

April 10, 2014

VIA ECFS

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW, Room TW-A325
Washington, DC 20554

**Re: *Technology Transitions*, GN Dkt. No. 13-5;
AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition,
GN Dkt. No. 12-353**

Dear Ms. Dortch:

Cbeyond Communications, LLC, Integra Telecom, Inc., Level 3 Communications, LLC, and tw telecom inc. (collectively, the “Joint Commenters”) and COMPTTEL hereby submit this letter regarding the service-based experiment proposed by AT&T in the above-referenced dockets.¹ As AT&T recognized in its own comments on the service-based experiment proposed by Iowa Network Services (“INS”), the Commission should not authorize an experiment to proceed unless the applicant provides sufficient information to determine whether the experiment “ensur[es] universal connectivity, consumer protection, public safety, reliability and competition” and “will indeed provide the Commission with useful information concerning the IP transition.”² Unfortunately, as the Joint Commenters and COMPTTEL have explained,³ AT&T’s own experiment proposal does not meet this standard.

Numerous parties—including public interest groups, state commissions, state consumer advocates, and other competitive carriers—share the Joint Commenters’ and COMPTTEL’s concerns about AT&T’s proposal. In particular, commenters agree that the proposal lacks critical information that is necessary to conduct a meaningful review of the proposed experiment and ensure compliance with the Commission’s *Experiments Order*.⁴ For example, the proposal

¹ See generally AT&T Proposal for Wire Center Trials, GN Dkt. Nos. 13-5 & 12-353 (filed Feb. 27, 2014); see also *id.*, Attachment, “AT&T Wire Center Trial Operating Plan.”

² See Comments of AT&T Services, Inc. on Proposal of Iowa Network Services, Inc. for Service-Based Technology Transitions Experiment, GN Dkt. Nos. 13-5 & 12-353, at 2 (filed Mar. 21, 2014); see also *id.* at 1 (“[T]he Commission should require INS to provide additional detail and clarification concerning its proposal before authorizing the experiment to proceed.”).

³ See generally Cbeyond, Integra, Level 3 and tw telecom Comments; COMPTTEL Comments. Unless otherwise indicated, all “Comments” cited herein are those filed in GN Dkt. Nos. 13-5 & 12-353 on March 31, 2014.

⁴ See generally *Technology Transitions*, Order, Report and Order and Further Notice of Proposed Rulemaking, FCC 14-5 (rel. Jan. 31, 2014) (“*Experiments Order*”).

does not provide sufficient information on the replacement services that will be made available to wholesale customers during the experiment⁵ or the timeline for enhancements to the replacement voice services that will be made available to residential and business customers.⁶ In addition, the proposal does not provide *any* information about the rates, terms, and conditions on which replacement services will be offered to wholesale customers during the experiment. The proposal thus precludes wholesale customers from conducting the business planning necessary to serve their retail customers,⁷ including small and medium-sized businesses. It also fails to ensure that, consistent with the *Experiments Order*,⁸ packet-based replacement inputs will be offered at rates, terms, and conditions equivalent to those currently offered for TDM-based unbundled network elements and special access services.⁹

Moreover, there is widespread agreement among commenters that AT&T's proposed experiment is unlikely to generate accurate and meaningful data about the impact of the TDM-to-IP transition on residential, business, and wholesale customers. This is in large part because the proposal does not (1) include wire centers that encompass sufficiently diverse geographic areas, customer types, population densities and demographics, and climates;¹⁰ or (2) provide sufficient information on the types of data to be collected, the metrics to be used, or the control groups to be selected.¹¹ These flaws are discussed in further detail in the attached Declaration of Joseph

⁵ See, e.g., Competitive Carriers Association at 2-6; MetTel Comments at 2-4; HyperCube Comments at 4; NASUCA Comments at 4.

⁶ See, e.g., AARP Comments at 9-12; *id.* at 32-33 (“AT&T does not provide a specific date when these enhancements will be available, but the general time frame for the enhancements identified by AT&T is not consistent with its public statements that the trials will begin in late 2014 or early 2015.”); Communications Workers of America Comments at 5; *see also* Public Knowledge, New America Foundation and Benton Foundation Comments at 17.

⁷ See, e.g., XO Comments at 12 (“Carriers cannot make business plans and serve customers based on ‘TBD.’”); Windstream Comments at 6; Granite Comments at 6-9.

⁸ See *Experiments Order* ¶ 59 & Appendix B, ¶ 35.

⁹ See, e.g., ACN, Access Point and Matrix Telecom Comments at 4-5; MetTel Comments at 2-4; Windstream Comments at 6-9.

¹⁰ See, e.g., Public Knowledge, New America Foundation and Benton Foundation Comments at 14-16; Michigan Public Service Commission Comments at 2-3; XO Comments at 8-10; *see also* NASUCA Comments at 5-6 (urging the FCC to require that AT&T “provide information on why it chose these two locations” out of all of the wire centers in its territory).

¹¹ See, e.g., AARP Comments at 22-27; Public Knowledge, New America Foundation and Benton Foundation Comments at 7-14; *see also* Michigan Public Service Commission Comments at 4 (“The MPSC is also concerned that there is no third party to verify that the data that AT&T reports to the FCC is accurate. It seems to be putting the fox in charge of guarding the hen house.”).

Lenski of Edison Media Research, Inc. There, Mr. Lenski also describes the ways in which AT&T's proposal must be changed in terms of experiment design and data collection if it is to yield any reliable and statistically significant information about the effects of the transition on customers in the AT&T territory. These include, among other things, (1) using appropriate procedures to select test wire centers that are statistically representative; (2) defining a control group via random selection; (3) identifying the types of data to be collected (including data on wholesale service quality (*e.g.*, ordering, provisioning, maintenance, and repair intervals)); and (4) obtaining independent third-party verification of the data collected.¹²

Given that the initial round of experiments approved by the Commission will serve as precedent for subsequent experiment proposals,¹³ the Commission should not approve AT&T's proposal unless and until it is revised consistent with (1) appropriate methods for experiment design and data collection, such as those described in the attached declaration;¹⁴ and (2) the recommendations made by the Joint Commenters and COMPTTEL in their initial comments.¹⁵

Please do not hesitate to contact us if you have any questions or concerns about this submission.

Respectfully submitted,

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Attachment

¹² Declaration of Joseph Lenski, Edison Media Research, Inc., on behalf of Cbeyond, Integra, Level 3, tw telecom, and COMPTTEL, ¶¶ 19, 22-23 (dated Apr. 9, 2014) (attached hereto).

¹³ *See Experiments Order* ¶ 29.

¹⁴ *See also* Public Knowledge, New America Foundation and Benton Foundation Comments, Attachment, CTC Technology & Energy, *Response to AT&T's Proposal for Wire Center Trials in the IP Transition Proceeding* (dated Mar. 27, 2014) (identifying shortcomings in the design of AT&T's proposed experiment and providing recommendations on issues such as appropriate test locations, metrics, control groups, and data validation).

¹⁵ *See* Cbeyond, Integra, Level 3 and tw telecom Comments at 29-32; COMPTTEL Comments at 3-5.

ATTACHMENT

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Technology Transitions)	GN Docket No. 13-5
)	
AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition)	GN Docket No. 12-353
)	

**DECLARATION OF JOSEPH LENSKI, EDISON MEDIA RESEARCH, INC.
ON BEHALF OF
CBEYOND, INTEGRA, LEVEL 3, TW TELECOM, AND COMPTEL**

1. I am co-founder and Executive Vice President of Edison Media Research, Inc. Edison Media Research conducts market research and exit polling, providing strategic information for businesses and media organizations worldwide. Since founding the company in 1994, I have overseen hundreds of research projects each year for some of the world’s largest media companies, conducting survey research and providing strategic information to radio stations, television stations, newspapers, cable networks, record labels, Internet companies and other media organizations. I have been a member of the American Association for Public Opinion Research (“AAPOR”) since 1994 and have twice been elected to serve on its Executive Council. In addition, I have served as President of the New York chapter of the AAPOR. I have lectured on survey research and exit polling at numerous universities, including Harvard University, George Washington University, and Johns Hopkins University. I am a graduate of Princeton University and studied at the Annenberg School for Communication at the University of Pennsylvania.

2. I was asked by Cbeyond, Integra, Level 3, tw telecom, and COMPTEL to review and evaluate the design of the wire center trials (also known as the “service-based experiment”) proposed by AT&T to the Federal Communications Commission (“FCC” or “Commission”) on February 27, 2014. The purpose of my declaration is to (1) evaluate whether AT&T’s proposal comports with basic tenets of experimental design; and (2) provide recommendations as necessary on how the design of AT&T’s experiment and its plans for data collection should be changed in order to yield reliable and statistically significant information. While there are other shortcomings in AT&T’s proposal, my declaration is limited to those relating to experimental design and data collection.

I. Deficiencies in AT&T's proposed experiment design

A. *AT&T's selection procedure for wire centers to be included in the experiment is not statistically representative.*

3. For a sample in an experiment to be representative of the entire universe, there must be a selection procedure in which the sample units are randomly chosen based upon a known probability of selection for each unit. Without such a sampling routine, there is no way to assure that the sample selected has any statistical relevance for representing the entire universe. Here, AT&T is proposing to conduct service-based experiments in only two wire centers—Carbon Hill, Alabama and Kings Point, Palm Beach County, Florida. In the AT&T proposal, there is no scientific sampling basis provided (or any other systematic method described) for the selection of these two wire centers. Because no sampling plan was developed, the two wire centers selected cannot in any way be described as statistically representative of the approximately 4,700 wire centers in the AT&T territory.

4. In fact, as discussed below, the reasons explicitly provided in the AT&T proposal for the selection of these two wire centers make it clear that this is a convenience sample and not a true randomly selected sample that is statistically representative of any group of wire centers beyond the two wire centers themselves. While there may be circumstances in which a non-probability sample is appropriate, the results from a non-probability sample will not provide the statistical basis for any conclusions that could be applied to the entire universe. In this case, AT&T has all of the information necessary to select a random probability sample of its own wire centers, but has not done so.

5. On page 13 of the proposal, AT&T states that it “chose these wire centers with an eye towards gaining insights into some of the more difficult issues that likely will be presented by the TDM sunset.” Some of these factors include the rural nature and low population density of the Carbon Hill, Alabama wire center. However, there is no discussion in the proposal of how many of the other approximately 4,700 wire centers in the AT&T universe have similar rural, low population density profiles.

6. Similarly, on page 15 of the proposal, AT&T provides the reasons that it selected the Kings Point, Florida wire center. These include that Kings Point is suburban and has a large population of older Americans with more than 70 percent of its population being over 50 years of age. Again, there is no mention in the proposal of how many of the other wire centers in the AT&T territory share these characteristics with the Kings Point wire center.

7. On page 15 of the proposal, AT&T also states that “the wire centers AT&T chose for these trials will raise some of the most challenging geographic and economic issues that we will face with respect to the IP transition.” However, there are a host of geographic areas, demographic characteristics, and meteorological conditions that are not represented at all by these two wire centers.

8. *First*, both wire centers selected by AT&T are located in the Southeast United States. There are no wire centers chosen to represent AT&T wire centers in the other parts of the country, such as the Midwest or West Coast.

9. *Second*, there is no representation of urban wire centers. Urban areas tend to have larger numbers of businesses, as well as wholesale carriers that serve these businesses, than rural and suburban areas, so business and wholesale customers in these areas are underrepresented.

10. *Third*, there is no representation of more ethnically diverse populations. According to the demographic data on page 5 of AT&T's wire center plan, the population of the Carbon Hill wire center is 95 percent White and the population of the Kings Point wire center is 84 percent White—both well above the national average. Both wire centers severely underrepresent the population of Blacks, Hispanics, Asians and other races compared to the national population.

11. *Fourth*, based on the information on page 6 of AT&T's wire center plan, both wire centers have populations that are significantly older than the population of the nation as a whole and AT&T has provided no evidence that the population across its territory has an age profile that is significantly different from the national population. In Carbon Hill, 38 percent of the population is age 50 years and older and in Kings Point, 70 percent of the population is age 50 years and older—both of these figures are much higher than the 31 percent for the entire United States. Both wire centers clearly under represent the population of 18 to 49 year olds.

12. *Fifth*, the AT&T proposal mentions that both wire centers represent areas that “can experience severe weather including hurricanes or tornados.” Again there is no mention in the proposal of how many of the other wire centers in the AT&T territory experience hurricanes or tornados. Also, there are many other types of weather conditions that are not represented by the areas of these two wire centers, such as cold winters or significant snowfalls, that would be common in wire centers in other parts of the AT&T territory, such as the Midwest.

13. It is not surprising that the two wire centers selected by AT&T are not representative of the entire universe of AT&T wire centers given the company's own admission that the two wire centers were not chosen to be statistically representative of their entire territory of wire centers. Whenever a sample is not chosen based upon random selection, there is no reason to believe that it will be representative in any statistical way. In sum, the method AT&T used to select the two wire centers was not random and thus, any results from the experiments conducted at these two wire centers cannot be used to draw conclusions regarding any other portion of the AT&T territory.

B. The proposal lacks a defined control group.

14. In Appendix B, paragraph 51 of its order of January 30, 2014, the FCC states that it expects “each proposal to provide a ‘control group’ by which to evaluate the performance of the ‘experimental group.’” This is because a control group is necessary to demonstrate that any measured results from the experimental group were due to the “treatment” that was introduced and not by any other cause. Without a control group, any results from the experimental group cannot be tested for statistical significance. In its proposal, AT&T has not provided any method by which it will select control groups for its experiment.

15. There are two possible approaches to defining a control group in a service-based experiment such as that proposed by AT&T. The first approach would be to randomly divide the sample into two groups. One group would receive the “treatment” and would be subject to the

proposed changes in service; this would be the experimental group. The other group would not receive the “treatment” and would have no changes to its service; this would be the control group. This approach would allow for a straightforward comparison of the results of the experiment within two comparable groups within the same geographic region. If AT&T could randomly divide each of the wire centers it chooses into an experimental group and a control group, that would allow for statistical analysis to determine the effect of the experiment on a host of measures without concern that those differences were due to other factors. The AT&T proposal, as it currently stands, does not provide for this type of control group definition.

16. To the extent that the first approach is not practically or technically feasible, a second approach would be to define a group of wire centers that share many of the characteristics of the test wire centers in terms of geography, customer types, demographic characteristics, and weather conditions as well as any relevant technical characteristics. Once this group of similar wire centers is defined, a wire center or multiple wire centers could be randomly selected to serve as the control.

17. AT&T has not provided any procedure by which it plans to select wire centers to serve as a control group. This leaves open the possibility that the control group will be selected by AT&T in a similar non-random method as it selected the two wire centers that form the experimental group. Again, this lack of randomness in the selection process would make it impossible for the control group to be used to demonstrate statistical relevance of the results of the experiment.

C. The proposal lacks defined methods for data collection and analysis.

18. In Appendix B, paragraph 52 of its order of January 30, 2014, the FCC states that “it will also be important for the Commission to understand whether the data would be suitable to make statistical inferences about the performance of the experiment areas.” In its proposal, AT&T indicates that it plans to collect little information for this purpose and does not provide any systematic procedure by which it will collect this data.

19. As the FCC observes in Appendix B, paragraph 49 of its January 31, 2014 order, there are many categories of data that could be collected during a service-based experiment. These include technical performance, service quality, and accessibility metrics such as those described on page 4 of the CTC Technology & Energy paper filed by Public Knowledge, the New America Foundation and the Benton Foundation on March 31, 2014 (*e.g.*, network capacity, call quality, access to 911 service, call quality provided to the disabled, etc.). The metrics used should assess the experience of all types of customers—not only residential consumers and business customers but also wholesale customers (*e.g.*, metrics on the ordering, provisioning, maintenance, and repair times faced by wholesale customers). In its proposal, AT&T plans to collect data on only a handful of metrics and it does not include metrics to measure various aspects of the transition, such as its effect on public safety, on accessibility for the disabled, or on wholesale service quality.

20. The AT&T proposal also contains no plans for any systematic measure of consumer opinion or customer satisfaction. Instead, on page 53 of its wire center plan, AT&T merely proposes to provide, on a quarterly basis, “a summary of trial-specific customer issues” based on

calls to their customer care centers and feedback submitted to their trial-specific websites. In my experience, in order to measure changes in public opinion or customer satisfaction, a baseline survey should be conducted before an experiment even begins in order to measure benchmarks of public sentiment. There should also be a schedule for follow-up surveys at regular intervals during the experiment to measure how customer satisfaction and other consumer issues are being affected by the experiment.

21. An experiment must also include a plan to conduct analysis of the data collected to demonstrate the effects of the experiment and to statistically prove that the experiment did or did not meet the stated goals. A true experimental design would allow for replication of the results. One way to ensure this would be for AT&T to make the data it collects during the experiment available to independent third parties for validation. AT&T's proposal does not include such a plan. Without an independent analysis, it will be impossible to demonstrate whether the collected data accurately supports any conclusions that AT&T presents to the FCC.

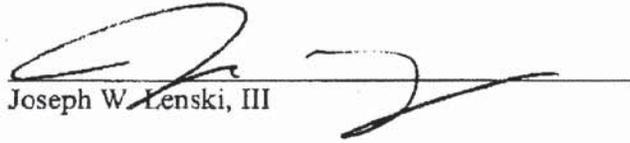
II. Recommendations for AT&T's proposed experiment design

22. Based on the foregoing analysis, I have the following recommendations to address the deficiencies in the design of AT&T's proposed experiment.

- a. The wire centers for the experiment should be selected using a random sampling procedure.
- b. The wire centers selected for the experiment should be representative of the entire AT&T territory in terms of geography, customer types, population demographics, and meteorological conditions.
- c. A control group should be defined so that results from the experimental group can be compared with a control group. The control group should either be a randomly selected portion of the wire centers in the experimental group or a randomly selected group of wire centers that share many of the same characteristics as the wire centers in the experimental group.
- d. A detailed plan for the collection and analysis of the data that will be used to evaluate the experiment should be provided. This includes, among other things, collection of data to measure the effects of the experiment on all types of customers (*i.e.*, residential, business, and wholesale customers) and a systematic mechanism to measure consumer opinion or customer satisfaction.
- e. The raw data collected from the experiment should be made available to a third party to independently verify both the data itself and the conclusions AT&T draws from the data.

23. By following these recommendations, AT&T can address the deficiencies in its current proposal so that it adheres to basic tenets of experimental design as well as the guidelines for service-based experiments provided by the FCC.

I hereby declare under penalty of perjury that the foregoing is true and correct to the best of my information and belief.


Joseph W. Lenski, III

Dated: April 9, 2014