mobility drive testing. The drive testing occurs from about **[BEGIN CONFIDENTIAL INFORMATION]** **[END CONFIDENTIAL INFORMATION]**, and covers areas where more than **[BEGIN CONFIDENTIAL INFORMATION]** **[END CONFIDENTIAL INFORMATION]** of the U.S. population lives and works. These drive tests are conducted by an AT&T vendor.

11. The information collected from these drive tests is transferred to another third party that processes the data and puts it into a database. This information is then analyzed and verified by AT&T data analysts. After being verified, AT&T data analysts compute the range of average national speed and latency metrics for AT&T's network. These metrics are then provided to AT&T's IT professionals who place the information on the AT&T website containing AT&T's broadband Internet disclosures.

12. The drive tests do not currently collect packet loss data. It is possible to add packet loss to the drive tests, but that would require substantial additional costs. The equipment and software in the vehicles used for drive testing do not currently have the capability to collect packet loss information. There are two ways to add packet loss measurement capabilities to the drive testing.

13. The first option is to revise the software used in the existing equipment in each of the dozens of vehicles used for drive testing to allow the equipment to capture packet loss. However, this approach would require additional drive testing to collect the same amount of data. When the equipment in the vehicles is programmed to capture packet loss, it will take the equipment more time to capture that data from the network, because it must now capture an additional data point for each sample. As a result, the total number of data points that can be collected for each metric during a given amount of time would decrease by about 10 percent. To

maintain the same number of data points, it would therefore be necessary to increase drive test times by about 10 percent. This increase in drive testing could impose an additional burden of several million dollars per year.

14. The second option is to install a separate set of equipment dedicated to capturing only packet loss data in each of the dozens of vehicles used for drive testing. This approach would allow the same number of data points to be captured for speed, latency, and packet loss without having to significantly change drive test times. However, the additional equipment needed for each vehicle would be expensive. This approach would cost more than three quarters of a million dollars per year.

15. These burden estimates assume that the FCC's new rules will not require AT&T to expand its drive testing to new areas or to cover new times of day (issues which are discussed in the next two sections). If such expanded drive testing is needed, the incremental costs of adding packet loss to the disclosures will increase accordingly.

16. In addition to the costs of collecting actual packet loss data through drive testing, there are costs associated with developing useful average packet loss estimates from the data. Specifically, AT&T data analysts would have to validate the drive test data, analyze it, and then compute statistically significant average packet loss metrics from these data. There would be significant upfront one-time costs associated with developing the methodology for these computations. In addition, AT&T engineers would have to implement those computations periodically as updated data becomes available. And, AT&T would have to add the new information to the website containing AT&T's disclosures. These tasks would cost several thousand dollars each year (more in the first year due to the initial setup costs), with the actual amount depending on how frequently the disclosures need to be updated.

17. The above estimates assume that AT&T would only have to compute network performance figures at the national level. As discussed further below, these costs will rise dramatically if the FCC requires these metrics to be computed for multiple geographic areas and if they need to be updated periodically throughout the year. For example, if AT&T were required to provide packet loss estimates for each Cellular Market Area ("CMA") covered by its network, AT&T data analysts would have to compute more than 700 packet loss estimates. As a result, depending on the geographic granularity with which these estimates must be computed, the costs of computing the metrics from the data could rise to tens of thousands of dollars.

18. *Fixed Wireline Broadband.* For wireline services, AT&T currently uses the data collected by the FCC's Measuring Broadband America program ("MBA") to estimate the required national speed and latency metrics. The MBA program also includes packet loss data. Accordingly, to provide packet loss metrics, AT&T analysts would be required to analyze the MBA packet loss data to estimate statistically significant national packet loss metrics. Based on past experience, it takes an AT&T analyst about [**BEGIN CONFIDENTIAL INFORMATION**] [**END CONFIDENTIAL INFORMATION**] to conduct this analysis, which includes extracting the data, validating the data, computing the metrics, and validating the metrics. Moreover, as AT&T continues to add speed tiers and update existing speed tiers, AT&T will have to repeat these tasks to update the disclosures to reflect the most recent information. In addition, this burden will increase substantially depending on the level of geographic granularity required for reporting. For example, if this number must be computed at the state level, these estimates would have to be computed for each of the 21 states covered by AT&T's wireline network, which would increase the number of hours required accordingly.

Assuming that the data would have to be updated three times each year for each state, AT&T estimates the cost of compliance would be tens of thousands of dollars per year.

B. There Are No Offsetting Practical Uses Or Other Benefits To Packet Loss Metrics.

19. The *2015 Open Internet Order* does not explain why it added packet loss as a necessary component of the network performance disclosures. In a footnote, the *2015 Open Internet Order* cites to comments from AARP and others stating that "packet loss could be useful to consumers."[2] But none of these comments appear to explain how packet loss would actually be useful to consumers or edge providers. These comments merely state that packet loss, to the extent it would be useful at all, would be useful for assessing "delay intolerant applications."[3]

20. In fact, packet loss metrics are of little or no practical use to consumers or edge providers for evaluating service quality, or for comparing the performance of alternative networks, including for delay intolerant applications. To the contrary, low packet loss could be an indication of *slow* network performance, and thus worse for delay intolerant applications.

21. To understand why this is so, it is important to understand the trade-offs associated with packet loss. Internet traffic is transmitted using routers. A router receives packets, identifies their next destination, and forwards the packets to those destinations. Routers have "buffers" where packets are queued for delivery. The size of the buffer is an important design parameter because there is a relationship between the size of the buffer and the speed at which packets reach their destinations. A larger buffer means longer queues for packets before they are sent to their next destination. A smaller buffer means smaller queues for packets before

[2] *2015 Open Internet Order* ¶ 166, n.407.

[3] *Id.*

they are sent to their next destination. In other words, smaller buffers permit packets to be transmitted more quickly.

22. The downside to having a smaller buffer is that it increases the potential for packet loss. When a packet reaches a router and the buffer is full – which is more likely to happen when the buffer is smaller – the packet typically will be dropped, which results in packet loss (dropped packets are normally recovered using TCP retransmission). Thus, there is a trade-off between reduced packet loss and the speed at which packets are transmitted through the network.

23. For these reasons, low packet loss does not necessarily mean better performance for delay intolerant applications. Increasing buffer size to mitigate packet loss will result in higher network delay, which could have a far greater adverse effect on delay intolerant applications, such as frozen frames for significant periods of time.

24. Packet loss metrics have little or no practical utility or other benefits for other reasons as well. The *2015 Open Internet Order* does not explain how providers are supposed to compute packet loss. One approach would be to measure packet loss from a point on the providers' network to a computer or mobile device connected to that network. These "intra-network" packet loss estimates, however, will generally be extremely low for most broadband providers. Packet loss at such low levels would have virtually no noticeable impact on customer experiences, even for delay intolerant applications. Thus, differences in intra-network packet loss would not typically be a useful metric for consumers wishing to assess or compare providers.

25. Another approach to measuring packet loss would be to attempt to measure "inter-network" packet loss. Inter-network packet loss metrics vary dramatically depending on the end

points used for testing network conditions at the time of testing. As a result, such metrics would not typically represent the packet loss that any particular customer or edge provider would experience, because their experience will depend on the end points of *their* transmissions and congestion at the time those transmissions occurred. In addition, there are different technical methods for measuring packet loss, including measurements based on loss of UDP packets and measurements using ICMP pings. For all of these reasons, comparisons of inter-network packet loss metrics among different providers would be meaningless, because those metrics would almost certainly depend on different end-points, testing that occurred at different times, and many other factors out of each provider's control, resulting in apples-to-oranges comparisons.

26. Even if packet loss metrics were useful to customers or edge providers, there is no need to force providers to incur the substantial costs of developing, collecting, and disclosing such metrics. Third parties already make such information publicly available. To be sure, due to the fact that packet loss metrics are not particularly useful, there are a limited number of third parties that collect such metrics, but some do exist. For example, such metrics are currently available from the FCC's MBA applications and from Internet Pulse (http://internetpulse.net/main.aspx?metric=PL). The new collections for packet loss in the *2015 Open Internet Order* are therefore not necessary to provide consumers and edge providers with any packet loss data they may find useful.

27. Finally, it is important to note that the FCC's focus on packet loss metrics could have *adverse* unintended consequences that ultimately harm consumers and edge providers. To the extent that the new packet loss collection and reporting requirements cause customers and edge providers to choose service providers based on reported packet loss metrics, providers

would have incentives to increase router buffers to reduce packet loss. But, as explained above, such practices could result in slower and less optimized Internet routing systems.

IV. THE NEW GRANULAR GEOGRAPHIC SPEED, LATENCY, AND PACKET LOSS COLLECTION IS HIGHLY BURDENSOME AND THE RESULTING DATA HAS NO OFFSETTING PRACTICAL UTILITY OR OTHER BENEFITS

28. Under the *2010 Open Internet Order*, AT&T currently collects and discloses actual speed and latency metrics for its mobile broadband network at the national level, by technology (*e.g.*, LTE, HSPA+, HSPA). The FCC has acknowledged that if users want more granular information, there are "[v]arious software-based broadband performance tests . . . available as potential tools for end users and companies to estimate actual broadband performance."[4]

29. Nonetheless, the *2015 Open Internet Order* adds a new collection that requires speed, latency, and packet loss to be collected and disclosed by providers at more granular geographic levels:

> We expect that disclosures to consumers of actual network performance data should be reasonably related to the performance the consumer would likely experience in the geographic area in which the consumer is purchasing service.[5]

30. This new collection and disclosure requirement imposes significant burdens on AT&T and the rest of the industry, without offsetting benefits.

31. It is important to note at the outset that the FCC does not explain what it means by "the geographic area in which the consumer is purchasing service." That phrase could be defined at many different levels. I assume for purposes of this declaration that the FCC does not intend to define those terms to require providers to collect and report data at excessively granular

[4] *2015 Open Internet Order* ¶ 166 n.411.

[5] *2015 Open Internet Order* ¶ 166.

sub-market levels (such as census blocks or cell sites), which would be completely infeasible and astronomically expensive. Even if the "geographic area" is defined more broadly, the burden of computing each of the performance metrics for many new areas would be substantial, and certainly far greater than the total of $200 estimated by the FCC. And, as explained below, such collections and disclosures would be of little or no practical use to consumers or edge providers.

A. The New Granularity Requirement Would Be Extremely Burdensome To Implement For AT&T's Mobile Services With No Offsetting Benefits.

32. To obtain national average speed and latency metrics for its mobile services, AT&T conducts drive tests using vehicles outfitted with specialized equipment and software. These drive tests cover about **[BEGIN CONFIDENTIAL INFORMATION]** **[END CONFIDENTIAL INFORMATION]** CMAs in the United States, which cover about **[BEGIN CONFIDENTIAL INFORMATION]** **[END CONFIDENTIAL INFORMATION]** percent of the national population. These drive tests are designed to obtain **[BEGIN CONFIDENTIAL INFORMATION]**

[END CONFIDENTIAL INFORMATION].

33. Depending on the geographic granularity actually required by the new collection and disclosure requirements, the additional burden to AT&T would range from very substantial to truly astronomical. These burdens include (1) the need for substantially more analyst hours for developing performance metrics for each of the new geographic areas and (2) substantially more drive testing. Moreover, these burdens are subject to multiplier effects because the FCC's new collection and disclosure requirements appear to require data to be updated one or more times during the year and the data must be collected for each technology, for both uplink and

downlink, average and peak, often with high and low ranges, resulting in millions of new data points to collect and analyze.

34. *Data Analysis Burden.* To comply with the FCC's current collection and reporting requirements, AT&T provides the drive test data to a third party that processes the data and inputs it into a database. AT&T data analysts then validate the drive test data and use those data to compute each national performance metric (speed and latency). In addition, AT&T uses these data to compute these metrics for [**BEGIN CONFIDENTIAL INFORMATION**]

[**END CONFIDENTIAL INFORMATION**] CMAs. The *Open Internet Order*, however, may contemplate reporting of the metrics for some undefined area that is much smaller than a CMA. A CMA can be very large. For example, the "Washington, DC-MD-VA" CMA covers all of Washington, D.C., and most of its suburbs in Maryland and Virginia. Similarly, the entire state of Wyoming has only six CMAs, and Alaska only four. Comparing these metrics at the CMA level provides little or no incremental benefit over comparing national numbers.

35. Computing these metrics for smaller areas would be extremely burdensome. This additional geographic granularity would require data analysts to compute these metrics, plus the packet loss metric, *for each new geographic area*. For example, if the requirement is to disclose the data by an area half the size of a CMA, AT&T engineers would have to develop new statistically valid sets of performance metrics for at least [**BEGIN CONFIDENTIAL INFORMATION**] [**END CONFIDENTIAL INFORMATION**] newly defined geographic areas [**BEGIN CONFIDENTIAL INFORMATION**] [**END CONFIDENTIAL INFORMATION**]. Such a requirement, therefore, would require more than 1000 times more work for the engineers, as compared to the current nationwide performance

reporting. Moreover, this requirement would require the creation of a procedure for mapping the data to the newly defined smaller geographic areas, and would likely require additional drive testing to ensure the drive tests collect enough data points within these smaller areas to provide statistically significant data to produce representative performance metrics. The result would be tens of thousands of dollars or more in additional costs to AT&T. And this burden would increase at a corresponding rate if the FCC requires performance data to be developed for even smaller geographic areas.

36. Moreover, as described further below, providers today use different equipment and methods for computing performance metrics. To enable apples-to-apples comparisons of these metrics, the FCC would have to require providers to use identical equipment and methods. But such micro-management would require most providers to completely change their current approaches, which would itself impose an additional large burden on providers.

37. *Drive Test Burdens.* The FCC's new collection and disclosure requirements could also require AT&T to conduct substantial additional drive testing, which would further increase the burden of complying with these new requirements.

38. First, as noted, AT&T's current drive testing is designed to collect sufficient data to develop **[BEGIN CONFIDENTIAL INFORMATION]**

[END CONFIDENTIAL INFORMATION]. Consequently, **[BEGIN CONFIDENTIAL INFORMATION]**

[END CONFIDENTIAL INFORMATION], these drive tests can lack a sufficient number of data points to estimate statistically significant average performance metrics for smaller geographic areas. To develop sufficient data for each of the smaller geographic areas, AT&T would likely

have to conduct additional drive tests to collect a sufficient number of data points within each smaller geographic area to develop statistically significant average performance metrics for those areas. Depending on the level of geographic granularity, this additional drive testing could require more vehicles as well as extra time. The additional costs could easily run into the tens or even hundreds of thousands of dollars, depending on the required geographic granularity.

39. Second, as noted, AT&T's current drive testing covers about **[BEGIN CONFIDENTIAL INFORMATION]** **[END CONFIDENTIAL INFORMATION]** CMAs, which covers more than **[BEGIN CONFIDENTIAL INFORMATION]** **[END CONFIDENTIAL INFORMATION]** of the population within those service areas. The approximately **[BEGIN CONFIDENTIAL INFORMATION]**

[END CONFIDENTIAL INFORMATION] not currently covered by AT&T's drive tests are generally less populated areas that cover nearly 1.5 *million* square miles. To the extent AT&T is required to provide performance metrics at a geographic granularity that would require drive testing in these additional CMAs, the burden of complying with the requirement would increase dramatically. AT&T's vendor estimates that it would cost an additional $1.5 million per year to expand the drive testing into these areas. **[BEGIN CONFIDENTIAL INFORMATION]**

[END CONFIDENTIAL INFORMATION]

40. AT&T's mobile network also includes Wi-Fi services. It is unclear whether the FCC's new transparency rules require providers to report performance metrics for Wi-Fi services to the extent they are deemed to be broadband Internet access services. Such a requirement would be extremely costly. General geographic metrics about Wi-Fi performance are not useful

because Wi-Fi performance will depend on the capabilities of each router and the environment in which it is operating (*e.g.*, interference, walls, distance). Moreover, due to the nature of Wi-Fi services, drive testing is not feasible (indeed, many Wi-Fi locations are indoors). AT&T has investigated methods to gather meaningful performance metrics for Wi-Fi services, but all are extremely expensive. For example, one approach would be to place a "test probe" at each Wi-Fi location that measures performance of the Wi-Fi network at these locations. But AT&T has tens of thousands of Wi-Fi locations, and initial estimates indicate that deploying and monitoring these probes would cost millions of dollars.

41. None of these substantial costs are offset by practical utility or other benefits.

42. First, these metrics could not be used to compare speed, latency, or packet loss among different providers. Absent a standardized approach, which the FCC has not provided, each provider will almost certainly compute these metrics for *different* geographic areas. Moreover, providers use different vendors to collect network performance data (and some may do it themselves). In AT&T's experience, each vendor uses different equipment and algorithms to measure performance. As a result, even if each provider happens to test perfectly overlapping geographic areas, the performance metrics they report would not be comparable because they would reflect different underlying methodologies. Any attempt to force providers to use a uniform approach would require many providers to substantially change their systems, which would impose an enormous additional burden on providers.

43. Second, this information, even if comparable, provides no incremental benefits to consumer because such information is already available to existing and potential customers and edge providers. As just one example, the FCC's own MBA application provides users with current network performance metrics from any geographic location within AT&T's network.

Geographically granular network performance figures, such as speed and latency, are also available from third parties, such as Ookla, RootMetrics, and Sensorly. To be sure, not all users currently have a device that can connect to AT&T's network that can be used to conduct these tests. However, there are many ways for consumers to obtain such devices, *e.g.*, borrow a friend's device, use an AT&T device in an AT&T store, or purchase a device and return it consistent with AT&T's return policies. There are also multiple publications that provide network performance metrics at highly disaggregated levels, such as *PC Magazine* and Open Signal. Thus, requiring AT&T and other providers to also report these metrics thus provides no useful information that customers cannot already obtain elsewhere.

44. Third, as the FCC has explained, it is in the process of completing a mobile version of the MBA program that will have the data needed for these disclosures. There is no reason to force providers to undertake the enormous expense of additional drive testing and data analysis to obtain the underlying data needed for the disclosures when those efforts may be superseded by the uniform MBA program in the near future. The far better approach is to delay these mobility reporting requirements at least until the mobile MBA program is implemented.

B. The New Granularity Requirement Would Be Burdensome To Implement For AT&T's Wireline Services, With No Offsetting Benefits.

45. The *2010 Open Internet Order* provides that AT&T and other providers that participate in the MBA program can rely on those data to comply with the performance-related collection and disclosure requirements for wireline services. The *2015 Open Internet Order* states that "[p]articipation in the [MBA] program continues to be a safe harbor for fixed broadband providers in meeting the requirement to disclose actual network performance."[6] The

[6] *2015 Open Internet Order* n.411.

most granular data available from the MBA program is state-level data. Accordingly, although the *2015 Open Internet Order* is not clear as to what level of geographic granularity is required, the most granular level it can require of participants in the MBA is statewide data.

46. Under the current reporting requirement, AT&T data analysts currently use MBA data to compute a single set of "national" performance metrics for the 21 states where AT&T offers wireline broadband Internet access services. As discussed above, to the extent the new rules require these data to be reported at the state level, AT&T's data analysts would be required to compute these metrics for each of the 21 states where AT&T offers wireline broadband Internet access services, and the costs would increase 21-fold.

47. There are no significant offsetting practical uses or other benefits to justify these burdens. These more granular geographic data could be of practical use to consumer or edge providers only if geographic variation in the three performance metrics derived from the MBA data led to noticeable differences in the user experience. If not, national figures provide all of the information needed to make informed decisions about the performance of AT&T's network.

48. I have analyzed the data for each of the three performance metrics (speed, latency, and packet loss) available for AT&T's network from the MBA program for the period from January 2015 through May 2015 (the most recent data available) for all AT&T speed tiers for which data are available from the MBA program. The results of this analysis show that there is very little variation in wireline speed or latency within each speed tier offering from state-to-state. And packet loss is so low in every state that any variations among states would have no noticeable impact on customers' or edge providers' experience. As a result, there are no practical uses for these more granular data for either consumers or edge providers.

49. Even if state-to-state variations for speed, latency, and packet loss were of some practical use, those metrics are already available from third-party sources, so requiring AT&T to provide them would make no additional benefits available to customers or edge providers. These metrics can be obtained in real time from public websites and publications, including Ookla and the FCC's MBA website.

V. THE NEW PEAK PERIOD COLLECTION REQUIREMENT IS HIGHLY BURDENSOME AND THE RESULTING DATA HAS NO OFFSETTING PRACTICAL UTILITY OR OTHER BENEFITS

50. The *2015 Open Internet Order* adds a new requirement that providers collect and disclose each of the three network performance metrics (speed, latency, and packet loss) "during times of peak usage."[7] AT&T already discloses overall averages for speed and latency. As demonstrated below, these new "peak" period metrics would be very burdensome to collect, and would provide little or no practical utility or other benefits.

A. The New "Peak Period" Requirement Would Be Highly Burdensome To Implement For AT&T's Mobility Services With No Offsetting Benefits.

51. The new requirement for "peak usage" is not a well-defined metric for mobile networks. For mobile networks, "peak usage" periods vary substantially from location to location. For example, in downtown areas, peak usage tends to be during the late morning to the late afternoon rush hour. In residential areas, however, peak usage tends to be later in the evening. Consequently, determining peak usage for every area would be very burdensome in itself. Doing so would require studies of every geographic area to determine peak usage times for each area, and then drive testing during those times to collect sufficient information to develop average speed, latency, and packet loss during those times. These tasks would severely

[7] *2015 Open Internet Order* ¶ 166.

impact the logistics and practicalities of performing nationwide drive testing, and may lead to the need for additional test vehicles at a potential additional cost of hundreds of thousands or even millions of dollars per year.

52. It is not feasible to use the FCC's historic definition of peak usage periods, *i.e.*, 7-11 p.m., to compute peak time performance metrics. As noted, AT&T's current drive testing occurs between the hours of **[BEGIN CONFIDENTIAL INFORMATION]** **[END CONFIDENTIAL INFORMATION]** To obtain speed, latency, and packet loss data for the 7-11 p.m. period would require AT&T to extend its drive testing by **[BEGIN CONFIDENTIAL INFORMATION]** **[END CONFIDENTIAL INFORMATION]** hours. This would require both extending the drive times for existing vehicles and drivers, and adding new vehicles and drivers to the fleet. According to AT&T's vendor, such additional drive testing would cost more than $15 million per year.

53. The alternative is to use existing drive test data – based on testing from **[BEGIN CONFIDENTIAL INFORMATION]** **[END CONFIDENTIAL INFORMATION]** – to identify peak periods within that time frame and use those figures to develop the average speed, latency, and packet loss figures during those time periods. This project would require engineers to develop these new metrics for each geographic area for which the new reporting requirement applies. AT&T's data analysts would have to develop a method for making these measurements. AT&T estimates that it would take a data analyst about **[BEGIN CONFIDENTIAL INFORMATION]** **[END CONFIDENTIAL INFORMATION]** to develop the metric, plus **[BEGIN CONFIDENTIAL INFORMATION]** **[END CONFIDENTIAL INFORMATION]** to execute them, at

an additional cost of thousands of dollars per year. And, for the reasons described above, the cost could be much higher depending on the required level of geographic granularity.

54. There are no offsetting practical uses or other benefits to requiring providers to collect and disclose this information. As explained above, variations in peak usage occur at granular levels (*e.g.*, residential districts versus business districts, and even there by cell site), and identifying the peak times for each area and measuring speed, latency, and packet loss for these periods in such granular areas is impractical and cost prohibitive (millions of dollars each year). Rather, the only practical peak period metrics would be at much broader geographic areas. But at these levels, variations in peak usage are masked due to the fact that peak usage will occur at different times of day for different local areas within the geographic area being measured. For example, AT&T drive testing data show that the differences in national speed and latency metrics for the time periods from [**BEGIN CONFIDENTIAL INFORMATION**]

[**END CONFIDENTIAL INFORMATION**], 12-5 p.m. (more reflective of peak periods in business areas), and 12-9 p.m. (more reflective of peak periods in residential areas) are insubstantial, thus confirming the lack of any benefit from carving out metrics for peak times from overall averages assuming a reasonably sized geographical footprint (*e.g.*, city, CMA or FCC hexagon).

55. In any case, as discussed above, the FCC will soon deploy a mobile MBA program that will enable those data to be used to develop performance metrics for "peak" periods. Accordingly, to the extent the FCC determines there are benefits to such disclosures, it should reduce the burden by delaying implementation of the requirement until the MBA data are available.

B. The New "Peak Period" Requirement Would Be Burdensome To Implement For AT&T's Wireline Services With No Offsetting Benefits.

56. For wireline broadband services, the FCC has in the past indicated that peak usage occurs from 7 p.m. to 11 p.m. The FCC's MBA program already contains each of the performance metrics for these periods. Accordingly, it would be straightforward for an AT&T engineer to compute average network performance metrics for these periods. However, as discussed above, it would take an engineer about **[BEGIN CONFIDENTIAL INFORMATION]** **[END CONFIDENTIAL INFORMATION]** to compute these metrics for each geographic area. To the extent such metrics must be computed for many geographic areas (as opposed to only a national figure), the burden will increase substantially (one hour for each area). Moreover, to the extent these data must be updated periodically, the burden will be incurred multiple times each year. For these reasons, the burden of collecting and disclosing these figures, although straightforward, could easily be tens of thousands of dollars each year.

57. Again, there are no offsetting practical uses or other benefits from this information. AT&T has used the MBA data to compare wireline 24-hour average performance metrics to wireline peak period (7 a.m. to 11 p.m.) average performance metrics. The differences are very small, and thus provide no useful information beyond what is already available from the national metrics.

VI. THE NEW NETWORK PERFORMANCE REQUIREMENTS CREATE ADDITIONAL BURDENS ASSOCIATED WITH SALES AND CUSTOMER SERVICE AND SUPPORT

58. In addition to the burdens associated with collecting and disclosing these data, there are substantial additional burdens associated with providing the necessary training to

enable AT&T's sales and customer service and support ("CSS") personnel to respond to questions from customers about the new network performance-related disclosures.

59. To put this in perspective, AT&T mobility has tens of thousands of sales and CSS employees, of which a few thousand are team managers. In the ordinary course, the team managers would review the training materials and present them during a weekly team meeting with the other CSS employees. Assuming the team managers spend about 45 minutes reviewing the training materials and preparing their presentations about those materials for the weekly meetings, the cost of that time would be hundreds of thousands of dollars. Further, assuming that each of the tens of thousands of sales and CSS employees spend about one hour listening to the training and reviewing the materials themselves, the cost of that time would be millions of dollars.

60. AT&T's wireline business would likewise incur substantial costs to ensure that its sales and customer services representatives are properly trained to address customer inquiries about the new disclosures. AT&T mobility has several thousand representatives and vendors who would need to be trained to address inquiries about the new disclosures. The "methods and procedures" manuals used by these representatives would have to be updated to address these disclosures. AT&T's wireline customer support relationship and management systems would have to be updated to address these issues. All of these tasks would impose millions of dollars of additional costs on AT&T.

61. In addition, sales and customer service representatives will have to spend time explaining the new point-of-sale requirements to customers and responding to questions. This will add time to each sale and it will use additional customer service support time. Even if these

tasks use up only a few minutes of sales and customer service representatives' time each day, these costs could easily exceed several million dollars per year.

VERIFICATION PAGE

I declare under penalty of perjury that, based on the best information available to me, the foregoing is true and correct.

Executed on July 17, 2015.

Dr. Hany Fahmy

ATTACHMENT B

Declaration of Matthew T. Haymons

July 17, 2015

REDACTED – FOR PUBLIC INSPECTION

Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
Protecting and Promoting the Open Internet	)	GN Docket No. 14-28
	)	OMB Control No. 3060-1158
	)	

ACCEPTED/FILED

JUL 20 2015

Federal Communications Commission
Office of the Secretary

DECLARATION OF
MATTHEW T. HAYMONS

July 20, 2015

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I. QUALIFICATIONS AND BACKGROUND

1. My name is Matthew T. Haymons. I am currently Vice President-Technology Solutions Management at AT&T. I have held this position since October, 2014 and have been employed by AT&T for more than 19 years. In my capacity as Vice President-Technology Solutions Management, I am responsible for, among other things, helping to ensure that AT&T's point-of-sale systems provide the proper disclosures to customers.

II. PURPOSE AND SUMMARY

2. I am not a lawyer. However, I understand that there is some uncertainty as to whether the Federal Communications Commission ("FCC"), in its *2015 Open Internet Order*, intended to change the point of sale disclosure requirements. The FCC's most recent guidance, from 2011, states that "[b]roadband providers can comply with the point-of-sale requirement by, for instance, directing prospective customers at the point of sale, orally and/or prominently in writing, to a web address at which the required disclosures are clearly posted and appropriately updated."[1] However, I also understand that the last sentence of footnote 424 in the *2015 Open Internet Order* states: "[i]t is not sufficient for broadband providers simply to provide a link to their disclosures."[2] I understand that it is unclear whether this footnote is intended to reverse the prior guidance on this issue.

3. The purpose of this declaration is to demonstrate that such a change would impose very substantial new burdens on AT&T. Although the FCC has not explained how these disclosures must be made, AT&T has investigated different ways to do it. The bottom line is

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[1] Public Notice, FCC Enforcement Bureau And Office Of General Counsel Issue Advisory Guidance For Compliance With Open Internet Transparency Rule, GN Docket No. 09-191, WC Docket No. 07-52, DA 11-1148 (rel. June 30, 2011) ("*2011 Guidance*").

[2] *In the Matter of Protecting and Promoting the Open Internet*, Report and Order on Remand, Declaratory Ruling, and Order, 30 FCC Rcd. 5601, ¶ 171 n.424 (2015) ("*2015 Open Internet Order*").