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

In the Matter of Investigation of Certain Price Cap Local Exchange Carrier Business Data Services Tariff Pricing Plans	WC Docket No. 15-247

JOINT COMMENTS OF LIGHTOWER FIBER NETWORKS AND LUMOS NETWORKS

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I. Introduction and Summary

This proceeding moves the Commission closer to much needed reform of the market for special access services — particularly dedicated connections to customer premises[1] —which represent crucial links for small, medium and large businesses to function in today's hyper-connected economy. This market remains plagued by anticompetitive practices on the part of the price cap ILECs that impede competition and innovation. The time has come for Commission action to curb these practices.

Despite the Congressional mandate to tear down ILEC monopolies and unleash forces of competition, the ILECs' market power over dedicated services persists, while because of several interrelated practices that the Commission has failed to address, competition has emerged slowly and only at the fringes of the market:

- ILECs' tariffed month-to month rates are grossly inflated and commercially prohibitive,[2] allowing ILECs to offer significant "discounts" that come attached with onerous lock up terms requiring customers to commit to purchasing "high levels of [its] previous or existing … purchases from the [I]LEC — from 80-95 percent."[3] These commitments "lock in the vast majority of the demand for special access service for the [I]LECs."[4]

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[1] Commenters recognize that special access includes both connections to customers and interoffice transport. The focus of these Comments is on connections to customers. The ILECs have greater control over these connections, and thus the problems created by their abuse of this market power generate greater competitive concerns.

[2] Sprint has explained that "[a]lthough described as discounts … volume-based pricing practices are more accurately described as penalties that punish customers that do not buy the vast majority of their services from the [ILEC]." Comments of Sprint Nextel Corp., GN Docket Nos. 09-47, 09-51, 09-137, at 30 (filed Nov. 4, 2009).

[3] *Order Initiating Investigation and Designating Issues for Investigation, Investigation of Certain Price Cap Local Exchange Carrier Business Data Services Tariff Pricing Plans*, 30 FCC Rcd 11417, 11431-32 ¶ 30 (Wireline Comp. Bur. rel. Oct. 16, 2015) ("*Order*").

[4] *Order* at 11432 ¶ 31. *See also* Peter Bluhm and Dr. Robert Loube, Competitive Issues in Special Access Markets, Nat'l Regulatory Research Inst., at 20 (Jan. 21, 2009) ("NRRI

- The ILECs also use unreasonable and excessive shortfall fees to coerce customers into subscribing to successor arrangements with lock up provisions.[5] Such shortfall fees "significantly constrain" the ability of CLECs to transition purchases from ILECs to competitors and to transition from TDM to Ethernet services.[6]

- The ILECs exploit CLECs' need for portability to coerce CLECs into entering lock up provisions. Circuit portability is crucial to CLECs because it provides "flexibility to disconnect circuits and replace them with others to meet their commitments and thereby not incur early termination penalties." This is crucial because customer contracts "whose terms of service rarely coincide with the [C]LECs' underlying pricing plan term commitments with [I]LECs.[7]

- The ILECs impose terms that punish customers for exceeding their initial volume commitments.[8] Under these terms, where a CLEC's "purchases increase more than a set percentage above their initial volume commitment during the term of the plan, they are required either to commit to an increased purchase volume or to pay an overage penalty."[9]

Together these practices "lock up substantial proportions of carrier and end-user demand, which locks out competition for such demand and consequently harms both competition and innovation."[10] These lock up provisions are further impeding the transition to competitive IP networks and are working to provide the ILECs the means to leverage their long-held market power with respect to dedicated TDM services to suppress competition for dedicated Ethernet services as well.[11] The *Order* appropriately designated these issues for investigation so that the Commission may comprehensively analyze the market and reign in the ILECs' anticompetitive

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Report") (over 90% of Verizon's special access revenue is received under discount pricing plans).

[5] *Order* at 11453 ¶ 73.

[6] *Id.* ¶ 74.

[7] *Id.* at 11433 ¶ 34.

[8] *Id.* at 11457 ¶ 79.

[9] *Id*.

[10] *Id.* at 11420 ¶ 6.

[11] *Id*. at 11422 ¶ 10.

practices.

The ILECs dispute the analysis that their tariff provisions lock up demand for dedicated services. They further argue that the market for TDM special access services is irrelevant, as demand is shifting rapidly to Ethernet services.[12] They claim that the Ethernet market is competitive and that CLECs and ILECs compete on a level playing field.[13] They thus dismiss the aspect of the Commission's tariff investigation that addresses the linkage between the ILEC dominance over TDM dedicated services[14] and their dominance in providing Ethernet. In fact, it is disingenuous to analyze Ethernet special access and TDM special access separately.

As the Commission has long established, the most significant barrier to entry in providing dedicated services does not flow from the capacity level of the circuit or the technology employed at the ends of the transmission facility. The Commission has instead explained that "loop construction … involves substantial fixed and sunk costs. The primary costs associated with fiber deployment lie in the substantial sunk costs associated with physically laying the fiber cable."[15] The same transmission facilities that carry TDM services can carry Ethernet services.[16]

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[12] Verizon Direct Case, at 38 (filed Jan. 8, 2016); AT&T Brief in Support of Direct Case at 11 (filed Jan. 8, 2016) ("AT&T Brief"); CenturyLink White Paper on Discount Plan Terms and Conditions at 7 (filed Jan. 8, 2016) ("CenturyLink White Paper").

[13] *See* AT&T Brief at 12.

[14] *Order* at 11468 ¶ 105.

[15] *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, 18 FCC Rcd 16978, 17165 ¶ 312 (2003); *see also*, Comments of INCOMPAS, WC Docket No. 05-25 at 11 (filed Jan. 27, 2016) ("INCOMPAS Comments") ("The fundamental barrier to competitive access to certain business customer's buildings—network infrastructure costs that far exceed revenues—is present regardless of whether the electronics used on the network facilities are transmitting traffic in IP or TDM").

[16] *See* Comments of Ad Hoc Telecommunications Users Committee, WC Docket No. 05-25, RM-10593 at 15 (filed Jan. 28, 2016).

This is especially true for fiber services, where a strand of fiber cable connecting a customer location can have some strands connected to TDM SONET equipment while other strands are connected to Ethernet transmission gear.

As long as the ILECs control the transmission facilities to the vast majority of customer locations, they will continue to be able to exercise market power through unreasonable and anticompetitive rates, terms and conditions. The facts demonstrate such continued control as "preliminary results from the Commission's data collection show that incumbent LECs remain the sole facilities-based provider of TDM-based special access services to a majority of business locations that demand or are likely to demand business data services nationwide."[17]

The ILECs' claim that the growth in use of Ethernet for special access has obviated any need to regulate their dominance in providing special access[18] cannot be squared with fact or economic theory. To begin, the ILECs vastly understate the linkage between Ethernet and TDM special access. In one form or another, each of the four ILECs subject to the Commission's tariff investigation uses its dominance in providing TDM services, a dominant position sustained by decades of anticompetitive lock up provisions in their tariffs, to leverage a dominant position in providing Ethernet special access services.

Because the market is evolving towards Ethernet services, and the same underlying transmission facilities are used for TDM special access and Ethernet special access,[19] the Commission must address the ILECs' ability to leverage their market power in TDM services to Ethernet services. Thus, the Commission's investigation must explore how the ILECs use their

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[17] *Order* at 11419 ¶ 4.

[18] *See* AT&T Brief at 11-13.

[19] Ad Hoc Comments at 15-16.

lock up contracts for TDM services to lock up demand for Ethernet and how the ILECs employ similar lock up provisions in their agreements for Ethernet service.

The ILEC direct cases make several claims attempting to avoid scrutiny of the linkage between TDM and Ethernet special access services. First, they disingenuously claim they do not link TDM lock up provisions with terms for providing Ethernet. The evidence, including their own statements, belie these claims.

The ILECs claim that the Ethernet market is competitive and that CLECs are leading providers.[20] The data from the Commission's data collection suggests otherwise. Further, the ILECs fail to differentiate between Type I and Type II services. The CLECs cited as market leaders in Ethernet special access rely heavily on Type II connections obtained from the ILECs.[21] This reliance is due in no small part to the fact that the ILECs alone, as the result of their legacy as monopoly providers, have facilities deployed to almost all customer locations within their ILEC territories.[22] Even the most well capitalized CLECs cannot construct their own facilities to meet all customer demand and thus must rely on ILECs to connect to a large percentage of customer locations.

The ILECs further claim that CLECs are equally capable of deploying new fiber facilities to serve customers and that ILECs have no built in advantage when it comes to deploying new

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[20] *Supra* n. 12.

[21] *See* Comments of XO Communications, LLC, WC Docket No. 05-25, RM-10593 (filed Jan 27, 2016) at Declaration of James A. Anderson ¶¶ 2, 6, 14, 16, 19; ("XO Anderson Decl."); Comments of Birch Communications, Inc., et al, WC Docket No. 05-25, RM-10593 ("Birch et al Comments") at Appendix A, Declaration of Chris McReynolds on behalf of Level 3 Communications, LLC ¶ 4 (filed Jan. 27, 2016) ("McReynolds Decl."); Birch et al Comments at Appendix B, Declaration of Gary Black, Jr. ¶ 4 ("Black Buy-Side Decl."); and at Appendix C, Declaration of Gary Black, Jr. ¶ 3 ("Black Lock-Up Decl.").

[22] Black Buy-Side Decl. ¶¶ 4-6.

fiber networks. Again, this is incorrect. First, the ILECs have the ability to spread the cost of new investment over a much bigger and broader base of customers. The ILECs "benefit from their far larger customer base of both retail and wholesale customers, which means—even if their deployment project costs are exactly the same as a competitor's (and they are not)—the incumbent still would have a far lower cost per customer location hurdle to clear than any competitor seeking to enter the market."[23] Second, the ILECs have significant advantages in terms of access to and control of infrastructure and access to buildings where ILECs frequently need not undergo the building access process that competitors must undertake.

Taken together, the ILEC control over last mile transmission facilities at the vast majority of U.S. customer locations, together with their onerous lock up provisions, impede competition in the market for dedicated services, regardless of whether the services are provisioned as TDM circuits or Ethernet. The Commission must declare the ILEC lock up provisions unjust, unreasonable, and unlawful under Sections 201 and 202 of the Communications Act.[24]

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[23] INCOMPAS Comments at 12, *citing* Letter from Jennie B. Chandra, Windstream, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 13-5 & 12-353, RM-10593, WC Docket Nos. 05-25 & 15-1 (filed June 8, 2015) ("Windstream June 8 Ex Parte"), Attachment A at 13-15 ("CostQuest White Paper #1").

[24] In its White Paper, CenturyLink argues that the Commission's application of its authority in Sections 201 and 202 is limited to policing conduct that would also violate antitrust law, *citing Verizon Commc'ns, Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004) and *Pac. Bell Tel. Co. v. linkLine Commc'ns, Inc.*, 555 U.S. 438, 449-50 (2009) in support. There is simply no merit to this erroneous interpretation of the Commission's authority. It is well settled that "the standard under which the FCC acts in administering the Act is not the standard … upon which the Sherman Act is premised *but a standard broader than that*, namely, the standard of protecting the public interest." *Phonetele, Inc. v. AT&T*, 664 F.2d 716, 746 (9th Cir. 1981) (emphasis added). While "antitrust considerations may be relevant to the F.C.C.'s determination of the legality of a tariff …they are not determinative." *Id*. Courts have thus recognized that the Communications Act "contains duties and obligations of affirmative assistance that 'go well beyond anything the antitrust laws would mandate on their own.'" *Covad Commc'ns Co. v. Bell Atl. Corp.*, 201 F. Supp. 2d 123, 130 (D.D.C. 2002) *aff'd in part, rev'd in*

A. Background Regarding Commenters

Each of the commenters competes with the ILECs to provide dedicated transmission services, especially Ethernet services, to business customers in various geographic markets.

Lightower is a leading, all-fiber provider of custom, high-capacity network services that ensure optimal application and business performance. Serving enterprise, government, carrier and data center customers, Lightower's comprehensive suite of fiber-based solutions is delivered across a robust, dense and highly-reliable network. The company offers over 20,000 route miles of network, which provides access to over 8,500 service locations throughout the Northeast, Mid-Atlantic and Chicago Metro areas with connectivity to critical international landing sites.

Lumos Networks is a leading fiber-based service provider in the Mid-Atlantic region, serving carrier, enterprise and data center customers, offering end-to-end connectivity in 24 markets in Virginia, Pennsylvania, West Virginia, Maryland, Ohio and Kentucky. With a fiber network of 8,408 fiber route miles and approximately 379,000 total fiber strand miles, Lumos Networks connects 1,030 unique Fiber to the Cell sites, 1,363 total fiber to the curb connections, 33 data centers, including 7 company owned co-location facilities, 1,642 on-net buildings and approximately 2,700 total on-net locations.

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part and remanded, 398 F.3d 666 (D.C. Cir. 2005) *citing Goldwasser v. Ameritech Corporation*, 222 F.3d 390, 400 (7th Cir. 2000).

And even if CenturyLink were correct (which it most certainly is not) the cases it cited hardly stand for the proposition CenturyLink claims. Competitors here are not asking for enforcement of the antitrust laws as did the plaintiffs in *Linkline* and *Trinko*. Rather competitors are asking the Commission to use its broad statutory authority to determine what rates, terms and conditions are just and reasonable so that competition can flourish and provide the public with the benefits of a competitive market.

II. ILECs Leverage Their TDM Special Access Lock Up Provisions to Lock Up Demand for Ethernet Services

The Order designated for investigation whether certain ILEC agreements for Ethernet services contain "provisions that directly or indirectly affect charges for" TDM special access services.[25] Evidence in the special access rulemaking docket persuasively demonstrates how the ILECs use their dominance in the TDM market to their advantage in the Ethernet market. Level 3 explains how the ILECs "use new volume commitments in overlay agreements to lock up the market for Ethernet."[26] They do so by "granting competitors some relief from shortfall penalties under volume commitments for DS1 and DS3 dedicated services in exchange for large volume commitments that include Ethernet…services."[27] In order to investigate this practice, the Commission sought from the ILECs Ethernet service agreements that "effectively impact, directly or indirectly, the rates paid for tariffed special access services."[28]

Verizon admits that its "plans include technology-transition provisions, which allow a customer to convert an existing DS1 or DS3 circuit to Ethernet and count that Ethernet towards satisfying its commitment level."[29] Verizon also allows for portability between circuits procured under its TDM special access pricing plans and Ethernet services provided under non-tariffed agreements.[30] Verizon states also that if the customer migrates TDM services "to Verizon's Ethernet service," Verizon "adds back the DS1 and DS3…quantities that the customer upgrades

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[25] *Order* at 11468 ¶ 102.

[26] Black Lock-Up Decl. ¶ 31.

[27] *Id*.

[28] *Order* at 11468 ¶ 105.

[29] Verizon Direct Case at 96.

[30] *Id*.

to Ethernet …to determine if a customer has met its commitment levels."[31] In other words, a customer receives the benefits of its Ethernet purchases when Verizon determines whether penalties (and thus increased pricing) apply to TDM services.[32]

These provisions afford Verizon a significant advantage over commenters and other competitive fiber and Ethernet providers. Because of the volume commitments and shortfall penalties in their TDM agreements, Verizon's existing TDM customers that wish to upgrade to Ethernet without incurring penalties often have little alternative but to move their TDM circuits to Verizon Ethernet instead of a competitor's Ethernet. This impedes deployment of competitive fiber networks and impedes self-deployment by Verizon's customers.

CenturyLink engages in similar practices. CenturyLink's TDM volume commitments afford CenturyLink the same advantages over its competitors to provide Ethernet service in CenturyLink territory that Verizon's do. CenturyLink states that it "established portability provisions that allow [Regional Commitment Program] and [Special Access Term Discount Plan] customers to migrate to Ethernet, while reducing their … commitments, respectively" to CenturyLink.[33] CenturyLink explains, for example, that one of its pricing plans contains a 95% percentage commitment — meaning the customer commits to spend 95% of the revenue it was spending with CenturyLink at the beginning of the term.[34] When a customer under this plan seeks to migrate those TDM circuits to Ethernet it may avoid termination liability "as long as the total value of the new service is equal to or greater than 115 percent of the remaining value" of

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[31] *Id*. at 93.

[32] *Id*.

[33] CenturyLink Response at 21.

[34] CenturyLink White Paper at 18.

the TDM pricing plan and the "customer agrees to a new pricing plan."[35] In other words, CenturyLink TDM tariff customers are not penalized for transitioning their existing circuits to CenturyLink-provided Ethernet, as long as their spend increases by 15%, but are penalized if they self-deploy or shift those TDM circuits to a competitor's Ethernet network.

Frontier's direct case ***BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL***.[36]

AT&T claims, however, that its "tariff pricing plans under investigation do not permit Ethernet services to be counted toward the commitment levels" and therefore has not provided the responsive quantitative information that Verizon and Frontier have.[37] However, AT&T's filing contradicts this claim since AT&T admits ***BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL***.[38] While using a semantic quibble to evade disclosing the volume of Ethernet service that AT&T captures through this device, AT&T concedes the fundamental point that it uses its lock-up contracts for TDM special access to coerce those customers that want to upgrade to Ethernet to select AT&T Ethernet, rather than Ethernet offered by a competitor.

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[35] *Id.*

[36] Frontier Direct Case at 7-9; 21 ***BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL*** Like Verizon, Frontier provides a highly confidential table *** BEGIN HIGHLY CONFIDENTIAL [redacted]. END HIGHLY CONFIDENTIAL***.

[37] *See* AT&T Narrative Response to Tables I-IX, at 4, 9-10, 12.

[38] AT&T Brief at 21 n.58 *citing* Reid Decl. ¶¶ 25-32.

In addition, AT&T audaciously claims that its plans are not anti-competitive because companies like Sprint are able to buy their way out of the contracts and move demand to other providers.[39] The fact that a customer such as Sprint has to buy its way out of the contract, incurring significant penalties,[40] shows that the contract provides a disincentive to purchase Ethernet from a competitor. Moreover, Sprint's comments in the rulemaking proceeding contradict AT&T's claims, noting that although it had enormous scale to attract competitive bids, "ultimately the majority of [Sprint's] backhaul circuits and expense remain with the [I]LEC."[41] And the evidence suggests that AT&T links TDM and Ethernet purchases through *****"BEGIN HIGHLY CONFIDENTIAL** [redacted]."[42] [redacted] **END HIGHLY CONFIDENTIAL*****."[43]

And as might be expected, once the CLEC enters into the contract to purchase ILEC Ethernet circuits, it faces two problems. First, the ILEC Ethernet pricing at wholesale to CLECs is far above the price at which AT&T sells to retail end users, thus placing CLECs in a classic

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[39] AT&T Brief at 22-23.

[40] *See* Comments of Sprint Nextel Corp., WC Docket No. 05-25, at 55 (filed Jan. 27, 2016) ("Sprint Comments"); (explaining Sprint faced "enormous costs" to migrate even a small amount of backhaul to competitors "because of the penalties imposed under [ILEC] loyalty mandates").

[41] *Id.*

[42] *Id*. at 57.

[43] *Id*.

price squeeze.[44] Second, the ILECs' Ethernet contracts "impose the same types of anticompetitive terms and conditions in Ethernet special access contracts that for years have been included in TDM agreements."[45]

III. The ILECs Have The Ability To Impose Unreasonable Lock Up Provisions on Ethernet Services Because They Have Market Power In The Sale Of Broadband Transmission Services Including Both TDM And Ethernet Services

The ILECs seek to escape review of the their practice of leveraging control over TDM special services to exercise control over Ethernet services by making numerous claims that fail when tested against fact. The ILECs incorrectly claim they have no market power for Ethernet because it is a national market. They then claim that CLECs, not ILECs, are the leaders in this market, while ignoring CLEC reliance on ILEC transmission facilities. The ILECs also claim that CLECs can compete as equals in providing Ethernet because there are no incumbents.[46] The ILECs are wrong on each count.

The ILECs for years have peddled the fiction that the Commission should analyze the market for Ethernet services in isolation from the TDM special access service market, effectively treating them as separate product markets. Any "assessment of the ILEC's market power" for dedicated services, however, must recognize that Ethernet is one offering in a "single product market for broadband access services."[47] The underlying transport facilities for Ethernet…are the

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[44] XO Anderson Decl. ¶ 19; McReynolds Decl. ¶ 10. Comments of TDS Metrocom, LLC, WC Docket No. 05-25, RM-10593, at Second Declaration of Matthew Loch, ¶ 19 (filed Jan. 27, 2016).

[45] Sprint Comments at 59.

[46] AT&T Brief at 12.

[47] Ad Hoc Comments at 15.

same …facilities for TDM services."[48] It is these transmission facilities, and not the services which ride over them, that "are the source of the ILECs' market power in the special access marketplace."[49]

The ILECs have invested heavily in peddling this illusion, claiming that for Ethernet, "there are no incumbents.[50] Data collected regarding special access uniformly refutes this view of the dedicated services market, as the ILECs maintain control over the vast majority of dedicated connections to business customers nationwide.

A. The Special Access Market is Local — Not National — For Both TDM and Ethernet services

The ILECs frequently refer to Ethernet special access as a national market. This, however, flies in the face of long-standing FCC precedent analyzing special access services.[51] The FCC should define the relevant geographic market as "service to each customer location served by a dedicated service."[52] This conclusion rests on the fact that "it is difficult to imagine" a retail or wholesale customer "responding to a small increase in the price of dedicated services

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[48] *Id.*

[49] *Id.*

[50] Comments of AT&T Inc., WC Docket No. 05-25, RM-10593 at 6 (filed Apr. 16, 2013).

[51] *Verizon Communications Inc. and MCI, Inc. Applications for Approval of Transfer of Control*, Memorandum Opinion and Order, 20 FCC Rcd 18433, 18449, ¶ 28 (2005) ("Consistent with Commission precedent and the record before us, we conclude that the relevant geographic market for wholesale special access services is a particular customer's location, since it would be prohibitively expensive for an enterprise customer to move its office location in order to avoid a 'small but significant and nontransitory' increase in the price of special access service").

[52] Birch et al Comments, at 19 citing Letter from Jonathan Baker, attaching Declaration submitted on behalf of Level 3 Communications, LLC, Windstream Services, LLC and XO Communications, LLC, at ¶ 35 (filed Jan. 27, 2016) ("Baker Decl").

at one location by moving their business to another location where prices are lower."[53]

The FCC has traditionally evaluated competition for dedicated services such as TDM special access and Ethernet special access by defining the "relevant geographic market … 'as the region where a hypothetical monopolist that is the only producer of the relevant product in the region would profitably impose at least a 'small but significant and nontransitory' increase in the price of the relevant product, assuming that the prices of all products provided elsewhere do not change.'"[54]

Thus, customers for special access look only to suppliers offering special access in their location. Because each ILEC has a zero (or close to zero) market share out of its ILEC region, comparing market shares on a national basis grossly understates the share that the ILEC has within its own region. The Commission should not be misled by this subterfuge.

B. The ILECs Fail To Distinguish Competition For Type I and Type II Connections

Because the ILECs continue to control the last mile transmission facilities to the vast majority of customer locations in the country, it is impossible to credit the ILEC claims that CLECs have the advantage in the Ethernet market.[55] Underlying the misleading nature of this ILEC claim is the failure to distinguish between Type I and Type II services. The Commission

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[53] *Id*.

[54] *Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona Metropolitan Statistical Area*, 25 FCC Rcd 8622, 8646 ¶ 42 n. 142 (2010) ("*Qwest Phoenix Forbearance Order*") *aff'd Qwest Corp. v. FCC*, 689 F.3d 1214 (10th Cir. 2012).

[55] *Supra* n. 12.

regularly treats Type I and Type II services as separate product markets.[56]

The ILECs cite data compiled by Vertical Systems, claiming that its "leaderboard" shows ILEC non-dominance in the provision of Ethernet. But this is misleading. First, each RBOC is listed on Vertical Systems 2015 "Mid-Year 2015 U.S. Carrier Ethernet LEADERBOARD."[57] AT&T is first, Verizon third and CenturyLink is forth. This alone lays waste to the argument that the Ethernet market has no incumbents. The Vertical Systems data is, however, less meaningful because the Vertical Systems methodology only considers "billable retail U.S. Ethernet port installations (i.e., not wholesale)."[58] In other words, Vertical Systems rankings make no distinction between retail services obtained using Type I or Type II circuits.

This is significant because at least the two leading competitive providers on the Vertical Systems Leaderboard rely extensively on Type II facilities to meet demand for retail Ethernet. Level 3 explains that many "customer locations do not exhibit a level of demand that is sufficient for Level 3 to economically deploy its own fiber-optic last-mile facilities…[and] in order to serve these locations, Level 3 must purchase wholesale dedicated services from another provider."[59] And XO, listed as seventh on the leaderboard cited by the ILECs, states that "the vast majority of XO's sales to wholesale and retail customers rely on Type II facilities purchased from ILECs."[60] With respect to its retail Ethernet services, XO states that "approximately

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[56] *See e.g. SBC Communications Inc. and AT&T Corp. Applications for Approval of Transfer of Control*, Memorandum Opinion and Order, 20 FCC Rcd 18920, 18305-306, ¶ 26 (2005).

[57] Vertical Systems Group 2015 "Mid-Year 2015 U.S. Carrier Ethernet LEADERBOARD (Aug. 24, 2015), attached as Exhibit A.

[58] Vertical Systems Group LEADERBOARD Methodology, attached as Exhibit B.

[59] Black Buy-Side Decl. ¶ 4.

[60] XO Anderson Decl. ¶ 14.

*****BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL***** … come directly from price cap ILEC sources."[61]

The FCC cannot credit ILEC claims regarding competition from CLECs where the CLECs rely on dedicated services purchased as inputs from the ILECs. The presence of such competition is insufficient to justify forbearing from economic regulation to prevent ILEC anticompetitive practices.

C. ILECs Ignore Significant Advantages They Have In Transition From TDM To Ethernet Special Access

While "incumbents may roll out fiber wires or new electronics, the incumbents' deployment plans for these 'new' builds largely leverage existing infrastructure (e.g., conduit, rights-of-way access, building entries), much of which was deployed under monopoly conditions."[62] Because the costs associated with deploying wireline facilities "vary little with respect to the number of fiber strands or copper wires," the incumbents can serve new in-region customers using their existing "support structures" for little, if any, additional expense (e.g., by deploying new fiber facilities through existing conduit).[63]

The ILECs already have rights of way, conduits and aerial attachments that can be re-purposed, providing advantages in cost and speed of deployment. When the ILECs "provide Ethernet service they can make use of the same rights-of-way, trenches, conduit, wires, poles, building access, riser, truck rolls, employees, outside plant, central office equipment,

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[61] XO Anderson Decl. ¶ 19.

[62] INCOMPAS Comments at 11.

[63] *Special Access Rates for Price Cap Local Exchange Carriers; AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, Order and Notice of Proposed Rulemaking, 20 FCC Rcd 1994, 2004-2005 ¶ 26 (2005) ("*Special Access NPRM*").

administrative expenses, and other legacy inputs that they use when they provision TDM-based special access services."[64]

They also have significant cost advantages in building access, particularly in carrier hotels, because of their size and past occupancy. In the experience of the TDS ILECs, an ILEC frequently does not have to pay for space and power in a building.[65] The Declaration of AT&T attorney Andrew Edelstein asserts that it is industry custom and practice for ILECs not to pay for their use of space and power in a carrier hotel to provide services in the building.[66] In contrast, when TDS CLEC seeks to access a building, it typically must pay for space and power. Another CLEC, Windstream, has estimated that cost at $678 per month per building.[67] Commenters have similar building access issues, frequently encountering commercial landlords that attempt to block competitive entry into the building or charge fees to competitors that are not charged to ILECs.

ILECs benefit from other first-mover advantages as well, including "access to rights-of-way, the higher risk of new entrants' failure (often exacerbated by high sunk costs), the fact that the incumbent LEC has substantial sunk capacity, operational difficulties faced by an entrant that have already been worked out by the incumbent LEC when it built out its network as a

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[64] Ad Hoc Comments at 16.

[65] *See* Letter from Matthew Jones, Counsel for TDS Telecommunications Corporation, to Marlene Dortch, FCC, at Attachment, Declaration of James Butman, ¶ 12 (filed March 26, 2015) ("TDS Butman Declaration").

[66] *Garland Connect, LLC v Pacific Bell*, California Superior Court Case No. BC513029, Defendant AT&T California's Designation of Expert Witness; Declaration of Andrew Z. Edelstein Declaration, ¶¶ 4, 8 (filed Jan. 14, 2015); available at http://apps.fcc.gov/ecfs/comment/view?id=60001014101.

[67] *See* Letter from John Nakahata, Counsel for Windstream, to Marlene Dortch, FCC Secretary, attaching Analysis Of Fiber Deployment Economics For Efficient Provision Of Competitive Service To Business Locations, at 7, 9 (filed June 8, 2015).

monopolist, consumers' reluctance to switch carriers, and advertising and brand name preference."[68]

These first-mover advantages are not theoretical. Commenters have significant experience in encountering obstacles to construction of fiber networks that the incumbents do not face. These impediments include municipal moratoria on issuing new franchise agreements to non-incumbents and state highway authorities refusing requests from competitors to deploy fiber in the right-of-way although incumbents have already deployed there.

Taken together, these factors inevitably show that ILECs remain dominant in the provision of dedicated transmission facilities to business customers and should be regulated as such regardless of the technology used to deliver service. Analysis of conditions in the special access marketplace have repeatedly found that ILECs control the vast majority of connections to customer locations.[69] According to comments filed in the special access rulemaking, data collected by the Commission confirms these findings.[70]

Sprint, for example, states that its expert economists found that the ILEC is the only

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[68] *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, 18 FCC Rcd 16978, 17039 ¶ 89 (2003) ("*TRO*").

[69] NRRI Report at 45-46 ("ILECs maintain strongly dominant market shares for DS-1 channel terminations," "dominant market shares for DS-1 transport," DS-3 channel terminations, and DS-3 transport"). *See also* United States Gov't Accountability Office, FCC Needs to Improve Its Ability to Monitor and Determine the Extent of Competition in Dedicated Access Services, GAO-07-80, at 19 (Nov. 2006), ("GAO Report") ("facilities-based competition for dedicated access services to end users at the building level (i.e., analogous to channel terminations to end users) does not appear to be extensive."); *United States v. Verizon Communications Inc. and MCI, Inc.*, Complaint, No. 1:05-cv-02103, ¶ 15 (D.D.C. Oct. 27, 2005) ("DOJ Complaint Against Verizon-MCI") ("[f]or the vast majority of commercial buildings in its territory, [Verizon] is the only carrier that owns a last-mile connection to the building").

[70] *See* Sprint Comments at 22; CLEC Economists Report, ¶¶ 44-45.

facilities-based provider of special access service at "***** BEGIN HIGHLY CONFIDENTIAL** [redacted] **END HIGHLY CONFIDENTIAL *****.[71] At "***** BEGIN HIGHLY CONFIDENTIAL** [redacted] **END HIGHLY CONFIDENTIAL ***** of the remaining locations there are only two suppliers—the [I]LEC and a competing carrier."[72] As a result, at virtually all customer locations in the country — *** **BEGIN HIGHLY CONFIDENTIAL** [redacted] **END HIGHLY CONFIDENTIAL***—** the customer faces either a monopoly or a duopoly.[73] Sprint's economists reached a similar conclusion when they examined competition at the census block level.[74] Competitive analysis from other CLEC economists show similar results.[75]

IV. Conclusion

The Commission must declare the ILEC lock up provisions unjust, unreasonable, and unlawful under Sections 201 and 202 of the Communications Act.

Respectfully submitted,

/*S/ ERIC J. BRANFMAN*

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TAMAR E. FINN
JOSHUA M. BOBECK

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[71] Sprint Comments at 22.

[72] Sprint Comments at 23.

[73] *Id. See also Qwest Phoenix Forbearance Order*, 25 FCC Rcd at 8635-38 ¶¶ 29, 31. As the Commission has recognized, a duopoly does not "always constitute[] effective competition" and is not "necessarily sufficient to ensure just, reasonable, and nondiscriminatory rates and practices, and to protect consumers" and noting that "two empirical studies found supracompetitive prices in the mobile wireless industry during its duopoly period."

[74] Sprint Comments at 23.

[75] Baker Decl. ¶¶ 44-45.

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February 5, 2016

Counsel for Lightower Fiber Networks and Lumos Networks

EXHIBIT A

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Mid-Year 2015 U.S. Carrier Ethernet LEADERBOARD

Port growth unprecedented in the first half of 2015; Mergers may shake up the market by the end of the year

BOSTON, MA, AUGUST 24, 2015 – Vertical Systems Group's U.S. Carrier Ethernet LEADERBOARD results for mid-2015 are as follows *(in rank order based on retail port share):* **AT&T, Level 3, Verizon, CenturyLink, Time Warner Cable, Comcast, XO** and **Cox**. Port shares were calculated using the base of enterprise installations of Ethernet services, plus input from surveys of Ethernet providers. The LEADERBOARD threshold is four percent (4%) or more of billable port installations.

VERTICAL SYSTEMS GROUP LEADERBOARD

MID-YEAR 2015 U.S. CARRIER ETHERNET SERVICES

RANK	ETHERNET PROVIDERS
1	AT&T
2	Level 3
3	Verizon
4	CenturyLink
5	Time Warner Cable
6	Comcast
7	XO
8	Cox

CHALLENGE TIER *(in alphabetical order)*
Bright House, Charter, Cogent, Lightpath, Windstream, Zayo

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"U.S. Ethernet port growth was unprecedented in the first half of 2015 and easily surpassed previous estimates. This market seems to be defying the law of large numbers, as there are few indications of the typical slowing growth patterns that we look for when services reach this size and maturity," said Rick Malone, principal at Vertical Systems Group. "Primary drivers for growth are massive migration from TDM to Ethernet services, robust demand for higher speed Ethernet private lines and rising requirements for connectivity to public and private Clouds."

Other providers selling Ethernet services in the U.S. are segmented into tiers as measured by port share. The **Challenge Tier** includes providers with between 1% and 4% share of the U.S. retail Ethernet market. The following six companies attained a position in the mid-2015 Challenge Tier *(in alphabetical order):* **Bright House, Charter, Cogent, Lightpath, Windstream** and **Zayo.**

Pending mergers could shake up the Ethernet marketplace by the end of 2015. In April 2015, Comcast ended its bid to acquire Time Warner Cable in the face of strong consumer opposition and regulatory hurdles. In May, Charter announced a merger that includes both Time Warner Cable and Bright House. Currently pending regulatory approval, this deal has the potential to change the U.S. Ethernet competitive landscape as significantly as Level 3's acquisition of tw telecom in 2014. Both Charter and Bright House are Challenge Tier companies. Time Warner Cable is ranked fifth on the Mid-2015 U.S. Carrier Ethernet LEADERBOARD.

The **Market Player** tier includes all providers with port share below 1%. Companies in the Market Player tier include the following providers *(in alphabetical order):* Alpheus Communications, American Telesis, Birch Communications, BT Global Services, Cincinnati Bell, Consolidated Communications, Earthlink Business, Expedient, FairPoint, FiberLight, Fibertech (acquired by Lightower, August 2015), Frontier, Global Capacity, Global Cloud Xchange, GTT, Hawaiian Telecom, Integra, Lightower, LS Networks, Lumos Networks, Masergy, MegaPath, NTT America, Orange Business, RCN Business, Sprint, SuddenLink, Tata, TDS Telecom, TelePacific, Telstra, US Signal, WOW!Business and other companies selling retail Ethernet services in the U.S. market.

Detailed Ethernet share results for the U.S. market plus in-depth share analysis are available now exclusively through Vertical Systems Group's ENS (Emerging Networks Service) Research Programs.

LEADERBOARD Market Share Methodology

Vertical Systems Group's LEADERBOARDs are the industry's foremost benchmarks for measuring Ethernet Service Provider market presence based on billable retail port installations. Share results are calculated at year-end and mid-year for the **U.S.** and **Global Provider** markets. Year-end results additionally include U.S. provider share analysis for three separate segments: **Incumbent Carrier**, **Competitive Provider**, and **Cable MSO**. For releases and more information on methodology, see LEADERBOARDs.

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Previous: 2014 Global Provider Ethernet LEADERBOARD **Next:** Mid-Year 2015 Global Provider Ethernet LEADERBOARD

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EXHIBIT B

LEADERBOARD Methodology

Vertical Systems Group's Carrier Ethernet LEADERBOARDs are the industry's foremost benchmarks for measuring Ethernet Service Provider market presence.

Share results are calculated at year-end and mid-year for the **Global Provider** and **U.S.** markets. Year-end results additionally include U.S. share analysis for three provider segments: **Incumbent Carrier**, **Competitive Provider**, and **Cable MSO**. Research sources for share calculations include Vertical Systems Group's base of enterprise installations, plus direct input and other data from our biannual surveys of Ethernet Service Providers throughout the world.

Global Provider Ethernet LEADERBOARDs

To qualify for a position on the **Global Provider LEADERBOARD**, a provider must have four percent (4%) or more of billable retail Ethernet port installations (i.e., not wholesale) at customer **sites outside of the provider's primary home country**. To qualify for the second, or **Challenge Tier**, a provider must have at least 2% or more of the total number of ports. The third, or **Market Player** tier, includes all other providers selling retail Ethernet services in multiple country markets. Global Provider share results are calculated biannually, based on year-end and mid-year installations.

U.S. Carrier Ethernet LEADERBOARDs

To qualify for a position on the **U.S. Carrier Ethernet LEADERBOARD**, a provider must have four percent (4%) or more of billable retail U.S. Ethernet port installations (i.e., not wholesale). To qualify for the second, or **Challenge Tier**, a provider must have at least one percent (1%) of U.S. ports. The third, or **Market Player** tier, includes all other providers selling U.S. retail Ethernet services. U.S. share results are calculated biannually, based on year-end and mid-year installations.

U.S. Provider Segment LEADERBOARDs: Incumbent Carrier, Competitive Provider, Cable MSO

Year-end U.S. share analysis includes sub-segments of the market based on three provider classifications: **Incumbent Carrier**, **Competitive Provider**, and **Cable MSO**. To qualify for a position on a Provider Segment LEADERBOARD, a provider must achieve either a **Leaderboard rank or a Challenge Tier citation on the U.S. Carrier Ethernet LEADERBOARD**.

Public LEADERBOARD releases show the top Ethernet service providers in rank order based on market share. Ethernet providers in the Challenge Tier, plus a selected number of Market Players, are listed in alphabetical order on the Global Provider and U.S. LEADERBOARDs. See here for the latest LEADERBOARD results, as well as releases dating back to 2009.

Detailed market share results are available exclusively through subscription to Vertical Systems Group's ENS (Emerging Networks Service) Markets + Migration or @Ethernet Market Analysis Research Programs.

Please contact us if you represent a Service Provider and do not already receive our **Ethernet and IP VPN Surveys**.

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