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April 7, 2016

**REDACTED – FOR PUBLIC INSPECTION**

**By ECFS**

Marlene H. Dortch  
Office of the Secretary  
Federal Communications Commission  
455 12th Street, S.W.  
Washington, DC 20054

Re: WC Docket No. 05-25, RM-10593: **Revised Public Versions** of AT&T's Comments, AT&T's Reply Comments, the Israel-Rubinfeld-Woroch Reply Declaration, and Israel-Rubinfeld-Woroch Supplemental Reply Declaration

Dear Ms. Dortch:

Pursuant to the protective orders adopted by the Commission in WC Docket No. 05-25, and the Commission's April 6, 2016 Public Notice addressing the treatment of data that is derived from Highly Confidential data in the data collection, AT&T respectfully submits **Revised Public Versions** of the following documents:

1. AT&T's Comments (originally filed January 27, 2016) (Attachment 1);
2. AT&T's Reply Comments (originally filed February 19, 2016), including the Reply Declaration of Mark Israel, Daniel Rubinfeld, and Glenn Woroch (Attachment 2); and
3. The Supplemental Reply Declaration of Mark Israel, Daniel Rubinfeld, and Glenn Woroch (originally filed March 24, 2016) (Attachment 3).<sup>1</sup>

Parties who are admitted to the protective orders in this proceeding can request a copy of the Highly Confidential versions of the enclosed documents by contacting Kyle Fiet at Sidley Austin LLP (kfiet@sidley.com).

<sup>1</sup> Due to changes in the confidentiality labeling, the pagination of the **Revised Public Versions** of these documents is slightly different than the originally filed **Public Versions**. The enclosed versions are otherwise identical to the versions that were originally filed with the Commission.



Marlene H. Dortch  
April 7, 2016  
Page 2

Respectfully submitted,

A handwritten signature in black ink that reads "Kyle Fiet". The signature is written in a cursive, slightly slanted style.

Kyle J. Fiet

Enclosure

# **ATTACHMENT 1**

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

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In the Matter of	)	
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	)	
Special Access Rates for Price Cap Local Exchange Carriers	)	WC Docket No. 05-25
	)	
	)	
AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593
	)	

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January 27, 2016

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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
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**COMMENTS OF AT&T INC.**

Pursuant to the Commission’s December 21, 2015 Order,<sup>1</sup> AT&T Inc. (“AT&T”) respectfully submits these comments in response to Section IV.B of the Commission’s December 18, 2012 *Notice*.<sup>2</sup>

**INTRODUCTION AND SUMMARY**

The Commission’s pricing flexibility rules are based on a simple, economically unassailable principle: there is no basis for price cap regulation in areas where competitors have deployed their own facilities-based networks. As the Commission and the D.C. Circuit have recognized, facilities-based competition both ensures that incumbent LECs charge rates that are

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<sup>1</sup> Order, *Special Access for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, RM-10593 (rel. Dec. 21, 2015) (extending comment deadlines).

<sup>2</sup> Report and Order and Further Notice of Proposed Rulemaking, *Special Access for Price Cap Local Exchange Carriers*, 27 FCC Rcd. 16318 (2012) (“*Notice*”).

just and reasonable and prevents incumbent LECs from attempting exclusionary or predatory pricing practices.<sup>3</sup>

Accordingly, the only controversy in this proceeding is not *whether* the Commission should eliminate price cap regulation where competitors have deployed such facilities, but rather what is the best way to determine where such sunk competitive facilities exist. The Commission's current pricing flexibility rules reflect a compromise: in an attempt to keep the process of granting and implementing relief administratively manageable, the Commission relies on the easily verified evidentiary proxy of facilities-based collocation, and it assesses Phase I and Phase II relief on a MSA-wide basis. The CLECs that seek regulatory advantages over their ILEC competitors, however, have argued for nearly a decade that the triggers have granted relief too broadly. They argue that the current triggers have resulted in ILECs gaining pricing flexibility in areas that are not subject to competitive constraints. But at the same time, these CLECs refused to disclose the locations of their extensive facilities-based networks in a manner that would allow the Commission to properly evaluate their claims. The Commission ultimately required these CLECs to disclose data about their deployments as part of the Commission's mandatory 2013 data collection to test the accuracy of the proxies in the rules. This data collection was unprecedented in scope and includes detailed data about the location and reach of CLEC facilities-based networks as of 2013.

The results of that data collection are now in and were finally made partially available for review and analysis during the past few months. And even the compressed review of the data show what one would expect after three decades of competitive entry and investment:

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<sup>3</sup> Fifth Report and Order and Further Notice of Proposed Rulemaking, 14 FCC Rcd 14221, ¶ 80 (1999) ("*Pricing Flexibility Order*"), *aff'd*, *WorldCom, Inc. v. FCC*, 238 F.3d 449, 458-59 (D.C. Cir. 2001).

competitors have deployed extensive facilities-based networks capable of serving the overwhelming majority of special access demand across the nation. Indeed, as the data collection confirms, special access demand is heavily concentrated in urban areas and other business districts, and competitors have overbuilt these areas many times over.

Accounting for all relevant competitive facilities, which include the cable company connection data from the National Broadband Plan mapping project, competitors have deployed their own competitive facilities in nearly all census blocks (95.2 percent) *nationwide* that contain special access demand, and those census blocks, in turn, account for virtually every special access connection (97 percent) and business establishment (98.9 percent). To be sure, there are some outlying areas that contain only incumbent LEC facilities, but those areas represent only a tiny fraction of the overall potential demand and, in all events, remain overwhelmingly subject to price caps today. In other words, the data confirm that the triggers, on balance, were extremely *conservative* rather than overbroad – *i.e.*, they were far more under-inclusive, in the sense of leaving areas with sunk facilities and multiple competitors under price caps, than they were over-inclusive. And, notably, these data *understate* the true extent of competitive deployment, because, among other reasons, the data are from 2013 and thus do not account for the explosive growth and facilities investment undertaken by cable companies and other Ethernet providers over the last two years.

This analysis leads to two inescapable conclusions. *First*, these data confirm that there is no basis to revisit any grant of Phase II relief. In the MSAs in which the Commission has granted Phase II relief for channel terminations, competitors have deployed sunk facilities in census blocks representing almost all (99.1 percent) potential demand. Thus, contrary to CLEC assertions, the existing Phase II triggers are *not* over-inclusive. To the extent there remain

certain areas where competition is lacking, those areas account for a tiny portion of the special access marketplace, which, in all events, benefit from the competition that exists elsewhere. Clearly, the administrative cost of reimposing and administering a system of price cap regulation for these demand-empty census blocks far outweighs any benefit.

*Second*, and equally important, the data collection shows that there are a number of Phase I and price cap MSAs in which competitors have deployed extensive facilities-based networks on par with the extensive deployment observed in Phase II MSAs. These include, among many others, large cities in the AT&T region like Chicago and Atlanta, which, the data confirm, are among the most intensely competitive special access marketplaces in the country. It makes no sense to continue saddling incumbent LECs (but not their competitors) with price cap regulation in these areas. In fact, based on the data before the Commission today, the Commission should remove price cap regulation from these and other areas in which sunk CLEC facilities reach the lion's share of demand.

But that is just the first step that the Commission must take. Going forward, in the absence of massive data collections, the Commission will need better proxies for determining when to further extend pricing flexibility relief. One option would be to maintain the existing MSA-based approach, which offers significant administrative advantages, while liberalizing the triggers. AT&T has not yet had time to test alternative triggers against the data to determine an alternative trigger that most appropriately addresses the problem of under-inclusivity. But it is evident that the Commission should do just that. Alternatively, the Commission could maintain the existing trigger but supplement its MSA-based approach with an alternative, additional path for obtaining more granular relief. Whichever approach the Commission takes, it should address the inappropriate exclusions that result from application of the current triggers.

Finally, *if* the Commission chooses to abandon its MSA-based approach in favor of a more geographically granular approach, it must (1) do so in both directions, and (2) ensure that any alternative is administratively workable. It would be patently arbitrary to roll back pricing flexibility in ILEC-only Phase II census blocks (or any other smaller geographic unit) without also *extending* Phase II relief to the comparably granular geographic areas in non-Phase II MSAs where the data collection unequivocally shows, based on data submitted by the competitors themselves, that sunk facilities have been deployed. And it would be equally arbitrary to adopt a pricing regime that imposes a patchwork quilt of pricing requirements that will unduly complicate the contracting process and confuse customers.

**I. THE DATA COLLECTION CONFIRMS THAT THE COMMISSION’S PRICING FLEXIBILITY TRIGGERS WERE OVERLY CONSERVATIVE.**

There can be no legitimate dispute that price cap regulation should be eliminated, at a minimum, from areas in which competitors have deployed sunk facilities. The Commission’s data collection now confirms that competitors have in fact deployed such facilities in almost every area in which demand for special access exists, and that the Commission’s “triggers” were thus enormously overly conservative. The Commission should therefore both (1) affirm that there is no basis to revisit any grant of Phase II pricing flexibility and (2) extend Phase II relief, in a one-time reset based on the detailed data collection, to a number of additional MSAs that the data confirm have extensive facilities-based deployment on par with that in Phase II MSAs.

**A. The Commission Cannot Lawfully Justify Price Cap Regulation in Areas Where Competitors Have Deployed Sunk Facilities.**

The basic economic principles underlying the pricing flexibility rules are not in dispute. There is no justification for price cap regulation in areas in which competitors have deployed sunk facilities. Prior Commission and federal court decisions have recognized that the presence of such facilities ensures that ILEC prices will remain at just and reasonable levels and deters

ILECs from attempting exclusionary or predatory pricing practices, thus eliminating any need for price cap rules. As the Commission explained in 1999, once a *facilities-based* competitor has

entered the market and cannot be driven out, rules to prevent exclusionary pricing behavior are no longer necessary. . . . If a competitive LEC has made a substantial sunk investment in equipment, that equipment remains available and capable of providing service in competition with the incumbent, even if the incumbent succeeds in driving that competitor from the market. Another firm can buy the facilities at a price that reflects expected future earnings, and, as long as it can charge a price that covers average variable cost, will be able to compete with the incumbent LEC. . . . [T]he presence of facilities-based competition with significant sunk investment makes exclusionary behavior highly unlikely to succeed.<sup>4</sup>

The D.C. Circuit agreed with this reasoning. *WorldCom, Inc. v. FCC*, 238 F.3d 449, 458-59 (D.C. Cir. 2001) (“the presence of facilities-based competition with significant sunk investment makes exclusionary pricing behavior costly and highly unlikely to succeed,” because “that equipment remains available and capable of providing service in competition with the incumbent, even if the incumbent succeeds in driving that competitor from the market”).

The Commission further explained why the presence of facilities-based competition provides a sufficient basis to ensure that ILEC rates and practices will be constrained. Special access customers are “sophisticated purchasers of telecommunications services, fully capable of finding competitive alternatives where they exist and determining which competitor can best meet their needs.”<sup>5</sup> Accordingly, where there are competing facilities-based alternatives, customers will – and indeed do – seek out and obtain the best combination of services and pricing to meet their individual needs, which ensures that no competitor can charge rates that fall outside the Communications Act’s broad zone of “reasonableness.”<sup>6</sup>

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<sup>4</sup> *Pricing Flexibility Order* ¶ 80.

<sup>5</sup> *Id.* ¶ 155.

<sup>6</sup> *See also id.* ¶ 153 n.389 (explaining that “it is unnecessary to extend the efficiency incentives of price cap regulation to services offered on a ‘contract-type basis’”) (citing Second Report and

The underlying theory of the pricing flexibility rules also correctly recognizes that it is not necessary that a competitor have a connection from its transport network to every single building in an area for that competitor to constrain ILEC prices in that area.<sup>7</sup> Special access competition does not occur merely or even primarily among carriers that *already* have an existing connection to a building, because additional carriers with the ability to deploy a connection (based on, for example, a large fiber ring or transport facilities that are near the building) also vigorously compete for the business of the building’s special access customers. Both the Commission and the D.C. Circuit have expressly recognized the existence of this rather obvious competitive reality. Although this phenomenon is often referred to as “potential” competition, it is, in fact, more accurate to call it actual competition – existing facilities-based competitors are actually competing in the marketplace for the right to build (what remain “potential”) direct connections to a location.<sup>8</sup> The Department of Justice likewise has found that special access competition from traditional CLECs constrains ILEC prices in any building that is sufficiently near, but not necessarily already connected to, their competitive sunk network facilities.<sup>9</sup>

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Order, *Policy and Rules Concerning Rates for Dominant Carriers*, 5 FCC Rcd 6786, ¶ 193 (1990) (“*LEC Price Cap Order*”).

<sup>7</sup> See Mark Israel, Daniel Rubinfeld & Glenn Woroch, “Competitive Analysis of the FCC’s Special Access Data Collection,” WC Docket No. 05-25, filed January 27, 2016, Section II.B (“Israel-Rubinfeld-Woroch Analysis”); Declaration of Dennis W. Carlton and Hal S. Sider, ¶¶ 28-30 (“Carlton-Sider Decl.”), attached as Exh. A to Comments of AT&T Inc., WC Docket No. 05-25 (Jan. 19, 2010).

<sup>8</sup> See *WorldCom*, 238 F.3d at 458 (“the presence of substantial sunk investment, and the resulting *potential* for entry into the market, can limit anticompetitive behavior by LECs”) (emphasis added; citing *Pricing Flexibility Order* ¶ 80).

<sup>9</sup> See, e.g., Memorandum Opinion and Order, *AT&T Inc. and BellSouth Corp. Application for Transfer of Control*, 22 FCC Rcd. 5662, ¶¶ 41-42, 46 & nn.111-14 (2007) (describing and adopting “screens” employed by DOJ to determine whether a building could be served by

The current controversy is thus not over *whether* price cap regulation should be eliminated where competitors have deployed such facilities, but instead over whether the current pricing flexibility test represents an appropriate, administratively workable means of identifying the geographic areas in which the factual pre-conditions for such relief are met. As the Commission recognized in 1999, this is merely a question of evidence; the Commission wanted to find an easily administrable evidentiary proxy for the existence of such sunk facilities without having to conduct a full-blown market power or dominant carrier analysis in each case.<sup>10</sup> In this regard, the D.C. Circuit expressly rejected the argument that the pricing flexibility triggers were unlawful merely because they were rough proxies that did not replicate a full nondominance (*i.e.*, market power) inquiry.<sup>11</sup>

The Commission designed a system of “triggers” for two levels of relief (Phase I and Phase II) that was intended to be conservative, in at least two respects. First, the Commission chose to rely on facilities-based collocations – an easily verifiable piece of evidence within the possession of the ILECs – as an indicator of the presence of a more extensive fiber network.<sup>12</sup> Even in 1999, all parties understood that facilities-based collections would be a conservative indicator, because they would not capture direct connections or the use of non-ILEC carrier

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alternative facilities, which recognize that competitors with facilities near a building can and do compete for customers in that building).

<sup>10</sup> *Pricing Flexibility Order* ¶ 78 (Commission sought an evidentiary proxy that “reasonably balance[d]” its two goals: “(1) having a clear picture of competitive conditions in the MSA, so that [it could] be certain that there is irreversible investment sufficient to discourage exclusionary pricing behavior; and (2) adopting an easily verifiable, bright-line test to avoid excessive administrative burdens”); *id.* ¶ 90 (rejecting market power and dominant carrier analyses because such analyses are “neither administratively simple nor easily verifiable”).

<sup>11</sup> *WorldCom*, 238 F.3d at 459-61.

<sup>12</sup> *Pricing Flexibility Order* ¶¶ 81, 84 (finding that “collocation by competitors in incumbent LEC wire centers is a reliable indication of sunk investment by competitors” and that “a collocation-based trigger provides an administratively simple and readily verifiable mechanism for determining whether competitive conditions warrant the grant of pricing flexibility”).

hotels.<sup>13</sup> They are even more conservative today, because cable companies generally do not rely on ILEC collocations at all. Second, the triggers grant relief on an MSA basis, but to ensure that relief was not granted prematurely, the Commission required the ILEC to show that facilities-based collocations existed in a very high percentage of the wire centers in a given MSA before it removed price cap regulation.<sup>14</sup> In many instances, the triggers permit only “Phase I” relief (which merely expands the opportunity to offer discount plans), even though the Phase I trigger indicates that sunk facilities exist in a significant portion of the MSA.<sup>15</sup>

Some purchasers of special access services (those that would benefit from further regulation of ILEC prices) have been complaining that the triggers are overbroad – *i.e.*, that granting relief on an MSA-wide basis has resulted in granting pricing flexibility in some areas where the incumbent is the only option for special access services. Nonetheless, when the Commission initiated a voluntary data request to test this hypothesis, the CLECs refused to provide the comprehensive data the Commission was seeking, including, most importantly, data on the location of their facilities. Based on the CLEC complaints, the Commission adopted a freeze on new applications for pricing flexibility anyway while it investigates the propriety of the triggers in this rulemaking.<sup>16</sup> And to test the accuracy of the triggers, the Commission has initiated a mandatory data request pursuant to which ILECs, CLECs, and to a lesser extent cable

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<sup>13</sup> See, e.g., *WorldCom*, 238 F.3d at 462 (“[t]he FCC also notes that there are reasons to believe that, if anything, collocation underestimates competition in relevant markets as ‘it fails to account for the presence of competitors that . . . have wholly bypassed incumbent LEC facilities’” (citation omitted)).

<sup>14</sup> *Pricing Flexibility Order* ¶¶ 93, 100, 108, 148-50 (setting forth triggers for Phase I and Phase II pricing flexibility relief). The channel termination trigger for Phase II pricing flexibility relief requires collocation at fully 65 percent of wire centers (or wire centers that account for 85 percent of revenue). *Id.* at ¶ 150.

<sup>15</sup> *Id.* at ¶¶ 122-33 (discussing Phase I relief); *id.* at ¶¶ 153-57 (discussing Phase II relief).

<sup>16</sup> Report and Order, *Special Access for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, 27 FCC Rcd. 10557 (2012) (“*Pricing Flexibility Suspension Order*”).

companies, were required to submit detailed data on the geographical extent of their facilities-based networks, so that the Commission can assess the extent to which the triggers match up to actual network deployment.

The results may explain why some CLECs resisted the data-based review the Commission has undertaken. They show, first, that there is no basis to revisit any existing grant of Phase II relief, as competitors have deployed their own facilities to address almost all (99.1 percent) of the available demand in Phase II MSAs. At the same time, they show that the Commission’s triggers were actually *too* conservative and *under*-inclusive in that they fail to capture many markets, including Chicago and Atlanta, where competition is undeniably intense. These may not be the results that the CLECs predicted, but the Commission is obligated to follow the data wherever they lead.<sup>17</sup> This means that the Commission must: (1) affirm all existing grants of Phase II pricing flexibility; (2) extend pricing flexibility to additional MSAs where, the data show, CLECs have made extensive sunk investments; and (3) establish a new, more liberal proxy for future grants of pricing flexibility. That proxy can be an MSA-based test with less stringent triggers or it can consist of the existing test supplemented by an option for more granular relief.

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<sup>17</sup> See, e.g., *Motor Vehicle Mfrs. Ass’n of United States, Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (to engage in reasoned decision making, an agency “must examine relevant data”); *Butte County, Cal. v. Hogen*, 613 F.3d 190, 194 (D.C. Cir. 2010) (“an agency’s refusal to consider evidence bearing on the issue before it constitutes arbitrary agency action within the meaning of § 706”); *Comcast Corp. v. FCC*, 579 F.3d 1, 7 (D.C. Cir. 2009) (vacating Commission rule that capped the market share of any single cable television operator at 30% of subscribers because the Commission “fail[ed] to consider the impact of [direct broadcast satellite] companies’ growing market share” and “the growth of fiber optic companies”); *Illinois Pub. Telecomm. Ass’n v. FCC*, 117 F.3d 555, 564 (D.C. Cir. 1997) (vacating Commission rates for certain types of payphone calls because the Commission “failed to respond to any of the data showing that the costs of different types of payphone calls are not similar”); *Natural Res. Defense Council v. Herrington*, 768 F.2d 1355, 1391 (D.C. Cir. 1985) (agency may not “continue to rely on the market penetration algorithm and the ORNL model if further study in light of more complete information shows the model’s prediction to be unreliable”).

**B. The Data Collection Confirms That The Pricing Flexibility Triggers Were Overly Conservative, And That Competitors Have Deployed Facilities to Serve the Vast Majority of the Nation’s Special Access Demand.**

The data confirm that the Commission’s pricing flexibility triggers were too conservative. As Drs. Israel, Rubinfeld, and Woroch explain, the data show that competitors have now deployed sunk facilities in virtually every census block that contains special access demand, including outside Phase II areas.<sup>18</sup> Thus, far from showing, as the CLECs have claimed, that the triggers are too lenient, the data show just the opposite: that they result in unnecessary regulation of areas in which competition is robust.

First, the most complete and accurate measure of competitive deployment, which augments the data collection with cable connection data from the Commission’s National Broadband Plan mapping project, confirms that, as of 2013, competitors had deployed facilities to serve almost all special access demand nationwide. Drs. Israel, Rubinfeld, and Woroch have analyzed the data to evaluate how many census blocks contained either (1) a CLEC connection,<sup>19</sup> (2) a CLEC or cable fiber route,<sup>20</sup> or (3) a cable connection (fiber or DOCSIS 3.0) as reported in the National Broadband Plan mapping project.<sup>21</sup> The results are striking: competitors have

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<sup>18</sup> Israel-Rubinfeld-Woroch Analysis, Section III.B.

<sup>19</sup> *Id.*, Section III.A. These data are as reported in Table II.A.4 of the data collection, with the exception that Drs. Israel, Rubinfeld, and Woroch *excluded* CLEC connections which are identified as relying on unbundled network elements (“UNE”) or unbundled common loops (“UCL”). *Id.* Excluding these CLEC connections renders the analysis conservative, because CLECs still purchase hundreds of thousands of UNEs nationwide and use them to compete against ILEC special access services. *Id.*

<sup>20</sup> *Id.* These data are as reported in Table II.A.5 of the data collection. *Id.*

<sup>21</sup> *Id.* In response to requests from the cable companies, the Commission permitted cable companies to include only their *middle mile* fiber facilities in responding to the data collection, given that the cable companies were already obligated to report their connection data as part of the National Broadband Plan mapping project. *See e.g.*, Letter from Steven F. Morris, Vice President and Associate General Counsel, NCTA, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25 (Nov. 19, 2012) (“we explained that if the Commission is interested in the

deployed their own competitive facilities in virtually every census block with potential special access demand nationwide (95.2 percent), and those census blocks in turn cover nearly every special access connection (97 percent) and business establishment (98.9 percent).<sup>22</sup> In other words, competitive special access deployment today is essentially ubiquitous.

The inclusion of the Commission’s cable connection data from the National Broadband Plan mapping project is necessary because cable companies have been aggressively targeting small and mid-sized special access customers for years.<sup>23</sup> During the comment cycle on the Commission’s data collection request, the cable industry conceded that data on its deployment should be part of any analysis of the special access marketplace. “To the extent USTelecom is simply asserting that cable operators offer attractive alternatives to ILEC special access services,

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availability of ‘best efforts’ (*i.e.*, non-dedicated) broadband services offered by cable operators to business customers, it should look at the data that companies submit in connection with the National Broadband Map rather than imposing a separate, redundant collection requirement”). Accordingly, the analysis conducted by Drs. Israel, Rubinfeld, and Woroch includes fiber or DOCSIS 3.0 facilities as reported in the National Broadband Plan mapping data. Israel-Rubinfeld-Woroch Analysis, Section III.A.

<sup>22</sup> *Id.*, Section III.B & Table C. The way the Commission has designed the data collection has made it unnecessarily difficult to map the deployment of competitive facilities to the available demand. The Commission’s approach does not permit the parties to determine how much demand is served at each connection location, because any connection that is more than one Gigabit is masked in the Data Enclave and rendered as one Gigabit. This approach has the effect of making it look like there is far less demand in the urban areas where competitive deployment exists than there really is. Similarly, the data set lacks the information necessary to determine total revenues from special access services at the census block level. Drs. Israel, Rubinfeld, and Woroch have therefore used Dun & Bradstreet data on the location of business “establishments” as a proxy for the level of potential special access demand in each census block in the data collection. Israel-Rubinfeld-Woroch Analysis, Section III.A.

<sup>23</sup> *See, e.g.*, Sean Buckley, *Cable hones its wholesale skills in special access, wireless backhaul*, Fierce Telecom, April 7, 2015, <http://www.fiercetelecom.com/special-reports/cable-hones-its-wholesale-skills-special-access-wireless-backhaul> (noting that cable companies “offer lower speed tiers using a mix of DOCSIS 3.0 and DOCSIS 3.1 equipment to serve the wireline access space” and quoting analyst as saying that “it’s all about having a different option for T-1s”); *see also* Letter from Glenn T. Reynolds, USTA, to Marlene H. Dortch, FCC, dated November 29, 2012 (detailing cable company offers in competition with ILEC DS1s).

and that those services should be considered as part of any marketplace analysis, NCTA agrees.”<sup>24</sup> Indeed, in responding to claims that its proposed revisions to the data collection would *understate* the level of competition offered by cable operators, NCTA asserted:

If our goal was to understate the presence of cable operators, presumably we would have objected to the obligation to identify every single commercial building a cable operator serves, but we did not. We also would have objected to questions regarding best efforts broadband services (which USTelecom previously suggested are marketed by cable operators and purchased by customers as faster and less expensive alternatives to the special access services offered by incumbent LECs), but we did not do that either.<sup>25</sup>

Cable companies have invested billions of dollars in their networks to compete for special access customers, and they are doubling down on this business to offset slow growth in their consumer businesses.<sup>26</sup> Indeed, it is widely recognized that “[c]able is the fastest growing segment in the wholesale and retail business Ethernet markets.”<sup>27</sup> As Vertical Systems Group reports, “[t]he Cable MSO segment remained the fastest growing overall in 2014, garnering growth that considerably outpaced the Incumbent Carrier and Competitive Provider segments. . . . Already established in metro markets, leading cable companies are fortifying their

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<sup>24</sup> Reply to Oppositions of the National Cable & Telecommunications Association, *Special Access for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, at 3 (filed Jan. 8, 2014).

<sup>25</sup> *Id.* at 3-4. The Commission also has recognized the competitive position of cable operators in the business services market: “although many cable operators are relatively new entrants competing in the marketplace for the provision of telecommunications services to business customers, cable operators have expansive – and in some areas, ubiquitous – network facilities that can be upgraded to compete in telecommunications markets at relatively low incremental cost.” Order, *Petition for Declaratory Ruling to Clarify 47 U.S.C. § 572 in the Context of Transactions Between Competitive Local Exchange Carriers and Cable Operators*, WC Docket No. 11-118, ¶ 28 (2012) (internal footnote citations omitted).

<sup>26</sup> See, e.g., Gerry Smith, Comcast Targets Big Businesses to Offset Consumer TV Defections, *BloombergBusiness* (Sep. 16, 2015), <http://www.bloomberg.com/news/articles/2015-09-16/comcast-targets-big-businesses-to-offset-consumer-tv-defections>.

<sup>27</sup> E.g., Sean Buckley, *Cable hones its wholesale skills in special access, wireless backhaul*, *Fierce Telecom*, April 7, 2015, <http://www.fiercetelecom.com/special-reports/cable-hones-its-wholesale-skills-special-access-wireless-backhaul>.

Ethernet offerings to meet the needs of larger businesses with regional and nationwide networks.”<sup>28</sup> Thus, in just the past two years, “cable operators have increased the penetration of business locations they serve by more than 50 percent while ILEC penetration dipped nearly 14 percent.”<sup>29</sup> Comcast, which was recently named the fastest growing Ethernet provider for the second consecutive year, is said by analysts to be “well positioned in 2015 due to its extensive fiber network footprint.”<sup>30</sup>

However, *even if* cable location data from the National Broadband Plan mapping project is excluded from the analysis, the connection and fiber deployment data as reported in the data collection still show near-ubiquitous deployment of sunk facilities. CLECs have deployed their own competitive facilities in the vast majority of the census blocks nationwide that contain special access demand (82.6 percent), and those census blocks cover the vast majority of special access connections (88.7 percent) and most business establishments (92.1 percent).<sup>31</sup> To be sure, the data collection indicates, as everyone has always understood, that there are a small percentage of census blocks in which the 2013 data collection indicates no competitive network (although, as shown above, there are in fact very few census blocks with special access demand

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<sup>28</sup> Vertical Systems Group, *2014 U.S. Cable MSO Ethernet LEADERBOARD* (Mar. 16, 2015), <http://www.verticalsystems.com/vsglb/2014-u-s-cable-mso-ethernet-leaderboard/>.

<sup>29</sup> Sean Buckley, *Cable operators taking greater share of large businesses, says analyst firm*, FierceTelecom (Sep. 21, 2015), <http://www.fiercetelecom.com/story/cable-operators-taking-greater-share-large-businesses-says-analyst-firm/2015-09-21>.

<sup>30</sup> Comcast, *The Fastest Growing Ethernet Provider, Two Years Running*, Feb. 25, 2015, <http://corporate.comcast.com/news-information/news-feed/the-fastest-growing-ethernet-provider-two-years-running>. See also Carol Wilson, *Cable Looking Past AT&T, Verizon*, LightReading, Dec. 4, 2015, <http://www.lightreading.com/cable/cable-business-services/cable-looking-past-atandt-verizon/d/d-id/719679> (quoting Time Warner Cable executive explaining that Time Warner Cable “will gain as much market share [for business services] as we have the right to win. . . . We are going to have to win customers one customer at a time. But we have the opportunity to do that”).

<sup>31</sup> Israel-Rubinfeld-Woroch Analysis, Table F.

that have no facilities-based competitor). The data collection confirms, however, that these “ILEC only” census blocks contain extremely small levels of demand, both individually and in the aggregate.<sup>32</sup>

While these data are impressive, they significantly *understate* the actual level of competitive deployment because they are from 2013 and thus more than two years old. The growth of Ethernet services has accelerated substantially over the last two years, and competitors of all types have continued to invest billions to expand the reach of their networks. One analyst has explained that “U.S. Ethernet port growth in the first half of 2015 was unprecedented, easily surpassing estimates. . . . [and that one of the p]rimary growth drivers for 2015 [is] massive migration from TDM to Ethernet services.”<sup>33</sup> Indeed, the special access data set itself shows that competitors experienced very substantial double digit growth even during 2013.<sup>34</sup> Further, AT&T’s internal data confirm these trends: from the end of 2013 (the period covered by the data collection through November 2015, AT&T’s non-affiliate-billed revenues for TDM-based DS1 services declined very sharply.<sup>35</sup> If the data set collected by the Commission were updated, it would undoubtedly show even higher levels of competitive facilities.

It is no answer to say that the existence of competitive facilities in a census block does not establish that the competitor could actually serve the entire census block. To begin with, census blocks with the most special access demand have been blanketed by competitive facilities. But even in the most unlikely extreme instance where a competitor has deployed only

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<sup>32</sup> Israel-Rubinfeld-Woroch Analysis, Section III.B.

<sup>33</sup> Vertical Systems Group, “Ethernet Market Share – U.S.: Mid-2015 U.S. Port Share.”

<sup>34</sup> Israel-Rubinfeld-Woroch Analysis, Section III.C.

<sup>35</sup> See Declaration of Paul Reid ¶ 18, attached as Attachment A to the Brief of AT&T in Support of Its Direct Case, *Investigation of Certain Price Cap Local Exchange Carrier Business Data Services Tariff Pricing Plans*, WC Docket No. 15-247 (Jan. 6, 2016) (“Reid Decl.”).

to a small corner of a census block, that competitor would generally be able to compete for the establishments that demand special access in the rest of the census block as well. The average size of census blocks in MSAs with demand for special access services is only about one-seventh of a square mile, and most of these census blocks are actually much smaller. Indeed, about three-quarters of them are less than about 0.08 square miles and half are less than about 0.02 square miles.<sup>36</sup> Therefore, even if only a single competitor had deployed services to just one far corner of a census block with special access demand, it could still compete for customers in a large portion of the census block.<sup>37</sup> More fundamentally, however, competitors typically deploy facilities in areas within census blocks where there is special access demand, and special access demand tends to be concentrated in business districts. As a result, competitive facilities deployed in a census block will tend to be very close to the vast majority of locations with demand in that census block. And, in all events, there are often multiple competitors within census blocks allowing them to compete for customers throughout all or most of the census block.

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<sup>36</sup> See Israel-Rubinfeld-Woroch Analysis, Section II.B.

<sup>37</sup> For example, in the 2006 Consent Decrees regarding the AT&T/SBC and Verizon/MCI mergers, the DOJ found that competitive harm occurred “in situations where only AT&T and SBC or MCI and Verizon, respectively, were capable of supplying special access to a particular building before the merger and no other CLEC was likely to connect the building to its network. *AT&T Inc. and BellSouth Corp.—Application For Transfer of Control*, 22 FCC Rcd. 5662, ¶¶ 42-49 (2007) (“*AT&T/BellSouth Merger Order*”) (quoting Decl. of W. Robert Majure at 14, *United States v. SBC Communications, Inc. and AT&T*, Civil Action No. 1:05CV02103 (D.D.C. 2006) (public redacted version) (“Majure Decl.”)). To determine those buildings served by DS-3s where CLEC entry was likely (and therefore likely to prevent anticompetitive effects), the DOJ used a “demand/distance screen” which found no likelihood of anticompetitive harm where the distance was 0.1 mile and the minimum demand was 2 DS3s. Majure Decl. at 9-11 & n.17. In the *AT&T/BellSouth Merger Order*, the Commission described the DOJ’s “screening” process with approval and found that the use of screens by AT&T and BellSouth, in evaluating the effect of their merger on horizontal competition for “Type 1” special access, was “for the most part, both reasonable and consistent with the approach the DOJ adopted.” *AT&T/BellSouth Merger Order* ¶¶ 42-49; see also Report and Order and Further Notice of Proposed Rulemaking, *Special Access for Price Cap Local Exchange Carriers*, 27 FCC 16318, ¶ 78 n.173 (2012).

**II. THE COMMISSION SHOULD RETAIN EXISTING PHASE II RELIEF, EXTEND PHASE II RELIEF TO ADDITIONAL MSAs, AND MODIFY THE TRIGGERS TO ADDRESS THE UNDER-INCLUSIVENESS OF THE ORIGINAL TRIGGERS.**

The unequivocal evidence of nearly ubiquitous competitive deployment wherever special access demand exists leads to three inescapable conclusions with respect to the Commission’s pricing flexibility regime moving forward. First, there is no basis to revisit any grant of Phase II relief and therefore the Commission should reaffirm all existing grants of Phase II relief and reject calls for the re-imposition of price caps anywhere they have been lifted. Second, the Commission should both (i) immediately, in this rulemaking proceeding, extend Phase II relief to additional MSAs, such as Chicago and Atlanta, that the data collection confirms exhibit ubiquitous competitive deployment, and (ii) modify or supplement the triggers to ensure that other MSAs (or, alternatively, subsets of MSAs) that exhibit extensive competitive deployment can also win Phase II relief in future petitions. Third, if the Commission does go down the path of replacing its MSA-based approach with a more geographically granular approach, it may not re-regulate some areas without also extending Phase II relief at the same level of granularity to areas that are currently subject to price cap or Phase I regulation, but where, the data collection shows competitors have deployed sunk facilities such that competition for special access service exists.

**A. The Data Collection Confirms That There Is No Basis to Revisit Any Grant of Phase II Relief or “Re-Impose” Price Cap Regulation in Phase II MSAs.**

The data confirm that there are no grounds to revisit any grant of Phase II pricing flexibility. First, looking at the correct measures, which as discussed above include cable connections as reported in the National Broadband Plan mapping project, competitors have deployed their own facilities in most of the census blocks in Phase II MSAs containing special access demand (95.8 percent), and those census blocks in turn account for most special access

connections (97.4 percent) and most business establishments (99.1 percent).<sup>38</sup> But even if the cable connection data is excluded and only the CLEC data and cable fiber data from the 2013 data collection itself are considered, competitors have still deployed their own facilities in the vast majority of census blocks with special access demand (83.7 percent), accounting for the overwhelming portion of special access connections (89.3 percent) and business establishments (93.1 percent).<sup>39</sup>

The data thus affirmatively refute CLEC claims that the Commission has over-extended Phase II relief by granting such relief on an MSA-basis. As Drs. Israel, Rubinfeld, and Woroch explain, for several reasons, there is no cause for concern even with respect to the small number of census blocks in Phase II MSAs in which the data collection does not document the existence of an ILEC competitor.

First, those census blocks contain very little demand. Under the Commission’s current MSA-based system, most (95.8 percent) of the census blocks in Phase II MSAs are served by at least one facilities-based competitor.<sup>40</sup> And because demand for special access service tends to be geographically concentrated, competitor facilities are able to serve virtually all of the business establishments (99.1 percent) in Phase II MSAs.<sup>41</sup> Accordingly, if the Commission were to attempt to address the supposed “overbreadth” of the current MSA-based triggers, it would at most be considering the re-imposition of price cap regulation in a smattering of census blocks (or other geographic sub-units) in the outlying areas of Phase II MSAs, which together serve a

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<sup>38</sup> See Israel-Rubinfeld-Woroch Analysis, Table C-PF2.

<sup>39</sup> See *id.*, Table F-PF2.

<sup>40</sup> See *id.*, Section III.C & Table C-PF2.

<sup>41</sup> See *id.*

minuscule portion (less than one percent) of total potential special access demand.<sup>42</sup> That would make absolutely no sense whatsoever; the Commission would be re-imposing price caps on empty air. There is no economic or practical justification for creating, initializing, and maintaining a new system of price caps on these demand-empty census blocks on the outskirts of existing Phase II MSAs.

Moreover, there is no real risk that the small number of customers in outlying parts of the Phase II MSAs suffer competitive harm because *ILECs generally do not charge different rates for special access services at different locations within an MSA*. Even where pricing flexibility is granted, ILECs remain subject to tariffing requirements that enable all similarly situated consumers in the MSA to take advantage of the prices and contract terms determined in the competitive areas.<sup>43</sup> As the Commission has stated, “to the extent that an incumbent LEC attempts to use contract tariffs in an exclusionary manner by targeting them to specific customers, the Commission will enforce the requirement that they make contract tariffs available to all similarly situated customers.”<sup>44</sup> Given that the vast majority of demand in these Phase II MSAs is subject to intense competition, customers in outlying areas are actually getting the benefit of the competitively determined prices in those MSAs.<sup>45</sup> In fact, that would be the case

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<sup>42</sup> *See id.*, Table C-PF2.

<sup>43</sup> *See Pricing Flexibility Order* ¶ 130.

<sup>44</sup> *Id.*; *see also WorldCom*, 238 F.3d at 460 (upholding the *Pricing Flexibility Order* based, in part, on the continuation of tariff filing requirements for LECs that receive Phase II relief).

<sup>45</sup> In addition, there is no basis in either the data collection or economic theory to conclude that ILECs could “leverage” any “market power” in these outlying areas that lack demand into the areas where the great majority of the demand is served by dozens of facilities-based competitors. *See Declaration of Dennis Carlton, Mark Israel, Allan Shampine, and Hal Sider*, ¶¶ 74-75, attached as Attachment C to the Brief of AT&T in Support of Its Direct Case, *Investigation of Certain Price Cap Local Exchange Carrier Business Data Services Tariff Pricing Plans*, WC Docket No. 15-247 (Jan. 6, 2016).

even if the percent of customers located in areas served by one or more CLECs was substantially lower.

Replacing the existing MSA-based approach with a more granular approach would also run counter to the important administrative considerations the Commission has recognized. As the Commission explained in the *Pricing Flexibility Order*, choosing a geographic basis for evaluating requests for pricing flexibility requires a careful balance. On the one hand, the area must be small enough so that the competitive conditions within it are reasonably uniform, but also large enough to be “administratively workable.”<sup>46</sup> Even accepting *arguendo* claims that using a smaller geographic basis would theoretically achieve some incremental improvement in accuracy, that benefit must be balanced against the additional administrative costs or other harms of such an approach. The Commission carefully considered these factors in the *Pricing Flexibility Order*, and determined that MSA-based relief struck the best balance between assuring accuracy and minimizing the administrative burdens on the Commission and the parties.<sup>47</sup> That remains true today, and indeed, it is all the more true given the fact that the TDM services that the Commission would be re-regulating are experiencing a steep decline toward extinction. As the Commission is well aware, the market for special access services is undergoing a sea change, as customers are rapidly abandoning legacy TDM technologies for Ethernet services.<sup>48</sup> Although the Commission has not collected data concerning this transition, AT&T’s own experience is that it is rapid and irreversible. For example, between January 2013

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<sup>46</sup> *Pricing Flexibility Order* ¶ 71.

<sup>47</sup> *Id.* ¶¶ 71-76.

<sup>48</sup> *See, e.g.,* Vertical Systems Group, Ethernet Market Share – U.S.: Mid-2015 U.S. Port Share” (“U.S. Ethernet port growth in the first half of 2015 was unprecedented, easily surpassing estimates. . . . [One of the p]rimary growth drivers for 2015 [is] massive migration from TDM to Ethernet services.”).

and October 2015, AT&T’s non-affiliate-billed revenues for TDM-based DS1 services declined very sharply,<sup>49</sup> and AT&T plans to retire its copper TDM network used to provide DS1 service early in the next decade. TDM-based services are thus rapidly headed for extinction. Under these circumstances, resuscitating and reinventing a regulatory regime specifically to address areas with minimal or no special access demand would make even less sense. But it wouldn’t be merely futile: the only thing that will slow down the transition away from TDM services to broadband services would be regulations that give customers artificial incentives to delay the transition. Re-regulating TDM special access services, particularly in the face of the data the Commission has collected and cited herein would thus run counter to the Commission’s broadband goals.

Beyond all this, re-imposition of price caps in these areas would require the Commission to surmount a host of legal hurdles. In order to invoke its authority to regulate competition and to impose new rate regulation under Sections 201 and 202, the Commission would have to clearly demonstrate that there is a market failure that requires a regulatory solution.<sup>50</sup> That would require the Commission to make an affirmative showing that the ILECs’ current rates are unjust and unreasonable – *i.e.*, completely outside the zone of reasonableness – whether price

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<sup>49</sup> See Reid Decl. ¶¶ 18, 37.

<sup>50</sup> See, *e.g.*, Tentative Decision and Request for Further Comments, *Amendment of 47 C.F.R. § 73.658(j)(1)(i) and (ii), the Syndication and Financial Interest Rules*, 94 FCC 2d 1019, ¶ 107 (1983) (acknowledging that the Commission “should not intervene in the market except where there is evidence of a market failure and a regulatory solution is available that is likely to improve the net welfare of the consuming public, *i.e.*, does not impose greater costs than the evil it is intended to remedy”); Memorandum Opinion and Order, *Orloff v. Vodafone Airtouch Licenses LLC*, 17 FCC Rcd. 8987, ¶ 22 n.69 (2002) (absent a marketplace failure the Commission generally “rel[ies] on market forces, rather than regulation”); Second Report and Order, *Implementation of Sections 3(n) and 332 of the Communications Act*, 9 FCC Rcd. 1411, ¶ 173 (1994) (“[I]n a competitive market, market forces are generally sufficient to ensure the lawfulness of . . . terms and conditions of service set by carriers who lack market power”); *Cellco P’ship v. FCC*, 357 F.3d 88, 96 (D.C. Cir. 2004) (the Commission may adopt regulations only “upon finding that they advance a legitimate regulatory objective”).

caps technically constitute a prescription or not. Indeed, the Commission has acknowledged that even to impose interim special access rate prescriptions, the “record would have to support the conclusion that *every . . . rate [and practice for] every service for which pricing flexibility [or forbearance] has been granted violates Section 201.*”<sup>51</sup> For the reasons just discussed, the Commission could not make any such predicate findings for these services. But even if the Commission could survive that hurdle, it would still face the daunting task of figuring out how to reinvent and implement a price cap regime. When the Commission originally adopted price caps in 1990, it set the caps at the level of the then-existing rates, which had been determined in an old-fashioned rate-of-return proceeding.<sup>52</sup> The services at issue here thus have not been subject to any rate regulation for many years – in the case of some DSn services, almost 15 years. The Commission thus would have no defensible basis for initializing price cap rates at a different level than current rates. Nor does the Commission have any record basis upon which to address other issues, such as exogenous cost adjustments, and past experience in that area makes clear this would take years (at best) to solve that dilemma, at which point TDM services would be even more archaic.

**B. The Data Collection Requires the Commission Both to Extend Phase II Relief Immediately to Additional MSAs and to Modify the Triggers to Ensure That Other Areas with Competitive Facilities Obtain Regulatory Relief.**

The data collected by the Commission demonstrates not only that there is no need to roll back Phase II pricing flexibility, but, to the contrary, that the existing pricing flexibility triggers are too conservative. Competition is flourishing throughout numerous areas that have not qualified for Phase II relief under the existing triggers, including large cities such as Chicago and

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<sup>51</sup> Brief for Federal Communications Commission, *In re AT&T Corp., et al.*, No. 03-1397, 2004 WL 1895955, at \*23-24 (D.C. Cir. filed Aug. 23, 2004) (emphasis in original).

<sup>52</sup> See *National Rural Telecom Ass’n v. FCC*, 988 F.2d 174, 178 (1993).

Atlanta – omissions that on their face should raise a gigantic red flag that the triggers are too conservative. Indeed, while CLECs have peddled the theory that outlying areas of an MSA where there is little or no special access demand at all should dictate special access regulatory policy – a “tail wags the dog” theory if ever there were one – the real story is the triggers are overly conservative because they fail to consider substantial and growing competition that exists independent of any need for collocation at an ILEC wire center. And so, instead of marching backwards to the early 1990s, as the CLECs would prefer, the Commission needs to take steps to expand pricing flexibility and liberalize its triggers in recognition of the fact that the existing rules are too restrictive. Specifically, the Commission should: (i) immediately extend Phase II relief to those MSAs, which the data confirms have competitive deployment, and (ii) modify the triggers to ensure that, going forward, ILECs can gain additional pricing flexibility in other, similar MSAs. This modification can be effected either by lowering the existing collocation threshold requirements or by supplementing the existing test with an alternative, additional path by which ILECs can obtain more granular relief.

*Immediate Phase II Relief for Certain MSAs.* The data confirm that the Commission should immediately extend Phase II relief to numerous other MSAs that are currently subject to only Phase I or no pricing flexibility. One of the anomalies of the Commission’s 1999 pricing flexibility rules was that the triggers made it unintentionally difficult to obtain Phase II relief for channel terminations in larger cities that have the most competition (such as Chicago in AT&T’s service territory). This perverse result was a consequence of the Commission’s conservative reliance on the evidentiary proxy of facilities-based collocations coupled with the insistence that an ILEC demonstrate the existence of such collocations in an extraordinarily high percentage of wire centers in these geographically large MSAs to obtain Phase II relief for channel

terminations. Competitors in the largest cities have built the largest and most extensive networks, and thus are more likely to rely on end-to-end facilities-based alternatives without the need for ILEC collocation (and, as discussed above, cable competitors rarely use ILEC collocations either). This has resulted in manifestly incorrect results, with cities like Chicago still subject only to Phase I relief for channel terminations.

For purposes of an immediate recalibration in this rulemaking proceeding, however, the Commission has before it a comprehensive data set that obviates the need for such overly conservative proxies. Based on those data, the Commission should dramatically expand the number of MSAs with Phase II pricing flexibility. As Drs. Israel, Rubinfeld, and Woroch demonstrate, competitors have deployed competing facilities to virtually all of the census blocks in MSAs with Phase I pricing flexibility nationwide (96.1 percent), and those census blocks account for nearly all special access connections (97.5 percent) and business establishments (99.1 percent).<sup>53</sup> Indeed, competitive facilities exist throughout MSAs that have received no pricing flexibility at all, as competitive facilities exist in most of the census blocks in those MSAs (89.8 percent), accounting for most (92.9 percent) special access connections and business establishments (96.4 percent).<sup>54</sup>

The Chicago MSA illustrates this point. The Chicago MSA has only Phase I pricing flexibility for channel terminations. Yet, almost every business establishment **[BEGIN HIGHLY CONFIDENTIAL]** ██████████ **[END HIGHLY CONFIDENTIAL]** in Chicago – *i.e.*, locations that might have demand for special access services – are located in census blocks where there is at least one other competitor that has deployed competitive facilities.<sup>55</sup> Even a

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<sup>53</sup> Israel-Rubinfeld-Woroch Analysis, Table C-PF1.

<sup>54</sup> *Id.*, Table C-PC.

<sup>55</sup> *See id.*, Table C-MSA.

number of smaller MSAs, such as the Dayton, Ohio MSA, which have not received any pricing flexibility for channel terminations, should immediately be given Phase II pricing flexibility relief based on the substantial competition shown in the 2013 data set. In Dayton, for example, almost all [BEGIN HIGHLY CONFIDENTIAL] ██████████ [END HIGHLY CONFIDENTIAL] business establishments that might have demand for special access services are located in census blocks where at least one other competitor has deployed competing facilities.<sup>56</sup>

There is no rational basis for retaining price cap regulation in these MSAs, nor is there any reason to fall back on proxies when the Commission has actual data about competitive deployment before it.<sup>57</sup> Accordingly, the Commission should implement a one-time reset in this rulemaking proceeding, based on the 2013 data collection, that extends Phase II relief to any MSA in which the data collection shows that substantial competitive sunk facilities have been deployed.

*Modification of the Triggers in the Commission’s Rules.* The data also require the Commission to lift the freeze and liberalize its triggers for Phase II relief going forward. Even after the Commission recalibrates pricing flexibility relief based on the 2013 data before it, there will be a need for a mechanism to assess when and where future pricing flexibility must be provided. The Commission will have to rely on proxies to make those calls because it is not going to have the benefit of comprehensive actual data. But it is now evident that the existing

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<sup>56</sup> See *id.*, Table C-MSA.

<sup>57</sup> See, e.g., *State Farm*, 463 U.S. at 43 (to engage in reasoned decisionmaking, an agency “must examine relevant data”); *Butte County*, 613 F.3d at 194 (“an agency’s refusal to consider evidence bearing on the issue before it constitutes arbitrary agency action within the meaning of § 706”); *Comcast*, 579 F.3d at 7 (vacating Commission rule that capped the market share of any single cable television operator at 30% of subscribers because the Commission “fail[ed] to consider the impact of [direct broadcast satellite] companies’ growing market share” and “the growth of fiber optic companies”).

proxies are too conservative. In fact, as cable companies continue to make rapid inroads in the enterprise space, the existing triggers will grow even more inadequate.

Because the Commission has the benefit of actual data on competitive facilities, it should use that data to adjust the triggers themselves to address this problem of under-inclusiveness. AT&T is not in a position at this time to recommend any particular adjustment because it has not had sufficient time to test alternative triggers against the data to determine an alternative trigger that most appropriately addresses this problem of under-inclusivity. But any such change should either relax the collocation requirements and/or establish an alternative, additional path by which ILECs may gain Phase II relief in geographically smaller areas (such as downtown areas and other business districts), if such geographically granular relief can be practicably administered and implemented without unnecessary cost or complexity that is confusing for ILECs or their customers.

**C. If the Commission Attempts to Roll Back Pricing Flexibility In Any Area, It Must Also Extend Phase II Relief to the Geographically Granular Areas Where the Data Collection Shows There Is Competitive Deployment.**

AT&T is skeptical of proposals to scrap MSA-based relief altogether because the data shows that competition is ubiquitous in virtually all areas where there is special access demand. Thus, to the extent there are census blocks within an MSA that has been granted Phase II relief where competition is lacking, the data demonstrates that there is little or no special access demand in those areas. That is the true value of this data collection: whereas CLECs have constantly talked about the outlying areas of Phase II MSAs, what we now know is that, if there are no competitive facilities in those areas, it is of no concern because neither is there any special access demand. And, while a more granular set of triggers would thus seem to offer little benefit, it could add significantly to the cost and complexity of any regulatory regime.

Nonetheless, *if* the Commission were to start down the path of using a more granular geographic basis for determining where to grant pricing flexibility—and especially if it seeks to re-impose price cap regulation in the outlying areas of Phase II MSAs—it would be patently arbitrary not to extend Phase II relief at the same level of granularity to non-Phase II areas where the data shows that competitors have deployed sunk facilities.

Both the Commission and the D.C. Circuit have recognized that there is no legal or economic justification for retaining price cap regulation in a geographic area where competitors have deployed sunk facilities capable of providing service to that area.<sup>58</sup> Here, the data unequivocally show that even in 2013, competitors had deployed sunk facilities in census blocks serving the majority of special access demand in a significant number of MSAs that have received limited or no pricing flexibility.<sup>59</sup> Thus if the Commission switches to a more granular geographic area (such as census blocks) for the purpose of re-regulating the outlying areas of current Phase II MSAs, where little demand exists, it must also extend Phase II relief, on a similarly granular basis, to areas within the non-Phase II MSAs that have facilities-based competition. Any other approach would be arbitrary, especially given that the census blocks with facilities-based competition that remain under price caps contain much more of the

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<sup>58</sup> See, e.g., *Pricing Flexibility Order* ¶ 80 (“Once multiple rivals have entered the market and cannot be driven out, rules to prevent exclusionary pricing behavior are no longer necessary. . . . If a competitive LEC has made a substantial sunk investment in equipment, that equipment remains available and capable of providing service in competition with the incumbent, even if the incumbent succeeds in driving that competitor from the market.”); *WorldCom*, 238 F.3d at 458-59 (“the presence of facilities-based competition with significant sunk investment makes exclusionary pricing behavior costly and highly unlikely to succeed,” because “that equipment remains available and capable of providing service in competition with the incumbent, even if the incumbent succeeds in driving that competitor from the market”). See also *Pricing Flexibility Order* ¶ 155 (recognizing that special access customers are “sophisticated purchasers of telecommunications services, fully capable of finding competitive alternatives where they exist and determining which competitor can best meet their needs”).

<sup>59</sup> Israel-Rubinfeld-Woroch Analysis, Tables C-PF1, F-PF1, C-PC, F-PC.

available demand than the outlying Phase II census blocks where the data collection suggests that only the ILEC is available.<sup>60</sup>

### CONCLUSION

For the foregoing reasons, the Commission should reaffirm Phase II relief in each MSA where it has been granted, extend Phase II relief to additional MSAs, and modify the rules to expand Phase II relief as described above.

Respectfully submitted,

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January 27, 2016

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<sup>60</sup> See *Dist. Hosp. Partners, L.P. v. Burwell*, 786 F.3d 46, 59 (D.C. Cir. 2015) (“We have often declined to affirm an agency decision if there are unexplained inconsistencies in the final rule” (citing cases)); *Nat’l Parks Conservation Ass’n v. EPA*, 788 F.3d 1134, 1141 (9th Cir. 2015) (agency actions must “be consistent; an internally inconsistent analysis is arbitrary and capricious”); *General Chemical Corp. v. United States*, 817 F.2d 844, 854 (D.C. Cir. 1987) (vacating agency action in part because agency failed to treat evidence of market competition “in a rational and consistent manner that is fair to the parties involved”); see also *Leather Industries of America, Inc. v. EPA*, 40 F.3d 392, 401 n.4 (D.C. Cir. 1994) (overturning agency action because agency did not have “blanket one-way ratchet authority to tighten standards”).

# **ATTACHMENT 2**

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

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In the Matter of	)	
	)	
Special Access Rates for Price Cap Local Exchange Carriers	)	WC Docket No. 05-25
	)	
AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593
	)	

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**REPLY COMMENTS OF AT&T INC.**

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

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In the Matter of	)	
	)	
Special Access Rates for Price Cap Local Exchange Carriers	)	WC Docket No. 05-25
	)	
AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593
	)	

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**REPLY COMMENTS OF AT&T INC.**

Pursuant to the Commission’s December 21, 2015 Order,<sup>1</sup> AT&T Inc. (“AT&T”) respectfully submits these comments in response to Section IV.B of the Commission’s December 18, 2012 *Notice*.<sup>2</sup>

**INTRODUCTION AND SUMMARY**

The *Notice* in this rulemaking proceeding asks whether the Commission’s pricing flexibility triggers are reasonably accurate predictors of where competitors have deployed alternative facilities-based networks that would justify the removal of price cap regulations on certain legacy TDM services. As AT&T previously explained, the data now confirm that, contrary to what some have argued, the triggers were overly *conservative*. The data show that competitors have deployed their own facilities-based networks to almost every MSA census block that has special access demand. As both the Commission and the courts have found, the

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<sup>1</sup> Order, *Special Access for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, RM-10593 (rel. Dec. 21, 2015) (extending comment deadlines).

<sup>2</sup> Report and Order and Further Notice of Proposed Rulemaking, *Special Access for Price Cap Local Exchange Carriers*, 27 FCC Rcd 16318 (2012) (“*Notice*”).

presence of those competitive networks ensures that ILEC special access rates are just and reasonable and eliminates any need for price caps. In light of the data, the only defensible course for the Commission now is (1) to reaffirm all existing grants of Phase II relief and (2) extend Phase II relief to the additional areas, including many major cities like Chicago in the AT&T region, that the data confirm are some of the most competitive special access marketplaces in the country.

Even with hard data showing nearly ubiquitous CLEC deployment staring them in face, the CLECs and their supporters continue to claim that the special access marketplace is essentially an ILEC monopoly. They cannot make that claim using any credible analytical construct, so, while the details vary, they resort to arguing that special access competition must be assessed on a building-by-building basis, that only CLEC connections count (but not cable or nearby CLEC fiber), and that an individual building is not competitive unless *three* CLECs have built their own facilities-based connection to that building. If ever there were a test gerrymandered for failure that would be it. But the CLECs do not stop there. Having excluded from the competitive analysis most actual competition, they go on to propose, based on their rigged analysis, that the Commission impose a wide array of stringent regulations on TDM services, including the re-imposition of price caps in most areas where they have been removed, reduction of the caps and adoption of a higher X-Factor not tied to inflation, as well as restrictions on terms and conditions such as volume commitments. And, the CLECs actually devote large chunks of their comments to advocating equally intrusive regulation of *Ethernet* services, which are not governed by the pricing flexibility rules, are not at issue here, and which in all events are extremely competitive.

The CLECs' attempts to dismiss the fact of widespread competitive deployment are not remotely credible. The CLECs are literally arguing that, if the ILEC is the only provider that has built a connection to a building, there is no special access competition for customers in that building *even if* Comcast has a fiber connection in the building, and Level 3, XO, and Windstream all have fiber networks in the street in front of the building that could be easily extended to serve customers in that building. Indeed, these CLECs maintain that there is no cognizable competition for customers in the building even if AT&T, Comcast, XO and Level 3 have *all* built connections to that building, and there were additional CLECs with fiber in the street out front. This is an Alice in Wonderland competitive construct that bears no relationship to real world business decisions or economics.

The CLECs attempt to give the aura of credibility to their gerrymandered analysis with two papers by their hired economists. Both of these papers are so riddled with bad data and methodological flaws as to be wholly unreliable. First, a number of CLECs rely on a study by Professor Baker reporting the results of regression analyses that seek to model the effect of CLEC entry in a building on the ILEC's retail special access prices in that building. Professor Baker claims to have found that ILEC retail prices in any given location will decrease with the number of CLECs that have connections to that building, and that the presence of three or more CLECs results in the largest decrease. Professor Baker takes these results as both evidence of market power and an indication that competition requires at least three CLECs in a building.

Setting aside, for the moment, the serious analytical flaws in Professor Baker's analyses, which are discussed below, his actual results are not as described and they do not support his conclusions. First, the regression analyses returned mostly statistically insignificant results. But beyond that, his regression results are all over the map and frequently contradict his theories.

For example, many of them find that a higher number of CLECs correlates with *higher* retail prices. He also finds in many cases that a CLEC connection in a *nearby* building has a greater downward impact on ILEC prices than a CLEC in the same building – again contradicting his theory and undermining the CLECs’ zeal to exclude nearby fiber from their analyses. Even more embarrassing for the CLECs that sponsored this paper, Professor Baker ran regressions for the ILECs’ *wholesale* special access prices *and was unable to find any evidence of market power*.<sup>3</sup> Likewise, he ran regressions for ILECs’ prices in only Phase II areas – the areas where ILECs have the most pricing flexibility – and again was unable to find any evidence of market power.<sup>4</sup> As Professors Israel, Rubinfeld, and Woroch explain, Professor Baker’s wildly inconsistent results are indicative of deep flaws in the data inputs and the design of the regressions.<sup>5</sup>

First, Professor Baker is using flawed data for both inputs to his equation – prices and the number of CLECs in a building. His pricing data are flawed because pricing data is unavailable for a very substantial number of locations in the Data Collection, including 51 percent of CLEC locations and 27 percent of ILEC locations.<sup>6</sup> Thus, the pricing data he uses is substantially incomplete and there is no showing that the data that is available to him is a representative sample.<sup>7</sup> His other input – the number of CLECs connected to a building – is equally problematic, due to both data limitations and unwarranted assumptions. In this regard, Professor Baker’s analysis does not include any in-building cable company connections (including cable

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<sup>3</sup> Declaration of Jonathan B. Baker On Market Power In The Provision of Dedicated (Special Access) Services ¶ 62 (filed Jan. 28, 2016) (“Baker Decl.”).

<sup>4</sup> *Id.*

<sup>5</sup> Declaration of Mark Israel, Daniel Rubinfeld and Glenn Woroch § III, attached hereto as Exhibit A (“Israel-Rubinfeld-Woroch Decl.”).

<sup>6</sup> *Id.* ¶¶ 27-30.

<sup>7</sup> *Id.*

Ethernet connections), even though cable companies are some of the largest and fastest growing providers of special access services.<sup>8</sup> And beyond that, he is also missing numerous CLEC connections because the data submitted to the Commission does not identify the location for a substantial number of CLEC connections. Professor Baker simply leaves those connections out of his analysis, which means that for many buildings used in his analysis he is using the wrong number of CLECs with connections to the building.<sup>9</sup> As a result, what Professor Baker is counting as an ILEC-only building may actually have one or more cable or CLEC connections; a two-provider building may actually have three or more providers; and so on throughout his data set. Professor Baker’s analysis marries incomplete and inaccurate information about ILEC and CLEC pricing in a building to incomplete and inaccurate information about the number of CLECs in a building. Any attempt to find a statistically significant causal relationship between two sets of inadequate data cannot produce reliable results.<sup>10</sup> These data deficiencies are themselves fatal to his analysis.

Second, even if Professor Baker had the right data on pricing and the number of CLEC building connections, which he did not, his methodology is flawed because his regressions are not asking the right questions. As Professors Israel, Rubinfeld, and Woroch explain, his analysis does not capture the impact of different numbers of competitors on price so much as the impact of different building sizes and corresponding capacity demand on price. The sort of location that would support four or more providers would be very large and (as the 2013 Data Collection confirms) would have many times more demand on average than locations with one provider.<sup>11</sup>

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<sup>8</sup> *Id.* ¶¶ 31-33.

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*

<sup>11</sup> *Id.* ¶¶ 34-37.

Such locations are far more likely to be located in densely populated areas where the costs to serve a building (including mileage costs) would be lower and the revenue opportunities greater. Because Professor Baker has not controlled for such factors, he assumes that it is the number of competitors that is driving lower prices, rather than the unique economics of serving those buildings.

Professor Baker's analysis is further skewed by its failure to control for differences in regulatory restrictions. A sound regression would not ignore this variable, because the level of regulatory flexibility permitted directly affects an ILEC's ability and incentive to lower prices.

The failure of his analysis to control for this variable is especially notable because one of the main points of this proceeding is to test the CLECs' hypothesis that the Commission had prematurely extended Phase II to relief to areas lacking competition, leading to higher prices. That being the case, one would have expected the CLECs to track pricing levels against different levels of competitive entry specifically in Phase II areas. Professor Baker, in fact, concedes that he *did* conduct that very analysis, but he did not provide the results because he found that in Phase II areas CLEC entry caused prices to rise or had no statistically significant effect on prices at all.<sup>12</sup> The obvious conclusion to be drawn from that finding – one that runs directly counter to the CLECs' hypothesis in this proceeding – is that the reason prices in Phase II areas were not affected by the number of CLECs with existing connections to a building is because prices are already constrained to competitive levels by the presence of pervasive competition in Phase II areas. Thus the analysis that Professor Baker conducted but did not submit actually undermines core CLEC claims about premature deregulation in Phase II areas.

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<sup>12</sup> Baker Decl. ¶ 62.

Sprint’s submissions (from Professors Besen and Mitchell and Mr. Zarakas and Ms. Gately) are even more superficial and unreliable. Sprint’s economists limit their analysis to existing CLEC building connections, thereby excluding other sources of competition, including nearby fiber and any competition, including in-building connections, from cable competitors. They then use these skewed figures to calculate high ILEC market shares (and for that extra veneer of expertise, tables full of HHIs at or near 10,000). These “conclusions” are meaningless, because neither the exclusion of nearby fiber nor of cable competitors is defensible. Indeed, the CLECs’ own submissions, coupled with AT&T’s prior analysis, refute these assumptions. For example, XO acknowledges that it generally finds it “worthwhile” to extend laterals **[BEGIN HIGHLY CONFIDENTIAL]** [REDACTED] **[END HIGHLY CONFIDENTIAL]** and in some instances “as much as **[BEGIN HIGHLY CONFIDENTIAL]** [REDACTED] **[END HIGHLY CONFIDENTIAL]** feet.”<sup>13</sup> Similarly, Windstream explains that it builds laterals at distances of **[BEGIN HIGHLY CONFIDENTIAL]** [REDACTED] **[END HIGHLY CONFIDENTIAL]** miles from a Windstream fiber splice point, although longer builds may be possible in very limited instances where the revenue opportunity from building to that location is significant enough.<sup>14</sup> As AT&T explained, however, the average size of census blocks in MSAs with demand for special access

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<sup>13</sup> Declaration of Michael Chambless ¶ 26 (“Chambless Decl.”), attached to the Comments of XO Communications, LLC On The Further Notice of Proposed Rulemaking (filed Jan. 27, 2016) (“XO Comments”). XO reports that nearby providers will “provide competitive bids **[BEGIN HIGHLY CONFIDENTIAL]** [REDACTED] **[END HIGHLY CONFIDENTIAL]** percent of the time.” Chambless Decl. ¶ 27.

<sup>14</sup> Declaration of Dan Deem, Douglas Derstine, Mike Kozlowski, Arthur Nichols, Joe Scattareggia, and Drew Smith Decl. ¶ 51 (“Deem-Derstube-Kozlowski-Nichols-Scattareggia-Smith Decl.”), attached as Attachment A to the Comments of Windstream Services, LLC (filed Jan. 28, 2016) (“Windstream Comments”).

services is about one-seventh of a square mile, and half are less than 0.02 square miles.<sup>15</sup> In other words, the CLECs have conceded that they will build connections within a radius that is in many cases larger than a census block – and the data collected by the Commission show that CLECs have networks in almost all census blocks that have special access demand.<sup>16</sup>

That the CLECs’ various calls for increased regulation of TDM-based services are based on deeply flawed competitive analyses is reason enough to reject them. But the Commission also must recognize that CLEC proposals for new regulation would be extremely impractical to implement and would require an extraordinarily complex and inherently arbitrary regulatory reset. The data collected by the Commission demonstrates that competition exists almost everywhere there is special access demand. And there is good reason to believe that the realities of how ILECs price their services bring the benefits of competition even to the small percentage of special access customers located in those outlying areas of Phase II MSAs where competition may be lacking. Under the circumstances, even if the Commission believes that the existing regime is imperfect, it must think seriously about whether any so-called “fix” is worse than the alleged problem. It is noteworthy in that regard that the very CLECs that are clamoring for regulation of their ILEC competitors offer scant analysis of exactly how the Commission would go about that process. But the Commission cannot simply announce that from here on out, price cap regulation shall apply to certain services in certain areas. It has to give informed content to all of the working parts of a price cap regime – the indices, the initial price levels, the X factors,

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<sup>15</sup> See Mark Israel, Daniel Rubinfeld, and Glenn Woroch, Competitive Analysis of the FCC’s Special Access Data Collection, Section I.B and II.B (filed Jan. 28, 2016) (“Israel-Rubinfeld, Woroch Analysis”).

<sup>16</sup> In addition, the Commission’s 2013 Special Access Data Collection shows that the average number of businesses with a special access connection in an MSA census block is 1.8 with about two-thirds of census blocks having just one such building, which is further strong evidence that a CLEC with facilities in a census block with special access demand is capable of competing for all demand in the census block. See Israel-Rubinfeld-Woroch Decl. ¶ 10.

and the rest of it – and this is no easy task. To the contrary, history teaches that developing these schemes and the benchmarks for them would be an extraordinarily complex and resource-intensive undertaking that takes years to complete and that requires inherently arbitrary judgments. Indeed, the D.C. Circuit has yet to sustain an X-factor adopted by the Commission, and the process of developing a service-specific X-factor at this juncture would be even more difficult and arbitrary than in the past. All of which is to say that any price cap regime re-created by the Commission would take years to develop and would be highly imperfect (at best). And if that were not enough, all of this would take place at a time when demand for TDM services is plummeting and the special access marketplace is reinventing itself without Commission intervention. It is hard to imagine a more misguided regulatory pursuit.

Sprint’s suggestion (at i-ii) that re-regulation is necessary to facilitate the transition to 5G wireless services is especially misguided. The industry is still in the early stages of determining the standards for and testing 5G technology, but one thing is clear: the wireless industry is not going to be using legacy DS1s and DS3s for backhaul. The completion of the 5G standards-setting process and the widespread deployment and adoption of 5G is scheduled to coincide early in the next decade with the *retirement* of the legacy networks used to provide the DS1 and DS3 services at issue here. Indeed, Sprint and the rest of the wireless industry have *already* transitioned their backhaul needs to Ethernet, and 5G backhaul is likely to be a combination of Ethernet fiber services and the re-use of wireless spectrum. The development of 5G cannot serve as an excuse to regulate TDM services. And to the extent that 5G backhaul increases demand for Ethernet-based backhaul, that only creates new opportunities for competitors.

Finally, the Commission should dismiss out of hand CLEC requests for regulation of *Ethernet* services. First, these services are beyond the scope of this proceeding because the

*Notice* does not place the possible re-regulation of Ethernet services at issue, and indeed, does not even mention those services in connection with the proposed rule changes.<sup>17</sup> Although the CLECs suggest that the Commission can bypass the Administrative Procedure Act by simply reversing its decision in 2007 to forbear from regulating broadband transmission services, like Ethernet, that is incorrect. The Commission granted forbearance for these services in 2007, and to the extent the Commission has the authority to revisit those determinations, it would have to be done in a properly noticed rulemaking proceeding. But in all events Ethernet services are intensely competitive and no new regulation is warranted. AT&T has already demonstrated that competitors have deployed facilities to compete for virtually all locations with special access demand, and even the flawed analysis by the CLECs shows that CLEC market share for services ranging from 50 Mbps and higher, as of 2013, was almost 50 percent measured by circuit counts and over 41 percent measured by revenues – and those figures omit all cable Ethernet providers.<sup>18</sup> As explained below, the CLECs’ various company-specific complaints, relating to alleged “price squeezes” or the particulars of the contracts they have negotiated with AT&T, are meritless.

**I. THE CLECS’ ANALYSES OF THE DATA COLLECTION ARE FATALLY FLAWED AND COULD NOT LAWFULLY BE USED AS THE BASIS FOR REGULATION.**

As AT&T explained in its opening comments, the data show that competitors have deployed their own facilities-based networks in the vast majority of census blocks that have special access demand. CLECs that have deployed facilities in an area can and do compete for

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<sup>17</sup> *Notice* ¶ 9 (acknowledging that “as a result of a series of forbearance proceedings, the scope of services affected by the [earlier] *Special Access NPRM* narrowed considerably”).

<sup>18</sup> Declaration of William P. Zarakas and Susan M. Gately, Tables 2 & 3 (“Zarakas-Gately Decl.”), attached to the Comments of Sprint Corporation (filed Jan. 27, 2016) (“Sprint Comments”).

the right to serve nearby buildings and, if they win the business, they build connections to those buildings. The CLECs' own submissions here confirm that they routinely build connections within a radius that is larger than the average census block with special access demand. Given that CLECs have facilities in nearly all census blocks with special access demand, competition for special access services today is essentially ubiquitous.

The CLECs nonetheless claim that this ubiquitous CLEC deployment – which encompasses hundreds of thousands of miles of fiber deployed within easy striking distance of almost all special access demand – is competitively irrelevant. This extreme claim is based on two sets of economist papers: (1) a paper by Professor Baker that reports the results of regressions purporting to show that “real” competition does not exist in any specific building until there are at least *three* CLECs with connections to that building; and (2) declarations by Drs. Besen and Mitchell, and Ms. Gately and Mr. Zarakas, adopting even more extreme and distorted measures of competition that assume away almost all competition, including all cable company competitors and *any* CLEC that does not have a connection to a building. Professors Israel, Rubinfeld, and Woroch demonstrate that these analyses are so fatally flawed that the Commission could not rationally rely on them to support new regulations. Indeed, reliance on a competitive analysis with such assumptions would be patently arbitrary and capricious and could not be sustained on judicial review.<sup>19</sup>

**A. There Is No Merit To Assertions That Competition Is Inadequate Unless Three Or More CLECs Have Connected To A Building.**

The Commission cannot place any reliance on Professor Baker's study, because it is too flawed both in its design and use of data to produce reliable results. Professor Baker begins by

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<sup>19</sup> *General Chemical Corp. v. United States*, 817 F.2d 844, 854 (D.C. Cir. 1987) (vacating agency action in part because agency failed to treat evidence of market competition “in a rational and consistent manner that is fair to the parties involved”).

assuming that each individual building is a geographic market. He reports the results of regression analyses that purport to show that the entry of CLECs into a building or nearby in the neighborhood causes ILEC prices to decrease, with the presence of three or more in-building CLECs causing the largest decrease. Professor Baker takes these results to be both confirmation of ILEC market power and evidence that effective competition exists only when three or more competitors have built a connection to a building.

In fact, Professor Baker’s analyses do not provide any reliable evidence for his conclusions. As explained below, (1) Professor Baker’s results do not support his conclusions even on their face, because the actual results are inconsistent and often contrary to his theory, which is indicative of a model that is inherently flawed and not properly designed; (2) there are serious gaps and flaws in the data Professor Baker uses both to determine what the ILEC and CLEC retail prices are at a given building and how many CLECs compete at that building; and (3) there are a number of flaws in the design of his regressions, which means that his results often confuse correlation for causation and are in fact driven by other factors for which he did not control (such as building size).<sup>20</sup>

*Facially Inconsistent and Inconclusive Results.* Wholly apart from the significant data deficiencies and methodological flaws, Professor Baker’s regression analyses fail to produce any results from which legitimate conclusions can be drawn. These regressions do not even purport to address the primary issue raised by CLECs in this proceeding – whether the Commission has granted Phase II relief in areas without sufficient competition to constrain prices. In order to address *that* question, Professor Baker would have to produce a regression that analyzes the effect of CLEC entry on ILEC pricing in Phase II areas. Professor Baker reveals that he did, in

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<sup>20</sup> See *Nat’l Parks Conservation Ass’n v. EPA*, 788 F.3d 1134, 1141 (9th Cir. 2015) (“an internally inconsistent analysis is arbitrary and capricious”).

fact, perform that regression.<sup>21</sup> And he found that CLEC entry in Phase II areas caused prices to *rise* or had no significant effect on prices at all.<sup>22</sup> The obvious conclusion to be drawn from that result is that competition in Phase II areas has already driven prices to competitive levels, but that is not a conclusion Professor Baker’s clients would like to highlight. And so the results of that particular regression—the one analysis that most directly relates to the issues raised in this proceeding – was not submitted. Instead, Professor Baker submitted a regression that lumps together all Phase I, Phase II, and no-pricing-flexibility areas into a single national result. But combining all of these results not only pollutes the analysis by failing to control for regulations that diminish the ability of ILECs to lower prices on a building-specific basis, it also renders the regressions useless for determining whether the Commission’s triggers are accurate predictors of competition.<sup>23</sup>

AT&T does not mean to imply that Professor Baker’s unsubmitted regression analysis, which finds no connection between CLEC entry and price reductions in Phase II areas, definitively resolves all issues in this proceeding and requires that the Commission affirm its existing pricing flexibility framework. To the contrary, there are numerous flaws in Professor Baker’s analysis – both in the data he used and his methodology – that make it impossible to draw any conclusions at all from that analysis. What is clear, however, is that the analysis lends no support whatsoever to CLEC arguments that the Commission must reimpose price cap regulation in Phase II areas.

Indeed, even the limited number of results from Professor Baker’s analyses that the CLECs were willing to report do not support, and indeed frequently contradict, his conclusions.

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<sup>21</sup> Baker Decl. ¶ 62.

<sup>22</sup> *Id.*

<sup>23</sup> Israel-Rubinfeld-Woroch Decl. ¶¶ 39-40.

Of the 91 regression coefficients reported in Dr. Baker’s table about 55 percent<sup>24</sup> are *not* statistically significant, which means that they do *not* support Professor Baker’s hypothesis that ILEC prices decrease as more CLECs connect to a building. Moreover, a large portion of the results that were statistically significant showed a *positive* effect, meaning that more competitors resulted in higher prices. This inconsistent pattern of results does not support his conclusions that the data show a negative correlation between CLEC entry and ILEC prices, especially when so many of the results are strongly contrary to the standard expectations of economic theory.<sup>25</sup>

Similarly, the results of Professor Baker’s regressions find that CLECs that have fiber networks near a building actually have a greater downward effect on ILEC prices than in-building CLECs, which is again the reverse of Professor Baker’s theory. Indeed, this result is strongly contrary to the general CLEC argument, discussed in the next section, that nearby fiber should be irrelevant to any competitive analysis here. In many of Professor Baker’s models, he finds that the effect of a nearby competitor is both bigger than the effect of an in-building competitor and statistically significant (whereas the in-building effect often is not).

The fact that Professor Baker’s tables are actually checkerboards of wildly inconsistent positive, negative, and insignificant results, especially for key variables, and that so many of

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<sup>24</sup> This figure was computed by counting the total number of coefficients (excluding UNE-based entry) in Table 2 of Professor Baker’s analysis and computing the portion that Professor Baker reports as being statistically significant.

<sup>25</sup> Israel-Rubinfeld-Woroch Decl. ¶¶ 38-39. Some of his findings are especially curious. For example, one of his regressions models the effect of CLEC entry on “all retail prices” (ILEC and CLEC). Baker Decl., Table 2, Column 2. His analysis finds that the first CLEC to enter a building causes no statistically significant impact on the ILEC’s price or the overall (ILEC and CLEC) price. *Id.*, Columns 1 & 2 (2<sup>nd</sup> In-building Provider). When the second CLEC enters the building, however, he finds a statistically significant *increase* in overall prices, even though there is still no statistically significant impact on the ILEC price. *Id.*, Columns 1 & 2 (3<sup>rd</sup> In-building Provider). This “finding” apparently means that the presence of two CLECs in a building causes customers to pay higher overall prices because they are paying the *CLECs* higher prices. If Professor Baker’s findings are to be believed, consumers are *worse off* with two CLECs in a building than with none.

these results are implausible on their face is compelling evidence in and of itself that his methodology and/or data are fundamentally flawed.<sup>26</sup> In fact, an examination of the data, assumptions and analytical approach used to conduct the analysis confirms that Professor Baker’s entire approach suffers from deep and irremediable flaws.

*Data Flaws.* Professor Baker is attempting to model the effect of CLEC entry into buildings and neighborhoods on ILEC (and CLEC) retail special access prices, but his data sets for both sides of this equation are based on inaccurate data. First, his pricing data are not reliable, because building-specific revenue data are lacking for about 42 percent of all buildings in the 2013 Special Access Data Collection, including 51 percent of CLEC locations and 27 percent of ILEC locations.<sup>27</sup> There is no indication that the buildings for which revenue data are available are a representative sample. To the contrary, as Professors Israel, Rubinfeld and Woroch explain, the omissions are *not* randomly distributed, because they vary systematically by region and by provider (*e.g.*, some states have very little pricing data at all whereas others have nearly complete data; and some competitors, including regional competitors reported virtually no usable pricing data, whereas other reported nearly complete pricing data).<sup>28</sup> These gaps are compounded by the fact that in the Data Collection there can be multiple “locations” in a building (*e.g.*, multiple office suites or floors with different customers), which means that there are a number of buildings for which Professor Baker is deriving pricing data from only a portion of the tenants (or providers) in the building.<sup>29</sup> Professor Baker’s analysis is thus based on “a very incomplete and distorted picture of actual prices at buildings with competitors’

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<sup>26</sup> See Israel-Rubinfeld-Woroch Decl. ¶¶ 23-42.

<sup>27</sup> Israel-Rubinfeld-Woroch Decl. ¶¶ 27-28.

<sup>28</sup> *Id.* ¶¶ 29-30.

<sup>29</sup> *Id.*

connections,” and the relationship between price and competitors’ building connections shown in Professor Baker’s analysis very likely do not represent an accurate picture of the true nature of the relationship.<sup>30</sup>

Second, Professor Baker’s analysis undercounts the number of competitive connections in any given building. Most notably, Professor Baker’s method ignores connections from all cable companies. This includes cable Ethernet providers, because the Commission did not require cable companies to submit data on connections, only middle mile fiber facilities. The exclusion of cable Ethernet cannot be defended; no party has argued (or could argue) that cable fiber and Ethernet services do not compete directly against ILEC and CLEC special access services. Rather, their substitutability is well documented.<sup>31</sup> Nor is there a valid basis for Professor Baker’s exclusion of cable “best efforts” services, which, as explained more fully below, also compete against ILEC and CLEC special access services. Although best efforts services do not, by definition, offer guaranteed throughputs, it strains credulity to argue that the 100 Mbps or higher best efforts services commonly offered by cable companies are not substitutes for a 1.544 Mbps fixed bandwidth DS1, and, indeed, ILECs and CLECs both report losing customers to best efforts cable services. But it is not just the exclusion of cable competition that infects Professor Baker’s analysis; even his CLEC count is inaccurate. That is, the regression analysis relies on the Commission’s 2013 Data Collection to calculate the number of CLECs located in each building, but a significant number of the CLEC building connections reported in those data lack location information, and thus cannot be associated with any specific

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<sup>30</sup> *Id.* ¶ 28.

<sup>31</sup> *See, e.g.*, Comments of Birch, BT Americas, Earthlink, and Level 3 at 16 (filed Jan. 27, 2016) (“Joint CLEC Comments”) (“[C]able companies’ Ethernet-over-fiber and DS<sub>n</sub>-over-fiber services are competitive with Level 3’s dedicated services[.]” (quoting Declaration of Chris McReynolds on Behalf of Level 3 Communications, LLC ¶ 18 (“McReynolds Decl.”), attached as Appendix A to the Joint CLEC Comments).

building.<sup>32</sup> Professor Baker’s analysis does not appear to have made any attempt to match these unknown locations to a building. Instead, it appears that he simply did not count them at all.

The collective weight of these various omissions is substantial and, consequently, Professor Baker’s assumptions about the number of CLECs with connections to any building are wholly unreliable. Buildings assumed to have no CLEC connections may have one or more; those assumed to have one may have two or more, and so on. In short, Professor Baker’s regression analysis is running incomplete prices against an inaccurate number of CLEC counts in buildings, and the results are therefore unreliable.

*The Regression Analyses Have Fatal Design Flaws.* Even if Professor Baker had better data, his regressions are not well designed to shed light on any question of interest. For example, the regression analysis is conceptually flawed because it improperly equates correlation with causation and fails to control for factors beyond the number of CLECs in a building that will drive lower prices. It may well be that prices tend to be lower in buildings with multiple CLECs. That means, at most, that there is a correlation between multiple CLECs and lower prices; it does not mean that the lower prices were *caused by* the presence of multiple CLECs. In order to determine causation, the analysis would have to utilize appropriate controls to account for other correlating factors that could affect price, most notably building size and location. In general, one can expect to see more competitors in larger buildings in dense urban areas because there is more business to be won in those buildings and the unit costs of serving customers in them are lower.<sup>33</sup> But, by the same token, one can expect to see lower prices in larger buildings in dense urban areas for these very same reasons, irrespective of how many competitors are serving them.

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<sup>32</sup> Israel-Rubinfeld-Woroch Decl. ¶ 32.

<sup>33</sup> In this respect, the 2013 Special Access data confirm that the demand (measured in bandwidth) in buildings with three or more competitors is more than seven times or more higher than buildings with one competitor. Israel-Rubinfeld-Woroch Decl. ¶ 34 & n.25.

Thus, finding that prices tend to be lower in buildings with three or more competitors does not demonstrate that three or more competitors in a building result in lower prices; it could as easily reflect the characteristics and unit costs of serving customers in buildings that attract multiple competitors. Or it could reflect the fact that in larger buildings where there tend to be multiple CLECs, the customers are more likely to be the largest, most sophisticated purchasers that negotiate the lowest prices. All of these factors will drive down prices independent of the number of competitors in a building. By failing to control for them, the regression analysis is fundamentally flawed.<sup>34</sup>

In addition, as noted, Professor Baker’s models do not even purport to test the issue the Commission is investigating in this proceeding, which is whether the FCC’s triggers are accurate predictors of where enough competition has emerged to permit pricing flexibility. Rather, the models for which Professor Baker reports his results do not control for whether a location is in a Phase I, Phase II, or no-pricing-flexibility area. The lack of these control factors renders his results not just useless for purposes of this proceeding but *incorrect*, even on their own terms. As Professors Israel, Rubinfeld and Woroch explain, this is another instance in which omitting an important explanatory variable biases the results.<sup>35</sup> Pricing flexibility gives ILECs more freedom to offer discounts and thus would be expected to lead to lower prices. Because Professor Baker does not include pricing flexibility as a control variable, his coefficients for in-building and nearby CLECs are capturing both the downward pricing effects of pricing

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<sup>34</sup> *Id.* ¶¶ 34-38.

<sup>35</sup> *Id.* ¶¶ 39-40.

flexibility and the competitive impact on ILEC prices at the same time. As Israel-Rubinfeld-Woroch explain, this biases his coefficients downward in favor of finding a competitive effect.<sup>36</sup>

Yet another issue arises from the fact that many of Professor Baker’s findings are not statistically significant, and he acknowledges that many *more* of his coefficients become statistically insignificant when he uses a more robust method (“robust standard errors clustered on provider and location”) that accounts for the nature of the data being analyzed.<sup>37</sup> In this respect, Professor Baker tries to have it both ways. On the one hand, Professor Baker relies on the less robust measure of statistical significance when reporting his negative coefficients (the ones that support his theory that ILEC prices fall as CLEC building connections increase).<sup>38</sup> On the other hand, he dismisses results that refute his theory (*i.e.*, positive coefficients) by arguing that “[m]ost of the positive and significant coefficients lost statistical significance when the specifications were estimated with robust standard errors clustered on provider and location.”<sup>39</sup>

**B. The Besen/Mitchell and Zarakas/Gately Analyses Are Also Too Flawed and Superficial to Be Used As the Basis for Regulation.**

Sprint has submitted an analysis by Drs. Besen and Mitchell, which is based on various market share estimates that Ms. Gately and Mr. Zarakas calculated from the 2013 Data Collection. These market share estimates are completely meaningless, however, because Ms. Gately and Mr. Zarakas systematically ignored enormous portions of existing competition in

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<sup>36</sup> *Id.* Put another way, entry is endogenous to regulatory relief granted in the MSAs, and therefore omitting that factor will bias the results. *Id.*

<sup>37</sup> Baker Decl. ¶ 59 n.54, ¶ 62 n.57.

<sup>38</sup> *See id.* ¶ 59 n.54.

<sup>39</sup> *See id.* at n.57. *See also* Israel-Rubinfeld-Woroch Decl. ¶¶ 41-42. In the end, Professor Baker himself effectively concedes that his coefficients are biased, and spends many pages explaining why the biases in his analyses are not fatal by developing hypothetical situations where these biases could be said to understate the true competitive impact of having three or more CLECs connected to a building. But as explained by Professors Israel, Rubinfeld, and Woroch, many factors cut the other way. Israel-Rubinfeld-Woroch Decl. ¶¶ 36-37.

computing these numbers. Specifically, they looked only at competition on a building-by-building and census block basis and excluded (1) *all* nearby CLECs that did not have a connection to the building and (2) *all* competition from cable companies, including even cable Ethernet services. These assumptions ignore how competition occurs in the special access marketplace, and render the results (including the HHIs derived from the flawed market share calculations) meaningless right out of the gate.<sup>40</sup>

*CLECs.* The Sprint analysis makes no attempt to account for the fact that CLECs’ extensive fiber networks allow them to compete fiercely for business in many buildings including those to which they have not already built connections. The record confirms that in areas where CLECs have deployed fiber facilities, the CLECs routinely compete for customers in buildings near their existing fiber networks, and deploy connections to those buildings where they win customers. Indeed, that is their business plan. For example, XO explains that it has generally (although not entirely) “abandoned network builds or expansion based on speculation. Rather, the process of XO’s considering whether to build is driven by the receipt of new service requests from customers.”<sup>41</sup> In other words, XO competes for customers and then builds fiber to them when it wins the customer. And, as explained by XO’s Vice President of Access Management and Implementation, as “a rule of thumb” XO will compete for customers and build laterals to buildings that are within [BEGIN HIGHLY CONFIDENTIAL] [REDACTED] [END

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<sup>40</sup> Israel-Rubinfeld-Woroch Decl., § IV. *See also Dist. Hosp. Partners, L.P. v. Burwell*, 786 F.3d 46, 57 (D.C. Cir. 2015) (“[A]n agency cannot *ignore* new and better data.” (emphasis in original)); *Catawba Cnty., N.C. v. EPA*, 571 F.3d 20, 46 (D.C. Cir. 2009) (agencies ‘have an obligation to deal with newly acquired evidence in some reasonable fashion’” (quoting *Am. Iron & Steel Inst. v. EPA*, 115 F.3d 979, 1007 (D.C. Cir. 1991))).

<sup>41</sup> Draft Declaration of George Kuzmanovski Decl. ¶ 10 (“Kuzmanovski Decl.”), attached to the XO Comments.

**HIGHLY CONFIDENTIAL**] linear feet of its fiber facilities.<sup>42</sup> Similarly, Windstream explains that it extends fiber to buildings that are within [**BEGIN HIGHLY CONFIDENTIAL**] [REDACTED] [**END HIGHLY CONFIDENTIAL**] miles of its fiber facilities and that [**BEGIN HIGHLY CONFIDENTIAL**] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [**END HIGHLY CONFIDENTIAL**]<sup>43</sup> Indeed, the Commission, DOJ, and economic experts have long recognized that any sound economic analysis of the special access marketplace must account for nearby facilities-based CLECs, and even Professor Baker agrees.<sup>44</sup> In this respect, as Professors Israel, Rubinfeld, and Woroch have demonstrated, the special access marketplace operates in a manner similar to bidding markets, where all nearby competitors bid to serve the customer, and the winner deploys the facility to meet the customer’s demand.<sup>45</sup>

By categorically excluding any consideration of nearby fiber networks, Sprint’s experts have proffered an analysis that leads to facially absurd results. For example, if a building has only an ILEC connection, Sprint’s experts “count” that as an ILEC monopoly, even if Level 3, XO, and Windstream all have fiber running down the street in front of the building and are aggressively bidding for customers’ service in that building (and even if cable companies have

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<sup>42</sup> *Id.* ¶ 24. See also Chambless Decl. ¶ 26 (XO builds out to buildings within [**BEGIN HIGHLY CONFIDENTIAL**] [REDACTED] [**END HIGHLY CONFIDENTIAL**] feet of its facilities).

<sup>43</sup> Deem-Derstine-Kozlowski-Nichols-Scattareggia-Smith Decl. ¶ 51. Similarly, TDS has explained that “[o]ne way to get over the fiber build expense . . . was to pre-build routes along streets in a community near buildings with a particular focus on multi-tenant units,” and to enter into master building entrance agreements that provided TDS access to these buildings. Sean Buckley, *TDS takes three-pronged approach to lighting business fiber*, FierceWireless (May 12, 2015), available at [http://www.fiercetelecom.com/story/tds-takes-three-pronged-approach-lighting-business-fiber/2015-05-12?utm\\_campaign=AddThis&utm\\_medium=AddThis&utm\\_source=email#.VXBs6aqx2TM.email](http://www.fiercetelecom.com/story/tds-takes-three-pronged-approach-lighting-business-fiber/2015-05-12?utm_campaign=AddThis&utm_medium=AddThis&utm_source=email#.VXBs6aqx2TM.email).

<sup>44</sup> Comments of AT&T Inc. at 7-8 & n.9, 16-17 & n.37 (filed Jan. 27, 2016) (“AT&T Comments”). Professor Baker’s regression analysis recognized the need to assess “nearby” competitive facilities. *E.g.*, Baker Decl. ¶ 43, 59.

<sup>45</sup> Israel-Rubinfeld-Woroch Analysis at 8-9.

fiber facilities connected to the building). That is plainly incorrect. Indeed, Sprint’s approach, which systematically wishes away the fact that CLECs have deployed extensive fiber networks close enough to compete for the vast majority of demand, turns the 2013 Data Collection on its head in ways that no reviewing court could endorse.

Sprint and other CLECs attempt to justify their extreme assumptions by arguing that it can be expensive to deploy a new fiber lateral to a building, and that there are some cases where it is not economically viable to deploy a new lateral (*i.e.*, where the expected revenues from the lateral would not offset the costs). But that is not a valid reason for ignoring *all* such competition. As noted, XO and Windstream frankly concede that they can and do compete for customers in buildings within up to [BEGIN HIGHLY CONFIDENTIAL] [END HIGHLY CONFIDENTIAL] miles of their fiber facilities. Moreover, XO states that it can and does build out to locations where it can expect to earn modest revenues in the range of [BEGIN HIGHLY CONFIDENTIAL] [END HIGHLY CONFIDENTIAL] per month.<sup>46</sup> Moreover, this estimate likely overstates the actual revenue XO would need to recover, because those figures are based on XO being able to recover its “capital expenditure” within [BEGIN HIGHLY CONFIDENTIAL] [END HIGHLY CONFIDENTIAL] for a facility that is likely to have a much longer useful life.<sup>48</sup> In addition, claims that their ability to extend fiber laterals to buildings can be costly due to the need to acquire rights of way, access to conduit, and other costs of deploying fiber applies to *both* ILECs and CLECs. And as to conduit, CLECs already have access to ILEC conduit at regulated rates.

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<sup>46</sup> Kuzmanovski Decl. ¶ 15.

<sup>47</sup> *Id.* ¶ 16.

<sup>48</sup> Israel-Rubinfeld-Woroch Decl. ¶ 48.

Other CLECs argue that extending their fiber to new locations is justifiable only for buildings with very high demand. But this claim can be fact-checked against the 2013 Data Collection. Those data confirm that CLECs do indeed extend laterals to buildings with very low demand. The data show that about 25 percent of buildings with CLEC building connections serve less than 1.54 Mbps of bandwidth, and that 50 percent of the buildings with CLEC locations serve customers with less than 20 Mbps of bandwidth.<sup>49</sup> Level 3’s subsidiary, Time Warner Telecom, has also admitted that, even in 2009, its “Target” businesses were “within a mile of TWTC’s fiber with 2+ DS1s of bandwidth utilization.”<sup>50</sup> Thus, the data confirm that CLECs can and do extend fiber even to buildings with relatively low demand, notwithstanding their attempts to pull the wool over the Commission’s eyes.

The bottom line is that the CLECs’ testimony about the circumstances in which they extend laterals confirms *AT&T’s* demonstration that CLEC competition is now essentially ubiquitous. As Israel-Rubinfeld-Woroch showed in their opening paper, the Data Collection indicates that competitors have deployed facilities in almost all MSA census blocks with special access demand. XO and Windstream testify that they generally deploy laterals up to about [BEGIN HIGHLY CONFIDENTIAL] [END HIGHLY CONFIDENTIAL] miles of their networks. AT&T showed that the average size of census blocks in MSAs with demand for special access services is about one-seventh of a square mile, and that half are less than 0.02 square miles.<sup>51</sup> Thus, the CLECs have conceded that they will build connections within a radius

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<sup>49</sup> *Id.* ¶ 49.

<sup>50</sup> Time Warner Telecom, “Supplemental Earnings Information: Third Quarter 2009,” at 8 n.3.

<sup>51</sup> *See* Israel-Rubinfeld-Woroch Analysis at 4.

that is in many cases larger than a census block – and the data confirm that CLECs have networks in almost all census blocks that have special access demand.<sup>52</sup>

*Cable.* Sprint’s experts also indefensibly exclude all special access competition from cable companies, including both Ethernet and “best efforts” services. First, none of the CLECs could or even tries to deny the importance of cable *Ethernet* and other fiber-based services. To the contrary, Level 3 admits that it “adjusts the rates, terms and conditions on which it offers dedicated services in response to competing cable company offers to provide Ethernet-over-fiber or DSN-over-fiber services.”<sup>53</sup> Excluding cable companies’ fiber-based services ignores a large and rapidly growing segment of the marketplace: “[t]he Cable MSO segment remained the fastest growing overall in 2014, garnering growth that considerably outpaced the Incumbent Carrier and Competitive Provider segments.”<sup>54</sup> Thus, in just the past two years, “cable operators have increased the penetration of business locations they serve by more than 50 percent while ILEC penetration dipped nearly 14 percent.”<sup>55</sup> That this rapid growth is not reflected in the 2013 data before the Commission only underscores that the competitive data before the Commission

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<sup>52</sup> The CLECs’ only other argument for ignoring the fact that CLECs deploy laterals from their fiber facilities is their assertion that CLECs deploy fiber laterals to buildings in only about seven percent of the census blocks where they have fiber facilities. But that percentage estimate includes census blocks with fiber runs that have no special access demand. In fact, according to the 2013 data, CLECs had deployed fiber to a building in more than one of every three census blocks that actually have special access demand.

<sup>53</sup> McReynolds Decl. ¶ 19.

<sup>54</sup> Vertical Systems Group, *2014 U.S. Cable MSO Ethernet LEADERBOARD* (Mar. 16, 2015), <http://www.verticalsystems.com/vsglb/2014-u-s-cable-mso-ethernet-leaderboard/>; *see id.* (“[a]lready established in metro markets, leading cable companies are fortifying their Ethernet offerings to meet the needs of larger businesses with regional and nationwide networks”).

<sup>55</sup> Sean Buckley, *Cable operators taking greater share of large businesses, says analyst firm*, FierceTelecom (Sept. 21, 2015), <http://www.fiercetelecom.com/story/cable-operators-taking-greater-share-large-businesses-says-analyst-firm/2015-09-21>.

actually understates the extent of competition – a consideration the Commission should take into account as it weighs the evidence in this proceeding.

Second, there is no legitimate basis for excluding “best efforts” services offered by cable companies. The CLECs claim that the Commission should ignore cable “best efforts” services because they do not offer service level guarantees, but that blinks at reality: the notion that a 100 Mbps or faster best efforts service is not a substitute for a guaranteed 1.5 Mbps service is untenable and defies marketplace facts. The record shows that “best efforts” services offered by cable companies can and do compete against ILEC and CLEC special access services, especially for lower bandwidth services. For example, XO’s Director of Product Analytics admits that XO is “regularly competing” against cable companies for small and medium sized businesses, that it “loses” small and medium-sized customers “to [cable] companies offering Best Efforts Internet,” and that it has developed “products to this group of customers.”<sup>56</sup> Similarly, notwithstanding Windstream’s extremely long discussion of these issues in its comments, Windstream’s website advertises its “Ethernet Internet” service (with a 99.99% uptime guarantee) as a *substitute* for best efforts cable.<sup>57</sup> These CLECs clearly view cable “best efforts” services as a direct competitor to other business services with service level agreements.<sup>58</sup> And cable companies,

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<sup>56</sup> Declaration of James A. Anderson ¶ 33 (“Anderson Decl.”), attached to the XO Comments.

<sup>57</sup> See Windstream, “Ethernet Internet,” <http://www.windstreambusiness.com/products/enterprise-network-services/dedicated-internet-services/ethernet-internet> (directly comparing Windstream’s Ethernet Internet service to “cable Internet”).

<sup>58</sup> Windstream argues at length that many business customers need Service Level Agreements that include guaranteed up time, performance standards, quality of service levels, security standards, and so on, which renders “best efforts” services inadequate as a substitute. Windstream at 10-30. In fact, providers offer a wide range of “classes” of SLAs (with differing prices), which means that customers choose the combination of price, SLA class, and other features that best fits their needs. For many business customers, the lower price of best efforts cable services offsets the benefits of the services with higher SLAs. Israel-Rubinfeld-Woroch Decl. ¶ 61.

with their near ubiquitous networks, are especially well positioned to compete for much of the existing and very substantial growth in demand for data by businesses.<sup>59</sup>

AT&T has had a similar experience with best efforts cable services. When a customer cancels an AT&T DS1 special access service in favor of a competitive offering, AT&T's sales team attempts to determine the competitor to which the customer switched. Those data show that, for the thirteen-month period from November 2014 through November 2015, a very substantial portion of AT&T's competitive losses were to cable companies and a significant portion of those losses were to best efforts cable services.

The CLECs attempt to downplay this competition from best efforts cable services by arguing that they are not taking any actions to win back customers lost to cable best efforts services. As explained below, that is not true for AT&T. But even if it were true, that would not mean that ILEC prices are not constrained by this competition from cable companies. The fact that an increase in price would cause customers to migrate to best efforts cable services is a very significant competitive constraint, and it would thus be arbitrary to ignore competition from best efforts services in their entirety as the CLECs propose.<sup>60</sup>

In any case, AT&T is actively responding to competition from cable, including in the development of the next-generation products and services that will replace legacy TDM-based DS<sub>n</sub> services. As just one example, **[BEGIN HIGHLY CONFIDENTIAL]** 

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<sup>59</sup> TDS has likewise previously explained that small businesses with 10 or fewer employees comprise more than 75% of its market and that many of these same customers “have different needs than larger companies and at time compromise on their preference for reliable and secure service by downgrading to best efforts broadband internet access service [presumably supplied by cable companies] for cost savings.” Ex Parte Letter from Thomas Jones (TDS) to Marlene H. Dortch (FCC), WC Docket No. 05-25 (Mar. 26, 2015), Butman Decl. at ¶¶ 5, 15. These statements strongly indicate that TDS is competing with the cable companies for 75% of its customer base.

<sup>60</sup> Israel-Rubinfeld-Woroch Decl. ¶¶ 54-61.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. [END HIGHLY CONFIDENTIAL]

“*Market Shares.*” Because they omit substantial sources of competition, the market share analyses by Drs. Besen and Mitchell are fundamentally flawed. But even setting aside these fatal flaws, the analyses do *not* show a lack of competition; rather, they actually show that CLECs have a very substantial share of the marketplace. For example, market share tables on which Professors Besen and Mitchell rely show that CLECs have deployed facilities to buildings in about [BEGIN HIGHLY CONFIDENTIAL] [REDACTED] [END HIGHLY CONFIDENTIAL] of all census blocks.<sup>61</sup> Although Professors Besen and Mitchell treat this as a low number, those census blocks contained about [BEGIN HIGHLY CONFIDENTIAL] [REDACTED] [END HIGHLY CONFIDENTIAL] of the total bandwidth for special access services sold by AT&T in 2013. Similarly, Drs. Besen’s and Mitchell’s market share metrics show that, as of 2013, competitors accounted for half of all revenues for high capacity connections (800 Mbps+) and more than 41 percent of all revenues for smaller (50-200 Mbps) connections – again ignoring cable companies. Drs. Besen and Mitchell’s attempt to portray this marketplace as an ILEC monopoly is strongly refuted by their own calculations.

**II. THE CLECs’ PROPOSALS WOULD BE MASSIVELY IMPRACTICAL AND WOULD ACHIEVE NO COMPETITION-RELATED GAIN.**

Although the CLECs have not demonstrated any competition-related harms that would require increased regulation of the legacy TDM-based services at issue (DS1s and DS3s), they

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<sup>61</sup> Declaration of Stanley M. Besen and Bridger M. Mitchell, Table 2 (“Besen-Mitchell Decl.”), attached to Sprint Comments.

nonetheless propose sweeping new regulation of such services that would be extremely impractical to administer as well as counterproductive. They argue that the Commission should re-impose price caps on services that have received Phase II relief,<sup>62</sup> adopt new triggers that would require inquiries on a much smaller geographic basis than MSAs,<sup>63</sup> and even calculate and impose a new X-Factor.<sup>64</sup> What makes these proposals all the more remarkable is that they are typically offered in a single paragraph or two at the end of their comments, with no suggestion whatsoever of how the Commission might actually go about designing and implementing the complex systems of regulation they propose.<sup>65</sup> None of these proposals makes any sense.

*Re-Imposition of Price Caps.* A common CLEC refrain is that the Commission should presume, on the basis of the CLEC studies discussed above, that ILECs have overwhelming market power everywhere, with the exception of buildings that have three or more CLEC

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<sup>62</sup> Comments of The Ad Hoc Telecommunications Users Committee at ii, 11-14 (“Ad Hoc Comments”) (filed Jan. 27, 2016); Joint CLEC Comments at 9, 65-66; Sprint Comments at vi, 4, 80; Windstream Comments at 98-102; XO Comments at 55-57.

<sup>63</sup> Windstream Comments at 100-02 (advocating for pricing flexibility to be granted on a building-by-building basis); XO Comments at v, 55 (arguing for the creation of “density zones” within an MSA). *See also* Joint CLEC Comments at 19 (arguing that the relevant geographic market for market analysis is “service to each customer location served by a dedicated service”); Sprint Comments at 17-20 (arguing for analysis on an individual building basis).

<sup>64</sup> Ad Hoc Comments at 13 (“[T]he FCC must substantially reform or eliminate its pricing flexibility rules, reverse forbearance in non-competitive markets, and update its price caps rules, including the development of an ‘X’ factor based on a total factor productivity study.”); Joint CLEC Comments at 9, 66-67 (“[T]he Commission should establish an appropriate prospective ‘X-factor’ so as to ensure reasonable prices for incumbent LEC dedicated services in the future.”); Sprint Comments at iv, 5, 84-85, 88 (“The Commission also could perform an econometric analysis to revise, in part, the X-factor, which historically governed the growth rate of special access not subject to pricing flexibility.”).

<sup>65</sup> *E.g.*, Ad Hoc Comments at 12-14; Joint CLEC Comments at 64-67; Sprint Comments at 79-86; Comments of TDS Metrocom, LLC at 29-30 (“TDS Metrocom Comments”) (filed Jan. 27, 2016); XO Comments at 55-57.

connections.<sup>66</sup> Relying on this assumption, the CLECs urge the Commission to re-impose price caps on TDM services currently subject to Phase II relief.<sup>67</sup>

None of these CLECs, however, has even begun to explain how (or why) the Commission should pursue such re-regulation of TDM services. The Data Collection does not contain the sort of data that the Commission would need to determine price cap levels. Even Professor Baker’s analysis of prices was merely an attempt to show market power, not an attempt to determine the “correct” price levels (and even with all of the design and data errors that biased his results, as explained above, he did not find large price differences between the “monopoly” buildings and the buildings with four or more competitors).

Equally important, the CLECs’ proposals would be even more impractical considering that all of the CLECs concede that *nationwide* price caps would be inappropriate. Rather, the CLECs acknowledge that pricing flexibility relief would be appropriate at least in buildings or census blocks with multiple CLEC connections,<sup>68</sup> and perhaps in larger areas, such as central

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<sup>66</sup> *E.g.*, Joint CLEC Comments at 7-8, 49-51 (arguing that effective competition exists only at individual locations that are currently served by an ILEC and three CLECs); Sprint Comments at 21-25, 29-30, 87 (arguing that effective competition exists only at individual locations that are currently served by an ILEC and two CLECs); Windstream Comments at 47-48, 100 (arguing that effective competition exists only at individual locations where three or four LECs have last-mile facilities that currently serve the location). *See also* XO Comments at 35 n.141, 51-52 (“For competition to exist, at least Four facilities-based CLECs need to be present in the geographic market”).

<sup>67</sup> Ad Hoc Comments at ii, 11-14; Joint CLEC Comments at 9, 65-66; Sprint Comments at vi, 4, 80; Windstream Comments at 98-102; XO Comments at 55-57.

<sup>68</sup> *E.g.*, Windstream Comments at 100 (asserting that price cap regulation should be reinstated in all areas, with the possible exception of buildings that are currently served by four LECs). *See also* Sprint Comments at 80 (arguing that “there is almost no competition anywhere in the special access marketplace,” but acknowledging that “the Commission may find that there are some geographic areas that are sufficiently competitive to warrant pricing flexibility”).

business districts, that have a concentration of such buildings.<sup>69</sup> But these concessions simply return the Commission to AT&T’s point that re-imposing price caps in Phase II MSAs would really entail re-imposing caps on small geographic sub-units in those MSAs outside of the main business districts where most of the special access demand resides.<sup>70</sup> There is no logical or practical justification for going to the considerable trouble of re-imposing price caps in a smattering of demand-empty census blocks in the outlying areas of Phase II MSAs.<sup>71</sup>

These CLECs also ignore the considerable legal hurdles that must be surmounted in order to re-impose price caps. Normally, the establishment of rates requires compliance with the stringent standards for a prescription under Section 205 of the Communications Act. Section 205 provides that the Commission may order a carrier to offer its services on different rates or terms only *after* it conducts a hearing and (1) makes definitive findings that the existing charges or practices for these services are “in violation of any provisions of this chapter” and (2) determines “what will be the just and reasonable” charges or practices “to be thereafter observed.”<sup>72</sup> Even if the application of price caps is not actually a prescription that requires compliance with the hearing requirement of Section 205,<sup>73</sup> the re-imposition of such caps would not be a simple matter.

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<sup>69</sup> XO Comments at 52-53 (asserting that pricing flexibility for DS<sub>n</sub> channel terminations can be granted within a Central Business District where more than 66% of the square footage of buildings have four or more competitors that currently have deployed facilities in buildings over which TDM services are offered).

<sup>70</sup> *E.g.*, AT&T Comments at 20.

<sup>71</sup> *See id.*

<sup>72</sup> 47 U.S.C. § 205; *see also AT&T v. FCC*, 487 F.2d 865, 872-80 (2d Cir. 1973) (express Commission findings that the carrier-initiated rate is unjust and unreasonable and the prescribed rate is just and reasonable “are essential to any exercise by the Commission of its authority” to prescribe rates).

<sup>73</sup> *See Report and Order and Second Further Notice of Proposed Rulemaking, Policy and Rules Concerning Rates for Dominant Carriers*, 4 FCC Rcd 2873, ¶¶ 894-95 (1989) (indicating that

When the Commission originally adopted price caps (in 1990), it set the caps at the level of the then-existing rates, which had been determined in an old-fashioned rate-of-return rate proceeding.<sup>74</sup> The services here have not been subject to any rate regulation for many years; in the case of some DS<sub>n</sub> services, almost 15 years. Accordingly, the Commission could not lawfully just select a rate from thin air for such services that it believes to be in the zone of reasonableness and force it on the ILECs in a price cap regime. Rather, to invoke the Commission’s authority to regulate competition and to impose new rate regulation under Sections 201 and 202, the proponents of regulation would have to clearly demonstrate that there is a market failure that requires a regulatory solution. That would require the Commission to make an affirmative showing that the ILECs’ current rates are unjust and unreasonable – *i.e.*, completely outside the zone of reasonableness – before it could intervene, whether price caps technically constitute a prescription or not.<sup>75</sup> Indeed, the Commission has acknowledged that to impose interim special access rate prescriptions, the “record would have to support the conclusion that *every* . . . rate [and practice for] *every* MSA in which Phase II pricing flexibility

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the imposition of price caps implicates the Commission’s suspension authority under Section 204, 47 U.S.C. § 204, not its prescription authority under Section 205, because price caps do not set individual rates, but instead merely reflect the Commission’s “‘tentative opinion’ about the dividing line between reasonable and unreasonable rates”).

<sup>74</sup> Second Report and Order, *Policy and Rules Concerning Rates for Dominant Carriers*, CC Docket No. 87-313, 5 FCC Rcd 6786 (1990). *See also* Order and Notice of Proposed Rulemaking, *Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, 20 FCC Rcd 1994, ¶¶ 9-12 (2005) (discussing the history of price cap regulation).

<sup>75</sup> Moreover, to re-impose regulation on services from which it previously granted forbearance, the Commission would have to support such regulation with “substantial evidence” relating to *current* marketplace conditions. *Comcast Corp. v. FCC*, 579 F.3d 1, 6 (D.C. Cir. 2009); *see also Seattle Audubon Soc. v. Espy*, 998 F.2d 699, 704-05 (9th Cir. 1993) (agency cannot rely on “stale” evidence).

[or forbearance] has been granted violates section 201.”<sup>76</sup> As shown in the previous section, the Commission could not possibly make any such predicate findings for TDM-based special access services, given the intense competition in today’s marketplace.

Even if the Commission could lawfully conclude that the ILECs’ current rates are unjust and unreasonable – which it could not – that would be just the beginning of the task, not the end, because the Commission would also have to devise a price cap scheme that does a better job of setting rates than its existing regulatory construct, and that would be a daunting task, even if the Commission believes that its existing framework is imperfect.<sup>77</sup> For starters, determining a defensible level for newly imposed price caps would require a full rate proceeding. The Commission could not simply borrow other price capped rates to set rates for DS<sub>n</sub> services, because the Commission cannot lawfully presume that the price cap rates are the “correct” rates for services that have been subject only to competitive forces for years. The existing price caps were flawed from the outset because they were based on rates that resulted from years of rate-of-return regulation,<sup>78</sup> and the caps since then have been reduced by X-Factors that were found to

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<sup>76</sup> Brief for Federal Communications Commission, *In re AT&T Corp., et al.*, No. 03-1397, 2004 WL 1895955, at \*23-24 (D.C. Cir. filed Aug. 23, 2004) (emphasis in original).

<sup>77</sup> See, e.g., Tentative Decision and Request for Further Comments, *Amendment of 47 C.F.R. § 73.658(j)(1)(i) and (ii), the Syndication and Financial Interest Rules*, 94 FCC 2d 1019, ¶ 107 (1983) (acknowledging that the Commission “should not intervene in the market except where there is evidence of a market failure and a regulatory solution is available that is likely to improve the net welfare of the consuming public, *i.e.*, does not impose greater costs than the evil it is intended to remedy”); *Cellco P’ship v. FCC*, 357 F.3d 88, 96 (D.C. Cir. 2004) (the Commission may adopt regulations only “upon finding that they advance a legitimate regulatory objective”).

<sup>78</sup> Second Report and Order, *Policy and Rules Concerning Rates for Dominant Carriers*, 5 FCC Rcd. 6786 (1990).

be arbitrary<sup>79</sup> and then arbitrarily reduced again in negotiations that led to the *CALLS Order*.<sup>80</sup> Given this quarter century history of twists and turns, the Commission could not simply assume that price cap rates reflect the proper measure of the rates that should exist in today’s competitive market.

Nor could the Commission lawfully use other carriers’ rates as a benchmark. There is no lawful basis upon which the Commission could conclude that the reasonableness of an ILEC rate is somehow linked to the rate charged by another carrier facing an entirely different set of regulatory and operational constraints. There may be a whole range of reasons for price differences among carriers and the Commission has not even begun to assess those considerations. Indeed, the Commission has long recognized that CLECs may offer lower prices than incumbents because CLECs have complete control over where they provide service, and they will normally choose to do so in the highest-density, cheapest market segments.<sup>81</sup> The only defensible analysis of the market for legacy DSn services would have to account for the

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<sup>79</sup> Comments of AT&T, Inc., *Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, at 40-41 (April 16, 2013) (“AT&T 2013 Comments”); *USTA v. FCC*, 188 F.3d 521, 525-26 (D.C. Cir. 1999).

<sup>80</sup> See Sixth Report and Order, *Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers; Low-Volume Long-Distance Users; Federal-State Joint Board on Universal Service*, 15 FCC Rcd 12962 (2000) (“*CALLS Order*”).

<sup>81</sup> Memorandum Opinion and Order, *In the Matter of Ameritech Corp. and SBC Communications, Inc. For Consent to Transfer Control of Corporations Holding Commission Licenses and Lines Pursuant to Section 214 and 310(d) of the Communications Act and Parts 5, 22, 24, 25, 63, 95, and 101 of the Commission’s Rules*, 14 FCC Rcd 14712, ¶ 92 (1999) (competition is typically introduced when “entrants attempt[] to win consumers’ business with lower prices and improved services, and [when] incumbents [a]re forced in turn to respond to the entrants or lose customers”); see also Seventh Report and Order and Further Notice of Proposed Rulemaking, *In the Matter of Access Charge Reform and Reform of Access Charges Imposed By Competitive Local Exchange Carriers*, 16 FCC Rcd. 9923, ¶ 37 (2001) (“it is highly unusual for a competitor to enter a market at a price dramatically above the price charged by the incumbent, absent a differentiated service offering”).

differences between ILECs’ and CLECs’ offerings – and thus there could be no avoiding some form of complex rate case.

*X-Factor.* Most of the CLECs would complicate the TDM price cap regime even further by changing the X-Factor to make it a true productivity offset (rather than merely setting it equal to inflation, as it is today).<sup>82</sup> History teaches that this would be a very complicated endeavor, and could not be done with the inadequate data that comprises the record in this proceeding. The Commission has not attempted to estimate an X-Factor since the 1990s. Accordingly, the Commission would have to start from scratch and conduct a massively complex proceeding to establish a new X-Factor. Not only would such an inquiry be an enormous waste of resources, but it would give rise to endless difficulties similar to those the Commission had in its previous X-Factor proceedings. The Commission’s first and only real attempt to measure productivity gains under price caps came in 1997 (based on data from the early 1990s), when the Commission adopted a 6.5% X-Factor after a long and painstaking rulemaking proceeding.<sup>83</sup> The D.C. Circuit vacated it as arbitrary.<sup>84</sup> Although the Commission re-adopted a 6.5% X-Factor in 2000 in the *CALLS Order*, it was adopted not as an estimate of productivity gains but as a transitional mechanism to reach negotiated rate levels<sup>85</sup> – and *even then* the Fifth Circuit held that it was

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<sup>82</sup> *E.g.*, Ad Hoc Comments at 13; Joint CLEC Comments at 9, 66-67; Sprint Comments at 5, 84-85, 88.

<sup>83</sup> Fourth Report and Order in CC Docket No. 94-1 And Second Report And Order In CC Docket No. 96-262, *Matter of Price Cap Performance Review for Local Exchange Carriers; Access Charge Reform*, 12 FCC Rcd. 16642, 16645 (1997).

<sup>84</sup> *U.S. Telephone Ass’n v. FCC*, 188 F.3d 521, 525-26, 531 (D.C. Cir. 1999) (holding that the Commission had “failed to state a coherent theory supporting its choice” of the X-Factor).

<sup>85</sup> *See CALLS Order* ¶ 40 (the negotiated X-Factor is not a true “productivity estimate” but merely a “method to reduce rates to certain levels”).

arbitrary.<sup>86</sup> If the Commission were to change the status quo by selecting a new X-Factor, it would have to open a new rulemaking proceeding to grapple with the numerous methodological productivity measurement questions that the D.C. Circuit cited in its 1999 remand.<sup>87</sup> Any such proceeding would soak up a disproportionate amount of time and resources for all parties involved, only to achieve dubious gains in the accuracy of the X-Factor. Intractable litigation would be almost inevitable, with a high likelihood of judicial reversal. And in all events, the TDM services at issue are on a path to wind-down and retirement, and thus there is no reason for the Commission to make an extraordinary effort to measure the “productivity” gains in these rapidly declining services.

*Volume Commitments.* Several CLECs also repeat the arguments they have made against volume commitments in certain TDM tariffs that are at issue in the parallel tariff investigation.<sup>88</sup> AT&T has refuted those arguments in detail in that proceeding and will not repeat that discussion here.<sup>89</sup> Suffice it to say, however, all of these CLEC complaints deal solely with *wholesale* rates, and it is worth noting that Level 3, XO, and Windstream hired their own expert,

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<sup>86</sup> *Texas Office of Public Utility Counsel v. FCC*, 265 F.3d 313, 328-29 (5th Cir. 2001) (“The new X-Factor suffers from the same infirmity as the prior one: the FCC has failed to show a rational basis as to how it derived the 6.5 percent figure.”).

<sup>87</sup> See Further Notice of Proposed Rulemaking, *Price Cap Performance Review for Local Exchange Carriers; Access Charge Reform*, 14 FCC Rcd. 19717, ¶¶ 20-39 (1999). Such a proceeding would be exponentially more difficult than the prior ones because the Commission has never attempted to determine an X-Factor for a single service, nor has any proponent of re-regulation proposed a coherent method for doing so.

<sup>88</sup> E.g., Joint CLEC Comments at 5-6, 9, 42-48, 65; Sprint Comments at v, 81-82; Windstream Comments at 56-59; XO Comments at 40-42.

<sup>89</sup> See Brief of AT&T Inc. In Support of Its Direct Case, *Investigation of Certain Price Cap Local Exchange Carrier Business Data Services Tariff Pricing Plans*, WC Docket No. 15-247 (Jan. 8, 2016).

Professor Baker, who ran regression analyses looking for statistically significant evidence of market power in the ILECs’ wholesale rates and *could not find any such evidence*.<sup>90</sup>

**III. THE COMMISSION MAY NOT RE-IMPOSE RATE REGULATION ON IP-BASED SPECIAL ACCESS SERVICES.**

Several commenters urge the Commission to regulate IP-based special access services, including by re-imposing rate regulation.<sup>91</sup> The Commission cannot lawfully do so, however, because these requests are beyond the scope of this proceeding. The Commission did not provide valid notice that it is considering the regulation of IP-based special access services. In addition, the requested regulation would require the Commission to reverse several prior forbearance decisions, which it could not do apart from a new rulemaking. Finally, the Commission does not have a sufficient record to undertake the complex task of establishing rates for IP-based special access services. These multiple legal barriers are insurmountable.

Even if the Commission could lawfully regulate IP-based special access services in this proceeding, however, the 2013 Special Access data confirms that such regulation is unwarranted because these services are highly competitive. AT&T has demonstrated that competitors have deployed facilities to compete for virtually all business establishments with special access demand.<sup>92</sup> As noted, even the CLECs’ own analyses show that CLEC market share metrics for services ranging from 50 Mbps and higher confirm that CLECs have captured half of the demand. And third party analyses confirm that Ethernet competition is robust, with Level 3 being the second largest provider and cable companies all within the top eight providers in terms

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<sup>90</sup> Baker Decl. ¶ 62.

<sup>91</sup> Joint CLEC Comments at 56-60, 65-66; Sprint Comments at 85-86; TDS Metrocom Comments at 7-13, 29-31; Windstream Comments at 83-97; XO Comments at i, 1-2, 44, 53-55, 57; Ad Hoc Comments at 14-17; Comments of INCOMPAS at 11-16 (“INCOMPAS Comments”) (filed Jan. 27, 2016).

<sup>92</sup> AT&T Comments at 11-17; Israel-Rubinfeld-Woroch Analysis, Section III.B.

of port share.<sup>93</sup> All of this is consistent with the Commission’s own findings in 2007 that “[t]here are a myriad of providers prepared to make competitive offers to enterprise customers demanding packet-switched data services located both within and outside any given incumbent LEC’s service territory.”<sup>94</sup> On this record, there is no legitimate basis for regulating Ethernet services.

**A. The Commission Cannot Lawfully Regulate IP-based Special Access Services In This Proceeding.**

**1. The Commission has not provided any valid notice that it is considering the regulation of IP-based special access services.**

Under the APA, the Commission can promulgate only rules for which it has provided public notice.<sup>95</sup> To satisfy the notice requirement, the Commission “must describe the range of alternatives being considered with reasonable specificity”<sup>96</sup> and “make its views known to the public in a concrete and focused form so as to make criticism or formulation of alternatives possible.”<sup>97</sup> The Commission cannot “pull a surprise switcheroo on regulated entities” by adopting rules that are unaddressed by the relevant NPRM.<sup>98</sup> Such adoption is a “fundamental flaw” that “almost always requires vacatur.”<sup>99</sup>

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<sup>93</sup> Vertical Systems Group, *Mid-Year 2015 U.S. Carrier Ethernet LEADERBOARD*, <http://www.verticalsystems.com/vsglb/mid-year-2015-u-s-carrier-ethernet-leaderboard/>.

<sup>94</sup> Memorandum Opinion and Order, *Petition of AT&T Inc. for Forbearance Under 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to its Broadband Services*, 22 FCC Rcd. 18705, ¶ 22 (2007) (“*AT&T Forbearance Order*”).

<sup>95</sup> 5 U.S.C. § 553(b)(3) (a notice of proposed rulemaking must include “either the terms or substance of the proposed rule or a description of the subjects and issues involved”).

<sup>96</sup> *Horsehead Res. Dev. Co. v. Browner*, 16 F.3d 1246, 1268 (D.C. Cir. 1994) (per curiam) (internal quotation marks omitted).

<sup>97</sup> *Home Box Office, Inc. v. FCC*, 567 F.2d 9, 36 (D.C. Cir. 1977).

<sup>98</sup> *Environmental Integrity Project v. EPA*, 425 F.3d 992, 996 (D.C. Cir. 2005).

<sup>99</sup> *Allina Health Servs. v. Sebelius*, 746 F.3d 1102, 1110 (D.C. Cir. 2014) (citation omitted).

The Commission cannot lawfully adopt rules regulating IP-based special access services in this proceeding because the *Notice* does not place the possible re-regulation of such services at issue. In fact, it does not even mention those services in connection with the proposed rule changes.<sup>100</sup> Rather, the entire focus of the *Notice*, and the only issue on which it seeks comment, is whether or how the Commission should modify its pricing flexibility rules.<sup>101</sup> Since those rules apply only to legacy DS1 and DS3 services, and not to packet-based Ethernet services, there is no way to read the *Notice* as teeing up the possible re-regulation of packet-based Ethernet services.<sup>102</sup> Indeed, the Commission specifically acknowledges that “as a result of a series of forbearance proceedings, the scope of services affected by the [earlier] *Special Access NPRM* narrowed considerably.”<sup>103</sup>

The commenters proposing that the Commission regulate Ethernet services in this proceeding do not point to anything in the *Notice* that places the possible regulation of IP-based special access services at issue. TDS argues that regulation of Ethernet services is a “logical outcome” of the *Notice* because the Data Collection included such services and the Commission stated that it intended to perform a “multi-faceted market analysis of the special access

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<sup>100</sup> *Notice* ¶¶ 80-90.

<sup>101</sup> *See id.* ¶ 57 (“Once the data are collected and analyzed, we may modify the existing pricing flexibility rules or adopt a new set of rules that will apply to requests for special access pricing flexibility.”).

<sup>102</sup> Because the *Notice* does not mention or discuss re-regulation of IP-based special access services, such re-regulation could not be defended as a “logical outgrowth” of the *Notice*. *See Environmental Integrity Project*, 425 F.3d at 996 (“an agency’s proposed rule and its final rule may differ only insofar as the latter is a logical outgrowth of the former”) (internal quotation omitted). The “logical outgrowth” doctrine “does not extend to a final rule that finds no roots in the agency’s proposal because ‘[s]omething is not a logical outgrowth of nothing.’” *Id.* (quoting *Kooritzky v. Reich*, 17 F.3d 1509, 1513 (D.C. Cir. 1994)).

<sup>103</sup> *Notice* ¶ 9.

market.”<sup>104</sup> That the Commission developed a record about the entire special access marketplace should not be surprising, because the development of Ethernet alternatives has enormous implications for how TDM services, which are the subject of the *Notice*, should be regulated. The fact remains, however, that the Commission did not put parties on notice that it was considering rule changes with respect to Ethernet services themselves.

Some commenters suggest that the Commission provided valid notice in the 2007 forbearance orders, in which it left open the possibility of revisiting its regulatory approach for packet-based services.<sup>105</sup> This argument, however, ignores the APA’s requirements. The Commission may be free to revisit its regulatory approach, but the APA requires that it do so by initiating a proceeding through a public notice that provides fair warning of the rules it is considering. Here, the Commission did not provide any warning, much less fair warning, in the *Notice* of the possible re-regulation of IP-based special access services.<sup>106</sup>

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<sup>104</sup> TDS Metrocom Comments at 12-13 (citing *Notice* ¶¶ 17, 67).

<sup>105</sup> Sprint Comments at 86 & n.249; Windstream Comments at 90 & n.287; INCOMPAS Comments at 13; *see AT&T Forbearance Order* ¶ 28 n.120 (“We note that the Commission has the option of revisiting this forbearance ruling should circumstances warrant.”); *Ad Hoc Telecomms. Users Comm. v. FCC*, 572 F.3d 903, 911 (D.C. 2009) (noting that the grants of forbearance were not “chiseled in marble”).

<sup>106</sup> Commenters likewise attempt to sidestep the APA’s notice requirements when they argue that the Commission’s statements in other proceedings put parties on notice that the Commission was considering new regulation for Ethernet services in this proceeding. *See, e.g.*, TDS Metrocom Comments at 13; INCOMPAS Comments at 12-13 & n.31. The Commission’s passing statements about IP-based special access services in *other proceedings* cannot satisfy its obligation to provide specific and concrete notice of the regulatory alternatives it is considering in the relevant NPRM. INCOMPAS (at 12 n.31) is wide of the mark in claiming that a post on AT&T’s Public Policy Blog shows that AT&T was on notice that the Commission was considering new rules for Ethernet services in this proceeding. That post merely noted that the Commission’s Special Access Data Collection included Ethernet services.

**2. The Commission has no legal authority to “reverse” forbearance for IP-based special access services in this proceeding.**

Even if the Commission had provided valid notice that it would consider regulation of IP-based special access services in this proceeding, it would have to overturn several prior forbearance decisions. Several commenters urge the Commission simply to “reverse” those decisions in this proceeding.<sup>107</sup> These commenters ignore that the Commission does not have authority to “reverse” forbearance decisions apart from a new rulemaking.

In 2007, the Commission granted forbearance from rate regulation with respect to Ethernet services.<sup>108</sup> It granted this relief because it found that “there are a myriad of providers prepared to make competitive offers to enterprise customers demanding packet-switched data services located both within and outside any given incumbent LEC’s service territory,” including “many competitive LECs, cable companies, systems integrators, equipment vendors, and value-added resellers.”<sup>109</sup> For that reason, the Commission granted forbearance from dominant carrier tariff filing and cost support requirements, although it made clear that Sections 201 and 202 and the Section 208 complaint process would continue to apply.<sup>110</sup>

Section 10 of the Communications Act does not provide for “reversal” of a forbearance ruling.<sup>111</sup> The plain terms of this section provide only for an affirmative petition asking the

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<sup>107</sup> Sprint Comments at 86; Windstream Comments at 88-91; Ad Hoc Comments at 14-17.

<sup>108</sup> *AT&T Forbearance Order*. The D.C. Circuit affirmed. *Ad Hoc Telecomms. Users Comm. v. FCC*, 572 F.3d 903 (D.C. Cir. 2009).

<sup>109</sup> *AT&T Forbearance Order* ¶ 22.

<sup>110</sup> *Id.* ¶¶ 17-51. The Commission also granted forbearance from its antiquated, BOC-specific *Computer Inquiry* rules, but it retained the non-BOC *Computer Inquiry* requirement that AT&T offer the underlying basic transmission to enhanced service providers on a nondiscriminatory basis. *Id.* ¶¶ 52-62.

<sup>111</sup> 47 U.S.C. § 160. Notably, the Commission never has reversed a forbearance determination. Austin Schlick, General Counsel, FCC, *A Third-Way Legal Framework for Addressing the Comcast Dilemma*, at 9 (May 6, 2010), available at [http://hraunfoss.fcc.gov/edocs\\_public/](http://hraunfoss.fcc.gov/edocs_public/)

Commission to exercise its forbearance authority, and they spell out the substantive standards and procedural requirements that govern such petitions. Section 10 makes no mention of any other type of petition, such as a petition to reverse forbearance.<sup>112</sup> Congress designed Section 10 forbearance this way to prevent lingering regulatory uncertainty over forbearance decisions, because such uncertainty would stifle industry investment in broadband networks and innovation.<sup>113</sup> Forbearance thus is not an “on/off” switch that may be flipped willy-nilly.<sup>114</sup> Once forbearance has been granted, the only statutory mechanism for imposing new regulation – and especially the type of sweeping and detailed rate regulation that some commenters propose – is through the Commission’s general rulemaking and other regulatory authority under Section 201(b) and the APA.<sup>115</sup>

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attachmatch/DOC-297945A1.pdf (“*Schlick Statement*”) (“The difficulty of overcoming section 10’s deregulatory mandate and a prior agency finding in favor of forbearance is illustrated by the fact that the FCC has never reversed a forbearance determination made under section 10, nor one made for wireless under the similar criteria of section 332(c)(1).”).

<sup>112</sup> When Congress wanted to grant such authority, it knew how to do so. *Compare* 47 U.S.C. § 271(d)(6) (expressly providing for suspension or revocation of BOC interLATA authority upon a showing that the original conditions for such authority are no longer met).

<sup>113</sup> Congress has repeatedly underscored the Commission’s duty to rely first on market forces to promote the deployment of advanced services to all Americans. In the preamble to the 1996 Act, Congress explained that the Act’s overarching purpose is “[t]o promote competition and *reduce regulation* in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies.” Preamble to the Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (“1996 Act”) (emphasis added). In section 706 of the 1996 Act, Congress further directed the Commission to “encourage the deployment on a reasonable and timely basis of advanced telecommunications capability” by adopting a policy of “*regulatory forbearance*” and other measures to “*remove barriers to infrastructure investment.*” 47 U.S.C. § 1302(a) (emphasis added).

<sup>114</sup> The notion of “reverse forbearance” is also inconsistent with Section 10’s “deemed granted” provision. The “deemed granted” provision would be rendered a nullity if the next day the Commission could simply reverse the grant of forbearance.

<sup>115</sup> TDS correctly notes that the Commission has legal authority to regulate Ethernet rates pursuant to Sections 201 and 202, and did not grant forbearance with respect to those provisions. TDS at 9-12. But the fact that the Commission may find that a particular rate or practice violates

Accordingly, if the Commission were to move forward with re-regulation here, the proponents of re-regulation would bear the heavy burden of demonstrating that regulatory intervention is affirmatively necessary in light of changed circumstances, and any such regulatory reversal would have to take place in the context of a notice-and-comment rulemaking proceeding teeing up that issue.

Nor can the Commission simply flip a switch and re-impose, without change, ten-year-old regulations that were in place immediately prior to forbearance. As is the case whenever the Commission establishes new rules, any reversal of forbearance would have to be accompanied by a cogent explanation of why the particular regulations that are being imposed are necessary and appropriate. It cannot simply be assumed, and is certainly not the case, that a regulatory regime from ten years ago meets that test. Thus, the re-imposition of rate regulation would necessarily require the Commission to design new rules to establish rate levels and tariffing for services that have been exempt from such rules for years – a task that is well beyond the scope of this proceeding (and should not be undertaken in any proceeding).

Windstream is similarly misguided in arguing that even if the Commission does not “reverse” its forbearance rulings in this proceeding, it should “reaffirm” that Ethernet services that were not specifically listed in the carriers’ forbearance petitions or offered at the time of forbearance “are still subject to tariffing and rate regulation.”<sup>116</sup> First, Windstream misreads the forbearance orders and AT&T’s forbearance petition.<sup>117</sup> AT&T’s *Petition* requested forbearance

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section 201 or 202 does not mean that the Commission may simply reimpose the regulations from which it forebore without a rulemaking proceeding.

<sup>116</sup> Windstream Comments at 92-97.

<sup>117</sup> *Petition for Forbearance, Petition of AT&T Inc. for Forbearance Under 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to Its Broadband Services*, WC Docket No. 06-125 (filed July 13, 2006) (“*AT&T Petition*”).

from the services listed in “Appendix A” to the *Petition*.<sup>118</sup> In Appendix A, AT&T listed “Ethernet-Based Service,” which it described as a service that provides “point-to-point and/or Local Area Network connectivity by utilizing Ethernet protocol technology” and that “transmits variable length packets and typically operates at speed in the range of 50 Mbps to 10 Gbps.”<sup>119</sup> The Commission then granted forbearance for the “broadband services that AT&T currently offers and lists in its petition[.]”<sup>120</sup> AT&T at that time offered Ethernet services with the functionality described in Appendix A. AT&T therefore obtained forbearance for all such Ethernet services. The Ethernet services that AT&T offers today also meet the description of Ethernet services in Appendix A and thus fall within the *AT&T Forbearance Order*.

Contrary to Windstream’s assertion, the *AT&T Forbearance Order* is not limited to Ethernet services with identical features to those AT&T offered in 2007. As noted, the *Forbearance Order* expressly provided that forbearance applied to all Ethernet services as described in Appendix A to AT&T’s Petition, which contains a broad description of those services. Moreover, Windstream’s reading of that order would lead to patently absurd and indefensible results. Under its reading, a carrier providing a service that is so competitive as to have warranted deregulation through forbearance would be unable to respond to competition and the evolving dictates of the marketplace by updating its service without losing the service’s deregulated status. Windstream’s position would thus relegate ILEC providers of the most competitively provided services to the sidelines – which may well be what Windstream would like, but is completely antithetical to any reasonable public policy. It would be doubly arbitrary here insofar as Verizon’s petition for forbearance from *Title II* for all Ethernet services was

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<sup>118</sup> *AT&T Petition* at 9 n.22.

<sup>119</sup> *Id.*, Appendix A.

<sup>120</sup> *Id.* ¶ 40.

deemed granted in 2006.<sup>121</sup> There is no legitimate basis for denying AT&T and other ILECs the more modest relief they have enjoyed for most of the last decade based on Windstream’s tortured argument.

**3. Regulation of Ethernet Services Would Not Serve the Public Interest Even if There were a Marketplace Problem to Fix.**

Regulating ILEC Ethernet services would be all the more harmful given how extraordinarily difficult it would be for the Commission to come up with the “right” prices and the “right” regulatory regime. As noted above, the public interest is not served by replacing an imperfect market-based solution with an even more imperfect regulatory mechanism. Indeed, *any* time the Commission regulates some participants in an industry, but not others, it skews the market and opens the door to ceaseless regulatory gamesmanship. Instead of focusing their efforts exclusively on winning in the marketplace, carriers focus their efforts on winning in the regulatory arena. And there are real costs to that process. But those costs are magnified exponentially when the asymmetrical regulation the Commission is considering requires a host of subjective – some would say arbitrary – judgments. How would the Commission regulate Ethernet rates? A price cap regime? If so, how would the Commission initialize price cap rates, given that Ethernet services have not been subject to regulation for years? How would the Commission determine exogenous cost factors and price cap indices? How would the Commission adapt its regulatory requirements in a fast-changing marketplace? None of these questions would have easy answers, but one thing is certain: it would take years to develop them, years characterized by contentious proceedings, much litigation, and enormous regulatory uncertainty. And at the end of the day, *if* the Commission were finally able to sustain a new

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<sup>121</sup> See FCC News Release, *Verizon Telephone Companies’ Petition for Forbearance from Title II and Computer Inquiry Rules with Respect to their Broadband Services Is Granted by Operation of Law*, WC Docket No. 04-440 (rel. Mar. 20, 2006).

regulatory regime, that regime would be outdated before it even took effect. It would be a paradigmatic example of a “fix” that is worse than the problem, all the more so because, as discussed, there is no problem to fix.

**B. There is No Market Failure in Ethernet Services That Could Justify Reregulation in all Events.**

The CLECs fail to offer any legitimate evidence of a market failure that could justify regulation of Ethernet services. Rather, the CLECs press scattershot and unsupported claims either that AT&T is executing a “price squeeze” in Ethernet services, or that the terms and conditions of certain TDM portability plans are “forcing” them to purchase Ethernet from AT&T. These claims are meritless.

*Price Squeezes.* The CLECs argue that ILEC Ethernet wholesale prices are not sufficiently below ILEC retail prices to enable competitors to successfully compete for customers in buildings where they purchase ILEC Ethernet services at wholesale.<sup>122</sup> This argument is refuted in its entirety by the enormous success competitors have had in using ILEC facilities to compete for Ethernet customers. As noted, CLECs and cable companies are all among the top eight Ethernet providers in terms of port share, with Level 3 being the second largest provider.<sup>123</sup>

Moreover, the Commission has never found it necessary to mandate a gap between wholesale and retail rates for dedicated services. Even for TDM-based DSn-level services in areas where ILECs have not been given pricing flexibility, ILECs are simply required to offer the same tariffed price to all customers, whether wholesale or retail customers. Similarly, in the

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<sup>122</sup> See, e.g., Joint CLEC Comments at 67; TDS Metrocom Comments at 25-30; Windstream Comments at 49-56, 75-77; XO Comments at 43, 56-57.

<sup>123</sup> Vertical Systems Group, *Mid-Year 2015 U.S. Carrier Ethernet LEADERBOARD*, <http://www.verticalsystems.com/vsglb/mid-year-2015-u-s-carrier-ethernet-leaderboard/>.

antitrust context, the Supreme Court has rejected arguments that this type of “price squeeze” raises antitrust concerns.<sup>124</sup> Because of the inherent economic implausibility of such claims, price squeezes are rarely attempted and even more rarely succeed.

In all events, the CLECs have provided no evidence of a legitimate price squeeze. They simply assert that ILECs’ retail prices are lower than the CLECs’ costs of providing Type II connections.<sup>125</sup> They do not provide any actual evidence beyond mere assertions based on supposed data that has not been shared with the Commission or the ILECs and thus cannot be confirmed or evaluated. Moreover, the assertions by some of the CLECs alleging price squeezes are contrary to public statements made by their executives. For example, the manager of commercial product management for TDS Telecom admitted in May, 2015 that, with respect to “AT&T’s Switched Ethernet,” TDS can “buy the service for a competitive price [and] make a few bucks on it.”<sup>126</sup>

XO is the only commenter that purports to provide some specificity, but its arguments only confirm that the CLECs’ arguments are based on incorrect information. XO purports to identify specific locations where AT&T’s retail prices are below XO’s “cost” plus a large

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<sup>124</sup> The Court has noted that such claims attempt to “join a wholesale claim that cannot succeed with a retail claim that cannot succeed,” and “[t]wo wrong claims do not make one that is right.” *Pacific Bell v. Linkline*, 129 S. Ct. 1109, 1123 (2009). The wholesale claim fails because when (as here) a firm has no antitrust duty to deal with its competitors at wholesale, it has no duty to deal under the terms and conditions that its rivals prefer. *Id.* at 1119. The retail claim would be available only if the complainant could make the rigorous showings to establish “predatory pricing,” which could not be done here. *Id.* at 1120. Accordingly, the Court rejected the plaintiffs’ “price squeeze” claim as “an amalgamation of a meritless claim at the retail level and a meritless claim at the wholesale level.” *Id.*

<sup>125</sup> *E.g.*, Joint CLEC Comments at 5, 26, 67; Sprint Comments at 43, 76; TDS Metrocom Comments at 3, 24-27, Windstream Comments 49-56; XO Comments at 43.

<sup>126</sup> Sean Buckley, TDS takes three-pronged approach to lighting business fiber, FierceWireless (May 12, 2015), *available at* [http://www.fiercetelecom.com/story/tds-takes-three-pronged-approach-lighting-business-fiber/2015-05-12?utm\\_campaign=AddThis&utm\\_medium=AddThis&utm\\_source=email#.VXBs6aqx2TM.email](http://www.fiercetelecom.com/story/tds-takes-three-pronged-approach-lighting-business-fiber/2015-05-12?utm_campaign=AddThis&utm_medium=AddThis&utm_source=email#.VXBs6aqx2TM.email).

“return” for Type II Ethernet services, and concludes that AT&T’s prices exceed XO’s costs in these buildings.<sup>127</sup> Wholly apart from the fact that a price squeeze is a strategy to acquire market power, not to win business in a particular building, XO’s claims, even with respect to those buildings, are off-base. AT&T has reviewed those locations and has determined that it does not even have a fiber connection to a significant portion of the buildings on XO’s list and, with respect to the buildings on XO’s list to which AT&T has deployed fiber, many of those have fiber connections by competitors (or competitive fiber within 50 feet). AT&T obviously cannot implement a price squeeze in buildings where it has no fiber connection or in buildings where a competitive provider exists, because the competitive provider can offer the wholesale (or retail) service. Moreover, XO’s rate comparisons do not identify the type of services being compared. AT&T offers Ethernet service with up to four classes of service, and the prices for these services vary substantially.

As noted, beyond the building list provided by XO, no CLEC alleging price squeezes has provided any data that would allow the Commission to evaluate those claims. They argue that price squeezes can exist when they offer services using Type II connections, *i.e.*, connections that combine a CLEC’s own transport facilities with ILEC last mile facilities. Therefore, to evaluate the CLECs’ claims, it would be necessary to know the CLECs’ costs of providing the transport component. None of the CLECs provide this information. Instead they simply compare ILEC retail prices to the retail prices that they would like to charge to earn high returns. That, however, does not establish a price squeeze.

This lack of proof is not surprising, because the Commission itself has repeatedly found that vertical foreclosure predation claims are rarely credible in dynamic telecommunications

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<sup>127</sup> XO Comments at 43; Anderson Decl. ¶¶ 19-24 & Exh. D.

markets.<sup>128</sup> For example, the Commission has rejected claims that ILECs could use market power in local services to effect vertical price squeezes in downstream markets, where, as here, the presence of numerous established carriers with sunk investments in national networks renders improbable any claim that an ILEC could recoup forgone profits.<sup>129</sup> The Commission should also reject CLECs' current claims because the evidence shows that there is vigorous competition in the Ethernet marketplace. It is therefore untenable that AT&T, with its modest market share, could drive out competitors.

Windstream's related assertion that AT&T is "charging far more for comparable wholesale inputs when they transmit traffic in an IP, rather than TDM format, especially at lower speeds" is simply wrong. According to Windstream's comments, "[a] comparison of the prices for TDM and Ethernet services at the AT&T Kings Point, Florida wire center shows that the tariffed monthly price for [a] 1.5 Mbps circuit, *i.e.*, a DS1 connection, is \$126 per month under a 36-month commitment plan, while AT&T's wholesale guidebook lists the price of a comparable Ethernet connection of 2 Mbps at \$1,075 per month on a three-year term.<sup>130</sup> But as Windstream is well aware, wholesale customers often negotiate prices well below those listed in the

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<sup>128</sup> See *AT&T/TCI*, 14 FCC Rcd. at 3215, ¶ 118 n.327 (1998) ("We find that firms in dynamic industries such as telecommunications generally do not have the incentives to engage in predatory practices, because the success of such practices rests on a series of speculative assumptions"); *Rules and Policies on Foreign Participation in the U.S. Telecommunications Market*, 12 FCC Rcd. 23891, ¶ 199 n.405 (1997); see also *Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574, 588-91 (1986) (predatory conduct that requires profit sacrifice is "rarely tried, and even more rarely successful").

<sup>129</sup> See, e.g., *Application by SBC Communications Inc., et al. for Authorization to Provide In-Region, InterLATA Services in California*, 17 FCC Rcd. 25650, ¶¶ 157-59 (2002); see also *WorldCom, Inc. v. FCC*, 238 F.3d 449, 458-59 (D.C. Cir. 2001) ("the presence of facilities-based competition with significant sunk investment makes exclusionary pricing behavior costly and highly unlikely to succeed," because "that equipment remains available and capable of providing service in competition with the incumbent, even if the incumbent succeeds in driving that competitor from the market").

<sup>130</sup> Windstream Comments at 52.

Guidebook. Indeed, Windstream admits in the next sentence that it can purchase a 2 Mbps Ethernet Connection for far less.<sup>131</sup> Even then, Windstream’s comparison is erroneous. First,

[BEGIN HIGHLY CONFIDENTIAL] [REDACTED]

[REDACTED] [END HIGHLY CONFIDENTIAL] Second, Windstream appears to be comparing an end-to-end Ethernet service to the price of a bare DS1 channel termination. An end-to-end DS1 service would cost more, after additional rate elements, such as multiplexing and transport, are added. Without ensuring that the configurations of the Ethernet and DS1 service provide equivalent service, which Windstream has not done, comparisons of Ethernet and DS1 rates are apples to oranges.<sup>132</sup>

*Ethernet Migration.* Certain CLECs also claim that ILECs are using alleged market power over TDM-based services to force CLECs to migrate those services to ILEC Ethernet offerings.<sup>133</sup> These arguments also do not withstand scrutiny. These argument go as follows. ILECs require customers to purchase TDM-based services under tariffs with term and volume-based requirements. When customers seek to migrate those services to Ethernet services, they are forced to pay early termination charges or shortfall penalties associated with the term and

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<sup>131</sup> *Id.* at 53.

<sup>132</sup> Professor Baker states that “ILECs often charge a high price for wholesale connections relative to the retail price they charge for similar connections.” Baker Decl. ¶ 38. But Professor Baker’s main evidence is citations to the unsupported and erroneous assertions by XO and Windstream. His only other evidence is a computation he made using the incomplete pricing information contained in the 2013 Special Access Data Collection. For AT&T, he computed a comparison for only DS1 circuits and his overall results show that AT&T’s wholesale price is significantly *below* its retail price. The only exception he found was for 36-month prices. But those prices are incorrect, as evidenced by the fact that he found AT&T’s 36-month wholesale prices to be lower than AT&T’s 60-month wholesale prices when, in fact, the reverse is true, as confirmed by AT&T’s published tariffs.

<sup>133</sup> Joint CLEC Comments at 46-48; Windstream Comments at 56-59.





[REDACTED]

[END HIGHLY CONFIDENTIAL]

**CONCLUSION**

For the foregoing reasons, the Commission should reaffirm Phase II relief in each MSA where it has been granted, extend Phase II relief to additional MSAs, and modify the rules to expand Phase II relief as described above and in AT&T’s January 27, 2016 Comments.

Respectfully submitted,

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February 19, 2016

# **ATTACHMENT A**

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

In the Matter of	)	
	)	
Special Access for Price Cap Local Exchange Carriers	)	WC Docket No. 05-25
	)	
AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593
	)	

**DECLARATION OF**

**MARK ISRAEL, DANIEL RUBINFELD AND GLENN WOROCH**

**February 19, 2016**

## I. QUALIFICATIONS

1. **Mark Israel, Ph.D.** Mark Israel is an Executive Vice President at Compass Lexecon and Managing Director of the Washington, DC, office. Prior to joining Compass Lexecon, Dr. Israel served as an Associate Professor at Northwestern University's Kellogg School of Management. Dr. Israel has served as an expert for both the federal Government and private parties in cases involving industries which include telecommunications, cable television, broadband internet service, airlines, railroads, shipping, financial markets, credit cards, consumer retail, and many others.

2. Dr. Israel has written numerous academic articles on topics ranging from competition economics, merger policy, telecommunications, airlines, insurance markets, and applied econometrics. His research has been published in leading scholarly and applied journals including *The American Economic Review*, *The Rand Journal of Economics*, *The Review of Industrial Organization*, *Antitrust Source*, and the *Global Competition Review*, and has been presented to business, government, and academic audiences around the world. Dr. Israel received his Ph.D. in Economics from Stanford University.

3. **Daniel Rubinfeld, Ph.D.** Daniel Rubinfeld is the Robert L. Bridges Professor of Law and Professor of Economics at the University of California, Berkeley (*Emeritus*) and Professor of Law at New York University. Professor Rubinfeld served from June 1997 through December 1998 as Deputy Assistant Attorney General for Antitrust in the U.S. Department of Justice. He has consulted for private parties and for a range of public agencies including the Federal Trade Commission, the Antitrust Division of the Department of Justice, and various State Attorneys General.

4. Prof. Rubinfeld is the author of a variety of articles relating to antitrust and competition policy, law and economics, and public economics, and two textbooks, *Microeconomics*, and *Econometric Models and Economic Forecasts*. In the past he has been a fellow at the National Bureau of Economic Research (NBER), the Center for Advanced Studies in the Behavioral Sciences, and the John Simon Guggenheim Foundation. Prof. Rubinfeld teaches courses in law and economics, antitrust, and law and statistics, and is a member of the American Academy of

Arts and Sciences and a research fellow at NBER. He is the past President of the American Law and Economics Association. Prof. Rubinfeld received his Ph.D. in Economics from M.I.T.

5. **Glenn Woroch, Ph.D.** Glenn Woroch is an Adjunct Professor of Economics at the University of California, Berkeley, formerly was the Executive Director of the Center for Research on Telecommunications Policy and currently is a Senior Policy Scholar with the Center for Business and Public Policy at Georgetown University. Professor Woroch has been an economic advisor to government agencies including the U.S. Departments of Justice and Energy and the Office of Technology Assessment and has consulted to private parties in many cases involving competition and regulation in the telecommunications industry.

6. Prof. Woroch has published numerous articles on industrial organization, regulation, antitrust, intellectual property and network industries. In the past he served on the editorial boards of *Information Economics & Policy* and the *Journal of Regulatory Economics*, and is currently on the editorial board of the journal *Telecommunications Policy*. Previously, Prof. Woroch taught economics at the University of Rochester and Stanford University, and was Senior Member of Technical Staff at GTE (Verizon) Laboratories and a Principal of The Brattle Group. Prof. Woroch received his Ph.D. in Economics from University of California, Berkeley.

## II. ASSIGNMENT AND SUMMARY OF CONCLUSIONS

7. We previously submitted a White Paper reporting the results of our competitive analysis of the special access marketplace based on our review of the 2013 Special Access Data Collection (SADC).<sup>1</sup> Our analysis showed that competitors had deployed competing facilities in virtually every metro area census block (more than 95 percent) with special access demand, and that those census blocks represented about 97 percent of the total special access locations with connections and 99 percent of business establishments.<sup>2</sup>

8. We also showed that similar results are found even when most competition from cable companies (including all competition from “best efforts” cable business offerings) is omitted

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<sup>1</sup> Mark Israel, Daniel Rubinfeld and Glenn Woroch, “Competitive Analysis of the FCC’s Special Access Data Collection,” White Paper, Jan. 28, 2016.

<sup>2</sup> The 2013 SADC also confirms that these metro area census blocks with competitive provider facilities also account for more than 95 percent of AT&T’s and CenturyLink’s revenues and special access bandwidth.

from the analyses. We presented our findings at the MSA and the national levels, for all regulatory regimes (*i.e.*, Phase I, Phase II, and no pricing flexibility).

9. As part of our analysis of the SADC, we found that the average size of census blocks in Metropolitan Statistical Areas (“MSAs”) nationwide that have special access demand was less than about 0.15 square miles, and that half of those census blocks were less than 0.02 square miles. Consequently, even if only a single competitor had deployed facilities to just one building in a far corner of a census block, that competitor generally would be able to extend those facilities to all or most other buildings that have demand for special access services in that census block, and thus could compete for business at those other locations as well. Based on the analysis in our White Paper, we concluded that the special access marketplace is highly competitive, and that the Federal Communications Commission’s (“the Commission’s”) competitive triggers are under-inclusive in the sense that they generally understate the actual extent of competition in any given MSA.<sup>3</sup>

10. Moreover, since our initial analysis of the 2013 SADC, we calculated there to be about 1.8 buildings with special access connections per census block and also about two-thirds of these census blocks had just one building.<sup>4</sup> Because more often than not a census block contains a single building, a competitive provider with facilities somewhere in a census block is very likely able to serve all or most of the special access demand within the census block.

11. We have been asked by AT&T and CenturyLink to review the analyses of the 2013 SADC submitted by other economists and data analysts on behalf of Level 3, Windstream, XO Communications and Sprint.<sup>5</sup> First, Professor Jonathan Baker has submitted a report concluding that ILEC prices for special access services are lower in buildings that have more competitors serving those buildings.<sup>6</sup> Based on this analysis, Prof. Baker infers that ILECs have market

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<sup>3</sup> Since we submitted our initial findings, the SADC data has been updated and we applied an additional, conservative assumption that CLEC affiliates of ILEC providers within ILEC serving territory are ILEC providers. These changes did not materially affect our earlier findings.

<sup>4</sup> As used in this declaration, buildings refer to unique values of the geo\_bldg field in the FCC-provided crosswalks IIB03\_Building\_xWalk and IIA04\_Building\_xWalk. These building crosswalks were available to researchers and the CLEC Economists on the date of our original submission.

<sup>5</sup> The Declaration of Jonathan B. Baker on Market Power in the Provision of Dedicates (Special Access) Services (“Baker Decl.”) and the Declaration of Stanley M. Besen and Bridger M. Mitchel (“Besen and Mitchell Decl.”). We treat as part of the latter the Declaration of William P. Zarakas and Susan M. Gately (“Zarakas and Gately Decl.”).

<sup>6</sup> “[A]nalysis [of the SADC] shows that ILEC retail prices are lower when CLECs compete with them, and that ILEC retail prices tend to decline as the number of rivals selling dedicated services increases.” Baker Decl. at ¶ 8.

power (although he does not make this showing for any specific MSA or other geographic area),<sup>7</sup> and he suggests that three or more competitive providers to a building are generally needed to impose a significant constraint on ILEC pricing.<sup>8</sup> Second, Drs. Stanley Besen and Bridger Mitchell have submitted a report, based on datasets generated from the 2013 SADC by Ms. Susan Gately and Mr. William Zarakas, that examines ILEC market shares based on the number of buildings where competitors have connected facilities. Drs. Besen and Mitchell infer that ILECs have market power based on historical market shares that reflect the relative portion of building connections for ILECs and competitive providers.<sup>9</sup> They also conclude that effective competition prevails only when there are four facilities-based providers serving a census block.<sup>10</sup>

12. As we explain below, based on our own analyses and a review of the CLEC Economists' reports, we conclude that the analyses in their reports are flawed in many respects.

13. ***Summary of Flaws in Prof. Baker's Regressions.*** Prof. Baker's conclusions are based on a regression analysis using the 2013 SADC. This regression analysis purports to measure the relationship between ILEC and competitive provider prices in a building and the number of competitive providers connected to and nearby the building. Although Prof. Baker states that he conducted dozens of regressions, including ones focused on wholesale services (the services at issue in this proceeding) and in Phase I, Phase II, and no pricing flexibility areas, Prof. Baker reports results only on retail services at a nationwide level, thus combining areas with Phase II, Phase I, and no pricing flexibility. Prof. Baker claims that this regression analysis shows that ILEC retail prices fall when competitive providers connect to the building and that most of the price reductions occur after three or more competitive providers connect to the building. As we explain below, this regression analysis is flawed in multiple respects.

- *The results of the regression analysis do not establish that ILEC prices fall significantly with more competitive providers connected to the building. The*

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<sup>7</sup> “Given the structure of dedicated services markets, ILECs are likely able to exercise market power in most markets ... These results do *not* demonstrate that ILECs lack market power for dedicated services.” Baker Decl. at ¶ 7,8.

<sup>8</sup> “That is, the average price reduction is greater the more facilities-based providers are present in the building. The fourth additional provider leads to the greatest incremental reduction in price.” Baker Decl. at ¶ 58.

<sup>9</sup> “We find that [BEGIN HIGHLY CONFIDENTIAL] [REDACTED] [END HIGHLY CONFIDENTIAL] of special access purchaser locations are served by a single ILEC with no other facilities-based supplier reported present.” Besen and Mitchell Decl. at ¶ 26.

<sup>10</sup> “[I]t is likely that four – and certainly more than two – providers are needed to give a competitive outcome in the special access markets under consideration in this proceeding.” Besen and Mitchell Decl. at ¶ 47.

results of the regression reported by Prof. Baker are a checkerboard of positive, negative, and insignificant results, especially for key variables. Of the 13 regression models submitted by Prof. Baker in Table 2 of his report, only 5 have a statistically significant negative coefficient on the presence of the first in-building competitor (*i.e.* second in-building provider), while 3 others have *positive* and statistically significant coefficients (suggesting that prices go up as more competitive providers enter a building) and the remaining 5 coefficients are not significantly different from zero (meaning that no statistical relationship could be detected). A similar mixed pattern appears with respect to the coefficients on variables indicating a second and a third competitive provider. Given this checkerboard pattern of results, Dr. Baker’s regression analysis cannot be used to draw any specific inference about the relationship between special access competition and prices with any confidence. To do so would be to cherry pick a particular result when many go the other way.

- *The regression analysis did not show a negative relationship between price and the number of competitive providers in Phase II areas.* Prof. Baker states that when he conducted his analysis for only Phase II areas – the areas where ILECs have the greatest flexibility to respond to competitive entry – he found that “one or more coefficients is positive and significant,”<sup>11</sup> which means there is also no consistent evidence that lower ILEC prices are associated with more competition in this case. Prof. Baker did not present those findings in detail in his report.
- *The regression is based on incorrect prices.* Accurate building-level special access pricing data is important to the regression analysis because the regression attempts to estimate the relationship between special access prices and the number of competitive providers connected to (or nearby) a building. However, the pricing data relied upon by the regression is missing pricing data points for between 25 and 55 percent of the locations or buildings where there are special access connections, depending on the provider type. Our main concern with these missing prices is the bias in estimated coefficients introduced by systematic missing data. In fact, we show that pricing information is missing by geographic

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<sup>11</sup> Baker Decl. at ¶62.

areas and by service providers in a nonrandom way, with such nonrandom missing data likely to bias the regression coefficients, making any predictions based on the estimated regression unreliable.

- *The regression analysis is based on incorrect counts of building connections by competitors.* Another essential variable for Prof. Baker's regression analysis is the number of competitors connected to each building. However, Prof. Baker did not count connections to buildings provided by cable companies, including both cable fiber and Ethernet services and cable best efforts services. As we discuss below, these cable offerings are substitutes for ILEC special access services, are widespread, and are rapidly expanding. In addition, the 2013 SADC data used for the regression undercounts the number of competitive providers in buildings because those data are missing location data for a portion of the competitors' connections. In addition to undercounting competition, our concern is also that such a nonrandom pattern of missing information for an explanatory variable (in this case, the count of competitors) is likely to introduce bias, and make the regression results unreliable.
- *Prof. Baker admits that his regression results are biased.* Prof. Baker acknowledges that his regression analyses may be biased, but he argues that correcting the biases would tend to increase the findings of a negative relationship between price and the number of competitive providers. In fact, correcting for many of the biases would go in the opposite direction, such as when lower-cost locations have more competitors and lower prices, as described more fully next. Consequently, Prof. Baker cannot claim that the bias in his results means they are conservative; instead, as usual, such bias means the results are not reliable.
- *The regression analysis has a correlation/causation problem.* The number of competitors connected to a building is likely highly correlated with the costs of serving customers in the building. In fact, competitive providers tend to focus their initial deployments in urban centers and business parks where costs are low (e.g., zero or low mileage) and demand is high. To the extent low costs drive deployment, there will tend to be more competitors *and* lower prices in low cost buildings, a source of correlation between more competitors and lower prices that

does not imply that more competition causes the lower prices. Prof. Baker’s regression analysis does not account for this fact and thus cannot be used to draw reliable inferences about *the effect of* more competition on prices.

- *Prof. Baker admits that many of his regressions do not produce statistically significant results when he computes standard errors to account for the characteristics of the special access marketplace.* When Prof. Baker computes standard errors by clustering by special access location and provider, as opposed to not making those corrections, he finds that many of the results in his analysis become statistically insignificant.

14. ***Summary of Flaws in the Besen/Mitchell Report.*** Although they do not perform any econometric analysis, Drs. Besen and Mitchell, relying on datasets generated by Ms. Gately and Mr. Zarakas, draw similar (invalid) conclusions to Prof. Baker—namely, that special access markets are highly concentrated and, most notably, that there is a need for several competitive providers to be present in a building to achieve a competitive outcome. These conclusions are based on historical market share calculations. These market share figures provide little or no insight into the state of competition in the special access marketplaces.

- *Market shares do not account for how competition occurs in the special access marketplace.* Competition at a building is not limited to the competitors that have already deployed facilities to that building. Rather, as declarations submitted by competitive providers confirm, in areas where competitors have deployed fiber facilities, the competitors will compete for customers in nearby buildings, and deploy connections to those buildings where they win customers. This feature of the special access marketplace has been long recognized by the Commission and the DOJ. It is also evidence that special access services are transacted using a “bidding market”, where all nearby competitors bid to serve the customer, and the winner deploys the facility to meet the customer’s demand. Any legitimate analysis of competition for special access services at any particular building therefore must account for the existence of nearby fiber facilities, and not just fiber facilities that are already connected to the building. The market share

figures relied upon by Drs. Besen and Mitchell thus improperly ignore nearby fiber facilities.

- *The static market shares relied upon by Drs. Besen and Mitchell exclude substantial amounts of competition.* Drs. Besen and Mitchell omit *all* competition from cable companies; both cable Ethernet services and cable best efforts services. Yet cable companies offer widespread fiber-based Ethernet and other special access services that no party disputes are relevant here. Further, cable companies also offer best efforts services that compete directly with ILEC and with CLEC services. As explained below, both CLECs and ILECs report losing special access customers to cable companies, and CLECs directly compare their special access services to cable products in their marketing materials, and ILECs have developed competitive offerings that, among other things, benchmark prices to the cable offerings.

15. ***Failure to Address the Issues Raised in the Commission’s Notice.*** Finally, we noted in our initial White Paper that the Commission’s Public Notice sought comment on whether, based on the 2013 special access data collection, the Commission’s pricing flexibility triggers effectively identified MSAs where competitive entry had occurred. We responded to this request by analyzing the 2013 SADC at the *census block level* and by demonstrating that the Commission’s pricing flexibility triggers dramatically understate the true extent of competition in any given MSA.<sup>12</sup>

16. By contrast, the analysis of the 2013 SADC submitted by competitive providers cannot be used to assess whether the competitive triggers accurately predicted competition. The CLEC economic analyses were all performed at the national-level and thus cannot be used to assess whether the competitive triggers accurately predict the existence of sunk competitor in any particular metropolitan statistical area (“MSA”). In other words, they provide no data from which regulators or any other entity can conclude that there is a lack of competition in the areas where ILECs have been granted Phase II pricing flexibility.

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<sup>12</sup> Although we conducted much of our analysis at the level of a census block, we recognize that a census block-focused regulatory regime may be difficult and costly to implement.

17. For all of these reasons, and for the reasons discussed below, the Commission cannot rely on the CLEC Economists' analyses of the 2013 SADC as the basis for sound policy making. Reliance on these analyses is also unnecessary, as the straightforward analysis in our initial White Paper of the SADC's facilities data demonstrates that the special access industry is highly competitive, at the MSA and national level, for all regulatory regimes. In the remainder of this declaration, we discuss Prof. Baker's regression analyses, then turn to the static market share analysis conducted by Drs. Besen and Mitchell, and conclude by demonstrating that the CLECs' analyses of the 2013 SADC do not provide support for the conclusion that the competitive triggers fail to predict MSAs with substantial competition.

### **III. PROF. BAKER'S REGRESSION ANALYSIS**

18. Prof. Baker has submitted a regression analysis that uses the 2013 SADC to examine the extent to which ILECs and competitive providers reduce retail prices for special access services in a building when more competitors have a connection to that building, or have fiber facilities nearby to the building. Prof. Baker claims that this regression analysis shows that ILEC retail prices fall when competitive providers connect to the building and that most of the price reductions occur after three or more competitive providers connect to a building. Based on this analysis, Prof. Baker concludes that ILECs have market power and that three or more competitor connections to a building are needed to ensure sufficient competition.

19. Before turning to the regression analysis itself, we stress again that counting the number of competitive providers providing connections to a building is not necessarily indicative of the presence of competition.

- First, there is a natural variation in the number of special access competitors connected to buildings of different sizes. Smaller buildings may support two competitors, while larger ones may support many competitors. But there is no basis for concluding that competition is less intense in smaller buildings with fewer connections by competitors.

Each competitor connected to a building has strong incentives to make maximum use of its facilities, and, thus will compete vigorously to win customers in the building.<sup>13</sup>

- Second, in the special access marketplace, once special access capacity has been deployed to a building, it can be upgraded to increase capacity at very low cost. For this reason, each competitor that serves a building will typically be able to serve all demand in the building. Each competitor, therefore, will have substantial incentives to compete for all customers in a building. Thus, with even one competitor connected to (or nearby) a building, customers within the building will generally enjoy the benefits of intense competition among providers attempting to generate additional returns on largely sunk investments.
- Third, to the extent other competitors have deployed nearby fiber facilities, any attempt by competitors that are already connected to a building to charge above competitive prices will induce other competitors to compete for those customers and build their own connections to the building. As long as competitors have sunk facilities capable of competing for demand in the building, there is no legitimate basis for concluding that competition will be less with fewer competitors connected to a build.

20. For these reasons, there is no reason to expect that a properly designed regression analysis will show ILEC pricing to be lower when the number of competitors connected to a building or located nearby is greater and particularly not that a high number of competitors is required to generate significant competitive effects on prices. We have conducted a careful review of Prof. Baker's regression analysis, and it does not support such conclusions. We found that the estimation results are often inconsistent, and frequently contradict Prof. Baker's conclusions. We determined that the regression analysis is based on flawed econometric approach and imperfections in the data. As a consequence, the results of Prof. Baker's regressions cannot reasonably be relied upon to draw conclusions about competition in the special access marketplace.

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<sup>13</sup> On the incentives to leverage sunk investment, see for example the discussion in [BEGIN HIGHLY CONFIDENTIAL] [REDACTED] [END HIGHLY CONFIDENTIAL]

21. As an initial matter, we note that Prof. Baker reports that he conducted dozens of regressions that separately examined wholesale services, retail services, Phase I areas, Phase II areas, and areas with no pricing flexibility.<sup>14</sup> He explains that the results for most of these analyses are either inconsistent with the theory that ILEC pricing falls as the number of competitors increases or failed to produce statistically significant results.<sup>15</sup> The only results that Prof. Baker has chosen to include in his analysis is a set of 13 regressions (and an “Alternative Specification” with fewer controls) that combine *all* geographic areas (Phase I, Phase II, and no pricing flexibility), and that focus only on *retail* services. He does not report any results for wholesale services, *i.e.*, the services about which the competitive providers are concerned. Accordingly, Prof. Baker’s regression analysis cannot be relied upon to draw any conclusions about competition in the wholesale marketplace or within any specific regulatory area (*i.e.*, within Phase I, Phase II, and no pricing flexibility areas).

22. Examination of the regression results that Prof. Baker does report confirms that the regressions are flawed. The results often do not support, and frequently contradict, Prof. Baker’s conclusions.

23. For example, of the 91 regression coefficients reported in the table about 55 percent<sup>16</sup> are not statistically significant, which means that they do not provide support for Professor Baker’s hypothesis that ILEC prices decrease as more CLECs connect to a building. Moreover, a large portion of the results that were statistically significant, showed a positive effect, meaning that more competitors resulted in higher prices, which refutes Prof. Baker’s conclusions. This inconsistent pattern of results does not support his conclusions that the data show a negative correlation between CLEC entry and ILEC prices.<sup>17</sup>

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<sup>14</sup> Baker Decl. at ¶ 62.

<sup>15</sup> Baker Decl. at ¶ 62.

<sup>16</sup> This figure was computed by counting the total number of coefficients (excluding the coefficients for “CLEC providing service by UNE”) in Table 2 of Prof. Baker’s declaration and computing the portion that he reports as being statistically significant.

<sup>17</sup> Similarly, one of the regressions models the effect of CLEC entry on “all retail prices” (ILEC and CLEC). Baker Decl. Table 2, Column 2. This regression finds that the first CLEC to enter a building causes no statistically significant impact on the ILEC’s price or this overall (ILEC and CLEC) price. *Id.*, Columns 1 and 2 (2nd In-building Provider). When the second CLEC enters the building, however, there is a statistically significant increase in overall prices, even though there is still no statistically significant impact on the ILEC price. *Id.*, Columns 1 and 2 (3rd In-building Provider). This “finding” apparently means that the presence of two CLECs in a building causes customers to pay higher overall prices because they are paying the CLECs higher prices. If the conclusions drawn by

24. Prof. Baker’s modeling of the effect of the presence of competitive providers at nearby locations has similar inconsistent and anomalous results. For example, the results of his regressions show that nearby competitors apply greater downward pressure on ILEC prices in a building than actual competitor having connections at the building. In many of Prof. Baker’s regressions, he finds that the effect of a nearby competitor is both larger than the effect of an in-building competitor and *statistically significant* (whereas the in-building effect often is not significant when it is negative). These results are the reverse of the conclusions drawn by Prof. Baker that competitors’ connections are critical to ensure competition in a building and thus they call his interpretation of his results into serious question.<sup>18</sup>

25. Other results of the regressions – including those he refers to as his “primary specification” – are highly anomalous and further confirm that the analysis is flawed. For example, the regression results find that when the first competitor enters a building, there is no statistically detectable impact on the ILEC’s price or on the overall average price (ILEC plus competitors). When the second competitor enters the building there is again no statistically detectable impact on the ILEC price, but the overall average retail price goes up – which apparently means that when the second competitor entered the building, the *competitive providers* raised their prices (a result that is difficult to explain, to say the least). When the third competitor enters the building, there is a statistically significant coefficient indicating that the ILEC finally lowers its prices and the overall average price in the building falls as well. Thus, even focusing on the specific analyses highlighted by Prof. Baker raise serious questions about the reliability of his analyses and suggests that other factors—such as fundamental differences between buildings with many competitors and buildings with few—are likely driving the results.

26. Examination of the data, assumptions and analytical approach used to conduct the analysis further confirms that Prof. Baker’s regression analysis is fundamentally flawed. We describe these flaws next.

27. *Missing Pricing Data.* Prof. Baker’s regression analysis matches the price in each building to the number of competitors in the same building. In order to estimate coefficients precisely, it

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Prof. Baker about his regression analyses were correct, consumers are worse off with two CLECs in a building than with none.

<sup>18</sup> These implausible patterns are not a sign of competitive effects from CLEC entry; they are the sign of an unreliable regression analysis.

is necessary to accurately measure prices paid for special access services at the buildings. In fact, a substantial portion of the location-level pricing data is missing, which means that a substantial portion of the prices used in the regression are measured with error.

28. Specifically, Prof. Baker appears to have computed prices for each location using the location billing data contained in Commission provided cross-walk table for the 2013 SADC.<sup>19</sup> However, the cross-walk table has no billing data for about 51 percent of competitive provider locations and 27 percent of ILEC locations with building associations. Because there can be multiple locations in a building (*e.g.*, multiple office suites or floors with different customers), the substantial amount of missing billing data for locations means that a large portion of buildings also have incomplete billing data. Overall, 42 percent of all buildings identified by the FCC are composed of one or more locations without billing data.<sup>20</sup> As a result, Prof. Baker’s analysis is based on a very incomplete and distorted picture of actual prices at buildings with competitors’ connections.<sup>21</sup>

29. Our principal concern, however, is the possibility that the selection of missing observations, and hence the source of that mismeasurement, is not random. We do not have an understanding of the process that determines which building and billing records as missing, so it is not possible to decide how the missing data may skew the prices that Prof. Baker calculates. We do know, however, that systematic missing values of a dependent variable (in this case the ILEC pricing at each building) can cause serious bias in the estimated coefficients.<sup>22</sup>

30. We see that missing billing information does, in fact, vary systematically by region and by provider. For instance, Alaska has roughly [BEGIN HIGHLY CONFIDENTIAL] [REDACTED] [END HIGHLY CONFIDENTIAL] of locations missing billing information and Wyoming about [BEGIN HIGHLY CONFIDENTIAL] [REDACTED] [END HIGHLY CONFIDENTIAL], while billing information is missing for [BEGIN HIGHLY CONFIDENTIAL] [REDACTED]

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<sup>19</sup> Baker Decl., footnote 38.

<sup>20</sup> In addition, nearly one third of all buildings identified by the FCC lack any billing data at all.

<sup>21</sup> Additionally, Prof. Baker’s description of his price variable suggests he relies on an inconsistent methodology to generate prices. Specifically, he removes non-recurring charges from the “total\_billed” variable in the pricing data and includes out-of-cycle adjustments or discounts (Baker Decl., footnote 38). Nevertheless, out-of-cycle adjustments and discounts are described by the FCC in its “Instructions for Data Collection for Special Access Proceeding” as those payments or revenues that are *not billed on a recurring basis*.

<sup>22</sup> This bias, often called “sample selectivity bias,” arises in other settings when the estimation sample is systematically missing in a nonrandom way.

[END HIGHLY CONFIDENTIAL] of the competitive provider and ILEC connections in Connecticut and [BEGIN HIGHLY CONFIDENTIAL] [REDACTED] [END HIGHLY CONFIDENTIAL] of locations in California and New York . Showing the extreme disparities based on providers, CenturyLink is missing billing information for roughly [BEGIN HIGHLY CONFIDENTIAL] [REDACTED] [END HIGHLY CONFIDENTIAL] of its special access locations, while Zayo Group and Cbeyond Communications – two of the largest CLECs – are missing billing data for [BEGIN HIGHLY CONFIDENTIAL] [REDACTED] [END HIGHLY CONFIDENTIAL] of their locations.<sup>23</sup> All of this evidence indicates that the missing prices occur in a non-random fashion, which is likely to bias Dr. Baker’s results and render them unreliable for inferences about the effects of competition.

31. *Undercounting Of Competitor Building Connections.* The regression analysis attempts to compare the price in each building to the number of competitors in each building. Prof. Baker’s regression sample, however, omits a substantial number of competitor building connections. Specifically, the regression sample excludes all connections to buildings supplied by cable companies. The failure to include cable company connections further increases the number of buildings with a competitive connection that are missing from the regression analysis.<sup>24</sup>

32. In addition, the regression sample is missing building associations for nearly 140,000 locations, including over 25,000 competitive provider locations. Because Prof. Baker could not allocate these connections to any building, they were necessarily omitted from the building counts used in the regression analysis. Consequently, Prof. Baker undercounted both the number of competitive providers in a building, and the number of buildings that have competitive providers. Having used the incorrect number of competitive providers for many buildings and having omitted buildings that are served by competitors, the regression analysis cannot produce

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<sup>23</sup> Figures are determined after merging billing data from II.A.12 and II.B.4 aggregated to the location\_id, filer\_firm level on the FCC-provided building crosswalks IIA04\_Building\_xWalk and IIB03\_Building\_xWalk. States are determined by the first two digits of the FCC-identified census block code for each location. The std\_state field from CLECLocations\_Geocoded and ILECLocations\_Geocoded crosswalks was relied upon when census blocks were not identified. Company-specific figures are by parent company.

<sup>24</sup> Prof. Baker does attempt to account for nearby competitors by recording the presence of competitors’ fiber up to a half mile away (and to all buildings in the same census block). It is never completely clear how he determines the presence of nearby competition, but it is our best guess that Prof. Baker includes the locations of CLEC fiber networks contained in Table II.A.5. Baker Decl. at ¶43 (“A provider is considered nearby if it is not presently providing service to the customer location but has fiber within either the same census block or a census block with a boundary less than 0.5 miles away”). Assuming that to be the case, it is inconsistent for him to then proceed to exclude cable companies’ last-mile fiber facilities that are recorded in the National Broadband Map.

an accurate relationship between ILEC prices and the number of competitive providers in a building.

33. Measurement error of this kind—particularly given that it is likely non-random, similar to the missing pricing data—will bias the estimated coefficients, making Prof. Baker’s regression results unreliable on which to draw conclusions about the relationship between entry by competitive providers and ILEC pricing.

	<b>Locations with Missing Data</b>			
	<b>Locations</b>	<b>Percent of Locations with:</b>		
	<b>No Billing Data</b>	<b>No Building Association</b>	<b>Building Associated but No Billing Data</b>	
ILEC	1,139,741	30%	10%	27%
CLEC	664,645	54%	4%	51%
Overall	1,804,386	39%	8%	36%

Sources: Responses to question II.A.4, II.B.3, II.A.12 and II.B.4; FCC crosswalks.

	<b>Buildings with Missing Data</b>		
	<b>Buildings</b>	<b>Percent of Buildings with:</b>	
		<b>Some Locations Missing Billing Data</b>	<b>All Locations Missing Billing Data</b>
ILEC	836,211	31%	26%
CLEC	513,581	55%	49%
Overall	1,209,111	42%	32%

Sources: Responses to question II.A.4, II.B.3, II.A.12 and II.B.4; FCC crosswalks.

34. *Correlation/Causation Problems.* Professor Baker’s regression analysis and his discussion of the results of the analysis, both fail to account for the fact that the number of competitors connected to a building is likely correlated with the costs of serving customers in the building (a fact which indicates that, contrary to his claims, Prof. Baker’s analysis is likely to *overstate* any competitive effect of additional competitors). Competitive providers tend to focus their initial deployments in urban centers where costs are low (*e.g.*, zero or low mileage) and demand is significant. In other words, the regression analysis has a correlation/causation problem, or in

economic terms, there is an endogeneity problem. Buildings with lower costs, and hence lower prices, will attract multiple competitive providers. For instance, buildings in urban centers often do not require lengthy transport circuits, and thus often have lower or zero mileage rates applied to their special access purchases; whereas buildings outside those areas are less likely to have multiple competitive providers and are more likely to have mileage rates apply. In this case, the regression analysis may be simply capturing the fact that prices in buildings with multiple competitors often have zero or low mileage charges. Similarly, larger buildings tend to have more competitive provider connections.<sup>25</sup> But these larger buildings are also more likely to have lower *prices* because, for example, the per-unit price of higher bandwidth services tend to be lower.

35. Prof. Baker’s regression also has obvious specification errors that render its findings unreliable. For example, as specified, the model assumes that the impact of an additional nearby competitor is the same regardless of the number of in-building competitors. That is, his model embeds an assumption that a nearby competitor has the same effect if there are no in-building competitors or if there are four, or even more, in-building competitors. This is not a reasonable assumption. It is also consequential to Dr. Baker’s findings, as it implies that his estimated effect of nearby competitors is effectively an average of the effect when there are no in-building competitors or when there are many, and thus his results cannot answer the most relevant question – whether nearby competitors are able to generate sufficient competition in those cases where there are no (or few) in building competitors.

36. In the end, Prof. Baker acknowledges that his coefficients are biased but he fails to correct for that bias. He does not, for example, perform instrumental variables estimation though he notes how this technique would lessen the bias that he suspects exists.<sup>26</sup> Prof. Baker specifically suggests using measures of customer types as instruments for demand heterogeneity. This same approach could be used to address the bias caused by heterogeneity in the cost of serving

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<sup>25</sup> In this respect, the 2013 SADC confirms that the demand (after excluding UNE/UCL-supplied locations and measured as the lower bound of total bandwidth per building supplied by all providers) in buildings with two competitive providers is more than 3 times greater than buildings with one competitive provider. And buildings with three competitive providers have demand that is nearly more than 2.5 than in buildings with two competitive providers. These figures may be understated because the data reported in the SADC mask the bandwidth at locations with capacity greater than 1 Gbps. Thus, the calculations reported here treat all such connections as being 1,001 Mbps connections, even though they may be much higher capacity connections.

<sup>26</sup> Baker Decl., footnote 62.

different buildings and locations. In that case, a measure correlated with the incidence of competitive entry but uncorrelated with the cost of serving specific buildings would be a candidate as an instrument. If valid instruments are found, instrumental variables estimation could reduce this type of bias in the coefficients.

37. Prof. Baker does not implement this technique, however. Instead, he goes to some length to explain why the biases in his analyses are not fatal using hypothetical situations where these biases may understate the true competitive impact of competitive providers. For example, Prof. Baker's asserts that unobserved impediments to competitive entry/expansion could result in his analysis understating the negative relationship between price and the number of competitors.<sup>27</sup> But he ignores that, as noted above, unobserved costs may omit the impact of lower-cost buildings on price, which would mean that his regression coefficients may overstate any negative relationship between price and the number of competitors connected to a building.

38. Ultimately, the bias affecting the estimated coefficients on the different measures of competitive entry could be positive or negative. We do not know on balance which will dominate. We do know, however, that the estimated coefficients from Prof. Baker's regressions are not reliable.

39. *Failure to Account for the Regulatory Environment.* Prof. Baker's models *do not* purport to test the issue the Commission is investigating in this proceeding, which is whether the FCC's triggers are accurate predictors of where enough competition has emerged to permit pricing flexibility. The models for which Prof. Baker reports his results do not control for whether a location is in a Phase I, Phase II, or no-pricing-flexibility area. Even worse, Prof. Baker's results suggest that in price cap areas (*i.e.* areas with no Phase I or Phase II pricing flexibility) ILECs react to competitive entry by lowering prices where more competitive providers are in the building. Yet ILECs cannot react to competitive entry into price cap areas by lowering prices to the degree that they could in a Phase I or Phase II area. The fact that Prof. Baker purports to see such effects is further evidence that his analyses is fundamentally flawed and his conclusions unreliable.

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<sup>27</sup> Baker Decl. at ¶¶ 76-85.

40. Moreover, this is another instance in which omitting an important explanatory variable biases the results. By their very nature, pricing flexibility areas have greater entry by competitive providers, and they are also those areas in which ILECs have more freedom to offer discounts and thus would be expected to lead to lower prices. In particular, Phase I pricing flexibility – also known as downward flexibility – gives the ILEC freedom to lower prices relative to price cap tariffs. Because Prof. Baker does not include the regulatory environment as a control variable and areas with pricing flexibility tend to have both more competitors and lower prices which biases his coefficients downward in favor of finding a competition effect. Put another way, entry is endogenous to regulatory relief granted in the MSAs, and therefore omitting that factor will bias the results toward finding a larger competitive effect than actually exists (or possibly the existence of a competitive effect where there is none).<sup>28</sup>

41. *Incorrect Measure of Statistical Significance.* Notably, although Prof. Baker often fails to find statistically detectable competitive effects, he finds that *more* of his coefficients become statistically insignificant when their precision is measured so as to account for the characteristics of the special access data being analyzed.<sup>29</sup> The tables in which Prof. Baker reports his regression analysis compute statistical significance (based on robust standard errors) using an approach that, even after controlling for observable factors, does not account for the nature of the correlation among the variables omitted from the models and therefore in the error terms. As Prof. Baker recognizes, however, a more appropriate approach to measuring the statistical significance of his regression results would be based on standard errors that are clustered by special access location and provider. This strategy represents sound econometric practice. But, as Prof. Baker explains, when he computed standard errors of the coefficients in this way, many of the negative coefficients in his results (*i.e.*, those showing that price falls as more competitors enter a building) are no longer statistically significant.

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<sup>28</sup> We have examined MSAs which are directly above and directly below the thresholds that trigger pricing flexibility (between price cap and Phase I, and between Phase I and Phase II). The conditions under study are thus similar to the entry conditions evaluated with respect to the competitive showing the Commission chose to use in 1999. We find little difference in facilities-based competition between the two regulatory regimes, however. Our “discontinuity” analysis supports the claim that regulatory relief does not curtail entry. It appears that markets in which an ILEC enjoyed greater pricing flexibility invited greater competition than markets that operated under less flexibility, despite the fact that they were otherwise nearly identical. This contradicts claims that ILECs have used their pricing freedom to exclude competitors.

<sup>29</sup> Baker Decl., footnotes 54 and 57.

42. In this respect, we note that Prof. Baker attempts to have it both ways. When he reports results showing a negative relationship between price and the number of competitive providers, he highlights the standard errors that do not account for clustering and thus that indicate more statistically significant results. But when he acknowledges that he also found anomalous results – such as competitive entry causing higher prices – he downplays those results on the grounds that they are not statistically significant when computing standard errors based on clustering.<sup>30</sup>

#### IV. DRs. BESEN AND MITCHELL’S ANALYSIS OF MARKET SHARES

43. The other analyses of the 2013 SADC were conducted by Drs. Besen and Mitchell, using datasets built by Ms. Gately and Mr. Zarakas. These static, historical market share analyses, however, are of limited value in determining the competitiveness of special access markets because they fail to account for how competition actually occurs in the marketplace and understate the true extent of competition. Moreover, these analyses incorrectly ignore an important segment of competitors—cable companies, including both cable Ethernet services and best efforts services.

44. *Competition for Special Access Services.* We demonstrated in our initial paper that competition in a particular area is not limited to the competitors that have already deployed facilities to that building. Rather, in areas where a competitive provider has deployed fiber facilities, it will compete for customers in nearby buildings, and deploy connections to those buildings where they win customers. The declarations submitted by CLECs confirm this fact. For example, XO’s Vice President of Access Planning and Implementation, states that as “a rule of thumb” XO will compete for customers and build laterals to buildings that are within **[BEGIN HIGHLY CONFIDENTIAL]** [REDACTED] **[END HIGHLY CONFIDENTIAL]** of its fiber facilities.<sup>31</sup> Similarly, Windstream explains that it extends fiber to buildings that are within **[BEGIN HIGHLY CONFIDENTIAL]** [REDACTED] **[END HIGHLY CONFIDENTIAL]** of its fiber facilities and that “longer builds may... be possible.”<sup>32</sup>

<sup>30</sup> Baker Decl., ¶62 and footnote 57.

<sup>31</sup> See Kuzmanovski Decl. at ¶ 24.

<sup>32</sup> Declaration of Dan Deem, Douglas Derstine, Mike Kozlowski, Arthur Nichols, Joe Scattareggia, and Drew Smith (“Deem, et al. Decl.”) at ¶ 51.

45. This feature of the special access marketplace has been recognized for many years. As we documented in our initial submission, the Commission and DOJ have long recognized that competitive providers deploy fiber facilities, compete for customers in buildings near those fiber facilities, and extend laterals from those fiber facilities to buildings where they win customers (in some cases, competitive providers extend laterals even before they have customers).<sup>33</sup>

46. Put simply, an appropriate analysis of competition for special access services at any particular building would account for the existence of nearby fiber facilities, and not only fiber facilities that are already connected to the building. The competitive analyses submitted by Drs. Besen and Mitchell, however, are based solely on relative ILEC and competitive provider market shares, as measured by building connections (either at the building level or at the census block level). As such, their conclusions regarding special access competition are not valid.

47. Drs. Besen and Mitchell attempt to justify this erroneous assumption by arguing that it can be expensive to deploy a new fiber lateral to a building, and that there are some cases where it is not economically viable to deploy a new lateral (*i.e.*, where the expected revenues from the lateral would not offset the costs). In fact, however, competitive providers can and do compete for customers in buildings to which they are not connected but are near to their fiber facilities.<sup>34</sup> In fact, that is how the CLECs describe their business plans. For example, XO explains that it has generally (although not entirely) “abandoned network builds or expansions based on speculation. Rather, the process of XO’s considering whether to build is driven by receipt of new service requests from customers.”<sup>35</sup> In other words, the competitive providers acknowledge that they compete for customers and then extend fiber to those customers when they win the business at a particular location. Thus, there is no legitimate basis for completely ignoring the impact of this source of competition.

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<sup>33</sup> [BEGIN HIGHLY CONFIDENTIAL] [REDACTED]

[END HIGHLY CONFIDENTIAL]

<sup>34</sup> Competitors compete for customers at nearby buildings when they do not deploy their own fiber facilities to those buildings. [BEGIN HIGHLY CONFIDENTIAL] [REDACTED]

[REDACTED] [END HIGHLY CONFIDENTIAL]

<sup>35</sup> Kuzmanovski Decl. at ¶ 10.

48. Based on our review of the record, we conclude that the appropriate analysis includes competition from competitors with nearby fiber. In particular, we have reviewed the evidence and conclude that competitive providers can deploy facilities to buildings located as much as a half mile away from their facilities (sometimes even further), and that such builds are financially viable even for relatively modest demand levels. XO and Windstream acknowledge that they can and do compete for customers in buildings within [BEGIN HIGHLY CONFIDENTIAL] [REDACTED] [END HIGHLY CONFIDENTIAL] feet of their fiber facilities. Similarly, Prof. Baker acknowledges that competitive providers can extend their fiber facilities to locations within the same census block or up to a [BEGIN HIGHLY CONFIDENTIAL] [REDACTED] [END HIGHLY CONFIDENTIAL] mile away.<sup>36</sup> Moreover, the evidence submitted by the competitive providers indicates that the revenues required to justify the cost of extending fiber to a nearby building are modest. For example, XO states that it can and does build out to locations where it can expect to earn revenues in the range of [BEGIN HIGHLY CONFIDENTIAL] [REDACTED] [END HIGHLY CONFIDENTIAL] per month.<sup>37</sup> Moreover, this estimate likely overstates the actual revenue XO would need to recover, because those figures are based on XO being able to recover its “capital expenditure” within [BEGIN HIGHLY CONFIDENTIAL] [REDACTED] [REDACTED] [END HIGHLY CONFIDENTIAL] for a facility that is likely to have a much longer useful life.

49. Some other competitive providers have argued that extending fiber to new locations is justifiable only for buildings with very high demand. However, this claim can be fact checked against the 2013 Data Collection, and it fails. In particular, those data show that competitive providers do indeed extend laterals to buildings with very low demand. The data show that about 25 percent of competitive provider’ connections to buildings serve less than 1.54 Mbps of bandwidth, and that 50 percent of the buildings with competitor facilities serve customers with

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<sup>36</sup> Baker Decl. at ¶43 and footnotes 37 and 40.

<sup>37</sup> Kuzmanovski Decl. at ¶ 15.

<sup>38</sup> Kuzmanovski Decl. at ¶ 16.

less than 20 Mbps of competitive provider bandwidth in total.<sup>39</sup> Thus, the data confirm that competitive providers can and do extend fiber to even buildings with relatively low demand.<sup>40</sup>

50. Drs. Besen and Mitchell’s argument that customers are unlikely to change their location in response to change in special access rates, even if the lower-cost provider is located in the building next door or across the street, may be correct, but it misses the point.<sup>41</sup> It ignores the fact that *providers* are willing and able to extend their networks to nearby customers.<sup>42</sup> In effect, Drs. Besen and Mitchell erroneously assume that customers must come to providers when, in fact the opposite is generally true—the providers will come to the customers. Connections have always been supplied in this market by carriers building networks to reach customers’ locations, and not, as Drs. Besen and Mitchell would require, that customers need to move to the networks.

51. Drs. Besen and Mitchell also argue that their approach is consistent with the Horizontal Merger Guidelines (“Guidelines”).<sup>43</sup> That is not accurate.<sup>44</sup> As described in the Guidelines,<sup>45</sup> it

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<sup>39</sup> Figures exclude locations supplied by UNEs or UCLs and reflect the total bandwidth sold aggregated to the level of building and competitive provider parent company.

<sup>40</sup> In addition, Prof. Baker claims that competitive providers do not find it profitable to extend service to a single prospective customer that demands less than 1 Gbps. *See* Baker Decl. at ¶100. Using the 2013 SADC we found that competitive providers routinely connect single customers that purchase less than 1 Gbps of bandwidth. Nearly 130 thousand buildings-provider combinations as defined by the FCC cross walk are served by a single competitive provider after limiting the SADC data to buildings where every location has billing data to confirm the customer counts. The data show that competitive providers sell less than 1 Gbps in bandwidth at nearly 75 percent of the buildings where they serve a single customer.

<sup>41</sup> *See* Besen and Mitchell Decl. at ¶20 citing the Commission’s Wavecom Solutions decision (“[T]he relevant geographic market is a particular customer’s location, because it would be prohibitively expensive for an enterprise customer to move its office location in order to avoid small but significant and nontransitory increases in the price of special access services ...”). *See also*, Besen and Mitchell Decl. at ¶19 citing the same reasoning regarding customer unwillingness to change building locations in response to a SSNIP in a Declaration of Bridger M. Mitchell attached to Comments of Sprint Nextel Corporation, WC Docket No. 05-25, ¶ 35 (Jan. 19, 2010).

<sup>42</sup> In most cases the service provider that has facilities in the area, but not at a specific customer’s location, will need to acquire the necessary connection. But this could be accomplished by building a lateral off a splice point on its existing fiber ring. In most cases the necessary capital expenditure falls on the service provider though in some cases customers will pay offer to cover this cost. (*See* Kuzmanovski Decl. at ¶22.) As already mentioned, competitive providers have other options, however. They may enter into a fiber swap with another competitive provider that has spare strands that serve the target location, or purchase dark fiber that was deployed on the route to that customer by another provider. (*See* Kuzmanovski Decl. at ¶10.) They also have the option to purchase a wholesale circuit from the ILEC and resell it to the customer after “finishing” the connection. We also note that CLECs can, and do, use UNEs in many locations to provide dedicated services in competition with ILECs.

<sup>43</sup> DOJ/FTC Horizontal Merger Guidelines, 2010, at <http://www.justice.gov/atr/horizontal-merger-guidelines-08192010>.

<sup>44</sup> The Guidelines offer a useful framework for defining markets, but the Guidelines prescribe that substitution by purchasers among providers and their offerings should be the chief criterion on which to delineate product and geographic markets. Drs. Besen and Mitchell do not adequately consider this in their analysis.

<sup>45</sup> Guidelines, p. 15. (“When the geographic market is defined based on customer location, sales made to those customers are counted, regardless of the location of the supplier making those sales.”)

is appropriate to delineate geographic market by location of the customers *only* provided that competitive supply includes provision of special access connections from outside those locations. That is, even if one wants to use a narrow customer-based geographic market, one must account for all supply that can reasonably serve that market. Drs. Besen and Mitchell fail to do so.

52. Drs. Besen and Mitchell reliance on the Herfindahl-Hirshman Index (HHI) values to summarize the competitive constraint on the ILECs is misplaced.<sup>46</sup> Historical HHIs, like the market shares they are based on, do not reflect the competitive realities of the marketplace because they do not incorporate nearby fiber facilities that do not currently serve customers but nevertheless represent potential competition. Furthermore, all of their measures were computed on a nationwide basis which fails to give insight into market conditions in specific metro areas and more importantly mixes vastly different markets and regulatory regimes. Finally, when calculating the extent of ILEC-only areas, Dr. Besen and Mitchell attribute all UNE/UCL-based circuits to the ILEC footprints. As a result, they overstate the areas in which ILEC do not face competition by including buildings served by competitive providers entirely over such circuits. In fact, the ILEC faces substantial price competition when competitors provision these circuits that they acquire at cost-based rates.

53. In any case, HHIs are not dispositive regarding market power but rather are merely a tool used principally as a first step in merger proceedings, allowing the possibility that other evidence (such as the importance of sunk facilities in the present case) could overturn any HHI-based conclusions.<sup>47</sup>

54. *Exclusion of Cable Facilities.* The market share analysis relied upon by Drs. Besen and Mitchell are also flawed because it omits almost *all* competition from cable companies, both cable Ethernet services and cable best efforts services. The CLECs' argument that the Commission ought to ignore competition from cable is not consistent with the marketplace facts. To ignore cable companies would be to ignore a very large and rapidly-increasing segment of the marketplace. Industry analysts confirm “[t]he Cable MSO segment remained the fastest

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<sup>46</sup> Besen and Mitchell Decl. at ¶ 37.

<sup>47</sup> Guidelines, p. 19. (“The purpose of [HHI] thresholds is not to provide a rigid screen to separate competitively benign mergers from anticompetitive ones, although high levels of concentration do raise concerns. Rather, they provide one way to identify some mergers unlikely to raise competitive concerns and some others for which it is particularly important to examine whether other competitive factors confirm, reinforce, or counteract the potentially harmful effects of increased concentration.”)

growing overall in 2014, garnering growth that considerably outpaced the Incumbent Carrier and Competitive Provider segments. . . . Already established in metro markets, leading cable companies are fortifying their Ethernet offerings to meet the needs of larger businesses with regional and nationwide networks.”<sup>48</sup> Indeed, in just the past two years, “cable operators have increased the penetration of business locations they serve by more than 50 percent while ILEC penetration dipped nearly 14 percent.”<sup>49</sup>

55. Notably, although the CLEC economists exclude all cable competition from their analyses, none of them provides any argument for excluding Ethernet and other fiber-based services offered by cable companies. To the contrary, the CLECs themselves admit that such services compete directly with ILEC and competitive providers’ dedicated services. For example, Level 3 admits that it [BEGIN HIGHLY CONFIDENTIAL] [REDACTED]  
[REDACTED]  
[REDACTED] [END HIGHLY CONFIDENTIAL]

56. The CLECs do make arguments that “best efforts” cable services do not compete against the special access services offered by ILECs and CLECs. Nevertheless, testimony by CLEC employees refutes those assertions. For example, XO’s Director of Product Analytics notes that XO is [BEGIN HIGHLY CONFIDENTIAL] [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] [END HIGHLY CONFIDENTIAL]<sup>51</sup>

57. We understand that AT&T has had a similar experience with best efforts cable services. For example, when a customer cancels an AT&T DS1 special access service in favor of a

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<sup>48</sup> Vertical Systems Group, *2014 U.S. Cable MSO Ethernet LEADERBOARD* (Mar. 16, 2015), <http://www.verticalsystems.com/vsglb/2014-u-s-cable-mso-ethernet-leaderboard/>.

<sup>49</sup> Sean Buckley, *Cable operators taking greater share of large businesses, says analyst firm*, FierceTelecom (Sep. 21, 2015), <http://www.fiercetelecom.com/story/cable-operators-taking-greater-share-large-businesses-says-analyst-firm/2015-09-21>.

<sup>50</sup> Declaration of Chris McReynolds on Behalf of Level 3 Communications, LLC at ¶ 19. We note that fiber networks constitute a powerful competitive threat, not only in terms of the bandwidth they can deliver along their existing routes and the bandwidth they can deliver to any customer who can be reached by a lateral, but also in terms of the range of services they can provide. Fiber can provision traditional circuit-based services as well as packet based connections, and it can carry a tremendous array of bandwidth possibilities, provided the appropriate electronics are attached to the fiber. From the supply side, there is substantial ease of substitutability among services when they are delivered over a modern fiber-optic network.

<sup>51</sup> Declaration of James A. Anderson at ¶ 33.

competitive offering, AT&T’s sales team attempts to determine from the customer the competitor chosen and the reason for the switch. AT&T’s analyses of these data show that, for the 12 month period from November 2014 through November 2015, a [BEGIN HIGHLY CONFIDENTIAL] [REDACTED] [END HIGHLY CONFIDENTIAL] of AT&T’s DS1 competitive losses went to cable companies and that [BEGIN HIGHLY CONFIDENTIAL] [REDACTED] [END HIGHLY CONFIDENTIAL] of these cable company losses were to best efforts cable services, *i.e.* customers that specifically identified cable Internet as their chosen service or, for those customers that did not identify the type of service, the proportional number of customers that switched to cable and chose a cable Internet service.<sup>52</sup>

58. The CLECs’ attempt to downplay this competition from best efforts cable services by arguing that they are not taking any actions to win back customers lost to cable best efforts services. As explained below, that is not true for AT&T. But even if it were true, that would not mean that ILEC prices are not constrained by this competition from cable companies. The fact that an increase in price would cause customers to migrate to best efforts cable services is a significant competitive constraint, and it would thus be arbitrary to ignore competition from best efforts services in their entirety as the CLECs propose.

59. We understand that AT&T is actively responding to competition from cable, including in the development of the next-generation products and services that will replace legacy TDM-based DS<sub>n</sub> services. As just one example, [BEGIN HIGHLY CONFIDENTIAL] [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] [END HIGHLY CONFIDENTIAL]

60. We also understand that CenturyLink faces fierce competition from cable providers for CenturyLink’s DS<sub>n</sub> and Ethernet services and the Dedicated Internet Access and other products it provides over those services. CenturyLink has therefore taken various steps to compete with cable providers in this area, including reducing its DS<sub>n</sub> and Ethernet prices and launching a

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<sup>52</sup> AT&T Internal Analysis.

product called *Core Connect Enterprise*, which offers bundled data, voice and cloud-applications targeted to small and medium businesses, usually over copper facilities. *Core Connect Enterprise* provides comparable or superior speeds, functionality, and pricing similar to cable providers’ best efforts and Ethernet services.

61. The CLECs also attempt to dismiss the marketplace impact of cable’s best efforts services by arguing that many business customers have a need for Service Level Agreements that include guaranteed up time, performance standards, quality of service levels, security standards, and so on.<sup>53</sup> The problem with this argument from an economic perspective is that providers offer a broad continuum of SLAs and that customers choose the SLA and price point that best fits their needs.<sup>54</sup> For many business customers, the lower price of best efforts cable services offsets the benefits of the services with higher SLAs.<sup>55</sup> The CLECs’ own conduct in the marketplace further confirms that they view best efforts cable as a direct competitor to their Ethernet and other dedicated services. For example, Windstream’s website directly advertises its “Ethernet Internet” service (with a 99.99 percent uptime guarantee) as a *substitute* for best efforts cable.<sup>56</sup> If these Ethernet with an SLA and best efforts cable services were in different markets, there would be no reason for Windstream to be highlighting the benefits of its Ethernet service compared cable best efforts. The fact that Windstream’s own advertising materials directly target cable best efforts confirms that, in Windstream’s business judgment, cable best efforts services are a direct competitor to other business services with SLAs.

62. *Two or More Competitors*. Like Prof. Baker, Drs. Besen and Mitchell argue that effective competition does not occur in a building until at least *three* competitive providers have deployed facilities to a building. However, Drs. Besen and Mitchell do not provide any evidence to support that assertion given the specific characteristics of special access competition, *e.g.*, the importance of sunk investment in facilities. Instead, they rely on various articles assessing

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<sup>53</sup> See, *e.g.*, Deem, et al. Decl. at ¶¶ 18-30.

<sup>54</sup> Even within non-best efforts services, providers offer a wide range of “classes” of SLAs, and prices for service with more comprehensive SLAs cost more than services with less comprehensive SLAs.

<sup>55</sup> Prof. Baker acknowledges that best efforts broadband are attractive to certain types of retail customers. Baker Decl. at ¶ 32.

<sup>56</sup> See <http://www.windstreambusiness.com/products/enterprise-network-services/dedicated-internet-services/ethernet-internet> (directly comparing Windstream’s Ethernet Internet service to “cable Internet”).

competition in unrelated industries that purport to show that three or more competitors is required to attain maximum benefits from competition.<sup>57</sup>

63. Drs. Besen and Mitchell point to studies of specific product markets – gasoline retailing, general obligation bond underwriting, and condo apartments in Stockholm – that bear little relation to special access services. They also examine the literature which relates the outcomes of auctions to observed bidding – an implicit acknowledgment that these services are best viewed as bidding markets. They cite to Brannman, et al. (1987) who find each additional bid is related to a higher sale price for offshore oil leases and national forest timber sales.<sup>58</sup> In fact these authors establish a relationship between the winning bid and the number of bids, not the number of bidders which would be relevant here. The authors note that the empirical and theoretical research reaches mixed conclusions regarding the relationship between winning bids and the number of bidders. Furthermore, as with the other studies Drs. Besen and Mitchell cite, these transactions involve products that differ significantly from special access; they are the sale of commodity products rather than the provision of a differentiated service, and involve a one-time transaction, whereas the special access provider and the purchaser enter into a longer term relationship.

**V. OUR WHITE PAPER PROVIDES ECONOMIC ANALYSIS THAT ADDRESSES WHETHER THE COMPETITIVE TRIGGERS ACCURATELY PREDICT COMPETITION WITHIN AN MSA**

64. The Commission’s Public Notice sought comment on whether, based on the 2013 special access data collection, the Commission’s pricing flexibility triggers effectively identified MSAs where competitive entry had occurred. In response, we analyzed the 2013 special access data at the census block level and demonstrated that the Commission’s pricing flexibility triggers dramatically understate the true extent of competition in any given MSA. Our analysis showed that in MSAs where ILECs have been granted Phase II pricing flexibility competitors have deployed sunk facilities in most census blocks, and that those census blocks represent almost all business establishments with potential demand. We also provided tables showing that this metric

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<sup>57</sup> Note that, even if it were true, this would not explain Prof. Baker’s nonsensical conclusion that the second or third competitor has *more* effect than the first.

<sup>58</sup> Lance Brannman, J. Douglass Klein, and Leonard W. Weiss, “The Price Effects Of Increased Competition In Auction Markets,” *Review of Economics & Statistics*, 1987: 24-32.

is consistent at the MSA level. In addition, our analyses showed that the current triggers are actually considerably under-inclusive (*i.e.*, understate the extent to which competitors have deployed competitive facilities) because the data show that even in Phase I areas, and in areas with no pricing flexibility at all, competitors have deployed sunk facilities to almost every census block in MSAs with special access demand, covering most connections and business establishments. None of the analyses by other parties appears to address whether the competitive triggers accurately predict competition within an MSA. In contrast, our previous analysis can and did.

65. The analyses of the data reported by the competitive providers and their economists and data analysts show only *national*-level results. As explained above, these analyses are flawed. But even if they produced an accurate picture of competition in the marketplace at the national level, they do not show whether the competitive triggers accurately predict the existence of sunk competitive facilities (*i.e.*, competitive facilities) in any MSA. In other words, they provide no data from which regulators or any other entity can conclude that, in the areas where ILECs have been granted Phase II pricing flexibility, there is a lack of competition.

66. By contrast, our prior paper reported the extent to which there are competitive facilities within census blocks at the MSA level. Our paper showed that, based on the 2013 SADC data and National Broadband Plan data, competitors nationwide had deployed competing special access facilities in more than 95 percent of MSA census blocks with special access demand, covering about 97 percent of the total locations with special access connections and 99 percent of business establishments that might have demand for special access services.<sup>59</sup>

67. We showed that these metrics are the same (often higher) in Phase II MSAs (by providing the same metrics for each Phase II MSA), which confirms that the competitive triggers correctly predicted competition in areas where ILECS have been granted Phase II pricing flexibility. We further showed that the competitive triggers were under- inclusive, because many Phase I MSAs (and even some MSAs with no pricing flexibility) had competitive facilities covering more than 95 percent of MSA census blocks with special access demand, covering more than 97 percent of

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<sup>59</sup> These census blocks also cover more than 95 percent of AT&T's and CenturyLink's revenue and capacity demand for special access services.

locations with special access connections and 99 percent of business establishments that might have demand for special access services.<sup>60</sup>

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<sup>60</sup> These census blocks also cover more than 97 percent of AT&T's and CenturyLink's in-cycle revenue and capacity demand for special access services.

**VERIFICATION**

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

/s/ Mark Israel  
Mark Israel

Dated: February 19, 2016

**VERIFICATION**

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

/s/ Daniel Rubinfeld  
Daniel Rubinfeld

Dated: February 19, 2016

**VERIFICATION**

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

/s/ Glenn Woroch  
Glenn Woroch

Dated: February 19, 2016

# **ATTACHMENT 3**



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FOUNDED 1866

March 24, 2016

**REDACTED – FOR PUBLIC INSPECTION**

By **ECFS**

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

Re: WC Docket No. 05-25; RM-10593

Dear Ms. Dortch:

AT&T and CenturyLink hereby jointly submit the attached Supplemental Reply Declaration of Mark Israel, Daniel Rubinfeld, and Glenn Woroch (“Israel-Rubinfeld-Woroch Supplemental Reply”), which responds to and rebuts the Supplemental Reply Declaration of Professor Jonathan Baker, filed on behalf of Level 3 and Windstream.<sup>1</sup> Consistent with the *Protective Orders*<sup>2</sup> in this matter, this letter and the enclosed **Public** version of the Israel-Rubinfeld-Woroch Supplemental Reply have been redacted for inclusion in the public record.

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<sup>1</sup> See Supplemental Reply Declaration of Jonathan B. Baker on Market Power in the Provision of Dedicated (Special Access) Services, *Special Access Rates for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, WC Docket No. 05-25, RM-10593 (Mar. 2, 2016) (“Baker Supplemental Reply”).

<sup>2</sup> Modified Protective Order, *Special Access for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, 25 FCC Rcd. 15168 (2010); Second Protective Order, *Special Access for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, 25 FCC Rcd. 17725 (2010); Second Protective Order, Order and Data Collection Protective Order, *Special Access for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, 29 FCC Rcd. 11657 (2014).



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March 24, 2016  
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Professor Baker previously filed a declaration reporting the results of regression analyses attempting to model the effect of CLEC entry in or near a building on an ILEC's retail special access prices in that building. Professor Baker claimed to have found that ILEC prices in a building decline as the number of CLECs in or near the building increase, and in his initial declaration, Professor Baker emphasized that the largest ILEC price decrease occurred only when a *third* CLEC entered the building. The CLECs' advocates seized on these "findings" to argue that the Commission should not consider competition to exist in any building with special access demand unless *three* CLECs have constructed connections to such a building.<sup>3</sup>

Professors Israel, Rubinfeld, and Woroch filed a reply declaration explaining in detail that Professor Baker's regression analyses suffered from so many fundamental design and data-related flaws that the Commission could not rely on them.<sup>4</sup> Professor Baker's Supplemental Reply Declaration offers some tepid defenses of his original submission, but as the Israel-Rubinfeld-Woroch Supplemental Reply demonstrates, those defenses do not come close to rehabilitating Professor Baker's analyses.

First, Professor Baker continues to flout basic principles of statistics in interpreting his results. As Professors Israel, Rubinfeld, and Woroch previously noted, the *majority* of the results Professor Baker chose to report are either statistically insignificant or contrary to his theory. Nonetheless, Professor Baker continues to insist that his regressions show "a consistent inverse relationship between ILEC retail prices and the number of providers" because the coefficients were "negative or insignificant" in his "primary" specification and certain other specifications.<sup>5</sup> Interpreting statistically insignificant coefficients as supporting one's hypothesis runs counter to

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<sup>3</sup> See, e.g., Comments of XO Communications, LLC on The Further Notice of Proposed Rulemaking, *Special Access for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, WC Docket No. 05-25, RM-10593, at 53 (Jan. 27, 2016) ("XO Comments") ("[T]he Commission should find that the trigger for relief for DSn channel terminations requires four competitors to have already built to a location and not just be in close proximity."); Comments of Windstream Services, LLC, *Special Access for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, WC Docket No. 05-25, RM-10593, at 100-01 (Jan. 27, 2016) ("Windstream Comments") ("[T]he Commission should consider deregulatory measures, such as pricing flexibility, only at individual buildings where the data show that there are at least three non-ILEC competitors with their own last-mile fiber facilities supporting dedicated services . . . . [O]nly the in-building presence of at least three non-ILEC dedicated services competitors with their own last-mile fiber facilities is sufficient to ensure that the elimination of regulation will not permit service providers to raise their rates to supracompetitive levels.").

<sup>4</sup> Declaration of Mark Israel, Daniel Rubinfeld and Glenn Woroch, *Special Access Rates for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, WC Docket No. 05-25, RM-10593 (Feb. 19, 2016) ("Israel-Rubinfeld-Woroch Reply Decl.").

<sup>5</sup> Baker Supplemental Reply ¶ 5 (emphasis added).



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basic statistics. The only proper interpretation of a statistically insignificant coefficient is that “the data fail to provide sufficient evidence from which to conclude that the presence of competitive providers has an effect on ILEC prices.”<sup>6</sup> “The bottom line is that these results fall far short of the consistent pattern of negative and statistically significant coefficients that would be required for one to draw a reliable inference of an inverse relationship.”<sup>7</sup>

Second, Professor Baker concedes that the Commission cannot draw any conclusions from the relative magnitude of the coefficients in his regressions. Indeed, as Professors Israel, Rubinfeld, and Woroch previously explained, the pattern of Professor Baker’s regression coefficients “did not agree with common sense or economic theory,” insofar as Professor Baker often found that the third CLEC in a building had a greater impact than the first two, that nearby CLECs had a greater impact on ILEC prices than CLECs in the same building, and that additional CLEC entry caused CLEC prices to rise.<sup>8</sup> Professor Baker’s response is that that the magnitude of the coefficients in each regression are not “precis[e]” and thus cannot be compared.<sup>9</sup> This is a damaging concession, because Professor Baker is effectively conceding that even when “a coefficient is negative, statistically significant, and large in magnitude, one cannot draw any conclusions because the magnitude of the coefficient may be inaccurate.”<sup>10</sup> Equally important, in making this argument, Professor Baker further concedes that the CLECs that have been relying on his regressions for the proposition that effective competition requires multiple competitors have fundamentally misinterpreted his analysis.<sup>11</sup> On this point, Professor

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<sup>6</sup> Israel-Rubinfeld-Woroch Supplemental Reply ¶ 6.

<sup>7</sup> *Id.* ¶ 5. Professors Israel, Rubinfeld, and Woroch also explain that the methods Professor Baker uses to wrestle with the rather large standard errors of his estimates are either not a valid means of testing the robustness of the regression or in fact confirm that the results are not robust. *See id.* ¶¶ 14-20 (“It is not unusual to specify a reduced-form model of the relationship between structural competition and pricing outcomes. However, when no statistically-significant reduced-form relationship emerges, it is unlikely that there is a *causal* relationship between these variables. Given the overall lack of reliability of the regression results, one cannot draw a causal inference that a small number of competitors is an indication of the existence of market power.”).

<sup>8</sup> *Id.* ¶¶ 8-10.

<sup>9</sup> Baker Supplemental Reply ¶ 7.

<sup>10</sup> Israel-Rubinfeld-Woroch Supplemental Reply ¶ 12.

<sup>11</sup> *Id.* ¶ 14 (“[W]e note that Prof. Baker’s response with respect to these issues contains a highly relevant concession. He states that “[t]he regression results do not establish how many rivals are necessary to achieve competitive prices in the typical retail market . . . .” We agree. We note, however, that multiple CLEC commenters cite to Prof. Baker’s regression precisely for the proposition that three or more CLECs are required to establish effective competition.”).



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Baker could not be clearer: “the regression results do not establish how many rivals are necessary to achieve competitive prices in the typical retail market.”<sup>12</sup>

Third, even if Professor Baker’s estimates were more statistically robust, his regressions are not asking any question of interest. The central inquiry in this proceeding is “whether the current triggers for granting Phase II pricing flexibility are closely aligned with the presence of facilities-based competition in an MSA.”<sup>13</sup> Professor Baker, however, chose to report only the results for regression analyses that lump together Phase II, Phase I, and “no relief” MSAs, and further lump together prices for regulated *and* non-regulated services. As a result, his regressions fail to show any results specific to Phase II areas or specific to the regulated services being investigated in this proceeding. Professor Baker admits that he did run *unreported* regressions for Phase II areas, but he concedes that those regressions failed to produce statistically significant results and actually produced more *positive* coefficients, which is contrary to his hypothesis.<sup>14</sup> Professor Baker also states that he added dummy indicator variables for Phase II, Phase I and no relief areas. But as Professors Israel, Rubinfeld, and Woroch explain, such a change would not address the criticism as a matter of econometrics, because “the inclusion of fixed effects to account for differences in regulatory regimes does not allow for the response of ILEC pricing to competitive entry to differ by regulatory regime.”<sup>15</sup> As to lumping together regulated and non-regulated services, Professor Baker admits that his results could be driven by price competition for *non-regulated* services, which is merely a further concession that the marketplace is competitive even in areas with no pricing flexibility relief.<sup>16</sup>

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<sup>12</sup> Baker Supplemental Reply ¶ 7; *see also id.* ¶ 7 n.12 (statement in original Baker declaration about third CLEC “lead[ing]” to the greatest ILEC price decrease “was a descriptive statement about the coefficients, not a claim about the number of in-building providers required for prices to be competitive”).

<sup>13</sup> Israel-Rubinfeld-Woroch Supplemental Reply ¶ 24.

<sup>14</sup> *Id.* ¶ 25.

<sup>15</sup> *Id.* ¶ 29 (“One approach that could identify the implications of pricing flexibility would be to interact the indicators of competitive providers with indicators of regulatory treatment. However, to our knowledge, Prof. Baker has not estimated this model. As a result, his proposed ‘solution’ does not respond to our central point—that the relationship between number of competitors and prices almost surely varies across different competitive regimes.”).

<sup>16</sup> Professors Israel, Rubinfeld, and Woroch note that Professor Baker also apparently ran a separate regression for “no relief” areas and purported to find ILEC price decreases. This result is especially curious, because one would not expect there to be any meaningful relationship between CLEC entry and ILEC pricing in areas governed by traditional price cap regulation in which ILECs are severely constrained in changing their prices in response to competition. As Professors Israel, Rubinfeld, and Woroch explain, any statistically significant finding of an inverse relationship in “no relief” areas is strong evidence that the entire regression is biased toward finding an inverse relationship. *Id.* ¶ 27. Professor Baker’s response is that this relationship may be driven by reduced *non-regulated* services in these price cap areas.



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Fourth, Professor Baker’s regressions are unreliable because there are large gaps in his data that are not randomly distributed. Here, too, Professor Baker’s answers are non-responsive. For example, Professors Israel, Rubinfeld, and Woroch previously explained that nearly a third of all buildings in the FCC’s dataset lack any billing data, which means Professor Baker cannot include those buildings in his regression estimations.<sup>17</sup> In his supplemental reply, Professor Baker informs us that he has run regressions using samples that have different degrees of missing data in an attempt to show that the missing pricing data do not matter. Although he (once again) does not report his results, Professor Baker assures us that he found “similar inverse relationship[s]” in the regressions of these subsamples.<sup>18</sup> Professor Baker’s conclusions cannot be independently confirmed (because he does not provide the results), but in all events his samples are likely non-random themselves. According to Professor Baker, he estimated two regressions that included (1) only states with less than the median fraction of missing prices and (2) only providers with lowest fraction of missing prices.<sup>19</sup> As Professors Israel, Rubinfeld, and Woroch explain, **[BEGIN HIGHLY CONFIDENTIAL]** [REDACTED] **[END HIGHLY CONFIDENTIAL]** would be disproportionately represented in both of these samples, but **[BEGIN HIGHLY CONFIDENTIAL]** [REDACTED] **[END HIGHLY CONFIDENTIAL]** – which means the coefficients in Professor Baker’s regressions on these samples are likely biased as well.<sup>20</sup>

Finally, Professor Baker acknowledges, as he did in his original report, that his results are biased – a conclusion with which Professors Israel, Rubinfeld, and Woroch agree.<sup>21</sup> Professor Baker believes the bias is all in one direction; in essence, Professor Baker is saying “If I could get rid of all the bias in my models, my hunch is that the coefficients would be more consistently negative and significant” (even though the majority of them now are not). But Professors Israel, Rubinfeld, and Woroch previously explained that there are a number of other factors that would bias his results in the other direction, and as they emphasize again here, Professor Baker has *no grounds* in econometrics or economic theory for guessing that one effect or the other predominates.<sup>22</sup> All anyone can conclude at this juncture is that his results are biased and thus are not reliable. There are well-understood techniques in econometrics for attempting to correct these sources of bias (such as using instrumental variables estimation), but Professor Baker has

<sup>17</sup> Israel-Rubinfeld-Woroch Reply Decl. ¶ 28.

<sup>18</sup> Baker Supplemental Reply ¶ 16.

<sup>19</sup> *Id.*

<sup>20</sup> Israel-Rubinfeld-Woroch Supplemental Reply ¶ 33.

<sup>21</sup> *Id.* ¶¶ 42-49.

<sup>22</sup> *Id.*; Israel-Rubinfeld-Woroch Reply Decl. ¶¶ 34-36.



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not even tried to obtain reliable results by using these techniques to address the conceded bias in is estimations.<sup>23</sup>

For all of these reasons, the Commission could not reasonably rely on Professor Baker's regressions analyses for any purpose in this proceeding.

Sincerely,

/s/ Christopher T. Shenk

Christopher T. Shenk  
Sidley Austin, LLP  
*Counsel for AT&T*

/s/ Russell Hanser

Russell P. Hanser  
Wilkinson Barker Knauer, LLP  
*Counsel for CenturyLink*

Enclosure

cc: Christopher Koves

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<sup>23</sup> Israel-Rubinfeld-Woroch Supplemental Reply ¶¶ 48-49.

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

In the Matter of	)	
	)	
Special Access for Price Cap Local Exchange Carriers	)	WC Docket No. 05-25
	)	
AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593
	)	

**SUPPLEMENTAL DECLARATION OF**

**MARK ISRAEL, DANIEL RUBINFELD AND GLENN WOROCH**

**March 24, 2016**

**I. OVERVIEW**

1. We have been asked by AT&T and CenturyLink to review the Supplemental Reply Declaration of Professor Jonathan Baker,<sup>1</sup> which purports to respond to our criticisms of the regression analysis that Prof. Baker described in his initial declaration.<sup>2</sup> In our previous declaration we identified numerous flaws in Prof. Baker’s regression analysis that led us to conclude that the inferences he drew regarding the relationship between special access prices and the number of competitors connected to (or nearby to) a building were not valid.<sup>3</sup> Prof. Baker’s Supplemental Reply Declaration attempts to address some of our points. However, as we explain below, his responses are not compelling and, in some cases, reveal additional deficiencies in his regression analyses that were not apparent from his initial declaration.

2. Expanding on our earlier declaration, we show in this report that the coefficients in Prof. Baker’s regressions do not display the signs, magnitudes, and levels of statistical significance that would be required to establish an inverse relationship between ILEC pricing and the number of competitive providers. Moreover, we explain that the estimates reported in his original declaration are not consistent with standard models of industry equilibrium. Furthermore, the biases that Prof. Baker identified in his initial declaration have not been corrected, nor has he attempted to correct the additional sources of biases that we identified. Finally, Prof. Baker’s regression analyses fail to respond to a critical policy issue in this proceeding as to whether the triggers for pricing flexibility are aligned with facilities-based competition.

3. In the end, Prof. Baker’s Supplemental Reply reconfirms and strengthens our opinion that the evidence provided by his regressions does not offer a reliable guide for the reform of special access regulation. We address each of his points in the same order he raised them in his Supplemental Reply.

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<sup>1</sup> Supplemental Reply Declaration of Jonathan B. Baker On Market Power in the Provision of Dedicated (Special Access) Services, *Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, RM-10593 (Mar. 2, 2016) (“Baker Supp. Reply Decl.”).

<sup>2</sup> The Declaration of Jonathan B. Baker on Market Power in the Provision of Dedicated (Special Access) Services, *Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, RM-10593 (Jan. 27, 2016) (“Baker Decl.”).

<sup>3</sup> Declaration of Mark Israel, Daniel Rubinfeld and Glenn Woroch, *Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, RM-10593 (Feb. 19, 2016) (“Israel-Rubinfeld-Woroch Decl.”).

**II. STATISTICAL RELIABILITY OF PROF. BAKER’S REGRESSION RESULTS**

4. In our earlier declaration, we demonstrated that Prof. Baker’s regression results do not support an inference that ILEC prices fall as the number of competitive providers connected to, or nearby to, a building increase.<sup>4</sup> In his Supplemental Reply Declaration, Prof. Baker reiterates his claims that his series of regressions support the inference of an inverse relationship between ILEC prices and the number of in-building and nearby competitors using the Special Access Data Collection (“SADC”).<sup>5</sup>

5. We are not persuaded. Recall that there are a meaningful number of positive coefficients in his various regressions, and, of course, these are counter to his conclusion. Of the 91 coefficients on indicators of competitors that were reported in the econometric specifications reported by Prof. Baker, 31 are *positive*, either statistically significant, or insignificant.<sup>6</sup> Six of them are positive *and* statistically significant (*i.e.*, the opposite of Prof. Baker’s claim of an inverse relationship). More generally, more than half of the 91 coefficients do not support Prof. Baker’s claim of an inverse relationship between ILEC pricing and competitor counts and prices, either because their values are not statistically different from zero, or because their values are positive. The bottom line is that these results fall far short of the consistent pattern of negative and statistically significant coefficients that would be required for one to draw a reliable inference of an inverse relationship.

6. When a coefficient is not statistically different from zero, the proper interpretation is that the data fail to provide sufficient evidence from which to conclude that the presence of competitive providers has an effect on ILEC prices. In this case, among the 91 coefficients for in-building and nearby competitors, less than half, *i.e.*, 35, are negative and statistically

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<sup>4</sup> Mark Israel, Daniel Rubinfeld and Glenn Woroch, “Competitive Analysis of the FCC’s Special Access Data Collection: White Paper,” *Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, RM-10593 (Jan. 28, 2016) (“Israel-Rubinfeld-Woroch White Paper”) at ¶ 13.

<sup>5</sup> Prof. Baker counts as support all coefficients on competitive entry variables that are negative, whether or not they are statistically significant, plus those coefficients that are positive when they are statistically insignificant: “The regression results reported in my initial declaration show a consistent inverse relationship between ILEC prices and the number of providers.” Baker Supp. Reply Decl., ¶ 5. “[W]hen all coefficients in a regression are negative or insignificant . . . it is appropriate to conclude that the regression demonstrates an inverse relationship.” *Id.* ¶ 6.

<sup>6</sup> Baker Decl., Table 2.

significantly different from zero, meaning that the data do not demonstrate an inverse relationship.<sup>7</sup>

7. Ultimately, in its discussion of statistical significance, Prof. Baker’s Supplemental Reply Declaration attempts to have it both ways. On one hand, he not only relies heavily on coefficients that are negative and statistically significant as evidence in support of his conclusion that there is an inverse relationship, but he goes further in interpreting negative coefficients that are statistically *insignificant* as supporting the inverse relationship. On the other hand, he gives little weight to the fact that over half of the coefficients are positive, in part by arguing that many of these coefficients are statistically *insignificant*. The proper conclusion is that those coefficients that are insignificant (whether positive or negative) and the coefficients that are positive and significant—together, the majority of his coefficients—each fail to provide evidence from which to conclude that there exists an inverse relationship between ILEC prices and the number of competitors.

### **III. MAGNITUDES OF PROF. BAKER’S REGRESSION COEFFICIENTS**

8. As we explained in our earlier declaration, the estimated coefficients on indicators of the number of competitive providers often had values that did not make economic sense. In addition to the many positive coefficients, we pointed out that the pattern of regression coefficients did not agree with common sense or economic theory: (i) the presence of additional competitors was often not associated with lower prices,<sup>8</sup> (ii) nearby competitors often had a larger impact than in-building competitors,<sup>9</sup> and (iii) supplemental competitors often had a larger impact on prices than prior competitors.<sup>10</sup>

9. Standard models of industry behavior imply that, in equilibrium, the marginal impact on price of an additional supplier in the industry diminishes with the total number of suppliers.<sup>11</sup>

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<sup>7</sup> Baker Decl., Table 2.

<sup>8</sup> Israel-Rubinfeld-Woroch Decl., ¶ 23.

<sup>9</sup> *Id.*, ¶ 24.

<sup>10</sup> *Id.*, ¶ 25.

<sup>11</sup> For instance, the Cournot model of industry equilibrium has the property that price falls with the each additional firm, and in the linear version of that model, the price reduction caused by an additional firm diminishes as the number of firms increases. See, e.g., Dennis W. Carlton and Jeffrey M. Perloff, *Modern Industrial Organization*, Pearson/Addison Wesley: Boston, Fourth Edition (2005) (“The effect of additional rivals on quantity and price is initially very strong, but tapers off as the number of firms increases.” (p.170)). See also Declaration of Stanley M.

Yet, an examination of the sizes and signs of the regression coefficients on successive competitors does not confirm this pattern.<sup>12</sup> In fact, there is no consistent pattern, for neither signs nor sizes, in the coefficients on the second or third in-building competitor.<sup>13</sup> We would expect that the first in-building competitor would have the greatest impact on ILEC pricing. Yet, out of the 13 regressions reported, five coefficients were negative and significant, three were positive and significant, and the remaining five were statistically insignificant.<sup>14</sup> Coefficients on the “fourth (or more) in-building provider” indicator are more stable, but since they tend to be much larger than those for the second and third entrant – sometimes by an order of magnitude— they also are not consistent with standard industry models.

10. We also pointed out in our earlier declaration that a comparison of Prof. Baker’s first two regressions in his Table 2 implied that a second in-building competitive provider was correlated with *higher* prices charged by competitive providers to the detriment of special access purchasers.<sup>15</sup>

11. Prof. Baker appears to recognize that comparisons of the results of his 13 regressions reveal no consistent pattern. His response is that it is not appropriate to compare the results of different regressions because all are biased such that the actual magnitude of any particular coefficient is unreliable and cross comparisons cannot be made.<sup>16</sup> We have a different viewpoint.

12. To begin, it is important to emphasize that Prof. Baker’s argument concedes that even if a coefficient is negative, statistically significant, and large in magnitude, one cannot draw any conclusions because the magnitude of the coefficient may be inaccurate. Furthermore, coefficients *within* as well as *across* his regressions often yield nonsensical conclusions. For example, the first regression reported in Prof. Baker’s table shows that ILEC prices are

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Besen and Bridger M. Mitchell (Jan. 27, 2016) (“Besen and Mitchell Decl.”), ¶ 45 (“With respect to the number of competitors that are needed to discipline pricing effectively, the economic literature generally supports a finding that many competitors are required and that each additional competitor’s incremental effect on price diminishes as the number of competitors increases.”).

<sup>12</sup> Baker Decl., Table 2.

<sup>13</sup> We note that when the coefficient on the third in-building providers is negative and statistically significant, the size of the coefficient is small, implying a reduction in ILEC prices of between 1% and 8% depending on the subsample used. *See* Baker Decl., Table 2.

<sup>14</sup> *Id.*

<sup>15</sup> Israel-Rubinfeld-Woroch Decl., footnote 17.

<sup>16</sup> Baker Supp. Reply Decl. ¶ 7.

unaffected when two CLECs connect to the building, but then inexplicably fall when the third CLEC connects.

13. Prof. Baker argues that rather than comparing individual coefficients across regressions one should look at cumulative or average effects: “by comparing cumulative or average effects within or across regressions, both of which are derived from summing several regression coefficients, are likely to be more reliable than inference made by comparing the magnitude of individual coefficients within or across regressions....”<sup>17</sup> As a statistical matter, this is not necessarily so. The validity of this statement depends on the standard errors of the marginal (cumulative or average) effects, and these are not reported by Prof. Baker. Prof. Baker has not ruled out the possibility that correlations among explanatory variables could amplify the standard errors of cumulative/average effects relative to that of individual coefficients.<sup>18</sup>

14. Finally, we note that Prof. Baker’s response with respect to these issues contains a highly relevant concession. He states that “[t]he regression results do not establish how many rivals are necessary to achieve competitive prices in the typical retail market....”<sup>19</sup> We agree. We note, however, that multiple CLEC commenters cite to Prof. Baker’s regression precisely for the proposition that three or more CLECs are required to establish effective competition.<sup>20</sup>

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<sup>17</sup> *Id.*

<sup>18</sup> A Bonferroni test of the joint hypothesis that *all three* coefficients on in-building competitors are jointly equal to zero is not rejected for 4 of the 13 regressions at a 5% significance level. That same test of the joint hypothesis that *all four* coefficients on nearby competitors are jointly zero is not rejected for 8 of the 13 regressions. On the Bonferroni test, see James H. Stock and Mark W. Watson, *Introduction to Econometrics*, 3<sup>rd</sup> Edition, Addison Wesley: Boston, 2011, Appendix 7.1.

<sup>19</sup> Baker Supp. Reply Decl. ¶ 7. In our previous declaration (*see* Israel-Rubinfeld-Woroch Decl. ¶ 62), we noted that Besen and Mitchell come to a different conclusion. They state that “We base this conclusion [that “there are fewer suppliers of special access service than are necessary for a fully competitive outcome”] on the observation that the presence of more than two suppliers is necessary to achieve a competitive outcome.” Besen and Mitchell Decl., ¶ 31.

<sup>20</sup> *See, e.g.*, Comments of XO Communications, LLC on the Further Notice of Proposed Rulemaking, *Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, RM-10593 (Jan. 27, 2016) at p.53 (“Therefore, the Commission should find that the trigger for relief for DS<sub>n</sub> channel terminations requires four competitors to have already built to a location and not just be in close proximity.”); Comments of Windstream Services, LLC, *Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, RM-10593 (Jan. 27, 2016) at pp.100-101 (“...the Commission should consider deregulatory measures, such as pricing flexibility, only at individual buildings where the data show that there are at least three non-ILEC competitors with their own last-mile fiber facilities supporting dedicated services.... [O]nly the in-building presence of at least three non-ILEC dedicated services competitors with their own last-mile fiber facilities is sufficient to ensure that the elimination of regulation will not permit service providers to raise their rates to supracompetitive levels.”)

**IV. TESTING FOR STATISTICAL SIGNIFICANCE**

15. It is clear that Prof. Baker’s coefficients are not estimated with acceptable precision from which to draw strong inferences, *i.e.*, the standard errors of his estimates are relatively large. While small sample sizes might be responsible for large standard errors, several of Prof. Baker’s regressions have over one million observations, making it more likely that the lack of statistical significance indicates that, instead, there is no underlying relationship (at least of the type posited by Dr. Baker’s model).<sup>21</sup>

16. In his initial analysis, Professor Baker relied on several different measures of the standard errors associated with his estimated regression coefficients. We reiterate here the conclusion from our earlier declaration, that using the clustered approach to the measurement of standard errors is most appropriate, and that using this approach would make more of the negative coefficients reported by Prof. Baker statistically insignificant.

17. Prof. Baker’s main response is that the choice of standard error measure does not affect the “magnitude” of his coefficients. But that misses the point. As Prof. Baker concedes, the different measures of standard error affect whether the coefficients are *statistically significant*. Thus, regardless of the magnitude of the coefficients, the choice of standard error is important when determining whether one can reject the hypothesis that individual coefficients are different from zero. As Prof. Baker confirms, using the “clustered” approach makes more of his coefficients (regardless of their magnitude) statistically insignificant.

18. Prof. Baker also states that using different standard errors offered a “robustness test” for his regressions.<sup>22</sup> We disagree. Obtaining a more accurate estimate of standard errors does not provide a standard test of robustness of a regression model. A more appropriate test or tests would evaluate the sensitivity of the estimated coefficients to modest changes in the specification of the model. For example, one might see how the inclusion of different subsets of explanatory variables in the regressions affected the coefficients on the number of competitors. In contrast, Prof. Baker’s 13 regressions all include the identical explanatory variables. As an alternative

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<sup>21</sup> “As a general rule, the statistical significance of the magnitude of a regression coefficient increases as the sample size increases.” Daniel L. Rubinfeld, “Reference Guide on Multiple Regression,” *Reference Manual on Scientific Evidence* (Third Edition) The National Academies Press: Washington, DC, p. 318.

<sup>22</sup> Baker Supp. Reply Decl., ¶ 8 (“Clustering was undertaken in the alternative as a robustness test.”).

approach, we note that Prof. Baker could have excluded the nearby competitors in one regression and compared the results to the regression when those indicators were included.

19. Prof. Baker estimates his econometric model using 13 different subsamples of the data. This could serve as the basis for a test of the robustness of the results from a regression model. Notably, applied here, this robustness test shows that Prof. Baker's results are not robust. An examination of the regression results shows that the coefficients change sign and significance from one sample to the next. The implication is the full set of Dr. Baker's regressions does not provide robust support for his inference of a relationship between the number of competitors and price.

20. All of the regressions that Prof. Baker estimates are reduced-form relationships that capture the correlation between observed ILEC prices (or ILEC plus CLEC prices) and various market conditions including the presence of competitors. It is not unusual to specify a reduced-form model of the relationship between structural competition and pricing outcomes. However, when no statistically-significant reduced-form relationship emerges, it is unlikely that there is a *causal* relationship between these variables.<sup>23</sup> Given the overall lack of reliability of the regression results, one cannot draw a causal inference that a small number of competitors is an indication of the existence of market power.

## V. NEARBY RIVALS

21. In our earlier declaration, we pointed out that the regression specification was poorly suited to answering an important question: What is the effect of a nearby competitor when there are no in-building competitors present? Prof. Baker suggests that the estimated coefficients on indicators of nearby rivals capture the nearby competition when there are no/few in-building competitors because as a general rule there are no/one in-building competitors.<sup>24</sup>

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<sup>23</sup> See, e.g., Joshua D. Angrist, and Jörn-Steffen Pischke, *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press, 2008 (“if you can’t see the causal relationship in the reduced form, it’s probably not there.” (p.213)). See also Joshua D. Angrist and Alan B. Krueger, “Instrumental Variables and the Search for Identification: From Supply and Demand to Natural Experiments,” *Journal of Economic Perspectives* 15.4 (2001): 69-85 (“Most importantly, if the reduced form estimates are not significantly different from zero, the presumption should be that the effect of interest is either absent or the instruments are too weak to detect it.” (p.80)).

<sup>24</sup> Baker Supp. Reply Decl., ¶ 11.

22. Prof. Baker’s reasoning is incorrect. The proper way to identify the effect of nearby competitors for any number of in-building competitors (including no in-building competitors) is to introduce a full set of interaction variables between the in-building and nearby competitors. To our knowledge, Prof. Baker has not undertaken this analysis.

23. Given a full set of interactions, the coefficients on the interactions of the indicator of zero in-building competitors with the indicators of various numbers of nearby competitors would answer the question we identified as critical to this analysis: Is nearby competition sufficient to make up for the absence of in-building competition when the latter does not occur? The frequency with which different combinations of in-building and nearby competitors occurs would not affect the estimated coefficients on indicator variables and their interactions. Exclusion of the interactions altogether, in contrast, means that the estimated competitive effect is an average over the effects that would be split out by the interactions and thus does not provide an unbiased measure of any of the relevant interaction terms.

## **VI. REGULATORY TREATMENT**

24. A central issue in this proceeding is whether the current triggers for granting Phase II pricing flexibility are closely aligned with the presence of facilities-based competition in an MSA. To evaluate these issues, one should examine the data for Phase II areas only. In his original declaration, however, Prof. Baker reported only results from regressions that combined Phase I, Phase II, and no relief areas, making it impossible to draw any conclusions about competition in Phase II areas alone.

25. Prof. Baker did note that he estimated a regression using only Phase II areas, but he chose not to report those results. Prof. Baker explains that this regression produced standard errors indicating that additional coefficients were not statistically significant and that the regression actually showed a more statistically-significant *positive* relationship in Phase II areas.<sup>25</sup>

26. Professor Baker did purport to find a negative relationship between ILEC prices and competitors’ connections (or nearby fiber) in “no relief” MSAs. We find this result perplexing: we would not expect there to be a meaningful empirical relationship between ILEC pricing and

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<sup>25</sup> Baker Decl., ¶ 62; Baker Supp. Reply Decl. ¶ 13.

the number of competitive providers, since ILECs’ ability to reduce prices for regulate services in these areas is constrained by the price cap rules.

27. In light of these possibilities, any inverse relationship that arises in the undisclosed regressions in price-cap areas should be seen as evidence that the regression specification is biased to find an inverse relationship. Prof. Baker’s response is that his analysis combined regulated and unregulated services, and that the observed price declines in price-cap areas must be caused by ILEC pricing for non-regulated services. But that would suggest that the independent regressions for non-regulated services reported by Prof. Baker would show consistent and statistically significant negative coefficients.<sup>26</sup> As seen below, this is not the case.

28. We also note that seven of Prof. Baker’s regressions involve ILEC pricing of unregulated services, *i.e.*, models (6) and (8)-(13) of Table 2. We would expect those regressions to provide a more direct estimate of the effect of competition on prices in the absence of regulatory restrictions on pricing. However, out of the 49 coefficients related to competitive provider counts that appear in those seven regressions, 34 are not statistically significant or are positive and statistically significant. In one specification (ILEC retail prices for 100-500 Mbps), there are no statistically significant coefficients on competitive provider variables. In another case (ILEC retail prices for 500-1000 Mbps), the first in-building competitor caused an approximately 24 percent drop in prices, but the second in-building provider resulted in an approximately 28 percent price increase, netting out to a price increase. Hence, when restricted to unregulated services, Prof. Baker’s regression results become even less supportive of an inference of an inverse relationship between competition and prices.

29. Professor Baker has also pointed to regressions that include dummy indicator variables (“fixed effects”) for regulatory treatment. However, because he did not report the results of the estimation we cannot replicate his analysis. We can point out, however, that the inclusion of fixed effects to account for differences in regulatory regimes does not allow for the response of ILEC pricing to competitive entry to differ by regulatory regime. Fixed effects merely account for differences in the baseline price level by regulatory treatment; they do not allow the effect of the number of competitors to vary. One approach that could identify the implications of pricing

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<sup>26</sup> See Baker Decl., Table 2, Models (6) and (8)-(13).

flexibility would be to interact the indicators of competitive providers with indicators of regulatory treatment. However, to our knowledge, Prof. Baker has not estimated this model. As a result, his proposed “solution” does not respond to our central point—that the relationship between number of competitors and prices almost surely varies across different competitive regimes.

**VII. MISSING DATA**

30. In our earlier declaration, we explained that Prof. Baker’s regression analysis was unreliable because of information that was missing from the SADC on both sides of the regression equation, *i.e.*, the ILEC prices (left hand side) and the competitive facilities (right hand side). We noted that there is no evidence that data that he used were representative.<sup>27</sup> Prof. Baker responded by saying that “[e]mpirical tests show that this possibility is not a concern for interpreting the regressions presented in my initial declaration, as the regression results are not sensitive to the inclusion of states or providers with relatively high proportion of missing prices.”<sup>28</sup> As explained below, we disagree with this assessment.

**A. MISSING PRICING DATA**

31. In our earlier declaration, we noted that because over forty percent of all buildings identified by the FCC are composed of one or more locations that lack billing data, we cannot create a meaningful dependent variable.<sup>29</sup> If these buildings occurred randomly in the complete sample, this would be less of a concern. However, we showed that the buildings were missing in a nonrandom fashion and, as a result, the estimation sample could lead to biased coefficients.

32. To address the potential for bias, Prof. Baker estimates regressions using samples that have different degrees of missing data. His goal is to show that the coefficients are robust to missing data. Estimating a regression that uses only states with less than the median fraction of missing prices, Prof. Baker stated that he found “a similar inverse relationship to the coefficients reported for the primary specification.”<sup>30</sup> Because he does not report the estimated coefficients

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<sup>27</sup> Israel-Rubinfeld-Woroch Decl., ¶¶ 27-33.

<sup>28</sup> Baker Supp. Reply Decl., ¶ 16.

<sup>29</sup> Israel-Rubinfeld-Woroch Decl., ¶ 28.

<sup>30</sup> Baker Supp. Reply Decl., ¶ 16.

for these regressions or their corresponding standard errors, we are unable to judge what he means by “similar.” In any case, we are concerned that the selected sample of states itself is not representative of the population of buildings.

33. In support of our view, we note that Prof. Baker and several other commenters have noted that CenturyLink’s submission to the SADC was complete and therefore would be disproportionately represented in Prof. Baker’s estimation samples of these new regressions.<sup>31</sup> It is also well known that CenturyLink’s territory differs from that of other major ILECs, being more rural and more sparsely populated and with the real possibility of a different relationship between pricing and the number of competitive providers. Hence, the subset of states used in Prof. Baker’s sensitivity analysis is likely non-random and his test for the effect of missing data is likely to be biased.

34. In fact, when Prof. Baker estimated his primary specification using a sample of buildings that excluded AT&T, Verizon and Frontier, leaving only CenturyLink among the major ILECs, he states that he found an even stronger inverse relationship. He concluded, “These results are inconsistent with the ILEC economists’ concern that sample selection bias from missing prices would lead the reported results for the primary specification to overstate the inverse relationship between the number of rivals and price.”<sup>32</sup> However, this analysis actually implies that the data used by Prof. Baker do not represent a random sample (if they did he would not have found a stronger relationship).

35. To be precise, we did not state that nonrandom sample selection would bias the coefficients in one direction rather than another. The size and sign of sample selectivity bias depends on the process by which observations are dropped from the sample, and we do not know the process that determined the missing observations. Nevertheless, the change in the coefficient estimates that Prof. Baker mentions when he uses a different sample provides evidence that observations were not randomly excluded, and hence, his coefficient estimates are likely biased and thus not a reliable basis for policy making.

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<sup>31</sup> *Id.*, footnote 27.

<sup>32</sup> Baker Supp. Reply Decl., ¶ 16.

**B. MISSING RIVALS DATA**

36. To estimate the number of competitive providers connected to or nearby to a building, Prof. Baker relied solely on data available in the SADC. We showed that there are two problems with this approach. First, a large number (about 140 thousand) of the locations in II.A.4 and II.B.3 of the SADC are not associated with a building (including 25 thousand competitive provider locations) and thus could not be counted in Prof. Baker’s analysis as a building connection. Second, Prof. Baker did not account for the large number of cable connections that could be identified only by supplementing the SADC with data from the National Broadband Map dataset. This means that the regression systematically understates the actual number of competitors at or near any given location.

37. Prof. Baker asserts that we erred when we stated that he failed to include cable companies in his sample.<sup>33</sup> We disagree. Although connections provided by cable companies did appear in his samples, he ignored certain special access connections provisioned by cable companies. In particular, Table II.A.5 of the SADC requested the route maps of the middle-mile fiber facilities of cable companies, and Prof. Baker included the corresponding census blocks to his measure of potential competition. We also included those records as part of both definitions of competition offered in our White Paper.

38. Prof. Baker’s regression analysis, however, fails to count the substantial number of buildings with cable fiber connections and/or with cable fiber nearby. A simple comparison of the SADC data used by Prof. Baker and the National Broadband Map (“NBM”) data confirms this fact. We began by identifying the census blocks in the SADC that indicated a location served by a competitive provider according to the responses to Questions II.A.4 and II.A.5.<sup>34</sup> We then identified over 12,000 additional census blocks with special access service but not in that sample which had a last-mile fiber connection as reported in the National Broadband Map. Some of these are owned by cable companies. It is our understanding that Prof. Baker does not dispute that all fiber-based facilities should be included.

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<sup>33</sup> Baker Supp. Reply Decl., ¶ 17.

<sup>34</sup> To roughly approximate the sample used by Prof. Baker, we included both MSA and non-MSA markets. We dropped all records of competitor or ILEC circuits provisioned using a UNE or UCL.

39. Prof. Baker also ignores cable facilities that are fully capable of providing special access services. Cable companies’ hybrid fiber-coaxial (“HFC”) networks represent a substantial competitive threat in the market for special access services. As we described in our earlier declaration,<sup>35</sup> cable companies have leveraged their HFC networks built to deliver residential video services as an entrée into business services.<sup>36</sup> Prof. Baker does not include the last-mile end-user connections of those networks because they often are used to provide best-efforts internet access, and Prof. Baker has concluded that such service is not a substitute for special access. We disagree.

40. We identified over 80,000 additional census blocks that had DOCSIS 3.0 service above and beyond the competitor locations in the SADC. These connections are almost surely provided by cable operators over their HFC networks. To put this in perspective, we found about 600,000 MSA and non-MSA census blocks in the SADC with a special access connection provided by the ILEC and/or a competitive provider. Consequently, Prof. Baker’s regression sample potentially excludes nearby competition in about 15 percent of all census blocks with special access service.

41. Best efforts internet access competes in the special access marketplace. We demonstrated in our original white paper how special access providers, both ILECs and competitive providers, were losing business to best efforts broadband access.<sup>37</sup> In the process of excluding cable companies’ HFC networks, Prof. Baker also ignores connections over Ethernet with Service Level Agreements. These special access arrangements have experienced rapid growth in recent years.<sup>38</sup> These are not simple best-efforts services.

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<sup>35</sup> Israel-Rubinfeld-Woroch Decl., ¶ 54.

<sup>36</sup> “While TWC’s network was initially built to deliver video services to residential areas, TWC has since expanded its network to reach business customers beyond residential areas.” Time Warner Cable, Notice of Ex Parte Presentation, *Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, Mar. 3, 2016.

<sup>37</sup> Time Warner Cable notes that its best-efforts internet access service over DOCSIS on HFC experienced revenue growth of [Begin Highly Confidential] [Redacted] [End Highly Confidential] between 2014 and 2015, and that service represents [Begin Highly Confidential] [Redacted] [End Highly Confidential] the revenue of its dedicated internet access offering as of 2015. *Id.* at p.2.

<sup>38</sup> “At the end of 2015, in response to customer demands, TWC introduced SLAs for its Ethernet-over-DOCSIS service, and has since seen [Begin Highly Confidential] [Redacted]

[Redacted] [End Highly Confidential].” *Id.* at p.3.

**VIII. DIRECTION OF COEFFICIENT BIASES**

42. In his Supplemental Reply Declaration, Prof. Baker reminds us that he listed six sources of bias in the estimation of these coefficients, and he observes that they tend to bias the estimated coefficients toward zero. He concludes that the estimated coefficients represent an “upper bound” on the size of the coefficients in which case even if they are positive the true coefficient could be negative. Prof. Baker also notes that we did not question any of the six sources of bias described in his original Declaration.<sup>39</sup> It is true that we do not deny that these sources of bias are possible; it is just that his list is also highly incomplete. There are many other factors that would generate bias in the opposite direction. Hence, the overall bias could easily go either way (and might vary from coefficient to coefficient).

43. As such, Prof. Baker’s claim that fixing all sources of bias would necessarily cause the regression to show a greater inverse relationship is unsupported as a matter of economics or econometrics. What we know is that the results are biased and thus unreliable for reasons listed by Prof. Baker, reasons listed by us, and surely others. The direction of the bias could go either way—with the bias corrected, the coefficients could easily become more positive. Ultimately, given their bias, no reliable inferences can be drawn from Prof. Baker’s results.

44. The remainder of this section includes, among other things, examples of bias built in to Prof. Baker’s regression that, if accounted for, would make the estimated coefficients less negative and indeed could be entirely consistent with the true coefficients being zero.

**A. ENDOGENEITY OF ENTRY**

45. In our earlier declaration, we pointed out that the number of competitors is likely correlated with determinants of ILEC pricing that are excluded from Prof. Baker’s regressions such as cost of serving locations.<sup>40</sup> As a consequence, the estimated regression coefficients are biased in the direction of finding a negative relationship.

46. Prof. Baker suggests that his primary specification was equipped to deal with entry that was correlated with costs differences. For example, he noted that the fixed effects for census

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<sup>39</sup> Baker Supp. Reply Decl., ¶ 18.

<sup>40</sup> Israel-Rubinfeld-Woroch Decl., ¶ 34.

tracts included in the regressions could control for cost variation across census tracts. However, such fixed effects would also control for demand variation across census tracts. As a result, the inclusion of census tract fixed effects does not imply that any remaining unobserved heterogeneity conforms to Prof. Baker’s demand side explanation rather than our cost-based alternative. Instead, the use of census tract fixed effects simply means that all results are based on within census tract variation rather than variation across different census tracts. The relevant question then becomes how uncontrolled-for within census tract heterogeneity affects his results. Cost and demand are both likely to vary at the building level and the census tract fixed effects do not address this source of bias.

47. We acknowledge that Prof. Baker’s bandwidth variable could control for demand variation. However, Prof. Baker provides no reason as to why, after controlling for bandwidth, more firms will not enter where costs are lower. We expect the contrary, since these are more attractive buildings to serve. This will mean that there is a link between more competitors and lower cost/price that is not driven by competition, but rather by the fact that lower costs lead to both more competitors and lower prices.

## **B. INSTRUMENTAL VARIABLES ESTIMATION**

48. It is important to note that Prof. Baker did not attempt to correct any of the potential sources of bias in his regression coefficients. In our earlier declaration, we pointed out that a typical technique to correct for biases of the sort that Prof. Baker identified is to utilize instrumental variables estimation. Prof. Baker dismisses our suggestion as “academic” because we did not implement the technique. Yet, it remains the case that if an econometric methodology yields biased results, then to obtain reliable estimates, one must implement a method that addresses the bias. Dr. Baker has not done so. Notably, we *could not* do so because we did not have the variables that Prof. Baker used in his regression; we were unable to recreate the price variable given the description in his original declaration.

49. Prof. Baker does describe the usefulness of an instrument for his first source of bias, customer heterogeneity.<sup>41</sup> Although he does not propose a specific instrument that could be measured with available data, candidate instruments are not difficult to imagine (indeed, the FCC

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<sup>41</sup> Baker Decl., footnote 62.

provided a crosswalk which allows researchers to identify whether a customer was a provider or not, a cellular company, or a cable operator). A complete analysis would address the other sources of bias that we identified in our earlier declaration using instrumental variable estimation. Of course, without actually estimating such a model, it is not possible to predict with certainty the impact instrumental variable estimation would have on the signs and significance of the coefficients on counts of competitive providers. But that is a reason *not* to credit Dr. Baker’s analysis. The correct fix is well known in econometrics and he has not implemented it. In the end, Prof. Baker cannot rule out the real possibility that the uncorrected results are not informative as to the true relationship between the number of competitors and price.

**IX. BIDDING FOR SPECIAL ACCESS SERVICES**

50. Prof. Baker challenges our observation that procurement of special access circuits often takes place through a bidding (or similar) process. He acknowledges that sometimes suppliers bid to supply circuits and purchasers solicit bids from special access providers.<sup>42</sup> However, he rejects the implication that some have drawn about bidding markets that as few as two bidders are sufficient for competitive outcomes. We did not conclude that two competitors ensure competitive outcomes based solely on the fact that special access markets are well characterized as bidding markets. Rather, we stressed that the characteristics of a bidding market simply demonstrate that historical shares are not particularly informative for special access services. What matters is each firm’s ability to meet the needs of the current customer in each bidding opportunity.

51. In particular, as we explained in our earlier declaration, and as described in the Horizontal Merger Guidelines, it is important to count suppliers that are able to serve a geographic market even when they do not currently sell into that market.<sup>43</sup> The Guidelines stress that it is a mistake to ignore suppliers because they do not currently provide service in the geographic market. We broaden the scope to include nearby providers just as Prof. Baker does. We conclude those providers are more than potential competitors. They are actual competitors because of their commitment to the market in the form of investment in sunk facilities.

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<sup>42</sup> Reply Declaration of Jonathan B. Baker on Market Power in the Provision of Dedicated (Special Access) Services (Feb. 19, 2016) (attached to Letter from Jonathan B. Baker to Marlene H. Dortch, Secretary, FCC, *Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, RM-10593 (Feb. 19, 2016), at ¶ 12.

<sup>43</sup> Israel-Rubinfeld-Woroch Decl., ¶ 51.

**IX. CONCLUSION**

52. For the reasons laid out in our reply report and here, we conclude that Prof. Baker's regression analyses fails to provide useful information about the competitiveness of the special access marketplace. In the end, the regression analysis conducted by Prof. Baker does not confirm (or deny) the presence of an inverse relationship between ILEC prices and the number of competitive providers. His results cannot be relied upon to justify changes in the Commission's regulatory treatment of special access services.

**VERIFICATION**

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

/s/ Mark A. Israel

Mark A. Israel

Dated: March 24, 2016

**VERIFICATION**

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

/s/ Daniel Rubinfeld

Daniel Rubinfeld

Dated: March 24, 2016

**VERIFICATION**

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

/s/ Glenn Woroch

Glenn Woroch

Dated: March 24, 2016