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September 12, 2016

CONFIDENTIAL TREATMENT REQUESTED

Cathy Williams
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Nicholas Fraser
Office of Management and Budget
725 17th Street, N.W.
Washington, DC 20503

Re: *In the Matter of Protecting and Promoting the Open Internet*, GN Docket No. 14-28: AT&T Comments (OMB Control No. 3060-1158)

Dear Ms. Williams and Mr. Fraser:

AT&T hereby submits the “Confidential” version of AT&T’s Comments and the accompanying Declaration of Hany Fahmy. AT&T respectfully requests that the Office of Management and Budget (“OMB”) and the Federal Communications Commission (“FCC”) treat this submission as exempt from disclosure under Exemption 4 of the Freedom of Information Act (“FOIA”),¹ the FCC’s rules,² and pursuant to the Trade Secrets Act.³ The attached submission identifies the information for which AT&T is seeking confidential treatment using the designations “[Begin Confidential]” and “[End Confidential].” AT&T has separately submitted a redacted version of these submissions for public disclosure.

¹ See 5 U.S.C. § 552(b)(4) (exempting from public disclosure “trade secrets and commercial or confidential information obtained from a person and privileged or confidential”).

² See 47 C.F.R. §§ 0.457-0.459.

³ See 18 U.S.C. § 1905.

The Information Is Protected From Disclosure Under FOIA, Exemption 4.

This information is exempt from public disclosure under FOIA pursuant to 5 U.S.C. § 552(b)(4), which exempts from public disclosure “trade secrets and commercial or confidential information obtained from a person and privileged or confidential.” Exemption 4 of FOIA shields information which is (1) commercial or financial in nature; (2) obtained from a person outside government; and (3) privileged or confidential. *See Washington Post Co. v. U.S. Department of Health and Human Services*, 690 F. 2d 252 (D.C. Cir. 1982).⁴ The information for which AT&T seeks confidential treatment falls squarely within this test.

1. The information for which AT&T seeks confidential treatment satisfies the first prong of the test is because it is clearly commercial and financial in nature. The information describes how AT&T’s manages its commercial broadband networks, how it measures the performance of those networks, where it measures the performance of those networks, and the operations of its information technology (“IT”) related to those tests. It also contains detailed information about the costs incurred by AT&T related to these items.

2. The second prong of the test is clearly satisfied because AT&T is not a government entity.

3. The third prong of the test is also satisfied. Information is considered confidential if it is likely to impair the government’s ability to obtain necessary information in the future, or harm substantially the competitive position of the person from which the information was obtained. *National Parks and Conservation Ass’n. v. Morton*, 498 F. 2d 765,770 (D.C. Cir. 1974). In the context of the communications industry, the FCC has recognized that competitive harm can result from the disclosure of confidential business information that gives competitors insight into a company’s costs, pricing plans, market strategies, and customer identities. *See In re Pan American Satellite Corporation*, FOIA Control Nos. 85-219, 86-38, 86-41 (rel. May 2, 1986).⁵

All of these factors apply here. AT&T is voluntarily submitting this information to enable OMB to more effectively assess the FCC’s submission under the Paperwork Reduction Act. If the information that AT&T has designated as confidential were disclosed under FOIA, AT&T would incur significant competitive harm (for reasons described below), and thus would be far less willing to provide such information to the government in the future. Furthermore, such disclosure would likely discourage other companies from providing similar information in the future. Thus, disclosure of the information AT&T has designated as confidential would impair the government’s ability to obtain this information in the future.

⁴ The FCC’s rules implementing FOIA, Exemption 4 also protect such information from public disclosure. *See* 47 C.F.R. §§ 0.457-0.459.

⁵ Further, the FCC has ruled that not only should such data be protected but also that information through which sensitive information can be derived must also be protected. Memorandum Opinion and Order, *Allnet Communications Services, Inc. Freedom of Information Act Request*, FOIA Control No. 92-149, at 3 (rel. Aug. 17, 1993). The FCC’s decision was upheld in a memorandum opinion of the U.S. Court of Appeals for the D.C. Circuit, which affirmed a U.S. District Court decision protecting the information. *Allnet Communications Services, Inc. v. FCC*, Case No. 92-5351, Mem. Op. (D.C. Cir. May 27, 1994).

In addition, the information for which AT&T seeks confidential treatment would cause competitive harm to AT&T by giving competitors insight into AT&T's costs and network performance testing and metrics. AT&T views this information as highly competitively sensitive and confidential, and AT&T does not in the ordinary course of business make this information available to third parties. The broadband industry, including wireless broadband, is highly competitive, and AT&T faces intense competition from other broadband providers for both new and existing customers. Information for which AT&T seeks confidential treatment is extremely competitive sensitive, because such information can be used by competitors to streamline their own processes, reduce costs, and enhance their ability to compete more effectively against AT&T in the marketplace. As just one example, competitors could use information about how and where AT&T conducts its network performance testing to target their own network performance tests and to upgrade their own networks, targeting only those areas, thus reducing their own costs and gaining an unfair and undue competitive advantage in the marketplace. The FCC has provided assurances that it is "sensitive to ensuring that the fulfillment of its regulatory responsibilities does not result in the unnecessary disclosure of information that might put its regulatees at a competitive disadvantage."⁶ The FCC has previously found the types of information for which AT&T seeks confidential information to be competitively sensitive and exempt from disclosure under FOIA, Exemption 4,⁷ recognizing that competitive harm can result from the disclosure of confidential business information that gives competitors insight into a company's costs, customer pricing, network facilities, and market strategies.⁸

For all of these reasons, the information that AT&T has designated as confidential satisfies FOIA Exemption 4, and thus should not be publicly disclosed. AT&T notes that the FCC has also adopted rules implementing its approach to assessing whether information it receives falls within FOIA Exemption 4.⁹ For the reasons set forth above, the information that AT&T has designated as confidential falls squarely within the conditions set forth in these rules as well.

AT&T requests that material be withheld from public disclosure for as long as the information in question would provide a basis for competitors to gain insight into AT&T's procedures and derive competitive benefits therefrom. AT&T cannot determine in advance when this information would become "stale" for such purposes. In the event of a FOIA request covering the designated information, AT&T anticipates that it will be notified and allowed to

⁶ *Examination of Current Policy Concerning the Treatment of Confidential Information Submitted to the Commission*, GC Docket No. 96-55, ¶ 8 (rel. Aug. 4, 1998).

⁷ See e.g., *In Matter of Pacific Bell Telephone Company Petition for Pricing Flexibility for Special Access and Dedicated Transport Services*, CCB/CPD No. 00-23, DA 00-2618, November 20, 2000 (supporting confidentiality for collocation data); *Local Exchange Carrier's Rates, Terms and Conditions for Expanded Interconnection Through Virtual Collocation for Special Access and Switched Transport*; *Southwestern Bell Telephone Company*, 13 FCC Rcd. 13615 (1998) (keeping administrative operating expenses confidential because it would provide insight into business strategies); *AT&T/McCaw Merger Applications*, 9 FCC Rcd. 2610 (1994) (keeping confidential accounting records showing account balance information).

⁸ *Id.*

⁹ See 47 C.F.R. §§ 0.457-0.459.

comment on whether the information continues to remain a trade secret or otherwise confidential for purposes of FOIA Exemption 4.

The Information Is Protected From Disclosure Under The Trade Secrets Act

The information for which AT&T seeks confidential treatment is also protected from disclosure by the Trade Secrets Act, which imposes criminal penalties on government employees who disclose confidential commercial information. *See* 18 U.S.C. § 1905. The scope of information that is protected by the Trade Secrets Act is at least co-extensive with FOIA Exemption 4. *See Canadian Commercial Corp. v. Dep't of the Air Force*, 514 F.3d 37, 39 (D.C. Cir. 2008) (citing *CNA Fin. Corp. v. Donovan*, 830 F.2d 1132, 1151 (D.C. Cir. 1987)). This means that, unless another statute or regulation specifically authorizes disclosure of the information, the Trade Secrets Act *requires* federal agencies to withhold third-party business information to the fullest extent allowed under FOIA Exemption 4. *Id.* (citing *Bartholdi Cable Co., Inc. v. FCC*, 114 F.3d 274, 281 (D.C. Cir. 1997)). Federal agencies do not have the discretion to release this information as they do under other FOIA exemptions.

Should you have any questions, please feel free to contact me. Thank you for your attention to this matter.

Respectfully submitted,



Marc A. Korman
Counsel for AT&T

Before the
Office of Management and Budget
Washington, D.C. 20503

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Transparency Rule Disclosures, Protecting and)	
Promoting the Open Internet, Report and Order)	OMB Control No. 3060-1158
on Remand, Declaratory Ruling, and Order)	
)	
Protecting and Promoting the Open Internet)	CC Docket No. 14-28

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to devote substantial resources to the collection of the relevant data, engaging the time of engineers, technical analysts, IT professionals, and outside vendors (such as companies that perform drive testing). To facilitate OMB’s review of this broad new set of collections, the PRA and OMB’s rules requires the FCC to prepare a detailed public notice that identifies with specificity the collections for which the FCC is seeking approval and that explains the FCC’s estimate of the burden for each collection. In addition, since the FCC has committed to follow President Obama’s Executive Order 13563, its notice should also have included an analysis weighing the “benefits and costs, both quantitative and qualitative.”⁵

The *2016 PRA Notice* does not remotely comply with these requirements. The FCC has not specifically identified the collections for which it is seeking approval: although the FCC is presumably seeking approval for collections adopted in certain paragraphs of the *2015 Open Internet Order*,⁶ the FCC in many cases has yet to define the key terms in those collections or explain how it expects broadband providers to report the information, and those ambiguities are important because the burdens could vary dramatically depending on exactly what the collection

⁵ Executive Order 13563, *Improving Regulation and Regulatory Review* (Jan. 18, 2011), available at <https://www.whitehouse.gov/the-press-office/2011/01/18/executive-order-13563-improving-regulation-and-regulatory-review> (“Executive Order 13563”) (agencies must “use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible.”). See also 44 U.S.C. § 3512; *Saco River Cellular, Inc. v. FCC*, 133 F.3d 25, 29-31 (D.C. Cir. 1998) (without OMB approval, an agency’s data collection requests need not be followed). The FCC has committed to following Executive Order 14563. After this Executive Order was issued, the FCC Chairman at the time told Congress that the FCC would “comply with the [Executive Order],” and that FCC Staff had been instructed “that they are expected to comply with the executive order.” See Letter from Chairman Genachowski to Rep. Barrow (Sept. 12, 2011) available at https://apps.fcc.gov/edocs_public/attachmatch/DOC-310231A1.pdf.

⁶ See Final Rule, *Protecting and Promoting the Open Internet*, 80 Fed. Reg. 19737, ¶ 584 (rel. Apr. 13, 2015) (“*2015 Final Rule*”) (“the modified information collection requirements in paragraphs 164, 166, 167, 169, 173, 174, 179, 180, and 181 of this document are not applicable until approved by the Office of Management and Budget (OMB)”).

entails.⁷ The FCC has not broken out what it believes the burden will be for each collection at issue; indeed, it has not even explained how it calculated the aggregate burden for all of the new collections. And the *2016 PRA Notice* and accompanying *FCC Supplemental Statement* are utterly silent on the expected benefits or “practical utility” of any of these collections. Indeed, the *2016 PRA Notice* is so legally deficient that OMB does not have enough information to fulfill its statutory responsibility, and interested parties have effectively been denied any meaningful opportunity to comment.⁸ OMB should reject the FCC’s application for approval of the new collections and reporting requirements in their entirety for these reasons alone.

The deficiencies in the FCC’s submission are important, because the FCC’s bare-bones submission clearly understates the impact of its new collections on the industry. To begin with, the FCC never itemizes its cost estimates for the incremental collection and reporting requirements it is seeking here, but instead reports only total figures that include the costs of prior collections for which it previously obtained approval. The incremental costs must be gleaned from comparing the FCC’s current application to its prior ones. And when that is done, it is clear why the FCC did not break out these incremental costs for the collections and reporting requirements at issue here. They are absurd on their face. First, the FCC’s calculations assume that the overall labor costs for all of its collections will *fall by \$20 per respondent* even though it

⁷ The FCC’s *2015 Open Internet Order* added several new reporting requirements, including, among others, more granular geographic reporting, reporting for peak periods, reporting of packet loss metrics (in addition to speed and latency), disclosure of performance metrics by technology type, reporting of median (or ranges) of performance metrics, and reporting of average and expected performance metrics. See Dr. Hany Fahmy Declaration ¶ 3 (hereinafter referred to as “Fahmy Decl.”).

⁸ Collection of Economic and Regulatory Impact Support Data under RCRA, ICR Ref. No. 199709-2050-001 (May 5, 1998) available at <http://www.reginfo.gov/public/do/DownloadNOA?requestID=28005> (rejecting PRA submissions where “the generality of the Agency’s description of the proposed collection is such that it would be difficult for a member of the public to provide meaningful comments on it”).

admits that the new requirements will take more time. Second, the FCC's calculations assume that capital and startup costs will be only \$130,000 for the entire industry, which would be an absurdly low \$40 per provider. Recognizing this, the FCC asserts that it believes that only 25 of the 3,188 respondents would incur these capital and startup costs, but the FCC never explains how it reached that conclusion, or even which providers it believes would be subject to these costs and which would not. In any case, even if these incremental capital and startup costs are spread among only 25 providers that still amounts to only \$5,200 per provider. Although the FCC has not defined the scope of the new collections well enough for anyone to make a reasonably precise estimate, as shown below, the true cost to implement these incremental reporting and collection requirements will likely be millions of dollars for AT&T alone, depending on how the new requirements are ultimately interpreted, and many times more for the industry as a whole.

The enormous gulf between the FCC's low-ball estimate and the true cost can be seen by examining just one new collection: the requirement to report "packet loss" metrics. As explained in more detail below and in the Declaration of Dr. Fahmy, AT&T will have to spend more to comply with this requirement than the FCC's entire industry-wide estimate for compliance with all of the new collections. The FCC claims that AT&T can use the FCC's Measuring Broadband America ("MBA") data-gathering program as a safe harbor for its reporting under this requirement, but as Dr. Fahmy explains, in order to do so AT&T must purchase the data from the FCC's MBA vendor at an annual cost that exceeds the FCC's industry-wide capital and operations cost estimate. Even if that fee is eventually reduced or removed, it is still not clear whether AT&T will be able to use the MBA data, and if it cannot, AT&T will have to incur massive annual costs of millions of dollars to conduct new drive-testing

on its own. But as Dr. Fahmy explains, packet loss metrics do not provide any useful information for either consumers or edge providers – and thus there is no justification under the PRA for forcing the industry to incur those costs in the first place.

Other new collections could potentially impose additional massive costs on the industry. For example, the *2015 Open Internet Order* requires broadband providers to report certain metrics at “peak periods.” The FCC has yet to define key aspects of this requirement, but such a collection could be extraordinarily expensive depending on how the FCC resolves those ambiguities, even though such reporting would have no practical utility. Similarly, the FCC has indicated that the performance metric reporting requirement applies to Wi-Fi services, to the extent such services qualify as broadband internet access service, but the FCC has provided no analysis whatsoever of the cost of such reporting, which could be astronomically expensive given that such systems operate indoors and, thus, are not susceptible to drive-testing.

The FCC has had ample opportunity to address the deficiencies in its notice. Following passage of the *2015 Open Internet Order*, the FCC published an even more deficient initial notice in the Federal Register,⁹ and AT&T and several other parties filed comments in response to that *2015 PRA Notice* pointing out the myriad omissions in the FCC’s analysis.¹⁰ Rather than responding to these comments and correcting the deficiencies, the FCC issued the *2016 Guidance PN*, which purported to clarify limited aspects of these new requirements but actually raised as many questions as it answered.¹¹ It also released its new *2016 PRA Notice* and

⁹ Information Collection Being Reviewed by the Federal Communications FCC, 80 Fed. Reg. 29000 (rel. May 20, 2015) (“*2015 PRA Notice*”).

¹⁰ See *Protecting and Promoting the Open Internet*, GN Docket No. 14-28, OMB Control No. 3060-1158, *Paperwork Reduction Act Comments of AT&T* (filed July 20, 2015) (“AT&T Comments”).

¹¹ *Guidance on Open Internet Transparency Rule Requirements*, GN Docket No. 14-28, Public Notice (May 19, 2016) (“*2016 Guidance PN*”) (purporting to “offer guidance regarding

accompanying supporting statement,¹² which dismisses without explanation many of the deficiencies identified by AT&T and others, and still falls far short of meeting the PRA requirements. Accordingly, as explained in the remainder of these comments, OMB should find that the *2016 PRA Notice* is deficient and grossly underestimates the burdens that these new collections will impose on the industry, and thus should be rejected in its entirety; but in all events, OMB should reject the new packet loss, peak usage, and Wi-Fi collections as unsupported and without practical utility.

I. THE 2016 PRA NOTICE IS LEGALLY DEFICIENT AND IN ALL EVENTS GROSSLY UNDERESTIMATES THE BURDENS ASSOCIATED WITH THE PROPOSED INFORMATION COLLECTIONS.

The FCC's analysis in the *2016 PRA Notice* does not meet the most basic requirements of the PRA, and as a result, the FCC has not given OMB the information necessary to evaluate the costs and potential benefits of these new collections. The statute and implementing rules require the FCC to identify the specific collections for which it is seeking approval, develop and explain an estimate of the burden for each collection, and assure OMB that each of these collections is justified by a "practical utility." The FCC has also voluntarily committed to abide by President Obama's Executive Order 13563,¹³ which would require an even more rigorous analysis

acceptable methodologies for disclosure of network performance to satisfy the enhanced transparency requirements in the *2015 Open Internet Order*"). The Public Notice was similar in form to advisory guidance the FCC issued in 2011 and 2014 on the previous, 2010 transparency rules. See *FCC Enforcement Bureau and Office of General Counsel Issue Advisory Guidance for Compliance with Open Internet Transparency Rule*, Public Notice, 26 FCC Rcd. 9411, 9414-15 (2011); *FCC Enforcement Advisory, Open Internet Transparency Rule: Broadband Providers Must Disclose Accurate Information to Protect Consumers*, Public Notice, 29 FCC Rcd 8606, 8607 (2014).

¹² Application for OMB Approval Under the Paperwork Reduction Act, OMB Control No. 3060-1158, FCC Supporting Statement (submitted August 11, 2016)) ("*FCC Supporting Statement*"), available at <http://www.reginfo.gov/public/do/DownloadDocument?objectID=67156900>.

¹³ See *The President's Executive Order on Improving and Streamlining Regulation by Independent Regulatory Agencies*, White House (July 11, 2011) available at

weighing the “benefits and costs, both quantitative and qualitative.”¹⁴ The *2016 PRA Notice* does not even pretend to meet these requirements, and the FCC’s estimate of the industry-wide costs of implementing these collections is so absurdly low that it makes a mockery of these requirements on its face. Because the FCC has not provided the information necessary for OMB to perform its functions under the statute, OMB should reject the FCC’s entire submission for these reasons alone.

A. The 2016 PRA Notice Is Deficient Because It Does Not Meet the Basic Requirements Of The Paperwork Reduction Act.

The PRA was enacted to “minimize the paperwork burden” of federal data collection efforts,¹⁵ and thus Congress required agencies to obtain OMB approval before any submission of information can be enforced.¹⁶ OMB, in turn, may not approve any proposed information collection unless it determines that the collection is “necessary” for the “proper performance of

<https://www.whitehouse.gov/blog/2011/07/11/president-s-executive-order-improving-and-streamlining-regulation-independent-regula> (“Shortly after the President’s initial Executive Order, I directed FCC staff to follow the spirit of the Order. We had already conducted retrospective reviews, and incorporated cost-benefit analysis into our decision-making.”) (Statement of FCC Chairman Genachowski); *see also* Letter from Chairman Wheeler to Rep. Blackburn (May 19, 2014) *available at* https://apps.fcc.gov/edocs_public/attachmatch/DOC-327470A1.pdf (“Since President Obama issued Executive Orders 13563 and 13579 in 2011, the Commission has endeavored to act consistently with the cost-benefit analysis principles articulated in those orders in its rulemaking proceedings. This includes consideration of quantifiable, monetized costs and benefits associated with a proposed regulatory approach, as well as careful consideration of those costs and benefits that are not as easily quantifiable or monetized.”).

¹⁴ Executive Order 13563, *Improving Regulation and Regulatory Review* (Jan. 18, 2011), *available at* <https://www.whitehouse.gov/the-press-office/2011/01/18/executive-order-13563-improving-regulation-and-regulatory-review> (agencies must “use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible”). *See also* 44 U.S.C. § 3512; *Saco River Cellular, Inc. v. FCC*, 133 F.3d 25, 29-31 (D.C. Cir. 1998) (without OMB approval, an agency’s data collection requests need not be followed).

¹⁵ *Tozzi v. EPA*, 148 F. Supp. 2d 25, 38 (D.D.C. 2001); 44 U.S.C. § 3501(1).

¹⁶ *See* 44 U.S.C. § 3512; *see also Saco River Cellular*, 133 F.3d at 29-31 (without OMB approval, an agency’s data collection requests need not be followed).

the functions of the agency, including whether the information shall have practical utility.”¹⁷ The PRA defines “practical utility” as “the ability of an agency to use information, particularly the capability to process such information in a timely and useful fashion.”¹⁸ OMB’s regulations further provide that “[p]ractical utility means the actual, not merely the theoretical or potential, usefulness of information to or for an agency, taking into account its accuracy, validity, adequacy, and reliability, and the agency’s ability to process the information it collects . . . in a useful and timely fashion.”¹⁹

To facilitate OMB review, the PRA and its implementing rules require the agency to develop “a functional description of the information to be collected,”²⁰ and its Federal Register notice must set forth “a summary of the collection of information.”²¹ The Federal Register notice also must contain “an estimate of the burden that shall result from the collection of information” so that interested parties can comment on this estimate.²² A burden estimate must be provided for *each* proposed information collection (not all collections in the aggregate) and must be “objectively supported.”²³ The Federal Register notice must provide sufficient information to allow interested parties to “[e]valuate the accuracy of the agency’s estimate of the burden of the proposed collection of information, *including the validity of the methodology and*

¹⁷ 44 U.S.C. § 3508; *see also Tozzi*, 148 F. Supp. 2d at 38 (“The OMB must determine whether the [information collection] request is necessary to enable the agency to function and of public utility.”).

¹⁸ 44 U.S.C. § 3502(11).

¹⁹ 5 C.F.R. § 1320.3(l). *See also id.* (“In determining whether information will have ‘practical utility,’” OMB must “take into account whether the agency demonstrates actual timely use for the information . . . to carry out its functions.”).

²⁰ 44 U.S.C. § 3506(c)(1)(A)(ii); 5 C.F.R. § 1320.8(a)(2).

²¹ 44 U.S.C. § 3507(a)(1)(D)(ii)(II); 5 C.F.R. § 1320.5(a)(1)(iv)(B)(2).

²² 44 U.S.C. § 3507(a)(1)(D)(ii)(V); 5 C.F.R. § 1320.5(a)(1)(iv)(B)(5).

²³ 5 C.F.R. § 1320.8(a)(4).

*assumptions used.*²⁴ Following submission of public comments, the statute requires the agency to evaluate those comments and submit a certification to OMB.²⁵ After conducting its own 30-day public comment period,²⁶ OMB can then approve the information collection, disapprove the collection, or instruct the agency to make substantive or material changes.²⁷

OMB has properly rejected agency PRA submissions, like the one here, on the grounds that “[t]he generality of the Agency’s description of the proposed collection is such that it would be difficult for a member of the public to provide meaningful comment on it.”²⁸ OMB has

²⁴ *Id.* at § 1320.8(d)(1)(ii) (emphasis added). The rules define “burden” broadly (the “total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information”) and the burden estimate must account for:

- (i) [r]eviewing instructions; (ii) [d]eveloping, acquiring, installing, and utilizing technology and systems for the purpose of collecting, validating, and verifying information; (iii) [d]eveloping, acquiring, installing, and utilizing technology and systems for the purpose of processing and maintaining information; (iv) [d]eveloping, acquiring, installing, and utilizing technology and systems for the purpose of disclosing and providing information; (v) [a]djusting the existing ways to comply with any previously applicable instructions and requirements; (vi) [t]raining personnel to be able to respond to a collection of information; (vii) [s]earching data sources; (viii) [c]ompleting and reviewing the collection of information; and (ix) [t]ransmitting, or otherwise disclosing the information.

Id. at § 1320.3(b).

²⁵ *See* 44 U.S.C. § 3506(c)(3); *id.* at § 3507(a)(1)(B). The FCC must certify, *inter alia*, that the information has practical utility and is understandable to those who are to respond. *Id.* at §§ 3506(c)(3)(A), 3506(c)(3)(D).

²⁶ *Id.* at § 3507(b).

²⁷ *See id.* at § 3507(e)(1).

²⁸ Collection of Impact Data on Technical Information: Request for Generic Clearance, Design for the Environment (DfE), ICR Ref. No. 199907-2070-002 (Feb. 2, 2000) *available at* <http://www.reginfo.gov/public/do/DownloadNOA?requestID=29362> (“DfE Clearance Submission”). *See also* Reporting Requirements under the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables and Related Products, ICR Ref. No. 200110-0581-004 (Feb. 13, 2002) *available at* <http://www.reginfo.gov/public/do/DownloadNOA?requestID=3591> (OMB rejecting an agency’s PRA submissions for “fail[ing] to provide the public with a description of the proposed

explained that an agency’s submission fails to comply with that requirement when it does “not describe its information collection plan sufficiently to allow evaluation of practical utility, burden, and necessity [if the agency] does not specify the information to be collected or the methods used for collecting information.”²⁹

In short, the FCC’s public notice must meet at least three basic requirements: it must (1) specifically identify each information collection for which it seeks OMB approval; (2) provide an “objectively supported” burden estimate that includes sufficient information to allow OMB and interested parties to evaluate “the validity of the methodology and assumptions used”; and (3) demonstrate and justify the “practical utility” of each proposed information collection. Although a number of public commenters previously explained that the FCC’s bare-bones *2015 PRA Notice* failed to meet these basic requirements, the FCC has not remedied those failures in the *2016 PRA Notice* or the *FCC Supporting Statement*. Indeed, the FCC’s public notice here does not meet any of these three requirements, and OMB should therefore reject these collections.³⁰

Identification of the Collections. The FCC is required to provide a “functional description” of “each proposed collection.”³¹ The *2016 PRA Notice* indicates merely that the FCC is seeking approval for “[t]he rules adopted in” the *2015 Open Internet Order* that “require all providers of broadband Internet access service to publicly disclose accurate information regarding the network management practices, performance, and commercial terms of their broadband Internet access services sufficient for consumers to make informed choices regarding

information collection that would allow for meaningful public comment in both their 60 day and 30 day federal register notice”).

²⁹ See DfE Clearance Submission.

³⁰ See 44 U.S.C. § 3508.

³¹ 44 U.S.C. §§ 3506(c)(1)(A)(ii) & 3506(c)(2)(A); 5 C.F.R. §§ 1320.8(a)(2) & 1320.8(d)(1).

use of such services and for content, application, service, and device providers to develop, market, and maintain Internet offerings.”³² The *FCC Supplemental Statement* contains similarly superficial descriptions of the general types of transparency requirements the new order imposes.³³ These broad and imprecise description does not qualify as a “functional description” of “each collection” for which the FCC is seeking approval.

For further clues, commenters are apparently expected to consult the version of the *2015 Open Internet Order* published in the Federal Register.³⁴ In that “Final Rule” publication, the FCC included the same generic description of collections as in the *2016 PRA Notice*, but also identified the paragraphs containing the new collections that it believes fall within that description: “the modified information collection requirements in paragraphs 164, 166, 167, 169, 173, 174, 179, 180, and 181 of this document are not applicable until approved by the Office of Management and Budget (OMB).”³⁵ Here again, even if the *2016 PRA Notice* is intended to cover all of the collections in each of the listed paragraphs, the descriptions in those paragraphs are extraordinarily vague and thus cannot consistute the necessary “functional description” of “each” collection.

³² *2016 PRA Notice* at 53146; *2015 PRA Notice* at 29001.

³³ See *FCC Supplemental Statement* at 3; see also *id.* at 7 (noting that several commenters argued that the FCC’s notice was inadequate and stating only the FCC “disagrees with this assessment” because it provides the information “customarily included”).

³⁴ Final Rule, *Protecting and Promoting the Open Internet*, 80 Fed. Reg. 19737, ¶ 584 (Apr. 13, 2015) (the *Open Internet Rules* shall go into effect on June 12, 2015, “except that the modified information collection requirements in paragraphs 164, 166, 167, 169, 173, 174, 179, 180, and 181 of this document are not applicable until approved by the Office of Management and Budget (OMB)”). Although the FCC still has never specifically identified which information collections in these paragraphs it thinks require OMB approval, these paragraphs must necessarily constitute the maximum possible universe of collections that the *2016 PRA Notice* can reasonably be interpreted to cover, since the FCC has not identified any other collections that fall within that notice.

³⁵ *Id.* ¶ 584.

Although the FCC has since clarified the scope of *some* aspects of *some* of these collections,³⁶ the descriptions of the information collections in these paragraphs remain open to a wide range of interpretations, and the burdens would vary dramatically depending upon how the collections are ultimately defined and implemented. The FCC is, in essence, asking OMB for *pre-approval*, sight-unseen, of the FCC's ultimate implementation of these collections, however burdensome they may be. Such OMB pre-approval would function as a blank check and effectively permit the FCC to choose more expansive and burdensome interpretations of those collections, because the FCC could claim that OMB had "already" approved them under the PRA. That is not the process Congress enacted in this statute.

Estimate of the Burden. The FCC is also required to provide sufficient information in the notice to allow OMB and interested parties to evaluate the FCC's burden estimate, "including the validity of the methodology and assumptions used."³⁷ The FCC's estimate must comprehensively account for the total time, money, and effort of responding to *each* specifically identified information collection. As noted, OMB has expressly rejected PRA submissions where "the generality of the Agency's description of the proposed collection is such that it would be difficult for a member of the public to provide meaningful comments on it," and has noted that "[t]his is of special concern [where] the data gathered under th[e] collection is likely to be used for regulatory development, in which there is inherent public interest."³⁸ As OMB has explained, PRA submissions will be rejected when the agency "appears to have grossly

³⁶ 2016 Guidance PN; FCC Supporting Statement.

³⁷ 5 C.F.R. § 1320.8(d)(1)(ii).

³⁸ Collection of Economic and Regulatory Impact Support Data under RCRA, ICR Ref. No. 199709-2050-001 (May 5, 1998) available at <http://www.reginfo.gov/public/do/DownloadNOA?requestID=28005>.

underestimated the burden.”³⁹ As explained in more detail in the following subsections, the FCC has plainly underestimated the overall burden of the rules, while failing to properly document its calculations.

Explanation of “Practical Utility.” Just as the statute requires the FCC to explain its estimates of the burdens, the FCC is also required to explain what “practical utility” these collections have that would justify the imposition of those burdens. And statutorily, “practical utility” is a paramount concern in whether or not to approve, reject, or seek a revision of the information collection.⁴⁰ Given that the *2016 PRA Notice* does not specifically identify the collections for which the FCC is seeking approval, it should not be surprising that it fails to provide any explanation of the practical utility for any of the individual collections either.⁴¹ In some cases, the FCC purports to rely on public interest benefits described in the Order in which it adopted these requirements, but, as explained below, the sections of the Order the FCC cites contain no such justifications. These failings are particularly egregious given the FCC’s

³⁹ Disposal of National Forest Timber – Timber Export and Substitution Restrictions, ICR Ref. No. 199508-0596-001 (Sept. 29, 1995) *available at* <http://www.reginfo.gov/public/do/DownloadNOA?requestID=121756> (“The Forest Service appears to have grossly underestimated the burden hours. For example, the justification mentions 16 hours of burden time for the preparation of sourcing area applications and 3 hours for the preparation of annual reports. These burden hours do not appear to have been added into the total burden hours.”); *see also* National Fire Incident Reporting System (NFIRS), ICR Ref. No. 199908-3067-002 (March 3, 2000) *available at* <http://www.reginfo.gov/public/do/DownloadNOA?requestID=38175> (“This collection is disapproved based on the following factors: ... No documentation is included to account for training, information technology, or State resources necessary to participate in this collection. A burden figure of \$1.6 is asserted, but not supported, and is not included in the total annual cost burden.”).

⁴⁰ *See* 44 U.S.C. § 3508 (“Before approving a proposed collection of information, the Director shall determine whether the collection of information by the agency is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility.”).

⁴¹ The same issue arose in the *2015 PRA Notice*, as AT&T explained in its comments. *See, e.g.,* AT&T Comments at 21 (discuss lack of practical utility for reporting packet loss network data).

commitment to adhere to President Obama’s Executive Order 13563, which places particular emphasis on imposing the smallest burdens necessary taking into account the expected benefits of the collection, both “quantitative and qualitative.”⁴² Because the FCC has made no effort to calculate the actual burdens or benefits of any specific collection, the FCC is evading the whole point of the PRA, which is to force agencies to grapple with and demonstrate that the collections it seeks to impose have a real net social benefit.

B. The 2016 PRA Notice Is Also Deficient Because Its Burden Estimate Is Vastly Understated.

The FCC’s estimate of the overall costs to comply with the new collections is also vastly understated. Although the FCC still has not defined the scope of the new collections well enough for anyone to make a reasonably precise estimate, the true cost to implement all of the *2015 Open Internet Order’s* new collections and reporting requirements could easily total millions of dollars for AT&T alone, depending on how the new requirements are ultimately interpreted, and many times more for the industry as a whole.

The new collections mandated in the *2015 Open Internet Order* are not minor tweaks to pre-existing transparency reporting processes, as the FCC would have it. Rather, they would require AT&T and other providers to, among other things, develop new systems and software; collect, analyze, and verify vast amounts of new data; train thousands of employees and contractors; potentially add thousands of miles and hours to existing drive test routes while also requiring new vehicles and personnel; and undertake numerous other costly initiatives. Yet despite these requirements, the FCC estimates that the total incremental cost per year to

⁴² See Executive Order 13563.

implement these new requirements will be just \$130,000 in annualized capital, operation, and maintenance costs and an overall *reduction* in labor costs.⁴³

The sum total of the FCC’s cost analysis is as follows. The FCC indicates that 3,188 companies will be subject to the collection requirements, but that only 25 of these companies would incur any costs for capital, start-up, operation, and maintenance.⁴⁴ For each of these 25 providers, the FCC estimates that they will incur new, increased annual capital-related costs of only about \$5,200 each, for a total annual cost to the industry of \$130,000.⁴⁵ The FCC also assumes that all 3,188 will incur an annual labor cost per respondent of \$1,702.72 to comply with the 2010 and 2015 requirements combined, which actually represents about a \$20 reduction from the labor costs OMB previously approved, even though the FCC admits that the number of hours required to comply with its new requirements will increase.⁴⁶ That’s it; there is no further explanation of any aspect of the FCC’s conclusions. The FCC does not explain who the 25 providers are or why only 25 providers will have to pay these costs, except for the assurance that

⁴³ *FCC Supporting Statement* at 16.

⁴⁴ When OMB approved the FCC’s 2010 open internet transparency requirements, the FCC estimated that only 1,476 providers would be subject to the rules, but the same number – 25 – would be subject to capital costs. Fahmy Decl. ¶ 8.

⁴⁵ *FCC Supporting Statement* at 7.

⁴⁶ *Id.* at 15. The figure is flawed for two reasons. *First*, as AT&T explained in its comments on the *2015 PRA Notice*, the FCC has vastly understated the number of hours necessary to comply with these rules. *Second*, despite increasing the estimate of hours necessary for compliance to 31.2 hours per year (up from 24.4 hours in the Supporting Statement submitted to OMB in 2014 and available in OMB’s docket (“*2014 FCC Supporting Statement*”)), the *FCC Supporting Statement*’s annual labor cost of \$1,701.72 is actually *lower than* the annual labor cost of \$1,721.66 in the *2014 FCC Supporting Statement*. AT&T’s assumption is that this decrease occurred because the earlier justification included a 30% overhead factor and the *FCC Supporting Statement* (inexplicably) omits it. See *2014 FCC Supporting Statement* at 3; *cf.* *FCC Supporting Statement* at 15.

the FCC has “consistently” used this unsupported and unexplained figure before.⁴⁷ Of course, without that information it is impossible to determine whether the FCC’s assertion that only 25 providers would incur any additional costs is even remotely credible. Nor does the FCC explain why the other 3,163 providers will incur no capital costs.

The FCC’s cost estimates are clearly divorced from reality. The absurdity of the capital cost estimate is confirmed by the FCC’s own contract with SamKnows Ltd. (“SamKnows”), a British Company. The *2015 Open Internet Order* requires, among other things, that broadband providers report certain performance-related statistics including speed, latency, and packet loss. The FCC has contracted with SamKnows to perform this sort of testing for itself for its mobile MBA program, and it has indicated that wireless broadband providers can use the MBA data as a “safe harbor” for compliance with the transparency reporting requirements. Notably, however, the FCC is paying SamKnows approximately half a million dollars per year to perform the testing necessary to generate the data for such reporting.⁴⁸ If the FCC’s calculations in the *FCC Supporting Statement* are to be believed, the FCC would have been able to obtain these services for a small fraction of that amount. Indeed, the FCC estimates an industry-wide total cost of \$640,000 for capital, maintenance, and operations costs for compliance with *all* of the 2010 and new 2015 collections combined – which is only a little more than the annual value of the FCC’s contract with SamKnows relating to a subset of those collections.

⁴⁷ *Id.* at n.31. A review of the Supporting Statement for the original transparency rules does include the 25 respondent assumption, but provides no justification.

⁴⁸ Given the short timeframe that parties were given to submit comments on the *2016 PRA Notice*, AT&T was unable to confirm the value of the FCC’s contracts with SamKnows through a FOIA request; however, a value of \$500,000 per year is reported for this contract by various third-party websites. *See, e.g.,* GovTribe, SamKnows LTD London *available at* <https://govtribe.com/vendor/samknows-ltd-london>.

Equally important, as explained in more detail below, broadband providers could not actually use the MBA program as a safe harbor without separately contracting with SamKnows to obtain the MBA data over which it has a monopoly.⁴⁹ AT&T has sought the mobile MBA data from SamKnows and received a bill of \$180,000 (for 12 months of access). This bill rendered to AT&T alone exceeds the Commission's estimated total incremental capital and startup costs for the entire industry for the new collection and reporting requirements for which it is now seeking approval. And these direct payments to SamKnows do not include the additional costs AT&T must incur to conduct its own internal analysis and make use of the data.

In short, the FCC has failed to support its cost estimates. The facial absurdity of the FCC's overall burden estimate, the failure to show its work, and the refusal to identify any practical utility associated with the specific information collections at issue here all require OMB to reject the *2016 PRA Notice*.

II. THE FCC IGNORES THE SUBSTANTIAL BURDENS ON BROADBAND PROVIDERS TO MEASURE AND DISCLOSE PACKET LOSS WHILE FAILING TO IDENTIFY ANY USEFUL BENEFIT.

The *2015 Open Internet Order* requires broadband providers to add "packet loss" to their network performance disclosures.⁵⁰ The cost of adding packet loss measurements to the required disclosures will be orders of magnitude greater than the FCC's estimates, regardless of how

⁴⁹ Providers would need to obtain independent access to the underlying MBA data because the FCC reports the data without geographic location information, but that information is critical for providers to be able to use the information for the new reporting obligations. Moreover, data access is needed in order to determine whether the (still undefined) sample size requirements are met for any particular CMA such that the MBA data will qualify as a safe harbor.

⁵⁰ *2015 Open Internet Order* ¶ 166 ("The existing [2010] transparency rule requires disclosure of actual network performance. In adopting that requirement, the FCC mentioned speed and latency as two key measures. Today we include packet loss as a necessary part of the network performance disclosure.").

mobile broadband providers comply with these requirements.⁵¹ Imposing these costs on the industry would be entirely unjustified, because packet loss metrics provide no useful benefits to consumers or edge providers. OMB should reject this collection.

AT&T previously explained to the FCC that it would cost AT&T millions of dollars to collect and report packet loss data.⁵² In both the *2016 Guidance PN* and *FCC Supporting Statement*, the FCC now claims that mobile broadband providers can reduce the burden of reporting packet loss and other metrics by using the FCC’s own measurements from the mobile Measuring Broadband America program as a so-called “safe harbor” for complying with these requirements.⁵³ That is incorrect: even if this safe harbor were available – and it is not yet clear whether it is – this program does not eliminate the costs to respondents. *First*, as noted above, the data itself is not free to obtain from SamKnows. The \$180,000 annual charge for which AT&T was invoiced amounts to \$4.5 million per year for 25 respondents, which far exceeds the FCC’s industrywide estimate of costs for all of the reporting requirements combined.⁵⁴ *Second*, once AT&T or another provider obtains the data, there is still work to do to analyze, validate, and ultimately present the data in a manner that is useful for consumers and consistent with the rules.⁵⁵

⁵¹ See Fahmy Decl. ¶ 18.

⁵² See *id.* ¶ 19.

⁵³ See, e.g., *FCC Supporting Statement* at 6 (“In addition, it establishes a safe harbor for mobile broadband providers participating in the mobile Measuring Broadband America (MBA) program (participation in the MBA program for fixed broadband services already is a safe harbor.)”); *2016 PRA Notice* at 6 (“The *2015 Open Internet Order* stated that the MBA program could at the appropriate time be declared a safe harbor for mobile BIAS providers in meeting the requirement to disclose actual network performance.”).

⁵⁴ See Fahmy Decl. ¶ 19.

⁵⁵ In addition to the concerns expressed here, AT&T notes that it currently uses the data collected by the FCC’s MBA program to estimate the required national wireline speed and latency metrics. The MBA program includes packet loss data for wireline, but AT&T engineers will still need to

In all events, even if the SamKnows data were free, that would not solve the deficiencies in the FCC’s application because it is not yet clear whether any provider will be able to rely on this safe harbor, for multiple reasons. In the *2016 PRA Notice*, the FCC stated that “the MBA program could at the appropriate time be declared a safe harbor for *mobile* BIAS providers in meeting the requirement to disclose actual network performance.”⁵⁶ The FCC said it anticipated that the MBA program will begin issuing mobile data in 2016, but it also suggested that respondents can use the safe harbor only if there is a “sufficient sample size” and if “the MBA program has provided [Cellular Market Area (“CMA”)]-specific network performance metrics of the service in the CMAs with an aggregate population of at least one half of the aggregate population of the CMAs in which the service is offered.”⁵⁷ Currently, AT&T has no way of knowing whether the MBA’s sample size will be sufficient for purposes of complying with these new collections and whether it or other providers will thus be able to “rely” on the MBA as a safe harbor.⁵⁸ Absent such assurances, AT&T and other providers would have no choice but to implement, at substantial cost, some other data collection mechanism in order to meet the FCC’s requirements.⁵⁹

Even if the MBA program meets the FCC’s standards, there are still substantial concerns about the accuracy or usefulness of the data collected under the mobile MBA program. As

analyze the MBA packet loss data to estimate statistically significant national packet loss metrics. Computing packet loss data would cost tens of thousands of dollars per year, and these costs would be incurred each time an update to the data must be completed. AT&T made these same points in its earlier comments, *see* AT&T Comments at 22-23, but the *FCC Supporting Statement* is silent on the issue and does not support its low estimate of the costs.

⁵⁶ *2016 PRA Notice* at 6 (emphasis in original).

⁵⁷ *Id.*

⁵⁸ *See* Fahmy Decl. ¶ 19.

⁵⁹ *Id.* ¶ 23.

described in the Declaration of Dr. Fahmy, AT&T has examined preliminary performance metrics obtained from MBA and “they produce clearly incorrect results.”⁶⁰ For example, MBA reports “speeds that are 30 percent lower than AT&T’s real-world drive tests.”⁶¹ Dr. Fahmy describes some of the potential reasons for these invalid results, including the fact that a disproportionate number of the MBA program’s samples are derived from speed tests involving Android devices.⁶² The inaccuracy of the FCC’s MBA results puts AT&T in an impossible position: if it publicly discloses the FCC’s MBA results as a less burdensome means of complying with the FCC’s “transparency” requirements as a regulatory matter, consumers may misinterpret the data, which could have negative real-world consequences for AT&T’s business.

At a minimum, AT&T would have to invest in internal analysis and verification to ensure that the data are complete and accurate before relying on – and publicizing – them. On that score, the FCC substantially underestimates the necessary labor costs. Once AT&T obtains the MBA datasets, the data must be examined for blatant errors (*e.g.*, obvious outliers); average packet loss must be computed for each of the more than 700 CMAs where AT&T operates its network; the data must be audited to address any inconsistent or inaccurate results; and the results must then be linked to the AT&T plans offered in each CMA.⁶³ Each of these tasks requires work from AT&T engineers, computer programmers, and IT professionals.⁶⁴ Dr. Fahmy estimates that it would cost more than [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] to develop the processes and tools for these tasks, plus approximately

⁶⁰ See Fahmy Decl. ¶ 24.

⁶¹ *Id.*

⁶² *Id.* (“AT&T has shown, for example, that the scheduled measurements obtained from these Android devices are at least 2 Mbps lower than manual results obtained from iPhones”).

⁶³ See Fahmy Declaration at ¶ 25.

⁶⁴ *Id.*

[BEGIN CONFIDENTIAL] [END CONFIDENTIAL] each time the data must be updated, which could occur multiple times during the year.⁶⁵ Once again, these figures vastly exceed the FCC’s estimates for the labor costs necessary to comply with all of the new requirements combined.

The FCC claims that AT&T could reduce these labor costs by using the “broadband label” the FCC has developed as a safe harbor format for broadband providers.⁶⁶ But as Dr. Fahmy explains, the label approved by the FCC is not as simple as the agency suggests and would be very costly to implement and maintain.⁶⁷ There are more than one hundred plans available through AT&T, including grandfathered services, and separate reporting requirements may be required for each offering in each of the more than 700 CMAs where AT&T operates its network.⁶⁸ Each would require its own label, which results in the need for “tens of thousands of different labels.”⁶⁹ Furthermore, labels will need to be adjusted for any promotions which are constantly changing. The costs to create, revise, and make available all of these combinations of labels, even if a standard format is used, should not be ignored and could exceed [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] over three years.⁷⁰

If AT&T could not use the mobile MBA as a safe harbor, then the only currently viable choice would be to use data collected from third-party drive testing, which would be extremely costly. AT&T currently uses third-party drive testing to measure speed and latency performance

⁶⁵ *Id.*

⁶⁶ *See Consumer and Governmental Affairs, Wireline Competition, And Wireless Telecommunications Bureaus Approve Open Internet Broadband Consumer Labels*, GN Docket No. 14-28, Public Notice (rel. April 4, 2016).

⁶⁷ Fahmy Decl. at ¶ 26.

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ *Id.*

metrics, but not packet loss.⁷¹ Such drive testing entails a substantial cost, involving dozens of vehicles taking measurements in areas covering most of the U.S. population. Once collected, personnel must analyze and verify the data before IT professionals place the information on the AT&T website containing AT&T’s transparency disclosures.⁷²

There are two ways AT&T could comply with this requirement. The first option would be to ask the third party 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.⁷³ The installation of new software in existing equipment, however, would mean that the equipment could not take as many measurements in the same timeframe, and therefore the vendor would have to add drive time to achieve the same sample size for its measurements of speed, latency, and packet loss.⁷⁴ AT&T’s drive test vendor estimates that drive test times would need to increase by 10 percent to avoid a loss in current data collections, and “this increase in drive testing would impose an additional burden of several millions of dollars per year.”⁷⁵ The only other option would be to conduct separate drive tests with equipment designed to capture only packet loss.⁷⁶ Although this approach would not require an increase in drive times, the

⁷¹ See *id.* ¶ 27.

⁷² *Id.* ¶ 32.

⁷³ *Id.* ¶ 29.

⁷⁴ *Id.* ¶ 30.

⁷⁵ See *di.* ¶ 30; see also *id.* ¶ 29 (“By analogy, an organization conducting a telephone poll with two questions may be able to poll 1000 people an hour. Adding a third question would significantly reduce the number of people that can be polled in an hour. Thus, to collect the same number of observations, the organization taking the poll would have to either increase the time over which the poll is conducted or add new poll takers, either of which would significantly increase the cost of taking the poll”).

⁷⁶ See *id.* at ¶ 31.

additional equipment and vehicle costs would exceed three quarters of a million dollars per year.⁷⁷

Under either approach, there are “costs associated with developing useful average packet loss estimates from the data.”⁷⁸ AT&T analysts would need to “validate the drive test data, analyze it, and then compute statistically significant average packet loss metrics from these data.”⁷⁹ There would be significant upfront costs to these activities, as well as ongoing costs including the need to “add the new information to the website containing AT&T’s disclosures” on a continuous basis.⁸⁰ Adding packet loss data would necessitate a significant increase in the amount of time engineers and IT professionals must devote to verification and analysis of the drive test data.

The cost of collecting and disclosing packet loss data has been further muddled by the FCC’s *2016 PRA Notice*, which explains that performance data (including packet loss) may be aggregated among CMAs with a population density below 250 people per square mile.⁸¹ As Dr. Fahmy explains, “AT&T interprets this to mean that it can report the performance metrics for all of the [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] CMAs within its network footprint with fewer than 250 people per square mile based on the average results from the [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] CMAs where it currently conducts drive testing.”⁸² Such an interpretation is the “only reasonable interpretation because any other

⁷⁷ *Id.*

⁷⁸ *Id.* ¶ 32.

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ *See 2016 Guidance PN* at 7.

⁸² Fahmy Decl. ¶ 35.

interpretation would impose millions of dollars of costs.”⁸³ If the FCC interprets the requirement to mean providers must have at least some results from each CMA with fewer than 250 people per square mile, “then AT&T would have to request substantial additional drive testing in the [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] CMAs covered by its network where no drive testing is currently being conducted” at a cost of more than [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] per year.⁸⁴

None of these costs and obligations is justified by any benefits. The FCC has never offered a good reason to include packet loss data in the transparency disclosures and the *FCC Supporting Statement* simply points back to the *2015 Open Internet Order*.⁸⁵ But the *2015 Open Internet Order* merely includes a footnote in which it cites comments from AARP and others arguing that “packet loss could be useful to consumers.”⁸⁶ None of those commenters explained *how* packet loss would actually be useful to consumers or edge providers. The comments merely suggested that packet loss *might* be useful for assessing “delay intolerant applications.”⁸⁷ As the “expert” agency, the FCC was required to do more than simply accept those claims without any analysis of whether such data would be at all useful, let alone whether the burdens of collecting and disseminating such information outweighed any purported benefit.

Packet loss metrics, in fact, have no real “practical utility” for either consumers or edge providers in evaluating service quality or comparing the performance of alternative networks,

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *FCC Supporting Statement* at 8.

⁸⁶ *2015 Open Internet Order* ¶ 166, n.407. *See also* Fahmy Decl. ¶ 38.

⁸⁷ *2015 Open Internet Order* ¶ 166, n.407.

including for delay intolerant applications.⁸⁸ Packet loss implicates certain trade-offs in the engineering of broadband networks. For example, a principal method to reduce packet loss is to use larger buffers in routers. But increasing the size of the buffer also slows service as it lengthens the queue in which packets must wait for delivery to their next destination. That means there is a significant trade-off between reduced packet loss and the speed at which packets are transmitted through the network and, therefore, lower packet loss does not necessarily mean better performance, even for delay intolerant applications. Increasing buffer size to mitigate packet loss will result in increased network delays, which could have a far more adverse effect on delay intolerant applications, such as frozen frames for significant periods of time.⁸⁹

Even if packet loss data disclosure could have some benefit to consumers, “the reporting methods adopted by the [FCC] are not of practical use.”⁹⁰ As explained above, the FCC has proposed to allow providers to average metrics for those CMAs they serve with a population density below 250 people per square mile. But these metrics “would reflect combined average observations from CMAs across the country.”⁹¹ These metrics, therefore, “would not provide existing or potential customers with accurate performance metrics for the area where they live and work, and thus would be of little or no practical utility.”⁹² It will also be impossible, moreover, to compare two different providers because they may be aggregating different CMAs.⁹³

⁸⁸ See Fahmy Decl. ¶ 39.

⁸⁹ See *id.* ¶ 42.

⁹⁰ *Id.* ¶ 45.

⁹¹ *Id.*

⁹² *Id.*

⁹³ *Id.*

III. “PEAK USAGE” IS BEING INTERPRETED SUCH THAT THE COLLECTION AND DISCLOSURE WILL HAVE NO BENEFIT, ONLY COSTS.

The *2015 Open Internet Order* also requires providers to disclose each of the three network performance metrics (speed, latency, and packet loss) “during times of peak usage,” an extremely expensive proposition.⁹⁴ For its mobility network, AT&T currently discloses overall averages for speed and latency.⁹⁵ The problem with reporting “peak usage” data is relatively simple: it “var[ies] substantially from location to location.”⁹⁶ Even within the same city, peak usage can vary greatly from area to area, such as downtown versus residential areas.⁹⁷

To its credit, the FCC has recognized that its failure to define “peak usage” had to be corrected, but its “clarifications” are in fact “unclear, and depending on how they are interpreted, they would either be much more costly to collect and report than the FCC is estimating, or would be of zero practical utility.”⁹⁸

In the *FCC Supporting Statement*, the FCC stated that “peak usage should be determined solely by the local time zone, that there is no requirement that it vary between residential and business areas, and that broadband providers retain flexibility to determine the times when peak usage occurs on their respective networks.”⁹⁹ The FCC has essentially said that providers can choose what they believe the peak usage times should be, although there is no discussion of what happens if the FCC believes the provider chose incorrectly. Regardless, while AT&T appreciates flexibility, the FCC’s interpretation renders peak usage information useless and there

⁹⁴ *2015 Open Internet Order* ¶ 166.

⁹⁵ See Fahmy Decl. ¶ 46.

⁹⁶ *Id.* ¶ 47.

⁹⁷ See AT&T Comments at 25.

⁹⁸ Fahmy Decl. ¶ 46.

⁹⁹ *FCC Supporting Statement* at 11; see also *2016 Guidance PN* at 5.

is no utility in collecting it. If providers are completely inconsistent in how they define the peak period, the data cannot be usefully compared by consumers.¹⁰⁰

However “peak” is defined, it would be necessary to conduct drive tests during those peak times. If peak usage occurs outside of the current drive testing schedule, additional drive testing would be necessary which could require substantial costs.¹⁰¹ The more reasonable way to read the FCC’s clarification is that it would allow providers to compute peak period metrics for each CMA from data already being collected, an approach that would be far less expensive to implement.¹⁰² But there would still be a cost far in excess of the FCC’s estimates as engineers would need to “develop...new metrics for each CMA covered by AT&T’s network.”¹⁰³

IV. THE FCC HAS COMPLETELY NEGLECTED TO SUPPORT ITS WI-FI DATA COLLECTION REQUIREMENTS.

In its earlier comments, AT&T discussed the issue of Wi-Fi and what collections and disclosures would be required for Wi-Fi services.¹⁰⁴ As AT&T explained, broadband providers are relying increasingly on Wi-Fi networks to support traditional mobile service platforms and actually integrating Wi-Fi into those platforms.¹⁰⁵ Applying disclosures of performance measures for Wi-Fi provider networks raise significant burden issues entirely unaccounted for by the FCC. Drive testing is infeasible for data collection, as many Wi-Fi routers are indoors.¹⁰⁶ Alternative methods explored by AT&T thus far are all extremely expensive. For example, AT&T has investigated placing a “test probe” at each Wi-Fi location that tracks performance

¹⁰⁰ See Fahmy Decl. ¶ 50.

¹⁰¹ See Fahmy Decl. ¶ 48.

¹⁰² *Id.* ¶ 49.

¹⁰³ *Id.*

¹⁰⁴ See AT&T Comments at 18-19.

¹⁰⁵ *Id.* at 18.

¹⁰⁶ *Id.* at 18-19.

measures. But because AT&T has tens of thousands of Wi-Fi locations, initial estimates for merely deploying the probes to collect the data – to say nothing of the costs of analysis and disclosure – run in the millions of dollars.¹⁰⁷

The *FCC Supporting Statement* indicates that the transparency rules do apply to Wi-Fi, but then says nothing about the added costs of collecting whatever data that still-undefined requirement may entail.¹⁰⁸ According to the FCC, its burden figures are “averages” which somehow adequately accounts for measuring Wi-Fi services.¹⁰⁹ But an empty reliance on “averages” does not address the problem.¹¹⁰ The FCC has not included the costs of measuring Wi-Fi performance metrics in its data. The agency’s failure to attempt to calculate and include what could be astronomical costs is unsurprising, as its own MBA vendor is not separately tracking performance metrics for Wi-Fi (meaning the supposed safe harbor could never apply). Without including any costs – or even discussion of costs – of Wi-Fi collection, the *FCC Supporting Statement* cannot be relied upon.

¹⁰⁷ *Id.* at 19; Fahmy Decl. ¶ 52.

¹⁰⁸ See *FCC Supporting Statement* at 12 (“To the extent that a specific Wi-Fi service is BIAS, the enhanced disclosure requirements would apply.”).

¹⁰⁹ *FCC Supporting Statement* at 12; Fahmy Declaration at ¶ 53.

¹¹⁰ Perhaps the FCC is suggesting that the burden estimates are industry averages and the fact that AT&T’s burden may be higher than the average because of Wi-Fi is irrelevant. But this argument fails to account for the fact that AT&T’s costs to measure Wi-Fi would be many millions of dollars, which would result in “average” industry-wide burdens far in excess of the FCC’s estimates. See Fahmy Decl. ¶ 53.

CONCLUSION

For the foregoing reasons, OMB should reject the *2016 PRA Notice* because the FCC has failed to comply with the PRA and implementing rules.

Respectfully submitted,

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Transparency Rule Disclosures, Protecting and
Promoting the Open Internet, Report and Order
on Remand, Declaratory Ruling, and Order

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OMB Control No. 3060-1158

Protecting and Promoting the Open Internet

CC Docket No. 14-28

DECLARATION OF DR. HANY FAHMY

September 12, 2016

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I. QUALIFICATIONS AND BACKGROUND

1. My name is Dr. Hany Fahmy. I am Assistant Vice President of Global Public Policy and Legislative Affairs with AT&T Services Inc. I have worked at AT&T for 18 years. My responsibilities include leading wireless and wireline broadband performance evaluation for the purpose of disclosures to federal and state governments and guiding AT&T compliance and participation in government sponsored broadband evaluation initiatives such as the Federal Communications Commission's ("FCC") wireline/mobile Measuring Broadband America ("MBA"), Connect America Fund, and the State of California mobile drive test programs. Prior to this position, I was Director of wireless and wireline access architecture with AT&T Labs responsible for the evolution of AT&T's access network to new technologies such as 5G, FTTP (fiber to the premises) and G.FAST (high speed DSL). Prior to joining AT&T, I was Research Staff Member with Racal DataComm USA. I hold a Ph.D. in Electric and Computer Engineering from University of Miami, Florida.

II. PURPOSE AND SUMMARY

2. The purpose of this declaration is to demonstrate that the FCC has greatly underestimated the burdens of the new collection and reporting requirements adopted in the *2015 Open Internet Order*¹ for which the FCC is now seeking approval under the Paperwork Reduction Act, and to explain why those burdens are not offset by any practical uses or other benefits.

3. In the *2015 Open Internet Order*, the FCC adopted new collection and reporting requirements for AT&T and other carriers that will require AT&T and other providers, among other things, to: develop new systems and software; collect, analyze, and verify vast amounts of

¹ See Report and Order on Remand, Declaratory Ruling, *Protecting and Promoting the Open Internet*, 30 FCC Rcd. 5601 ("*2015 Open Internet Order*").

new data; train thousands of employees and contractors; potentially install new equipment in dozens of vehicles used for drive testing; potentially add thousands of miles to existing drive test routes; and numerous other costly initiatives. The FCC estimates that the *total* costs that will be incurred to comply with these new requirements by the more than 3,000 providers that are subject to them combined will be only about \$130,000 per year in new capital costs and no new labor costs.² As I demonstrate below, the cost to AT&T alone will be orders of magnitude higher than this estimate, and there are no offsetting practical utility benefits.

4. The FCC initially sought comment on its estimated burdens for the new collection and reporting requirements in a Public Notice published in the Federal Register on May 20, 2015.³ In response to the Public Notice, I submitted a declaration that described in great detail why the FCC's burden estimates were vastly understated.⁴ In response to my declaration (and to the pleadings submitted by AT&T and other parties), the FCC issued further guidance as to how providers can comply with its new collection and reporting requirements.⁵ However, the FCC did not materially alter its estimates of the burdens that these new collection and reporting requirements will impose on AT&T and other providers. Instead, the FCC is now seeking approval from the Office of Management and Budget ("OMB") for its new collection and

² See Application for OMB Approval Under the Paperwork Reduction Act, OMB Control No. 3060-1158, FCC Supporting Statement (submitted August 11, 2016) ("*FCC Supporting Statement*"), available at <http://www.reginfo.gov/public/do/DownloadDocument?objectID=67156900>.

³ Public Notice, *Information Collection Being Reviewed by the Federal Communications Commission*, OMB 3060-1158, 80 Fed. Reg. 29000 (May 29, 2015).

⁴ See Declaration of Dr. Hany Fahmy, attached to Paperwork Reduction Act Comments of AT&T, *Protecting and Promoting the Open Internet*, GN Docket No. 14-28; OMB Control No. 3060-1158 (July 20, 2015), available at <http://www.reginfo.gov/public/do/DownloadDocument?objectID=67162500>.

⁵ See *Guidance on Open Internet Transparency Rule Requirements*, GN Docket No. 14-28, Public Notice, DA 16-569 (May 19, 2016) ("*2016 Guidance PN*").

reporting requirements under the Paperwork Reduction Act (“PRA”) based on virtually the same vastly understated burden estimates.

5. The FCC argues that that the findings and guidance provided in its *2016 Guidance PN* addresses the concerns raised by me, as well as other parties. That is not accurate. As I explain below, the cost burdens that will be incurred by AT&T alone to comply with the new collection and reporting requirements – even following the guidance in the *2016 Guidance PN* – will far exceed the *industry-wide* estimates on which the FCC relies in this proceeding. I also demonstrate that there are still no offsetting practical utility benefits from these new collecting and reporting requirements.

6. The remainder of this declaration is organized as follows. In Section III, I unpack the FCC’s analyses of the burdens and show that the FCC is estimating that its new collection and reporting requirements will cost the industry only about \$67,000 per year. In Section IV, I demonstrate that a subset of the new collection and burden requirements for AT&T alone will far exceed this estimate and that there are no offsetting practical utility benefits from these new requirements.

III. THE FCC’S COST ESTIMATES OF THE BURDENS FOR THE NEW COLLECTION AND REPORTING REQUIREMENTS.

7. Before turning to the actual costs AT&T will incur to comply with the FCC’s new collection and reporting requirements, it is useful to unpack the cost burden estimates that the FCC relies upon for OMB approval of these new reporting requirements. In 2010, the FCC adopted its *2010 Open Internet Order*.⁶ In that Order, the FCC imposed new collection and reporting requirements on broadband providers.

⁶ See Report and Order, *Preserving the Open Internet, Broadband Industry Practices*, 25 FCC Rcd. 17905 (2010) (“*2010 Open Internet Order*”).

8. The FCC applied for OMB approval of these new collections and reporting requirements under the PRA in July 2014. In that submission, the FCC estimated that 1,712 providers would be subject to these new reporting requirements, but only 25 of them would incur annual “capital/startup” costs. These capital/startup costs included equipment and other items required to comply with these new requirements. The FCC estimated these capital/startup costs would, in aggregate, amount to \$510,000 per year.⁷

9. In addition, the FCC estimated that all of the 1,712 providers subject to these new collection and reporting requirements would incur labor costs to comply with these requirements. These labor costs are associated with time that engineers, technical writers, staff administrators, web administrators, and attorneys will have to spend implementing the reporting and collection requirements. The FCC estimated that these labor costs would average \$1,721.66 per year for each provider.⁸ The OMB approved these collections and reporting requirements based on these cost estimates.

10. The FCC now seeks approval for additional collection and reporting requirements. The FCC’s *2015 Open Internet Order* added several new reporting requirements, including, among others, more granular geographic reporting, reporting for peak periods, reporting of packet loss metrics (in addition to speed and latency), disclosure of performance metrics by technology type, reporting of median (or ranges) of performance metrics, and reporting of average and expected performance metrics.

⁷ See Application for OMB Approval Under the Paperwork Reduction Act, OMB Control No. 3060-1158, FCC Supporting Statement (submitted July 2, 2014) *available at* <http://www.reginfo.gov/public/do/DownloadDocument?objectID=48532001>.

⁸ *Id.*

11. In its application for approval of these new collection and reporting requirements, the FCC has updated the number of providers that would be subject to these requirements and its previous requirements from 1,476 to 3,188.

12. The FCC, however, continues to estimate that only 25 (unidentified) providers will incur “capital/startup” costs for these new requirements. The FCC estimates that the incremental capital/startup costs for the new requirements will total \$130,000 annually, or about \$5,200 per year for each of the 25 providers the FCC believes will incur such costs.

13. The FCC has also updated its estimated labor costs to account for these incremental reporting requirements. The FCC estimates that these new requirements will, on average, add only about 6.8 hours for each provider to comply with these requirements. Curiously, however, although the FCC estimates that it will take more time to comply with these requirements, it estimates that the total annual labor cost per provider for complying with all of the collection and reporting requirements (*i.e.*, those adopted in 2010 and the new ones adopted in 2015) will *decrease* from \$1,721.66 to \$1,701.72. It appears that this decrease is due to the FCC’s removal of a 30% “overhead” expense factor the FCC applied to hourly labor rates in its prior submissions. The FCC has provided no explanation for why it removed that 30% factor. In short, the FCC estimates that these new collection and reporting requirements will *reduce* the labor costs of complying with them by about \$20 for each of the 3,188 respondents, for a total industry-wide savings of \$63,760 (\$20 x 3,188).

14. In summary, the FCC is now seeking approval for the additional collection and reporting requirements adopted in the *2015 Open Internet Order*. The FCC estimates that these new requirements will impose capital/startup costs of about \$131,000 per year industry-wide, and that these costs will be incurred by only about 25 larger providers, resulting in a per provider

cost of about \$5,200 per year. In addition, the FCC finds that these new requirements will take more time to complete, but that the overall labor costs will *decrease* by about \$20 per year. Thus, the FCC estimates that the total annual cost of complying with the new requirements for a larger carrier, like AT&T, will be about \$5,180 per year (\$5,200 - \$20), and that the overall incremental costs for the entire industry associated with these new requirements is about \$67,240 per year (this estimate is the industry-wide \$130,000 incremental cost estimate for capital/startup minus the estimated \$20 “savings” in labor costs for each of the 3,188).

15. In the following sections, I demonstrate that these estimates dramatically understate the costs that AT&T and the industry will incur. Indeed, as I show below, some of the new requirements will alone cost AT&T more than the FCC’s industry-wide cost to implement. I also show that these costs are not offset by any practical utility benefits.

IV. THE FCC DRAMATICALLY UNDERSTATES THE COST BURDENS OF THE NEW COLLECTION AND REPORTING REQUIREMENTS AND CANNOT DEMONSTRATE ANY OFFSETTING PRACTICAL UTILITY OR OTHER BENEFITS.

16. In this section, I focus on a subset of the new data collection and reporting requirements adopted in the *2015 Open Internet Order* for which the FCC is now seeking approval under the PRA. I demonstrate that the cost burden to AT&T alone for this subset of the data collection and reporting requirements exceeds the FCC’s estimated cost burdens for *all* of the new data collection and reporting requirements for the *entire industry*. I also demonstrate that there are no offsetting practical utility benefits that could justify these cost burdens.

A. The Cost Burden For AT&T To Comply With The New Packet Loss Reporting Requirements Exceed The FCC’s Estimates By Orders of Magnitude And There Are No Offsetting Benefits.

17. The *2015 Open Internet Order* added “packet loss” to the collection and disclosure requirements imposed on broadband Internet access providers:

The existing [2010] transparency rule requires disclosure of actual network performance. In adopting that requirement, the Commission mentioned speed and latency as two key measures. Today we include packet loss as a necessary part of the network performance disclosure.⁹

18. In addition, the FCC has clarified that, for mobile broadband services, these data must be reported at the Cellular Market Area (“CMA”) level (there are about 730 CMAs within AT&T’s mobile network coverage area). As explained below, this new reporting requirement alone will cost AT&T far more than the FCC’s industry-wide cost estimates for all of the collections for which it is seeking approval. Moreover, there are no practical utility or other benefits that could offset these costs.

1. The Costs Imposed By The FCC’s New Packet Loss Collection Requirements Is Far Higher Than Estimated By The FCC.

19. In my prior declaration, I demonstrated that it would cost AT&T millions of dollars to collect and report packet loss data at the CMA level, which far exceeds the FCC’s estimate for the industry as a whole for all of the new collections and reporting. The FCC has not disputed the facts set forth in my declaration. Instead, the FCC asserts that these costs can be avoided by using packet loss data collected by the FCC and maintained by a third party vendor, SamKnows Ltd. (“SamKnows”), pursuant to the FCC’s MBA program. As I demonstrate below, that is not true. Access to the SamKnows database is \$180,000 per year *per provider*, which is greater than the \$130,000 *industry-wide* cost estimate for the capital and startup costs for all of the new collections and reporting requirements. In any case, it is not clear whether AT&T will be allowed to rely on the SamKnows data. The FCC has explained that AT&T may rely on it only if it has a sufficient sample size, and because the sample size has not yet been made publicly available, it is not known whether this condition will be satisfied. Moreover, analyses

⁹ 2015 Open Internet Order ¶ 166.

of preliminary data from SamKnows indicates that it is highly inaccurate, and may ultimately have to be set aside to avoid providing misleading information to customers. The only currently available alternative way to obtain the packet loss data needed to comply with the new collection and reporting requirement is through “drive testing,” which, as I explain below, would cost hundreds of thousands to many millions of dollars.

20. *Mobile MBA Data.* Since 2013, the FCC has been working on a program to collect nationwide performance metrics from mobile phone users, including metrics relating to packet loss. Under this program, an application is installed on consumers’ mobile phones, and the application provides speed, latency, and packet loss data to the FCC vendor, a British company called “SamKnows” tasked with collecting and maintaining the data. The FCC expects to be able to “publish its first Mobile Broadband Report in 2016.”¹⁰

21. The FCC’s submission in support of its request for OMB approval of its new “packet loss” collection and reporting requirement states that AT&T (and other providers) can use the packet loss data provided in the mobile MBA report and that the cost of obtaining and using these data will be very small.¹¹ The FCC is incorrect.

22. Foremost, the FCC’s cost estimates ignore the substantial costs that AT&T and other providers would incur to obtain the packet loss data from SamKnows, which, as noted, maintains the data for the mobile MBA program. AT&T has contacted SamKnows to obtain access to the mobile MBA data. In response, SamKnows sent AT&T an invoice for \$180,000, which would provide AT&T access to the data for 12 months (I have attached this invoice as “Exhibit A”). This cost alone exceeds the FCC’s industry-wide cost estimates for all of the new reporting requirements.

¹⁰ *2016 Guidance PN* at 6.

¹¹ *FCC Supporting Statement* at 9.

23. Even if the mobile MBA data were free, it is not clear that AT&T or other providers would be allowed to rely on it for the required packet loss disclosures and thus avoid the costs of collecting it themselves. The rules adopted by the FCC state that AT&T and other providers may use the mobile MBA data only if: (1) those data have “sufficient sample size” and (2) “the MBA program has provided CMA-specific network performance metrics of the service in the CMAs with an aggregate population of at least one half of the aggregate population of the CMAs in which the service is offered.”¹² It is impossible to know at this time whether these conditions will be satisfied for AT&T (or other providers). The FCC has not yet defined what it means by “sufficient sample size,” nor has it released the mobile MBA. Consequently, there is no way to know whether the mobile MBA data relating to AT&T will satisfy this condition. If this condition is lacking, AT&T will not be allowed to use the mobile MBA data to satisfy its reporting requirements for packet loss.

24. Even if these conditions are satisfied, AT&T still may not be able to rely on the mobile MBA packet loss data. The FCC has allowed AT&T to examine preliminary performance metrics produced by the mobile MBA program. AT&T’s preliminary analyses of these data indicate that they produce clearly incorrect results. For example, they indicate speeds that are 30 percent lower than AT&T’s real-world drive tests (as discussed further below, drive testing involves driving vehicles through the areas where AT&T has a mobile network and measuring speed at periodic intervals).¹³ AT&T has identified multiple reasons for these invalid results. For example, AT&T has noted that although it has a large base of iPhones on its network (most of which are capable of achieving the highest speeds), the vast majority of the

¹² 2016 Guidance PN at 6.

¹³ I have attached a letter to this Declaration that AT&T previously submitted to the FCC documenting these issues. See Exhibit B.

measurement samples collected in the mobile MBA program are from scheduled tests from Android devices, which are not a good representation of device population on the AT&T network (AT&T has shown, for example, that the scheduled measurements obtained from these Android devices are at least 2 Mbps lower than manual results obtained from iPhones).¹⁴ As another example, the FCC's sample data indicate that the FCC's tests are treating networks of different AT&T affiliates, which use different networks and offer different levels of services, as the same network for the purpose of performance metrics testing. For instance, the FCC's sample tests treat performance metrics for AT&T and Cricket as the same, even though they operate on different core networks.¹⁵

25. Finally, the FCC's cost estimates dramatically understate the labor costs AT&T would incur to process the data and make it available to customers, whether or not AT&T uses mobile MBA data. The packet loss data contained in the mobile MBA dataset consists of individual measurements taken nationwide. Providing accurate average data at the CMA level requires substantial processing. The data must be examined for errors (*e.g.*, obvious outliers), and those estimates must be removed. The average packet loss must then be computed for each CMA (for AT&T, this calculation must be done for each of the more than 700 CMAs), and the results must then be audited to address inconsistent and inaccurate results. The final results for each CMA must then be linked to the AT&T plans offered in each CMA (there can be dozens of plans, including legacy plans that AT&T no longer offers but that customers may still use). These tasks require time from AT&T engineers, computer programmers, and information technology ("IT") professionals. AT&T estimates that it would cost more than [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] to develop the processes and tools for

¹⁴ *See id.*

¹⁵ *See id.*

these tasks, plus about [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] each time these data must be updated which could occur multiple times each year. These costs substantially exceed FCC's industry-wide estimated capital and startup costs for all of the new requirements (\$130,000).

26. The FCC's response is not valid. The FCC states that providers can avoid some of the burdens associated with reporting these costs by using the FCC's Broadband Label. In fact, using the Broadband Labels would increase the costs. The FCC's Broadband Labels are plan-specific. For each mobile broadband plan they identify the price, data allowances, overage charges, and other plan specific details. AT&T has more than one hundred plans, which include its current offerings as well as plans that are no longer available but that are still used by AT&T's customers. Moreover, the FCC's new data reporting requirements require AT&T to provide speed, latency, and packet loss for each of the more than 700 CMAs where AT&T operates a mobile broadband network. Thus, if AT&T were to use the Broadband Labels, AT&T would have to develop a separate label for each plan and for each CMA – *i.e.*, tens of thousands of different labels – and then develop a system that would enable customers to identify the specific label for a specific plan and CMA. Moreover, AT&T would have to implement systems to update these thousands of Broadband Labels each time AT&T updates its performance metrics. AT&T's initial analyses indicates that to set up a system that reports data using the FCC's proposed broadband labels for its broadband services (both mobile and wireline) would require input from several AT&T teams, including AT&T's product teams, pricing teams, consumer marketing teams, ecommerce development teams, and legal teams. AT&T has estimated that the cost of setting up and maintaining accurate broadband labels would cost well over [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] over three years,

which again, far exceeds the FCC's estimated burden for the entire industry for *all* reporting requirements.

27. *Drive Test Data.* Currently, the only alternative to the mobile MBA data is third-party "drive test" data.¹⁶ As noted, drive testing involves outfitting vehicles with mobile cellular equipment that is capable of taking periodic speed and latency measurements as the vehicles drive through AT&T service areas. These vehicles also contain equipment that stores this information, and software capable of automatically collecting these data. AT&T currently relies on third-party "drive testing" to measure actual network speed and latency for its mobile broadband network. But these drive tests do not currently collect information about "packet loss."

28. It is possible to add packet loss to the drive tests, but that would require substantial additional costs far in excess of what the FCC has estimated for the packet loss disclosure requirements. 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.

29. 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 number of observations. Currently, the drive test equipment is capable of capturing a certain number of observations for speed and latency for each given period of time. If the equipment is also

¹⁶ AT&T also works with other third party vendors to obtain performance metrics for its network. None of these vendors currently collects reliable packet loss data for AT&T's network. Some vendors are currently working to collect these data. It is unclear what these vendors will charge for access to the packet loss data when, and if, they are developed. For comparison purposes, AT&T currently pays its main vendor more than [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] for speed and latency data.

required to capture packet loss data, the equipment will be able to capture fewer observations for speed and latency in any given time period. By analogy, an organization conducting a telephone poll with two questions may be able to poll 1000 people an hour. Adding a third question would significantly reduce the number of people that can be polled in an hour. Thus, to collect the same number of observations, the organization taking the poll would have to either increase the time over which the poll is conducted or add new poll takers, either of which would significantly increase the cost of taking the poll.

30. As AT&T previously explained to the FCC, AT&T's drive test vendor has indicated that the total number of observations that could be collected for each metric during a given amount of time would decrease by about 10 percent if packet loss data were added to the collection. Therefore, to maintain the same number of data points – and hence maintain the current sample size and accuracy – it would be necessary to increase drive test times by about 10 percent. According to recent estimates by AT&T's vendors, this increase in drive testing would impose an additional burden of several millions of dollars per year. For these reasons, the FCC's "understand[ing] that current drive testing equipment for mobile broadband providers is already capable of measuring packet loss" is misleading.¹⁷ It misses the critical point that developing and enabling this capability while maintaining the same number of testing observations imposes millions of dollars on costs on providers.

31. The only other option is to conduct separate drive tests with equipment designed to capture only packet loss data. 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 and vehicle costs would be very substantial.

¹⁷ *FCC Supporting Statement* at 11-12.

According to the estimates most recently provided to AT&T by its vendors, this approach would cost more than three quarters of a million dollars per year.

32. 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 thousands of dollars per CMA (there are more than 700 CMAs for AT&T) each year, with the actual amount depending on how frequently the disclosures need to be updated. Again, these labor costs would far exceed the negative \$20 labor costs in the FCC's estimates.

33. Finally, it is unclear from the FCC's rules whether AT&T will be required to expand drive testing to other CMAs, which could further substantially increase the costs of these new collections and reporting requirements. The FCC's new reporting rules require AT&T to conduct, through its vendor, drive tests in all CMAs with population density above 250 people per square mile.¹⁸ For CMAs with population density below 250 people per square mile performance measurements may be aggregated across CMAs.¹⁹ These rules are unclear and, depending on how they are interpreted could result in millions of dollars in additional costs for AT&T.

¹⁸ *2016 Guidance PN* at 7.

¹⁹ *Id.*

34. AT&T's vendor currently conducts drive testing in [BEGIN CONFIDENTIAL] [END HIGHLY CONFIDENTIAL] CMAs in the United States covered by its network, which cover about [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] of the U.S. population covered by its network. All of the CMAs where AT&T's vendor does not conduct drive testing have a population density below 250 people per square mile. In addition, [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] of the CMAs where AT&T's vendor does do drive testing have a population density below 250 people per square mile. Thus, of the [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] CMAs covered by AT&T's network with population density below 250 people per square mile, AT&T conducts drive testing in [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] of them.

35. Under the FCC's new rules AT&T is allowed to report "aggregated" performance metrics (speed, latency, and packet loss) for these low population density CMAs. AT&T interprets this to mean that it can report the performance metrics for all of the [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] CMAs within its network footprint with fewer than 250 people per square mile based on the average results from the [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] CMAs where it currently conducts drive testing. That is the only reasonable interpretation because any other interpretation would impose millions of dollars of costs.

36. However, if the FCC interprets its rules to mean that AT&T must have at least some drive test results for all CMAs with fewer than 250 people per square mile, then AT&T would have to request substantial additional drive testing in the [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] CMAs covered by its network where no drive testing is currently

being conducted. These additional drive tests would cost more than [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] dollars each year.²⁰

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

37. The FCC’s submission in this proceeding states that the FCC, “on the basis of the extensive record developed in the Open Internet proceeding, found the enhanced disclosure requirements, including disclosure of the packet loss to be warranted to ensure that consumers and edge providers have the information they need to make informed decisions.”²¹ In support of this assertion the FCC cites to paragraphs 163-169 of its *2015 Open Internet Order*. I have carefully reviewed these paragraphs. The only mention of the new packet loss requirement in those paragraphs appears in the third sentence to the first bullet of paragraph 166: “Today we include packet loss as a necessary part of the network performance disclosure.” In my view, this sentence does not demonstrate that there is any practical utility for the new packet loss collection requirement.

38. The FCC also addresses this issue in footnote 407 of the *2015 Open Internet Order*. In this footnote the FCC cites to comments from AARP and others stating that “packet loss could be useful to consumers.”²² But none of these comments appears to explain how packet loss would actually be useful to consumers or edge providers, let alone show any practical

²⁰ AT&T’s currently spends about [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] to conduct drive testing in [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] CMAs, which amounts to about [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] for every 200 MSAs. However, because the [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] CMAs where AT&T does not currently conduct drive testing are generally more rural and larger geographic areas, the additional costs of drive testing in these additional CMAs will likely be higher.

²¹ *FCC Supporting Statement*, at 8.

²² *2015 Open Internet Order* ¶ 166, n.407.

utility associated with such a requirement. These comments merely state that packet loss, to the extent it would be useful at all, would be useful for assessing “delay intolerant applications.”²³

These comments do not explain how or why.

39. In fact, as I have previously explained, 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.

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

41. 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. Thus, there is a trade-off between reduced packet loss and the speed at which packets are

²³ *Id.*

transmitted through the network. Dropped packets are normally recovered using TCP retransmission.

42. 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.

43. Even if packet loss metrics were a useful metric, 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>).²⁴ 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.

44. In addition, 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 the size of router buffers to reduce packet loss. But, as explained above, such practices would likely result in slower and less optimized Internet routing systems.

²⁴ These applications allow customers to measure packet loss using an application on their device.

45. Even if packet loss were of practical use to consumers, the reporting methods adopted by the FCC are not of any practical use. For example, as discussed above, the FCC's rules permit carriers that report performance metrics based on drive testing to report aggregated average metrics for CMAs with population density below 250 people per square mile. These metrics, therefore, would reflect combined average observations from CMAs across the country. For example, these aggregate figures could reflect observations in California, Texas, Georgia, Florida, and Illinois. As a result, these metrics would not provide existing or potential customers with accurate performance metrics for the area where they live and work, and thus would be of little or no practical utility to them in meeting the FCC's purported objectives. Nor would these aggregate figures provide a useful basis for comparing metrics among different providers, because these aggregated metrics would reflect entirely different mixes of rural areas for each carrier.

B. PEAK PERFORMANCE

46. AT&T already discloses overall averages for speed and latency based on its speed tests. The *2015 Open Internet Order* added 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" for their mobile networks.²⁵ And the FCC's *2016 Guidance PN* purports to "clarify that . . . providers retain the flexibility to determine the appropriate peak usage periods for their network performance metrics but must disclose the peak usage periods chosen for such disclosures."²⁶ The rules, however, remain very unclear, and depending on how they are interpreted, they would either be much more costly to collect and report than the FCC is estimating, or would be of zero practical utility.

²⁵ *2015 Open Internet Order* ¶ 166.

²⁶ *2016 Guidance PN* at 5.

47. The problem is simple. 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. Accordingly, to report actual peak usage metrics, it would be necessary to first conduct studies of every relevant geographic area in the United States to determine peak usage times for each such area. Conducting these tests for each such area in the United States where AT&T offers mobile services over its network would be an enormous undertaking, and would cost tens of thousands of dollars to conduct.

48. In addition, it would also be necessary to conduct drive tests during those peak times. AT&T’s current vendor drive testing occurs from [BEGIN CONFIDENTIAL]

[END CONFIDENTIAL] If peak usage occurs outside of that period, additional drive testing would be required to collect average speed, latency, and packet loss during those times. For example, the FCC has historically considered peak usage for mobile networks to occur from 7 p.m. to 11 p.m. To obtain actual network performance metrics for this period, AT&T would have to [BEGIN CONFIDENTIAL]

[END CONFIDENTIAL]. 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 [BEGIN CONFIDENTIAL]

[END CONFIDENTIAL] per year.

49. The far more reasonable way to read the FCC’s clarification is that it allows each provider to compute the peak period metrics using the average peak period for each CMA based on the data AT&T already collects from its vendor’s drive testing. For example, AT&T’s vendor currently collects drive testing data from [BEGIN CONFIDENTIAL] [END

CONFIDENTIAL] For each CMA, AT&T would identify the peak period from within that time period. Then, AT&T could compute and report the average metrics for those peak periods from those data. This approach would enable AT&T to avoid studies to determine peak times in every area, and to avoid additional drive testing. As such, this approach would be far less expensive to implement, requiring analysts to compute these metrics from existing data and IT professionals to incorporate the data into the relevant AT&T web sites. Still, it would cost far more than the FCC's estimates on which its OMB submission is based. This project would require engineers to develop these new metrics for each CMA covered by AT&T's network. AT&T estimates that it would take a data analyst about **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** to develop the metric, plus **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL] to execute them, at an additional cost of **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** per year.

Thus, even under this interpretation, the FCC's estimates of the burden of its new collection and reporting requirements are still vastly understated.

50. Further, even if the FCC agrees that its clarification was intended to permit this less expensive approach, the OMB still should not approve the proposed collection and reporting requirements because they would not produce any practical utility or other benefits. According to the FCC, the purpose of this collection and reporting requirement is to provide customers with data that allows them to make apples-to-apples comparisons across different carriers so they can make more informed purchasing decisions. But if providers are allowed to report the speed, latency and packet loss metrics for different peak periods (none of which are actual peak periods), there is no way to make apples-to-apples comparisons.

51. In short, the new peak period reporting requirements will either cost millions of dollars to implement requiring providers to identify peak periods at each location and conduct drive testing during those periods, or it will cost [BEGIN CONFIDENTIAL]

[END CONFIDENTIAL]. Either way the costs will exceed those estimated by the FCC and relied upon for approval of these new collection and reporting requirements here. Further, these new collection and reporting requirements have no practical utility because they would provide no meaningful information that customers could use to make informed purchasing decisions.

C. WI-FI

52. AT&T's mobile network also includes Wi-Fi services. The FCC has indicated that AT&T's CMA-level metric performance figures should account for Wi-Fi.²⁷ But measuring Wi-Fi speeds is extremely costly, and would overwhelm the cost estimates that the FCC is relying upon for approval of its new collection and reporting requirements. Due to the nature of Wi-Fi services, drive testing is not feasible (Wi-Fi locations are often indoors and use unlicensed spectrum). AT&T has investigated other 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.

53. The FCC's response is not responsive to the concerns I raised. The FCC states that its burden estimates are "expressly stated as averages, which accounts for potential

²⁷ *FCC Supporting Statement* at 12.

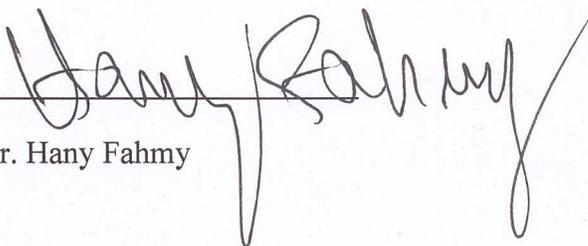
differences among broadband providers.”²⁸ In other words, the FCC’s response is that, its burden estimates are industry averages, and the fact that AT&T’s burden may be higher due to its extensive Wi-Fi footprint is irrelevant. But this argument fails to account for the fact that AT&T’s cost of measuring Wi-Fi performance would be *millions* of dollars, which far exceeds the *industry-wide* burdens of less than \$130,000 for capital and startup costs on which the FCC relies for approval of these new requirements.

²⁸ *Id.*

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 September 12, 2016.



Dr. Hany Fahmy

**Before the
Office of Management and Budget
Washington, D.C. 20503**

Transparency Rule Disclosures, Protecting and Promoting the Open Internet, Report and Order on Remand, Declaratory Ruling, and Order)	OMB Control No. 3060-1158
Protecting and Promoting the Open Internet)	CC Docket No. 14-28

DECLARATION OF DR. HANY FAHMY

EXHIBIT A

QUOTE REQUEST**To: Colleen Thompson**
AT&T**Quotation number: SK000837**
Quotation date: April 26, 2016

Thank you for your inquiry dated: April 26, 2016

We are pleased to quote you the following:

Item	Months	Description	Unit Price	Extended Price
1.	12	Data License for access to the Mobile Data Performance Index. Raw Data Access provided via FTP.	USD \$15,000	USD \$180,000
			TOTAL	USD \$180,000

We will be happy to supply any further information you may need and trust that you call on us to fill your order, which will receive our prompt and careful attention.

Customer Acceptance

Name

Signature

Date

PO# (if applicable)

To Place An Order Please Contact

Roxanne Robinson

Email: roxanne@samknows.com

Telephone: +44 (0) 203 111 4343

Address: 94 New Bond Street, London, W1S 1SJ

**Before the
Office of Management and Budget
Washington, D.C. 20503**

Transparency Rule Disclosures, Protecting and Promoting the Open Internet, Report and Order on Remand, Declaratory Ruling, and Order)	OMB Control No. 3060-1158
Protecting and Promoting the Open Internet)	CC Docket No. 14-28

DECLARATION OF DR. HANY FAHMY

EXHIBIT B



Joan Marsh
Vice President –
Federal Regulatory

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January 20, 2016

Mr. Julius Knapp
Chief-Office of Engineering and Technology
Mr. Roger Sherman
Chief-Wireless Telecommunications Bureau
Federal Communications Bureau
445 12th Street SW
Washington, DC 20554

Re: Mobile Speed Testing and the 18th Mobile Competition Report

Dear Julie and Roger,

This letter documents AT&T's serious concerns with the Wireless Telecommunications Bureau's decision to publish data from the FCC's Speed Test app in the FCC's 18th Mobile Competition Report ("Report"), as I had discussed with Roger prior to the Report's publication. AT&T believes the data should not have been published for two primary reasons. First, the full data set used to compile the FCC's charts was never made available to the carrier community, which deprived us of the opportunity to independently confirm and validate the results. Second, the Speed Test results that were published in the Report were based on a process the FCC Staff developed that excluded and filtered certain data, which was also not timely disclosed to the carrier community. The FCC's decision to publish specific network performance data without the necessary transparency into the process and collaboration with the carrier community led, in our opinion, to the publication of inaccurate and potentially misleading results.

First, FCC personnel consistently, and incorrectly, represented that the carrier community had been provided access to the same data that the FCC received from SamKnows. What the carriers discovered in the weeks leading up to publication of the Report is that we did not have the dataset the FCC received from SamKnows. Further, despite requests for the FCC to explain how the agency intended to use the data, the carrier community was not permitted to see the Report's illustrative charts until December 9th -- just two weeks prior to the Report's release. This set up a very truncated review period as we attempted to quickly assess the preliminary illustrative charts in an attempt to both understand and test the veracity of the data.

AT&T's initial review of the charts uncovered discrepancies with the speed test results and a significant discrepancy with the number of LTE tests used in the draft charts versus the number of tests that AT&T had access to in its data. We further discovered for the first time that the MBA illustrative charts utilized raw data fields that had not been

provided to the carrier community (and have not been provided to this day) in order to allow independent confirmation of the results. The charts rely on a variety of methodologies to include or exclude individual measurements that have never been fully disclosed to the carrier community, e.g. a filtering field called “matrix”. As you know, the inclusion or exclusion of various data points can have a material impact on carrier aggregate results and may affect each carrier’s results differently. Yet the data sets provided to the carriers did not contain those raw data fields (although they were included in the data the FCC received from SamKnows). Despite several calls with FCC staff, we were never able to resolve all of the uncovered discrepancies.

Through those discussions, however, we also learned of a number of other anomalies related to data inclusions/exclusions and potentially significant undisclosed methodology revisions. For example, the FCC *eliminated* a substantial number of data records due to the absence of location information but then staff *included* failed test results that had lower speed measurements which can impact carriers differently. This practice was not used in last year’s Report, even though it had been represented to us that there had been “no change” in the methodology.

Further, the FCC’s draft charts included the performance results of AT&T’s discount carrier, Cricket, in the performance results for AT&T Mobility. We explained to staff that Cricket is completely separate from AT&T, operating on a different core network and offering different plans and price structures. Most importantly, Cricket’s maximum download speed is 8Mbps, which is fully disclosed to the customer and on the Cricket website. It became clear to us that staff was unaware of these material distinctions and ultimately adjustments were made to include clarifying information on this issue in this year’s Report. Notably, we had never been provided with access to Cricket’s results and thus had no way of knowing that the results were combined. We continue to be concerned that basic information as material to the results as this was disclosed to us only one week before the report was scheduled to be released.

We were also particularly discouraged to learn about these material discrepancies in the data sets because we were led to believe that the FCC would use a collaborative process to restructure the Mobile MBA program. Specifically, on August 18, 2015 in a meeting hosted by OET staff, staff announced the formation of three collaborative working groups -- one specifically focused on data analysis. At that time, OET staff indicated that they needed to develop a strategy for “cleaning” the data, and specifically mentioned the task of verifying and correcting SIM operating codes or names and network operating codes or names.¹ Yet to date, Staff has not engaged the carrier community to clean up this information or to discuss analysis of the Speed Test data generally, despite the fact that we were told that the meetings for the working groups would start in September 2015.

¹ OET staff also indicated that in regards to developing a physical reporting structure, they would be looking at a different geographical granularity approach from the original hexagonal approach they had taken on in the past. But again, we have not heard anything more on that issue.

January 20, 2016

Page 3 of 3

AT&T also remains concerned about the quality and statistical reliability of the FCC's Speed Test results, as discussed with the FCC's Chief Technologist on November 23, 2015. At that time, we expressed serious concerns about the statistical significance of the FCC Mobile MBA data, specifically the number of tests collected and relied on by the FCC to derive its results. The FCC collects an average of 71K tests monthly and the vast majority of them (85%) are scheduled tests from Android devices, which skews against carriers that have a large Apple IOS base.

By contrast, Ookla indicates that they collect 800K tests monthly – over ten times the number collected by the FCC -- all manual and only 40% from Android, which provides a fairer representation of Apple device performance. Given the ready availability of mobile speed testing data from other public sources, we continue to question why the more limited FCC data is needed or useful.

The FCC staff previously asserted that an advantage to the FCC's Speed Test app was the ability to conduct and receive data from scheduled tests that would have the potential to examine network speeds in all coverage conditions vs. manual tests that may be conducted only when a user experiences coverage issues. This hypothesis, however, has not been validated. Indeed, the data available to date suggests that this hypothesis is wrong. Namely, the FCC data July 2014-June 2015 shows that the scheduled tests are showing lower speed estimates than manual tests and Ookla's estimates of the AT&T network average speed for the relevant period – which is based on considerably more tests all of which are manual -- is at least 3Mbps higher than the FCC's.

For all these reasons, we request a more collaborative and transparent process going forward. More specifically, AT&T requests (1) immediate access to ALL data and data fields that the FCC relies on in publishing the mobile speed test results, (2) a full and complete explanation of the methodology used by the FCC to filter the test results, and (3) the creation of a process to give the industry at least 6 to 8 weeks to review any charts or graphs or results that are designated for publication so that we might provide meaningful input to staff prior to any publication.

We appreciate your consideration of these concerns.

Sincerely,

A handwritten signature in black ink, appearing to read 'Joan Marsh', with a long horizontal line extending to the right.

Joan Marsh

cc: Paroma Sanyal
Walter Johnston
James Miller