregated subscribership data. Subscribership data is among the most sensitive data sets and could serve competitive interests regardless of the age of the data. 48 Due to the sensitivity of this data, the Commission must evaluate requests for the disclosure of this data on a case by case basis under section 0.461 of the Commission’s rules.

**VII. Conclusion**

As discussed above, the Commission should update the Form 477 data collection only where changes can be made with relatively moderate increases in the burden on filers, and when competitive sensitivities can be maintained.

Respectfully submitted,

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48 Publicizing the raw subscriber data would risk revealing the provider’s deployment strategies, and expose critical investment pattern such as areas where they have been successful, and other challenging areas.