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January 27, 2016

VIA ECFS

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

Re: ***Special Access for Price Cap Local Exchange Carriers, WC Dkt. 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***
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Dear Ms. Dortch:

On behalf of Birch Communications, Inc., BT Americas Inc., EarthLink, Inc., and Level 3 Communications, LLC (collectively, the “Joint CLECs”), I hereby submit the redacted version of the Joint CLECs’ comments and appendices in response to Section IV.B of the Further Notice of Proposed Rulemaking released on December 18, 2012 in the above-referenced proceeding.¹ These redacted materials are being submitted pursuant to the terms of the *Modified Protective Order*,² *Second Protective Order*,³ and *Data Collection Protective Order*⁴ in effect in this

¹ *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*, Report and Order and Further Notice of Proposed Rulemaking, 27 FCC Rcd. 16318 (2012).

² *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*, Modified Protective Order, 25 FCC Rcd. 15168 (2010).

³ *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*, Second Protective Order, 25 FCC Rcd. 17725 (2010).

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Marlene H. Dortch
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proceeding. Pursuant to the procedures outlined in the *Data Collection Protective Order*, the original Highly Confidential version of this submission has been submitted to the Secretary's Office and two copies of the Highly Confidential version of this submission have been submitted to Mr. Christopher Koves in the Pricing Policy Division of the Wireline Competition Bureau under separate cover.

Please contact me at (202) 303-1111 if you have any questions regarding this submission.

Respectfully submitted,

/s/ Thomas Jones

Thomas Jones

*Counsel for Birch, BT Americas, EarthLink,
and Level 3*

Attachments

cc: Christopher Koves

⁴ *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*, Order and Data Collection Protective Order, 29 FCC Rcd. 11657 (2014) ("*Data Collection Protective Order*"); see also *Wireline Competition Bureau Now Receiving Acknowledgments of Confidentiality Pursuant to Special Access Data Collection Protective Order*, Public Notice, 30 FCC Rcd. 6421 (2015).

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

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

**COMMENTS OF
BIRCH, BT AMERICAS, EARTHLINK, AND LEVEL 3**

WILLKIE FARR & GALLAGHER LLP
1875 K Street, NW
Washington, DC 20006
(202) 303-1000

*Counsel for Birch Communications, Inc., BT
Americas Inc., EarthLink, Inc., and Level 3
Communications, LLC*

January 22, 2016

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**COMMENTS OF
BIRCH, BT AMERICAS, EARTHLINK, AND LEVEL 3**

Birch Communications, Inc., BT Americas Inc., EarthLink, Inc., and Level 3 Communications, LLC (“Level 3”) (collectively, the “Joint CLECs”), through their undersigned counsel, submit these comments in response to Section IV.B of the Further Notice of Proposed Rulemaking released on December 18, 2012 in the above-referenced proceeding.¹

I. INTRODUCTION AND SUMMARY

The record in this proceeding confirms what all objective industry observers have known for decades: the incumbent LECs possess substantial and persisting market power in the

¹ *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*, Report and Order and Further Notice of Proposed Rulemaking, 27 FCC Rcd. 16318 (2012). Although Section IV.B of the Notice of Proposed Rulemaking seeks comment primarily on reform of pricing flexibility triggers, it also seeks comment more generally “on what steps the Commission should take where relief has been provided under our existing rules and where the data and our analysis demonstrate that competition is not sufficient to discipline the marketplace.” *Id.* ¶ 80. These comments focus primarily on these broader issues by proposing a framework for the comprehensive review and reform of the markets for dedicated services in the U.S.

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provision of dedicated services throughout the United States,² and they are abusing that market power by setting their rates above competitive levels and by stifling competition where it might develop. This conduct harms American businesses that purchase legacy DS1 and DS3 dedicated services, since such businesses are forced to pay unreasonable prices and are deprived of competitive choice where it would likely exist in the absence of the incumbents' exclusionary conduct. Just as seriously, the incumbents are now exploiting their control over end user connections to dominate non-TDM-based dedicated services, such as Ethernet. If the Commission fails to act promptly to rein in this conduct, the incumbent LECs will tighten their grip on Ethernet even further, and the promised efficiencies of IP will not be fully realized for American businesses or indeed for American consumers. Dedicated services for business

² As used in these comments, the terms “dedicated service,” “connection,” “location,” and “prior purchase-based commitment” have the meaning defined in the special access mandatory data request. *See 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*, Order on Reconsideration, 29 FCC Rcd. 10899, App. A (2014) (defining (1) “connection” as “a wired ‘line’ or wireless ‘channel’ that provides a dedicated communication path between a *Location* and the first *Node* on a *Provider*’s network”; (2) “dedicated service” as a service that “transports data between two or more designated points, *e.g.*, between an *End User*’s premises and a point-of-presence, between the central office of a local exchange carrier (LEC) and a point-of-presence, or between two *End User* premises, at a rate of at least 1.5 Mbps in both directions (upstream/downstream) with prescribed performance requirements that include bandwidth-, latency-, or error-rate guarantees or other parameters that define delivery under a *Tariff* or in a service-level agreement”; (3) “location” as “a building, other man-made structure, a cell site on a building, a free-standing cell site, or a cell site on some other man-made structure where the *End User* is connected”; and (4) “prior purchase-based commitment” as “a type of *Volume Commitment* where the commitment is based on either (i) a certain percentage or number of the customer’s purchased in-service circuits or lines as measured at the time of making the *Volume Commitment* or measured during a period of time prior to making the *Volume Commitment*, *e.g.*, based on the customer’s billing records for the current month or prior month(s); or (ii) a certain percentage or dollar amount of *Revenues* generated by the customer’s purchases as measured at the time of making the *Volume Commitment* or during a period of time prior to making the *Volume Commitment*).

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customers will continue to be a relatively stagnant sector where prices are set above competitive levels, innovation is slow, and competition is limited to small pockets of the market.

The Commission must not allow this to occur. Using the information submitted in response to the mandatory data request as well as the other information filed by commenters, the Commission should conduct a comprehensive market power analysis of dedicated services. The Commission has historically employed market power analysis to determine whether competition is sufficient to discipline carriers' rates, terms, and conditions. Traditional market power analysis, which is based on foundational principles of economics and is routinely employed by the antitrust agencies, represents the best way to craft policies that advance Chairman Wheeler's goal of "competition, competition, competition."

The Commission should therefore rely primarily on the traditional market power test to determine the extent to which incumbent LECs have market power. Pursuant to this test, the Commission should examine the structure of the market by defining the relevant product and geographic markets for dedicated services, identifying the participants in these markets, and evaluating the existing and potential competition in these markets. The Commission can supplement this analysis, at least to some degree, with regression analysis.

Dr. Jonathan Baker, who has served as both the Chief Economist of the FCC and the Director of the Bureau of Economics at the Federal Trade Commission, has applied the components of the market power test to the market for dedicated services by, among other things, defining relevant markets, identifying current market participants, and assessing the levels of actual and potential competition. Dr. Baker's market structure analysis confirms that the incumbent LECs possess market power in the provision of dedicated services. In addition, Dr. Baker has conducted regression analysis of the billing data filed in response to the mandatory

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data request. **[BEGIN HIGHLY CONFIDENTIAL]**

[END HIGHLY CONFIDENTIAL]

As Dr. Baker explains, the relevant market for dedicated services does not include best-efforts broadband services or fixed wireless services.³ Those services do not meet the service quality criteria demanded by those seeking dedicated services, and providers of dedicated service do not therefore change their prices in response to competitive offers of best-efforts broadband or fixed wireless services. Dr. Baker also concludes that each relevant customer location served by a dedicated service comprises a separate geographic market.⁴

The participants in the market for dedicated services consist of incumbent LECs, traditional competitive LECs, and cable companies, but these categories of firms do not compete on a level playing field. The incumbent LECs have significant advantages over their competitors because, among other things, their networks reach virtually every commercial building in their

³ Declaration of Dr. Jonathan B. Baker on Market Power in the Provision of Dedicated (Special Access) Services, ¶¶ 31-34 (dated Jan. 22, 2016) (*attached to* Letter from Dr. Jonathan Baker, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25, RM-10593 (filed Jan. 27, 2016)) (“Baker Decl.”).

⁴ *Id.* ¶ 35.

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respective territories, and their large and diverse legacy customer bases give them economies of scale and scope that competitive LECs cannot come close to achieving. The competitive LECs' and cable companies' networks reach only a small minority of commercial buildings.

Competitive carriers that seek to extend the reach of their networks by leasing loop facilities from another carrier must usually rely on incumbent LEC loops. Yet the technical, legal, and economic limitations associated with leasing incumbent LECs' loops are substantial. In addition, incumbent LECs have powerful incentives to set wholesale prices high so as to place competitors in a price squeeze. Competitors that seek to compete by relying on loops leased from incumbent LECs operate at a significant disadvantage as compared to incumbent LECs. Moreover, cable companies have candidly and repeatedly stated that the limited reach of their networks as well as other factors prevent them from competing effectively with incumbent LECs for many business customers.

But even where competitive carriers can compete in theory they are often prevented from doing so in practice, because incumbent LECs have used high shortfall and termination penalties in exclusionary tariff plans, contract tariffs, and non-tariffed commercial agreements (collectively, "volume and term plans" or "lock-up plans") for special access to increase the costs associated with switching from the incumbent LEC to competitive carriers. In fact, the record shows that these lock-up plans have prevented customers from purchasing dedicated services from competitive carriers even when the prices offered by competitive carriers are lower than those charged by the incumbent LEC. This lock-up effect limits competitors' ability to deploy fiber to business locations in areas where competition is possible. Moreover, incumbent LECs are increasingly using the lock-up plans as leverage to coerce customers into committing to volume commitments for Ethernet-based dedicated services. This conduct is having the same

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harmful effects on competition in the provision of Ethernet-based dedicated services that the plans have already had in the provision of DS1 and DS3 dedicated services.

In light of their historic advantages and their exclusionary conduct, it is no surprise that the incumbent LECs own the only loop connection to the vast majority of commercial buildings in the U.S. In fact, as Dr. Baker explains, **[BEGIN HIGHLY CONFIDENTIAL]**

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[END HIGHLY CONFIDENTIAL] The incumbent LECs’ control over bottleneck facilities is extremely significant. It demonstrates that, notwithstanding the concerted efforts of competitive carriers for the period of nearly 20 years since the passage of the Telecommunications Act of 1996, facilities-based competition has barely made a dent in the incumbent LEC’s stranglehold on connections to business customers. Moreover, the incumbent LECs have exploited their control over connections to dominate dedicated services provided over their connections. **[BEGIN HIGHLY CONFIDENTIAL]**

[END HIGHLY

CONFIDENTIAL]⁶

⁵ *Id.* ¶ 44. Dr. Baker defines an “in-building provider” as “a provider (ILEC or CLEC) currently providing dedicated service (other than through a leased connection) to a customer location (*i.e.*, to any customer in the building).” *Id.* ¶ 43.

⁶ *Id.* ¶ 45.

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And there is little chance that this will change in the future. As Dr. Baker explains, competitive carriers must overcome significant barriers when deploying loop facilities to new locations.⁷ He therefore concludes that “the threat of entry would not be expected to deter supracompetitive prices by incumbent providers.”⁸ These conclusions are supported by marketplace experience. Competitive carriers can only build loop connections to customer locations that are near to their fiber transport facilities, where the customer at the location is suitable for the competitive carrier’s service offerings, and where the revenues associated with the location are sufficient to make loop deployment profitable. As Level 3’s experience demonstrates, most locations where customers demand dedicated services do not meet these criteria. Although Level 3 deploys new loops at a faster pace than most (possibly all) other competitive carriers, it has deployed loops to only approximately 34,000 commercial buildings nationwide. Level 3 aims to deploy new loops to approximately 3,000 to 4,000 commercial buildings in the U.S. each year. At this pace, it will be a long, long time before Level 3 could deploy loop facilities to anywhere near the number of commercial buildings to which incumbent LECs have deployed loop facilities.

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⁷ *Id.* ¶ 40.

⁸ *Id.* ¶ 106.

⁹ *Id.* ¶ 106. Dr. Baker defines a nearby competitor as “a CLEC not currently providing service but with fiber nearby.” *Id.* ¶ 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.” *Id.*

[END HIGHLY CONFIDENTIAL]

All of these factors support the conclusion that incumbent LECs have market power in the provision of dedicated services. As Dr. Baker explains, “[t]he structure of dedicated services markets indicates that ILECs are likely able to exercise market power in most markets, and would be expected to charge prices above competitive levels unless prevented by regulation.”¹¹

Unfortunately, the FCC’s existing regulatory regime does not effectively constrain the incumbents’ exercise of their market power. Due to the Commission’s forbearance decisions, the major incumbent LECs are not subject to dominant carrier regulation in the provision of certain Ethernet-based services. In addition, the Commission’s failure to update its price cap regime for DSn-based dedicated services has left the price caps for these services too high. And as a result of the relief granted under the Commission’s flawed and now-suspended pricing flexibility triggers for DSn-based dedicated services, the incumbents are able to enter into

¹⁰ *Id.* ¶ 63.

¹¹ *Id.* ¶ 107.

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individually tailored agreements and set prices for these services above price cap levels in areas where they do not face effective competition.

Accordingly, the Commission should promptly reform its regulatory regime for DSn-based and Ethernet-based dedicated services. The new regime should be designed to constrain the incumbents' ability to exercise their market power. *First*, the Commission should adopt a presumption that the incumbent LECs' control over network connections gives them market power in all relevant dedicated service markets. *Second*, the Commission should prevent incumbent LECs from continuing to use lock-up plans to stifle competition where it might develop by ruling that the volume commitments in the lock-up plans are unlawful. Alternatively, the Commission could establish a rule that prior purchase-based commitments cannot exceed 50 percent of a customer's historic spend with the incumbent LEC and that packet-based services must count toward such commitments. *Third*, the Commission should apply price cap regulation to incumbent LECs' DSn-based dedicated services subject to Phase II pricing flexibility and to their packet-based dedicated services (*i.e.*, by adding these services to the price cap basket for special access services). *Fourth*, the Commission should reset the price cap index ("PCI") for the special access basket to compensate for its failure to set the PCI at an appropriate level since at least the expiration of the CALLS plan. *Fifth*, the Commission should establish an appropriate prospective "X-factor" so as to ensure reasonable prices for incumbent LEC dedicated services in the future. *Sixth*, pursuant to Sections 251(c)(4) and 252(d)(3) of the Communications Act, the Commission should require that each incumbent LEC provide dedicated services to wholesale customers at prices that are no higher than the incumbent LEC's retail price minus the costs that are "avoided" when the services are offered at wholesale.

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Taking these steps will establish the preconditions for a virtuous cycle of investment and innovation that will yield enormous benefits for businesses and consumers. Just as in the case of Open Internet regulations, appropriate *ex ante* regulations will prevent the incumbents from acting on their incentive to abuse their position as network gatekeepers by limiting business customers' access to competitive LEC services. Requiring the incumbents to offer dedicated services on reasonable rates, terms, and conditions would enable competitors to develop new and innovative services, which in turn would fuel demand for more last-mile capacity and promote the deployment of fiber to more business locations by both competitive and incumbent LECs. The entire economy would benefit.

II. INCUMBENT LECS CONTINUE TO POSSESS SUBSTANTIAL AND PERSISTING MARKET POWER IN THE PROVISION OF DEDICATED SERVICES.

A. The Commission Should Employ Its Traditional Market Power.

The Commission should rely primarily on its traditional market power framework in order to identify the markets in which the incumbent LECs possess market power. The Commission established this framework in the *Competitive Carrier* proceeding as a means of determining whether there is sufficient competition in a market to constrain a carrier from exercising market power (*i.e.*, the power to control price).¹² As the Commission has explained, this framework “is comparable to the analysis used by the DOJ, FTC, and telecom regulators in

¹² See *Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities Authorizations Therefor*, First Report and Order, 85 FCC 2d 1, ¶¶ 54, 56 (1980) (“*Competitive Carrier Order*”).

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other countries, including those in the European Community, to determine the extent of competition in a market.”¹³

Traditional market power analysis is well-suited for use in this proceeding. As the Commission has explained, “a robust market analysis” will assist it in “determining how best to assess the presence of actual and potential competition for special access that is sufficient to discipline prices.”¹⁴ Indeed, the market power framework “was designed to identify when competition is sufficient to constrain carriers from imposing unjust, unreasonable, or unjustly or unreasonably discriminatory rates, terms, and conditions, or from acting in an anticompetitive manner” – precisely the question at issue here.¹⁵ Using the data submitted in response to the special access data collection, in combination with the other information that the Commission has amassed in this proceeding, the Commission can conduct a robust analysis of dedicated services markets in order to determine where changes to the Commission’s regulatory regime are warranted.¹⁶

Under the market power framework, the Commission begins by defining the relevant product and geographic markets.¹⁷ It then identifies the participants in those markets, assesses

¹³ *Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona Metropolitan Statistical Area*, Memorandum Opinion and Order, 25 FCC Rcd. 8622, ¶ 37 (2010), *aff’d*, *Qwest Corp. v. FCC*, 689 F.3d 1214 (10th Cir. 2012) (“*Phoenix Order*”).

¹⁴ *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*, Report and Order, 27 FCC Rcd. 10557, ¶ 85 (2012) (“*Pricing Flexibility Suspension Order*”).

¹⁵ *Id.* ¶ 87.

¹⁶ *Id.* ¶ 86 (“Our analysis may also provide evidence that changes in our regulatory approach are warranted in particular geographic areas.”).

¹⁷ *Phoenix Order* ¶ 42.

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the level of actual competition in the markets (*e.g.*, by examining evidence regarding market shares and market concentration), and evaluates whether potential entry could occur in a manner that is timely, likely, and sufficient to counteract the exercise of market power.¹⁸ The Commission also considers other factors, such as barriers to entry – which are “key components of a traditional market power analysis”¹⁹ – as well as elasticities of supply and demand.

Furthermore, the Commission should evaluate the extent to which the incumbent LECs control the local transmission facilities over which providers offer dedicated services. Such control provides the incumbents with the ability to dictate the prices competitors charge and even the service quality that competitors can offer their customers. In the past, the Commission has found it necessary to adopt regulatory safeguards to prevent the incumbents from exploiting their control over bottleneck facilities, including in downstream markets where the incumbents have not been found to possess the ability to set their retail rates above competitive levels.²⁰ In keeping with this precedent, the Commission must not permit the incumbents to exploit their control over local transmission facilities to raise rivals’ costs.

Finally, given the breadth of evidence in the record, the Commission can supplement this framework with additional forms of analysis. For example, regression analysis may buttress the structural analysis by identifying at least some of the circumstances in which incumbent LECs

¹⁸ *Id.* ¶ 42.

¹⁹ *Id.* ¶ 38.

²⁰ *See, e.g., Section 272(f)(1) Sunset of the BOC Separate Affiliate and Related Requirements; 2000 Biennial Regulatory Review Separate Affiliate Requirements of Section 64.1903 of the Commission's Rules; Petition of AT&T Inc. for Forbearance Under 47 U.S.C. § 160(c) with Regard to Certain Dominant Carrier Regulations for In-Region, Interexchange Services, Report and Order and Memorandum Opinion and Order, 22 FCC Rcd. 16440 (2007).*

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charge prices above competitive levels, but, as discussed below, the results of regression analysis must be heavily qualified.

B. Relevant Markets

The Commission should begin by defining the relevant product and geographic markets for dedicated services. As Dr. Baker explains in his declaration, although the analytical framework in the DOJ’s and FTC’s Horizontal Merger Guidelines primarily addresses a future exercise of market power, the general approach set forth in the Guidelines is also appropriate for evaluating the current and past exercise of market power.²¹ The *Merger Guidelines* framework for market definition focuses on “demand substitution factors, *i.e.*, on customers’ ability and willingness to substitute away from one product to another in response to a price increase or a corresponding non-price change such as a reduction in product quality or service.”²² The *Merger Guidelines* explain that the antitrust agencies use the “hypothetical monopolist” test to define relevant product and geographic markets. Under that test, a product market consists of a product or group of products such “that a hypothetical profit-maximizing firm . . . that was the only present and future seller of those products (‘hypothetical monopolist’) likely would impose at least a small but significant and nontransitory increase in price (‘SSNIP’).”²³ The *Merger Guidelines* suggest that a five percent increase in price can be considered “significant” in most cases.²⁴

²¹ Baker Decl. ¶ 27.

²² See U.S. Department of Justice and the Federal Trade Commission, Horizontal Merger Guidelines, § 4 (rel. Aug. 19, 2010) (“*Merger Guidelines*”).

²³ *Id.* § 4.1.1.

²⁴ See *id.* § 4.1.2.

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For purposes of the dedicated services marketplace, this means that if a nontransitory increase of five percent or more in the price of a dedicated service sold by an incumbent LEC would cause enough customers to switch to another transmission service (*e.g.*, a competitive LEC’s dedicated service) to render the price increase unprofitable, then the two services would be considered to be in the same market. However, if a nontransitory increase of five percent or more in the price of the dedicated service sold by the incumbent LEC would *not* cause enough customers to switch to another transmission service (*e.g.*, a cable company’s best-efforts broadband Internet access service) such that the price increase would be unprofitable for the incumbent, then the two services would *not* be considered to be in the same market.

While application of the SSNIP test yields sound product market definitions, the Commission often lacks the data needed to apply the test. If the Commission believes that to be the case here, the Commission can analyze other information that indicates the extent to which customers of a dedicated service view other services as reasonable substitutes. In the past, the Commission has relied on information such as comparisons of prices charged for different services, comparisons of the technical characteristics of services, and the extent to which there is customer churn between two services.²⁵ Here, the Commission can also rely on declarations

²⁵ See *Unbundled Access to Network Elements; Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Order on Remand, 20 FCC Rcd. 2533, ¶ 193 (2005) (“*Triennial Review Remand Order*”) (“We reject incumbent LECs’ assertions that the existence of intermodal competition – particularly from cable providers – in the high-capacity loop market warrants a nationwide finding that competitive LECs are not impaired without access to unbundled high-capacity loops. First, the record before us contains little evidence that cable companies are providing service at DS1 or higher capacities. Although the incumbent LECs attempt to show that cable companies are a significant presence in the enterprise loop market, the record in fact suggests that most of the businesses served by cable companies are not large enterprise customers, but mass market small businesses that would never generate enough traffic to require a high-capacity loop. The record indicates that cable providers are focusing their marketing strategies on residential users and ‘small and medium businesses . . . that are near

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from buyers and sellers that participate in the dedicated services marketplace.²⁶

1. Product Markets

Dr. Baker has concluded that it is appropriate to define a relevant market as “dedicated service provided over a wireline connection.”²⁷ As Dr. Baker explains, best-efforts service should be excluded from the relevant market for dedicated services because “it lacks service quality features – particularly availability, reliability, and security – required by most dedicated service retail customers.”²⁸ Dr. Baker further explains that reliability and building access issues prevent fixed wireless services from functioning as a substitute for dedicated services.²⁹ Those services should therefore also be excluded from the relevant market.

These conclusions are fully supported by market evidence. As both a provider and a purchaser of dedicated services, Level 3 is well positioned to assess the degree to which various transmission services are adequate substitutes for the incumbents’ dedicated services. Level 3’s

the residential network.’ It is therefore reasonable to infer that most of the businesses that cable companies serve, or are likely to serve, are home offices or very small stand-alone businesses, neither of which typically requires high-capacity loop facilities. In addition, the record suggests that where cable companies do provide service to business customers, they provide cable modem service, rather than service that is comparable to service provided over high-capacity loops. Competitive LEC commenters explain that bandwidth, security, and other technical limitations on cable modem service render it an imperfect substitute for service provided over DS1 loops. Commenters also note that businesses that do require DS1 loops are willing to pay significantly more for them than the cost of a cable modem connection, which also indicates that the two are not interchangeable. Finally, at least two competitors maintain that, based on their internal data, they rarely lose enterprise customers to cable providers.”).

²⁶ See *Merger Guidelines* § 2.2.3.

²⁷ Baker Decl. ¶ 30. Dr. Baker also states that “smaller markets may be nested within larger ones,” (*id.* at n.10) which might be true of dedicated services.

²⁸ *Id.* ¶ 31.

²⁹ *Id.* ¶ 34.

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views on this question are explained in depth in the attached declarations of Chris McReynolds, Vice President of Core Product Management, who describes Level 3's experience as a provider of dedicated services, and Gary Black, Jr., Vice President of Carrier Relations, who describes Level 3's experience as a purchaser of dedicated services.

As Mr. McReynolds explains, "while the cable companies' Ethernet-over-fiber and DSn-over-fiber services are competitive with Level 3's dedicated services, the cable companies' best-efforts broadband Internet access and their Ethernet-over-HFC services generally are not competitive with Level 3's dedicated services."³⁰ This is so because "most of Level 3's customers do not view these services as sufficient to meet their needs."³¹ Specifically, "Level 3's retail business customers generally demand services that offer dedicated bandwidth, symmetrical speeds, robust service level agreements, and a high level of security," which best-efforts Internet access services do not offer. In addition, "Level 3's wholesale carrier customers generally purchase dedicated services from Level 3 in order to provide their own higher-layer services (such as voice, Internet access, and networking capabilities) over this capacity," which they cannot do with a best-efforts Internet access connection.³² Accordingly, Mr. McReynolds explains that "Level 3 generally does not monitor or respond to the cable companies' rates, terms, and conditions for these services."³³ Moreover, even where cable companies offer best-efforts broadband services subject to service level agreements, Mr. McReynolds explains that

³⁰ Declaration of Chris McReynolds on Behalf of Level 3 Communications, LLC, ¶ 18, attached hereto as Appendix A ("McReynolds Decl.").

³¹ *Id.* ¶ 20.

³² *Id.*

³³ *Id.*

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those services “have technological limitations that prevent them from meeting the needs of customers that demand services beyond basic voice and Internet access.”³⁴ For these same reasons, Mr. Black explains that, where Level 3 is seeking to lease connectivity to customer locations to which Level 3 has not built its own loops, the company does not view cable best-efforts broadband services to be substitutes for dedicated services.³⁵

Similarly, Mr. McReynolds explains that Ethernet-over-HFC services do not meet the needs of Level 3’s prospective customers. This is because Ethernet-over-HFC services “are often subject to high levels of jitter and a relatively low maximum transmission unit (MTU)” and “are not as reliable as the cable companies’ Ethernet-over-fiber services or the dedicated services offered by incumbent and competitive LECs.”³⁶ Moreover, cable companies “generally do not offer robust service level agreements for these services.”³⁷ For these same reasons, Mr. Black explains that Level 3, in its capacity as a wholesale buyer, does not view cable Ethernet-over-HFC services to be substitutes for dedicated services.³⁸

In addition, Mr. McReynolds states that, due to “well-known limitations, including line-of-sight restrictions and limited range,” fixed wireless services “generally do not offer the level of speed and reliability that Level 3’s customers demand.”³⁹ Thus, “Level 3 generally does not

³⁴ *Id.* ¶ 21.

³⁵ Declaration of Gary Black, Jr. on Behalf of Level 3 Communications, LLC, ¶ 16, attached hereto as Appendix B (“Black Buy-Side Decl.”).

³⁶ McReynolds Decl. ¶ 22.

³⁷ *Id.*

³⁸ Black Buy-Side Decl. ¶ 19.

³⁹ McReynolds Decl. ¶ 23.

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view these services as competitive with Level 3’s dedicated services.”⁴⁰ Again, Mr. Black cites these same reasons for concluding that Level 3, in its capacity as wholesale buyer, does not view fixed wireless services to be substitutes for wireline dedicated services.⁴¹

The experiences of competitive LECs who have experimented with relying on fixed wireless service confirm that it is not a substitute for wireline dedicated services. For example, TDS conducted trials in which it attempted to serve business customers in Midwestern markets over both licensed and unlicensed fixed wireless technologies. TDS “encountered a series of operational challenges, including an inability to obtain tower space at reasonable rates and difficulty obtaining permission from building owners to place equipment on multi-tenant buildings.”⁴² Even where TDS could overcome these challenges, wireless technologies did not provide sufficient “bandwidth and reliability,” and TDS’s customers “generally did not view the quality of the service as comparable to dedicated wireline connections,” “due in part to ‘line of sight’ issues.”⁴³ Thus, TDS decided to wind down its trials and declined to deploy this technology more broadly.⁴⁴

⁴⁰ *Id.*

⁴¹ Black Buy-Side Decl. ¶ 20.

⁴² *See* Declaration of James Butman on Behalf of TDS Telecommunications Corporation, WC Docket No. 05-25, RM-10593, GN Docket Nos. 13-5, 12-353, ¶ 21 (Mar. 26, 2015) (*attached to* Letter from Thomas Jones & Matthew Jones, Counsel for TDS, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25, RM-10593, GN Docket Nos. 13-5, 12-353 (filed Mar. 26, 2015)) (“TDS Declaration”).

⁴³ *Id.*

⁴⁴ *Id.* ¶ 22.

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2. Geographic Markets

Dr. Baker next explains that the relevant geographic market should be defined as “service to each customer location served by a dedicated service.”⁴⁵ This should not be controversial. As Dr. Baker explains, “it is difficult to imagine” a retail or wholesale customer “responding to a small increase in the price of dedicated services at one location by moving their business to another location where prices are lower.”⁴⁶

C. Market Participants

As Dr. Baker explains, participants in the relevant market for dedicated services consist of those firms that are either currently able to offer wireline dedicated services to a particular customer location or that could do so rapidly.⁴⁷ As explained below, while the incumbent LECs are robust competitors at essentially every relevant customer location, traditional competitive LECs and cable companies are often in a significantly weaker position than the incumbent LECs as competitors in the provision of dedicated services.

Incumbent LECs. By virtue of their historical monopolies, the incumbent LECs possess ubiquitous networks that connect to virtually every commercial building within their service

⁴⁵ Baker Decl. ¶ 35.

⁴⁶ *Id.* See also *Verizon Communications Inc. and MCI, Inc. Applications for Approval of Transfer of Control*, Memorandum Opinion and Order, 20 FCC Rcd. 18433, ¶ 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”). Of course, the Commission may aggregate customer locations subject to similar levels of market power (or competition) into larger groups for purposes of analysis. See *id.* (“In order to simplify its [geographic market] analysis, however, the Commission has traditionally aggregated or grouped customers facing similar competitive choices.”)

⁴⁷ Baker Decl. ¶ 35

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areas.⁴⁸ This enables the incumbents to provide dedicated services to any of these locations without relying on the networks of other providers. 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).⁴⁹

When the incumbents need to serve locations outside of their network footprints, they generally rely on longstanding relationships with the other incumbent LECs. As one analyst, a former Chief of the FCC’s Office of Strategic Planning and Policy Analysis, has explained, “[t]he basic foundation of [the former BOC] telcos’ advantage in serving enterprises is the ubiquitous reach of their networks, enabled by generally exclusive last-mile connections to business locations in their own territories and reliable standards for wholesale interconnection to reach locations in

⁴⁸ See, *e.g.*, *Phoenix Order* ¶ 42 n.143 (“In the case of wholesale and retail enterprise services, only Qwest has ubiquitous coverage of the market and thus capacity to serve end-users.”); *Petitions of the Verizon Telephone Companies for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Boston, New York, Philadelphia, Pittsburgh, Providence and Virginia Beach MSAs*, Memorandum Opinion and Order, 22 FCC Rcd. 21293, ¶ 45 (2007) (“*6-MSA Order*”) (finding that the record “d[id] not demonstrate that Verizon no longer possesses exclusionary market power” “arising from [its] control over ubiquitous local telephone networks”); *Petitions of Qwest Corp. for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Denver, Minneapolis, St. Paul, Phoenix, and Seattle MSAs*, Memorandum Opinion and Order, 23 FCC Rcd. 11729, ¶ 44 (2008) (“*4-MSA Order*”) (finding that the record “d[id] not demonstrate that Qwest no longer possesses exclusionary market power” “arising from [its] control over ubiquitous local telephone networks”).

⁴⁹ *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, ¶ 26 (2005) (“*2005 Special Access NPRM*”).

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each other's.”⁵⁰ The incumbents have successfully relied on this model to attract and retain large customer bases over the past several decades.

The incumbent LECs benefit from enormous economies of scale and scope. They are able to spread the fixed costs of network equipment such as transport and switching, as well as other fixed costs such as real estate and executive salaries, over their huge customer bases, thereby achieving economies of scale that competitive LECs cannot hope to achieve. The incumbents benefit from economies of scope arising from their provision of other services over some of the same facilities that they use to provide dedicated services. AT&T, Verizon, and CenturyLink each provide voice, video, and Internet access services to residential customers. AT&T has explained that it can serve business customers over the same fiber transport facilities that it uses to serve its residential U-verse customers.⁵¹ The other incumbents can almost certainly make use of their networks in this manner. Similarly, given their affiliation with large mobile wireless service providers, AT&T and Verizon can aggregate the traffic generated by mobile wireless customers and dedicated service customers over common fiber transport facilities.⁵² These shared uses allow the incumbents to achieve greater cost savings relative to other carriers that do not provide these services.

⁵⁰ Paul de Sa et al., *U.S. Telecom: A Primer on the \$70B Enterprise Telecom Market (Cable's Opportunity = Telcos' Loss?)*, Bernstein, at 7 (July 16, 2015).

⁵¹ John Stephens, Senior EVP & CFO, AT&T Inc., Q3 2014 AT&T Inc Earnings Call, Thomas Reuters Streetevents Edited Transcript, at 13 (Oct. 22, 2014) (explaining that the fiber facilities used to provide U-verse services “also can be available for business”).

⁵² *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, ¶ 373 (2003) (“*TRO*”) (explaining that “transport facilities generally are used to carry traffic aggregated from multiple customers, or even multiple carriers, within an incumbent LEC's network”).

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The incumbent LECs benefit from other first-mover advantages as well, including “preferential access to buildings, 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 monopolist, consumers’ reluctance to switch carriers, and advertising and brand name preference.”⁵³ Taken together, these advantages give the incumbents a significant leg-up over existing and potential competitors in dedicated services markets.

Competitive LECs. Competitive LECs face significant impediments that constrain their ability to compete on an equal footing with the incumbent LECs. As a result, competitive LECs occupy a “small and geographically localized competitive fringe” primarily because of the limited reach of their networks and their limited ability to rely on dedicated services leased from incumbent LECs.⁵⁴

Competitive LECs can be considered relatively robust competitors in the market only where they can offer dedicated services over loop facilities that they have already deployed. As Mr. McReynolds explains, competitive LECs “pose the most meaningful competition” to Level 3 when offering services “via local fiber transmission facilities that they own or that they have acquired as dark fiber pursuant to long-term lease arrangements.”⁵⁵

⁵³ *Id.* ¶ 89.

⁵⁴ Paul de Sa et al., *U.S. Telecom: A Primer on the \$70B Enterprise Telecom Market (Cable’s Opportunity = Telcos’ Loss?)*, Bernstein, at 5 (July 16, 2015).

⁵⁵ McReynolds Decl. ¶ 16.

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But competitive LECs cannot deploy loop connections to most locations where customers demand dedicated services. This is because, as discussed further below, competitive LECs must overcome significant barriers, most importantly significant sunk expenditures, in order to deploy last-mile fiber connections to business customer locations.⁵⁶ Again, market evidence supports this conclusion since the location data submitted in response to the mandatory data request shows that competitive LECs have deployed connections to **[BEGIN HIGHLY CONFIDENTIAL]**

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In order to provide dedicated services to off-net locations, competitive LECs must lease access to another provider’s network. Given that incumbent LECs own the only connection to the vast majority of commercial buildings around the country, Level 3 usually has no choice but

⁵⁶ See *infra* Section II.E.

⁵⁷ See *Phoenix Order* ¶ 87 (“Qwest has not demonstrated that there exists significant actual or potential competition for enterprise services by competitors that rely on their own last-mile connections to serve customers”); *6-MSA Order* ¶ 41 (finding that competitors served only 0.25 percent of commercial buildings with their own fiber facilities in six markets where Verizon petitioned for forbearance); *4-MSA Order* ¶ 40 (finding that competitors served only between 0.17 percent and 0.26 percent of commercial buildings in four markets where Qwest petitioned for forbearance).

⁵⁸ See *United States v. SBC Commc’ns, Inc. & AT&T Corp.*, 489 F. Supp. 2d 1, 7 (D.D.C. 2007) (“For the vast majority of commercial buildings in its respective territory, either SBC or Verizon is the only carrier that owns a last-mile connection to the building.”).

⁵⁹ See United States Government Accountability Office, *FCC Needs to Improve Its Ability to Monitor and Determine the Extent of Competition in Dedicated Access Services*, GAO 07-80, at 19-20 (rel. Nov. 2006) (finding that competitors had deployed loop facilities to, on average, less than 6 percent of the buildings with demand of a DS1 or greater in 16 sample markets).

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to lease dedicated services from the incumbent LEC in order to reach locations that Level 3 cannot reach with its own network.⁶⁰

Competitive LECs offer services over the incumbents' facilities in a number of ways, including (1) by purchasing copper loops from incumbent LECs as UNEs and using these loops to provide Ethernet-over-copper ("EoC") services; (2) by purchasing DS1 loops from incumbent LECs as UNEs and using these loops to provide Ethernet-over-DSn services; (3) by purchasing DS1 or DS3 loop and transport facilities from incumbent LECs as UNEs and using these facilities to provide DSn services; and (4) by purchasing DSn or Ethernet dedicated services from incumbent LECs as special access and using them to provide customers with either stand-alone dedicated services (which is usually the case for wholesale customers) or managed services for which dedicated services are an input. Each of these methods is subject to significant limitations. As Mr. McReynolds explains, the viability of competitive LEC services as a competitive alternative to the incumbent LEC "varies significantly based on the manner in which the competitive LEC obtains the physical connection to the end user (*e.g.*, self-deployed vs. purchased at wholesale from an incumbent LEC)."⁶¹

⁶⁰ See Black Buy-Side Decl. ¶ 6. As shown in the Appendix to Mr. Black's declaration, **[BEGIN HIGHLY CONFIDENTIAL]**

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⁶¹ McReynolds Decl. ¶ 12.

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Competitive LECs can be understood to be market participants for locations that they serve via UNEs because UNEs are subject to meaningful rate regulation. However, because there are so many practical and legal limitations associated with reliance on UNEs, competitive LECs can only compete with incumbent LECs in this manner at a limited number of customer locations and for a limited set of dedicated services.⁶² For example, there are many locations that are not served by incumbent LEC copper loops,⁶³ incumbent LECs are not required to provide DS1 and/or DS3 loops and transport facilities as UNEs in many locations and under many circumstances, and incumbent LECs are not required to provide Ethernet dedicated service connections as UNEs at all.⁶⁴ In many cases, competitive LECs can only rely on UNE loops that are connected to incumbent LEC central offices in which the competitive LEC has collocated network facilities.⁶⁵ In addition, “in most cases, [EoC] services can only be used to provide dedicated services at relatively low capacities in the range of 1-20 Mbps,” and “competitive LECs often cannot profitably offer Ethernet-over-DSn services at capacities above

⁶² Baker Decl. ¶ 37 (“providers serving end users with UNEs likely offer some competitive constraint on facilities-based providers, but only in some locations, only for some customers, and only to some extent.”).

⁶³ Incumbent LECs are required to offer conditioned copper loops as UNEs in all locations where they exist. 47 C.F.R. § 51.319(a)(1). But the Commission’s rules also allow incumbent LECs to retire copper loops without seeking prior FCC approval for doing so. *See id.* §§ 51.319(a)(3)(iv), 51.332. Incumbent LECs are increasingly taking advantage of this right, thereby steadily reducing the availability of conditioned copper loops. *See McReynolds Decl.* ¶ 13. This process can be expected to continue, and possibly accelerate, in the future. Due to the limitations associated with EoC, Level 3 is rarely able to rely on these facilities. As shown in the Appendix to Mr. Black’s declaration, Level 3 purchased **[BEGIN HIGHLY CONFIDENTIAL]** **[END HIGHLY CONFIDENTIAL]** EoC circuits from competitive LECs in 2012, 2013, and 2014 respectively.

⁶⁴ 47 C.F.R. § 51.319(a)(4)-(5).

⁶⁵ Baker Decl. ¶ 38 (“dedicated services provided by leasing non-UNE connections would usually not be expected to constrain dedicated services prices”).

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approximately 6 Mbps when relying on special access and approximately 7.5 Mbps when relying on UNEs.”⁶⁶ Even in cases where UNEs are available as a matter of law and engineering, incumbent LEC lock-up plans often prevent competitive LECs from purchasing them.⁶⁷

Competitive LECs should not be viewed as market participants in locations where they rely on DSn-based dedicated services purchased as special access from incumbent LECs.⁶⁸ This is because those services are not subject to sufficient economic regulation to prevent incumbent LECs from placing the competitive LEC in a price squeeze. As Dr. Baker explains, incumbent LECs have the incentive and ability to engage in this conduct.⁶⁹ **[BEGIN HIGHLY CONFIDENTIAL]**

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⁶⁶ McReynolds Decl. ¶¶ 13-14.

⁶⁷ For example, **[BEGIN HIGHLY CONFIDENTIAL]**

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⁶⁸ Baker Decl. ¶ 37 (“providers serving end users with UNEs likely offer some competitive constraint on facilities-based providers, but only in some locations, only for some customers, and only to some extent.”).

⁶⁹ *Id.* ¶ 78.

⁷⁰ *Id.* Table 4.

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In addition, Level 3’s experience as a buyer of wholesale dedicated services further illustrates this problem. As Mr. Black explains, where competitive LECs offer wholesale dedicated services by relying on circuits leased from another carrier, “the underlying circuit is usually an incumbent LEC DS_n-based dedicated service.”⁷¹ A wholesale provider “often cannot rationally charge a price below the incumbent LEC wholesale price for the underlying circuit. This underlying wholesale price is usually very high where . . . the circuit has been purchased as special access.”⁷² As a result, “competitive LEC services provided in this manner do not provide Level 3 with a meaningful competitive choice in reaching its customers in most circumstances.”⁷³

Cable Companies. As discussed above, cable companies’ standard best-efforts broadband Internet access services and other HFC-based services are not substitutes for dedicated services.⁷⁴ Cable companies participate in dedicated services markets where they offer Ethernet-based and DS_n-based dedicated services over fiber optic facilities. However, they have explained that their ability to compete with the incumbent LECs is somewhat limited, especially with respect to multi-location enterprise customers with complex needs.

As Comcast has explained, “[b]ecause larger businesses and enterprise customers have locations spanning multiple areas and cable footprints, Comcast, TWC, and other cable companies have been unable to offer seamless business service options – or meaningful

⁷¹ Black Buy-Side Decl. ¶ 12.

⁷² *Id.*

⁷³ *Id.*

⁷⁴ *See supra* Section II.B.1.

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competition against incumbent providers – across these different locations.”⁷⁵ This is because, as Charter has stated, “a provider typically must have a broad regional footprint without significant gaps in coverage areas to serve large enterprises with multiple sites across given geographic regions effectively. Customers typically prefer a single network, with a single set of technical standards and a single point of contact for customer support[.]”⁷⁶ Moreover, in contrast to the incumbent LECs, cable companies lack legacy relationships with enterprise customers and the expertise in serving them. As one analyst has put it, the incumbent LECs’ “geographically extensive networks, enterprise sales teams, network-design capabilities, and ability to offer managed services and capacity with guaranteed quality via SLAs, even across multiple carriers” can serve as “high barriers to cable entry.”⁷⁷

Contrary to USTelecom’s assertions, Comcast’s recent creation of a new unit to target Fortune 1000 businesses does not appear to support the conclusion that cable companies have overcome these longstanding limitations.⁷⁸ Comcast plans to target these businesses using a “partner model.” It struck wholesale agreements with other cable companies including Charter,

⁷⁵ Opposition to Petitions to Deny and Response to Comments, Comcast Corporation and Time Warner Cable Inc., MB Docket No. 14-57, at 70-71 (filed Sept. 23, 2014).

⁷⁶ Public Interest Statement, Charter Communications Inc., Time Warner Cable Inc., & Advanced/Newhouse Partnership, MB Docket No. 15-149, at 35-36 (June 25, 2015).

⁷⁷ Paul de Sa et al., *U.S. Telecom: A Primer on the \$70B Enterprise Telecom Market (Cable’s Opportunity = Telcos’ Loss?)*, Bernstein, at 6 (July 16, 2015).

⁷⁸ See Letter from Jonathan Banks & Diane Griffin Holland, Counsel for United States Telecom Association, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 05-25, RM-10593, at 1 (Sept. 18, 2015) (citing Comcast’s announcement as evidence that “cable is a major national competitor for enterprise broadband services”); see also Press Release, Comcast Business, *Comcast Business Announces New Unit Targeting Fortune 1000 Enterprises* (Sept. 16, 2015), <http://business.comcast.com/resource-library/press-releases/details/2015/09/16/comcast-business-announces-new-unit-targeting-fortune-1000-enterprises>.

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Time Warner Cable, Cox, Cablevision, and Mediacom, and it acquired Contingent Network Services—a managed services firm with “aggregation or wholesale relationships with many other CLECs, ILECs, [and] small cable providers.”⁷⁹ Whether this effort will be successful remains to be seen. Charter has explained that, at least from its perspective, the approach that Comcast plans to employ “has numerous drawbacks”:

A partner model creates high transaction costs, as multiple networks and personnel must be coordinated, and these costs impact the price at which these services can be offered. Additionally, the customer’s price may be unattractive because the retail price includes the profit margin of the wholesale supplier as well the retail service provider (so-called double marginalization). Services provided through a partner model are also relatively unappealing to customers from an operational standpoint. Using Type II or Type III circuits often leads to operational complexity due to the off-net component that extends installation and repair intervals. Customers’ desire for responsiveness and transparency drive them to prefer a single network, with a single network operations center, [and] a single set of technical standards Additionally, when Type II circuits are utilized, performance data for the off-net component of the circuits, which are increasingly being offered to the end-user customer via portals, often are masked or have less fidelity.⁸⁰

Moreover, Comcast’s wholesale agreements with other major cable companies indicate that the other operators do *not* plan to compete for these enterprise customers themselves.

According to Comcast Business’s Vice President and General Manager of Enterprise Solutions,

⁷⁹ Sean Buckley, *Comcast’s Contingent Purchase Enhances Its Multi-Site Enterprise Business Installation Process*, Fierce Installer (Sept. 28, 2015), <http://www.fierceinstaller.com/story/comcasts-contingent-purchase-enhances-its-multi-site-enterprise-business-in/2015-09-28>; see also Shalini Ramachandran, *Comcast to Sell Data Services to Big Firms Nationwide*, Wall St. J., (Sept. 16, 2015), <http://www.wsj.com/articles/comcast-to-sell-data-services-to-big-firms-nationwide-1442376240>.

⁸⁰ Charter Communications Response to FCC’s Information and Data Request, MB Docket No. 15-149 (Oct. 16, 2015).

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“the cooperation between the cable companies is fantastic, both operationally and technically” because Comcast and the other cable companies “don’t really compete against each other.”⁸¹

D. Actual Competition

The most important measure of competition in the provision of dedicated services is the extent to which competitors own the loop connections to end user customers that demand dedicated services. Utilizing self-deployed loops gives competitors the flexibility to control service quality and lower price as required to meet competition. Competition is far less robust where competitors must rely on dedicated services leased from incumbent LECs. As explained, competitive LECs can compete in only a very limited set of circumstances where they rely on UNEs, and they are ineffective competitors in locations where they rely on dedicated services purchased as special access. Indeed, in the absence of an effective regulatory regime constraining incumbent LECs from abusing their market power, American businesses will only experience the benefits of competition if competitors are able to deploy loop facilities to a large percentage of locations where customers demand dedicated services.

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⁸¹ Sean Buckley, *Comcast's Contingent Purchase Enhances Its Multi-Site Enterprise Business Installation Process*, Fierce Installer (Sept. 28, 2015), <http://www.fierceinstaller.com/story/comcasts-contingent-purchase-enhances-its-multi-site-enterprise-business-in/2015-09-28>.

⁸² Baker Decl. ¶ 44. Dr. Baker defines an “in-building provider” as “a provider (ILEC or CLEC) currently providing dedicated service (other than through a leased connection) to a customer location (*i.e.*, to any customer in the building).” *Id.* ¶ 43.

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This means that “the great majority” of relevant markets, *i.e.*, customer locations served by wireline dedicated services, “are monopolies or duopolies.”⁸³ This market structure “raises competitive concerns.”⁸⁴ In the case of “markets for dedicated service with a single provider – the majority of markets – the dedicated service monopolist would have the incentive and ability to charge a supracompetitive price.”⁸⁵ But “markets with two providers – most of the rest – are also unlikely to perform competitively.”⁸⁶

E. Potential Competition

Under the traditional market power framework, the Commission takes future entry into consideration if it is timely, likely, and of sufficient scale to counteract the exercise of market power by an incumbent LEC.⁸⁷ Potential entry differs from circumstances where rapid entry is possible. As Dr. Baker explains, rapid entry exists where “firms not presently serving that

⁸³ *Id.* ¶ 46.

⁸⁴ *Id.* ¶ 47.

⁸⁵ *Id.*

⁸⁶ *Id.* ¶ 48.

⁸⁷ *See Phoenix Order* ¶ 37; *see also Merger Guidelines*, § 9.

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location . . . can do so quickly and without substantial sunk expenditures (expenditures not recoverable upon exit).”⁸⁸ Rapid entrants can be considered existing competitors in a relevant market. For example, a competitor that has already deployed a loop facility to a building in order to serve a customer can usually extend those facilities to serve a second customer in the same building without incurring substantial sunk expenditures. The competitor in this case can be considered an actual competitor. Potential entry, on the other hand, concerns entry requiring substantial sunk expenditures. Since the deployment of new loop facilities requires substantial sunk expenditures, a competitor that must deploy such facilities to serve a new customer would be considered a competitively significant potential entrant only if the competitor’s deployment of loop facilities is timely, likely, and of sufficient scale to counteract a price increase by an incumbent LEC.

In assessing the extent of potential competition, it is necessary to examine barriers to entry such as high capital expenditures, large sunk costs, long lead times, scale economies, and cost disadvantages.⁸⁹ Evidence regarding “the actual history of entry into the relevant market” deserves “substantial weight” because “[l]ack of successful and effective entry in the face of non-transitory increases in the margins earned on products in the relevant market tends to suggest that successful entry is slow or difficult.”⁹⁰ Consideration of these factors demonstrates that a

⁸⁸ Baker Decl. ¶ 36.

⁸⁹ See, e.g., U.S. Department of Justice & Federal Trade Commission, *Commentary on the Horizontal Merger Guidelines*, at 38 (Mar. 2006), <http://www.usdoj.gov/atr/public/guidelines/215247.pdf>; ABA Section of Antitrust Law, *Antitrust Law Developments*, at 351 (6th ed. 2007).

⁹⁰ *Merger Guidelines* § 9.

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competitive carrier that has deployed fiber in the vicinity of an end user that demands dedicated service can rarely be considered to have a disciplining effect on the incumbent LEC.

The Commission has long recognized that deploying competitive facilities involves “substantial fixed and sunk costs,” including “the costs of obtaining rights-of-way and other necessary legal permissions, the costs of the actual fiber-optic facilities, and the costs of physical deployment itself.”⁹¹ Competitors also face “substantial operational barriers” to deploying their own facilities, such as “problems in securing rights-of-ways from local authorities” and “construction moratoriums which prevent the grant of a franchise agreement to construct new facilities in the public rights-of-way.”⁹² When the Commission investigated whether these barriers persisted in 2010, it found “nothing in the record to indicate that, in the years since the passage of the 1996 Act, these barriers have been lowered for competitive LECs that do not already have an extensive local network”⁹³

Level 3’s experience deploying last-mile transmission facilities demonstrates that this conclusion remains true today. After years of aggressively deploying loop facilities, Level 3 has only deployed loop facilities to approximately 34,000 commercial buildings nationwide.

⁹¹ *Triennial Review Remand Order* ¶¶ 72-77, 150-154 & n.419.

⁹² *Id.* ¶ 151. With regard to multiunit premises, competitors also face “difficulties and sometimes outright prohibitions in gaining building access.” *TRO* ¶ 305. These barriers can sometimes be prohibitive – “if the entity or individual controlling access to the premises does not allow a competitor to reach its customer residing therein (or places unreasonable burdens on the competitive LEC as a condition of entry), the competitive LEC may be unable to serve its customer via its own facilities, even where a competitive carrier may be ready, willing, and otherwise able to self-deploy the loop.” *Id.*

⁹³ *See Phoenix Order* ¶ 84 (“[T]he Commission, in the *Triennial Review Order*, found that competitive carriers face extensive economic barriers to the construction of last-mile facilities We see nothing in the record to indicate that, in the years since the passage of the 1996 Act, these barriers have been lowered for competitive LECs that do not already have an extensive local network used to provide other services today.”).

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Moreover, Level 3 aims to deploy new loops to approximately 3,000 to 4,000 commercial buildings in the U.S. each year. At this pace, Level 3 will not come close to matching the number of commercial buildings to which the large incumbent LECs have deployed connections for many, many years.

The responses to the data request further illustrate the barriers to competitive deployment.

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The responses also demonstrate the limitations that providers face outside of highly dense areas. [BEGIN HIGHLY CONFIDENTIAL]

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It is important to emphasize that these same barriers to wireline loop deployment apply to cable companies just as much as to traditional competitive LECs. Cable companies and

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competitive LECs deploy the same fiber network facilities using the same practices to build connections to end users. To be sure, loop deployment costs are distance-sensitive and cable companies would likely have somewhat lower loop deployment costs in areas where they have deployed extensive transport networks. But the cable companies have not done so in many of the areas where customers demanding dedicated services are densely clustered. And, as the rate of loop deployment by competitive LECs demonstrates, it is not economic for a competitive carrier to deploy loops to the many customer locations near the carrier's transport network that produce limited revenues.

The repeated failure of the competitive LECs that attempted to deploy local transmission facilities to serve their customers further confirms the limited prospects of future loop deployment. As shown in the chart attached hereto as Appendix D, the overwhelming majority of facilities-based competitive carriers that were publicly traded as of 2001 filed for bankruptcy themselves, were acquired by a company that filed for bankruptcy, and/or were eventually sold at a steep discount. Indeed, between 1999, likely the peak of competitive LEC investment in local transmission facilities, and 2001, when it was clear that most of that investment was inefficient, competitive LECs' market capitalization fell "from \$86.5 billion to \$4.0 billion, or a loss of over 96 percent."¹⁰⁰

This extensive record of business failure by companies that invested in location transmission facilities must inform any assessment of the extent to which firms will deploy extensive local transmission facilities in the future. Indeed, it is no accident that there are now only a handful of national competitive LECs, and few of those companies deploy local transmission facilities to any

¹⁰⁰ Larry F. Darby, Jeffrey A. Eisenach, & Joseph S. Kraemer, *The CLEC Experiment: Anatomy of a Meltdown*, Progress on Point 9.23, The Progress & Freedom Foundation, 5 (Sept.2002).

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significant degree. As one analyst has described it, although “[t]he late 1990s and early 2000s saw a number of new telco entrants . . . only a few remain (*e.g.*, Level 3, Cogent, XO), forming a small and geographically localized competitive fringe to what was largely an incumbent telco monopoly[.]”¹⁰¹ **[BEGIN HIGHLY CONFIDENTIAL]**

¹⁰² **[END HIGHLY CONFIDENTIAL]**

Incumbent LECs are in an entirely different position. Given their ubiquitous networks, incumbent LECs usually have no need to deploy last-mile transmission facilities to provide dedicated services to customers within their territories. As the FCC has recognized, the incumbents can “increase capacity on many special access routes at a relatively low incremental cost (relative to the total cost of trenching and placing poles, manholes, conduit, fiber, and copper, and securing rights and access) by adding or upgrading terminating electronics.”¹⁰³ In the instances in which they do need to deploy new fiber facilities, such as to replace copper with fiber or to connect their networks to new office parks, the incumbents face far fewer barriers than competitive LECs.

The incumbents’ first-mover advantages dramatically reduce their cost of deployment, especially when they are able to rely on their existing network “support structure.”¹⁰⁴ TDS,

¹⁰¹ Paul de Sa et al., *U.S. Telecom: A Primer on the \$70B Enterprise Telecom Market (Cable’s Opportunity = Telcos’ Loss?)*, Bernstein, at 5 (July 16, 2015).

¹⁰² Baker Decl. ¶ 105.

¹⁰³ *2005 Special Access NPRM* ¶ 26.

¹⁰⁴ *See supra* Section II.C.

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which operates both incumbent LEC and competitive LEC subsidiaries, has explained that “it is generally far less expensive and more efficient for TDS ILEC to deploy new fiber to business customer locations than is the case for TDS CLEC.”¹⁰⁵ This is because (1) “business customer locations are, on average, located much closer to TDS ILEC’s existing fiber plant than TDS CLEC’s”; (2) “TDS ILEC possesses many advantages due [to] its operation of a preexisting network along potential fiber routes”; and (3) “TDS CLEC must incur much higher equipment and fiber splicing costs than TDS ILEC when deploying new fiber.”¹⁰⁶ Similarly, Windstream, which also operates both incumbent LEC and competitive LEC businesses, has found that “ILECs continue to enjoy a dramatic advantage over CLECs in the average cost per building of new last-mile fiber deployment – an advantage that is largely attributable to the incumbents’ much larger market shares, which is a direct result of the ILEC first mover advantage rooted in the monopoly era.”¹⁰⁷

In addition to these inherent cost advantages, the incumbent LECs are often able to coerce their competitors into paying for the construction of new fiber loops through largely unregulated special construction charges. As INCOMPAS has explained, incumbents impose these charges on competitive LECs under a broad range of circumstances, including instances where the incumbents plan to provide service to customers other than the competitive LEC over

¹⁰⁵ TDS Declaration ¶ 7.

¹⁰⁶ *Id.* ¶¶ 8-12.

¹⁰⁷ Letter from Jennie B. Chandra, Vice President – Public Policy and Strategy, Windstream Corporation, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 13-5, 12-353, WC Docket Nos. 05-25, 15-1, RM-10593, at 2 (June 8, 2015); *see also id.* at 6 (“To support a build-out, CLECs must recover the costs for new infrastructure, including buried conduit, rights of way and pole access, and building entry portals and equipment rooms” (which the incumbents already possess) and “also may be charged for building entries in instances where the ILEC is not”).

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the facilities being deployed.¹⁰⁸ Thus, competitors are effectively forced to subsidize the incumbents' network deployments. This not only reduces the incumbents' cost of deployment but also drives competitors' costs even higher, further impairing their ability to compete for retail customers.¹⁰⁹

Moreover, incumbent LECs face lower investment risk and customer acquisition costs than competitors when deploying fiber facilities. This is in part because, even as the transmission medium changes, the incumbents “still enjoy an established customer base” from which they can be confident they will attain revenues to offset the cost of deployment.¹¹⁰ As discussed further below, the incumbents also exploit competitive LECs' need to gain relief from DSn lock-up provisions as a means of locking up future demand for Ethernet.¹¹¹ By requiring competitors to commit their Ethernet purchases to the incumbents, the incumbents gain greater certainty that they will not lose these customers to an alternative provider as customer demands

¹⁰⁸ See Comments of COMPTTEL, PS Docket No. 14-174, GN Docket No. 13-5, RM-11358, WC Docket No. 05-25, RM-10593, WC Docket No. 15-1, at 35-36 (filed Feb. 5, 2015) (“Competitive LECs are increasingly observing the imposition of unwarranted and/or excessive special construction charges being used as an opportunity to impose de facto last-mile price increases. For example, competitive LECs have been required to enter into special construction arrangements on the basis that the copper facilities are not available, even though it appears that the retail customer requesting service is currently using the copper facilities (through service from the incumbent) to which the competitive LEC seeks wholesale access to replace the incumbent. In other cases, competitive LECs—on the alleged grounds that their orders trigger a new build-out—have been charged special construction for network delivery infrastructure that are engineered to support capacity for multiple carriers.”).

¹⁰⁹ See, e.g., Letter from Jennie B. Chandra, Vice President – Public Policy and Strategy, Windstream Corporation, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 13-5, 12-353, WC Docket Nos. 05-25, 15-1, RM-10593, at 3 (June 8, 2015) (estimating the impact of special construction charges on demand for Windstream's retail services).

¹¹⁰ *TRO* ¶ 276.

¹¹¹ See *infra* Section II.F.

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evolve from DS1s and DS3s to Ethernet. This further reduces the incumbents' investment risk and enables them to deploy fiber under a broader range of conditions.

Due to these advantages, the incumbents are able to deploy fiber more quickly and on a much larger scale than cable companies and competitive LECs. For example, AT&T has deployed fiber to over 950,000 business locations within the last several years alone as part of "Project VIP."¹¹² Unsurprisingly, all of these business locations are located within AT&T's current wireline footprint, where it possesses these advantages, rather than out-of-market where it would face greater barriers to deployment.¹¹³ It is simply not possible for any competitor to deploy fiber loops on this scale. Thus, while the incumbent LECs' network facilities reach essentially every location, to the extent that an incumbent may need to upgrade an existing copper or hybrid loop facility to a fiber loop facility in order to meet a customer's service demands, the incumbent LEC is likely to be able to do so in a timely and sufficient manner to serve the customer's needs.

F. Elasticity of Supply and Demand

As the Commission has explained, "[i]t is well-established that supply and demand elasticities are properly considered in assessing whether a firm has market power in the relevant

¹¹² See Sean Buckley, *AT&T Extends Fiber to Over 950K Business Locations, Enhances On-Demand Ethernet Reach*, Fierce Telecom (Mar. 26, 2015), <http://www.fiercetelecom.com/story/att-extends-fiber-over-950k-business-locations-enhances-demand-ethernet-rea/2015-10-22>.

¹¹³ See Sean Buckley, *AT&T's \$14B Project VIP: breaking out the business services, U-verse numbers*, Fierce Telecom (Sept. 24, 2013), <http://www.fiercetelecom.com/special-reports/atts-14b-project-vip-breaking-out-business-service-u-verse-numbers> ("We've installed fiber and electronics to thousands of multi-tenant buildings, making fiber services available to tens of thousands of business customer locations, across our 22-state wireline service area.").

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product and geographic markets.”¹¹⁴ Elasticity of demand measures the responsiveness of the demand for a product to a change in the product’s price.¹¹⁵ The lower a firm’s elasticity of demand, the greater its ability to profitably set prices above the competitive level.¹¹⁶ A firm’s elasticity of demand depends in part on its competitors’ elasticities of supply, which measure their ability to supply additional units in response to an increase in the market price.¹¹⁷ All else being equal, a firm whose competitors are less able to do so will be more able to sustain supracompetitive prices.¹¹⁸

¹¹⁴ *Motion of AT&T Corp. to be Reclassified as a Non-Dominant Carrier*, Order, 11 FCC Rcd. 3271, ¶ 57 (1995) (subsequent history omitted).

¹¹⁵ William Landes & Richard Posner, *Market Power in Antitrust Cases*, 94 Harv. L. Rev., 937, 940 n.8 (1981) (“[A] sufficiently close approximation . . . is that it is the percentage change in quantity brought about by a one percent change in price.”).

¹¹⁶ *Id.* at 941 (“[T]he higher the elasticity of demand for the firm’s product at the firm’s profit-maximizing price, the closer that price will be to the competitive price, and the less, therefore, the monopoly overcharge will be.”); *id.* at 945 (“A high market elasticity of demand implies that there are good substitutes for the product the industry sells, and the existence of such substitutes limits the firm’s market power.”).

¹¹⁷ *Id.* at 944 n.17 (“Elasticity of supply can be defined as the percentage increase in quantity supplied in response to a one percent change in price. It is positive (rather than negative, as is the elasticity of demand) because firms produce more when the market price is high.”); *see also Competition in the Interstate Interexchange Marketplace*, Report and Order, 6 FCC Rcd 5880, ¶ 43 (1991) (“There are two factors that determine supply elasticities in a marketplace. One is the supply capacity of existing competitors: if existing competitors have or can relatively easily acquire significant additional capacity, then supply elasticities tend to be high. The other factor is low entry barriers: even if existing suppliers lack excess capacity, supply elasticities tend to be high if new suppliers can enter the market relatively easily and add to existing capacity.”).

¹¹⁸ *Id.* at 945 (“The higher the elasticity of supply of the competitive fringe, other things constant, the higher the elasticity of demand facing firm *i* will be and hence the smaller its market power. A high supply elasticity means that a small price increase will lead to a large increase in the output of the competitive fringe. Therefore, to maintain a given price increase, firm *i* must reduce its output by a greater amount the greater the supply elasticity of the fringe. At an extreme, if that elasticity were infinite in the relevant range, the elasticity of demand facing firm *i* would also be infinite and *i* would have no market power.”).

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In dedicated services markets, the incumbent LECs’ lock-up plans prevent buyers that purchase dedicated services from the incumbents from switching providers, thereby reducing the addressable market available to competitors.¹¹⁹ These plans, in combination with the barriers to deployment of competitive facilities discussed above and other factors, result in low elasticities of demand for the incumbent and low elasticities of supply for competitors.

The attached declaration of Gary Black of Level 3 details how these factors have limited Level 3’s ability to switch purchases away from the incumbents. As Mr. Black states, “because competitive LECs do not serve many locations, and because Level 3 is bound by the terms and conditions in incumbent LEC lock-up plans, Level 3 has no choice but to purchase a significant majority of its dedicated services requirements from incumbent LECs.”¹²⁰ Because Level 3 “must usually purchase a large percentage of its overall dedicated services requirements from the incumbent LEC in order to meet its volume commitment to the incumbent LEC,” Level 3 is often unable to purchase dedicated services from competitive providers even where they offer such services at better rates.¹²¹ For example, in order to meet its volume commitments to **[BEGIN HIGHLY CONFIDENTIAL]** **[END HIGHLY CONFIDENTIAL]**, Level 3 purchases dedicated services from **[BEGIN HIGHLY CONFIDENTIAL]** **[END HIGHLY CONFIDENTIAL]** in locations where it would prefer to purchase those services from competitive LECs.¹²² In particular, “Level 3 pays **[BEGIN HIGHLY CONFIDENTIAL]**

¹¹⁹ See Comments of BT Americas Inc., Cbeyond Communications, LLC, EarthLink, Inc., Integra Telecom, Inc., Level 3 Communications, LLC and tw telecom inc., WC Docket No. 05-25, RM-10593, at 20-42 (filed Feb. 11, 2013).

¹²⁰ Black Lock-Up Decl. ¶ 3.

¹²¹ *Id.* ¶ 14.

¹²² *Id.* ¶ 16.

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[END HIGHLY CONFIDENTIAL] approximately \$103 million per year for dedicated services at the locations where competitive LECs have offered to serve Level 3, but Level 3 would only pay competitive carriers approximately \$86 million per year for those same dedicated services.”¹²³ Because the penalties that Level 3 would incur by switching providers would far exceed these potential savings, Level 3 has “foregone purchasing dedicated services from competitive LECs at the locations in question.”¹²⁴

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¹²⁶ **[END HIGHLY CONFIDENTIAL]**

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¹²³ *Id.*

¹²⁴ *Id.*

¹²⁵ *Id.* ¶ 17.

¹²⁶ *Id.*

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¹³¹ [END HIGHLY CONFIDENTIAL]

In addition, while some purchasers identified instances in which they have been able to switch providers of transport services (as opposed to channel terminations), the incumbent LECs' business practices impose limits on buyers' ability to make these changes. [BEGIN HIGHLY CONFIDENTIAL]

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¹³¹ [BEGIN HIGHLY CONFIDENTIAL]

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¹³⁵ [END HIGHLY CONFIDENTIAL]

The effects of the lock-up plans are not by any means limited to TDM-based dedicated services. The incumbents use their lock-up plans to control the pace of the transition from DS_n-based dedicated services to Ethernet-based dedicated services. As Mr. Black explains, “[t]he volume commitments in incumbent LEC tariffs . . . generally prevent Level 3 from counting its Ethernet dedicated services purchases toward those volume commitments.”¹³⁶ Thus, Level 3 and other carriers run the risk of incurring substantial shortfall penalties if they attempt to upgrade from DS_n-based services to Ethernet-based services.¹³⁷ Likewise, [BEGIN HIGHLY CONFIDENTIAL]

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¹³⁴ [BEGIN HIGHLY CONFIDENTIAL]
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¹³⁶ Black Lock-Up Decl. ¶ 28.

¹³⁷ *Id.*

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When the incumbents do permit buyers to switch to Ethernet-based services, they often require them to purchase these services from the incumbents themselves rather than from competitive providers. For example, **[BEGIN HIGHLY CONFIDENTIAL]**

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[END HIGHLY CONFIDENTIAL]

The incumbents also “use new volume commitments in overlay agreements to lock up the market for Ethernet dedicated services.”¹⁴⁰ As explained in Mr. Black’s declaration, **[BEGIN HIGHLY CONFIDENTIAL]**

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¹⁴⁰ Black Lock-Up Decl. ¶ 27.

¹⁴¹ *Id.*

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HIGHLY CONFIDENTIAL] By pressuring buyers into commercial agreements of this kind, the incumbents threaten to stifle the increased competition that might otherwise result from the technology transition.

G. Application of these Factors Demonstrates that the Incumbent LECs have Substantial and Persisting Market Power in The Provision of Dedicated Services

Each of the factors in the market power test discussed above supports the conclusion that incumbent LECs have market power in the provision of dedicated services. As explained, the incumbent LECs' networks reach essentially every location where customers demand dedicated services. They can serve business customers over those network facilities while benefitting from economies of scale and scope that their competitors cannot hope to achieve. In cases where incumbent LECs need to upgrade their loop facilities, for example from copper to fiber, they can do so at lower cost and at lower risk than is the case for competitive LECs. Competitive LECs, meanwhile, cannot serve most locations where customers demand dedicated services over their own network facilities. They must serve most such locations by leasing incumbent LEC loop facilities, which places competitive LECs in a comparatively weak position.

The data filed in response to the mandatory data request shows that incumbent LECs face little or no competition in most customer locations. The incumbent LECs continue to own the only connection serving most of the locations where business customers demand dedicated services. This stranglehold over the connection to the end user is the source of the incumbent LECs' enduring market power, and there is no prospect that it will abate in the foreseeable future.

In fact, the barriers associated with loop deployment indicate that it is unlikely that the incumbent LEC prices are disciplined to any significant degree by the presence of a competitor

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with fiber transport facilities near to a customer location. This is true of traditional competitive LECs and cable companies alike. Moreover, to the extent loop deployment might be possible, the incumbent LECs have used lock-up plans to limit customers' willingness to purchase dedicated services offered over such newly-deployed loop facilities.

In sum, as Dr. Baker explains, “[t]he structure of dedicated service markets indicates that ILECs are likely able to exercise market power in most markets, and would be expected to charge prices above competitive levels unless prevented by regulation.”¹⁴² As explained below, an analysis of the pricing data submitted in response to the mandatory data request confirms that the incumbent LECs are doing exactly that.

H. Econometric Analysis Confirms that Incumbent LECs are able to Exercise Market Power.

While the foregoing structural analysis of dedicated services is a fully sufficient basis upon which to classify incumbent LECs as dominant in the provision of those services, that conclusion is further supported by econometric analysis performed by Dr. Baker of the pricing data submitted in response to the mandatory data request. Dr. Baker utilized regression analysis to assess the extent to which the presence of facilities-based competitors serving a location or within a half of a mile of a location affects the prices charged for dedicated services. Dr. Baker found that there is in fact, on average, **[BEGIN HIGHLY CONFIDENTIAL]**

¹⁴² Baker Decl. ¶ 107.

¹⁴³ *Id.* ¶ 57.

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¹⁴⁴ *Id.* ¶ 63.

¹⁴⁵ *Id.* ¶ 57.

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Taken together, these findings indicate that, **[BEGIN HIGHLY CONFIDENTIAL]**

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In any event, **[BEGIN HIGHLY CONFIDENTIAL]**

¹⁴⁶ *Id.* ¶ 58.

¹⁴⁷ *Id.* ¶ 63.

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[END HIGHLY CONFIDENTIAL] First, it is unlikely that the observable customer characteristics in the data submitted in response to the mandatory data request adequately control for a number of factors observable to competitive carriers that may affect customer willingness to pay, such as the number of customer locations, type of business, character of managed services purchased, and past purchases of dedicated service.¹⁴⁸ Because competitive carriers are more likely to enter and compete for the customers that have the highest willingness to pay for dedicated services (holding constant entry costs), the inability to reliably identify the customers that are most willing to pay high prices for dedicated services [BEGIN HIGHLY CONFIDENTIAL]

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To illustrate this problem, Dr. Baker uses the hypothetical of two types of customers. Type A customers are willing to pay 20 with only one firm seeking their business, and 16 if two firms are seeking their business.¹⁴⁹ Type B customers are only willing to pay 14 with one competing firm and 13 with two competing firms. The competitive price for providing the dedicated services is 10. In this example, a competitive LEC that understands the customers' demand levels will target Type A customers because it can earn a profit of 6 as the second competitor by serving A but only a profit of 3 as the second competitor by serving B. After the competitive LEC has entered to serve A, but not B, A will pay 16 and B will still pay 14. If the econometrician cannot control for the difference between the demand characteristics of Type A

¹⁴⁸ *Id.* ¶¶ 69-70.

¹⁴⁹ *Id.* ¶¶ 71-74.

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and Type B, regressions will result in the conclusion that an increase in the number of competitors from one to two results in an increase in price (from 14 to 16). The unobserved difference in customer demand will mask the true nature of the relationship between the number of competitors and price.

Second, competitive LECs may have high unobservable marginal costs of expansion that prevent them from competing effectively against an incumbent LEC. As Dr. Baker explains, competitive LECs may have high marginal costs of expansion where many customers require service at many locations and competitors must lease dedicated services from the incumbent LEC to serve a large percentage of the connections.¹⁵⁰ An incumbent LEC would have the incentive to set prices high for these leased connections relative to the retail price. In this situation, a competitive LEC might be not able to serve the subset of locations of the multi-location customers where the competitor has deployed loop facilities because the costs associated with reaching the off-net locations are extremely high. The competitive LEC would seem to be an in-building competitor for the locations it can serve with its own loops, but its presence in the building would have little or no effect on the incumbent LEC's retail price at that location.

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Third, the prices for dedicated services that competitive LECs reported in situations where they provide managed services (*i.e.*, dedicated services combined with other services like

¹⁵⁰ *Id.* ¶¶ 76-79.

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internet access, voice, etc.) are likely higher than they ought to be. As Dr. Baker explains, competitive LECs have an incentive to quote a high price for the dedicated service component of a managed service because the customer may drop all of the services in the bundle except the dedicated service at the end of its contract, and the quoted price for the dedicated service component would be the departure point for renewal negotiations.¹⁵¹ This factor would discourage a provider of dedicated services from attributing *a pro rata* or even partial portion of a discount offered to a customer of a bundled service offering to the dedicated service component of the offering. Thus, as competitors grant increasingly large discounts to customers of bundled service offerings, those discounts will not necessarily be reflected in the billing data. Dr. Baker was unable to control for this factor.

Fourth, Dr. Baker points out that, where incumbent LECs serve customers with multi-year contracts, the price recorded in the data will not reflect the competitive effects of additional rivals during the term of the contract.¹⁵² The incumbent LEC would have no reason to lower the price charged to a customer who is in the middle of a multi-year contract, even if a competitor is able to serve the customer and would do so for a lower price than the customer is paying the incumbent LEC. The incumbent LEC would only lower the price at the end of the contract, in response to the competitor's offer at that time. But for customers still in the middle of multi-year contracts during 2013, when the pricing data was gathered, the incumbent LEC's price would appear to be unaffected by competitive entry. The only way to address this problem is to use a time series of data, but that is not available here. Moreover, as Dr. Baker points out, this

¹⁵¹ *Id.* ¶¶ 86-89.

¹⁵² *Id.* ¶¶ 90-92.

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dynamic likely significantly affected the results of the regressions because **[BEGIN HIGHLY CONFIDENTIAL]**

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While the foregoing situations could significantly affect the results of regressions for retail and wholesale prices, Dr. Baker also identified two situations that would affect primarily wholesale prices. First, although Dr. Baker did not observe an **[BEGIN HIGHLY CONFIDENTIAL]**

[END HIGHLY CONFIDENTIAL] could well be due to the effect of incumbent LECs' lock-up plans and their wholesale pricing policies. As Dr. Baker observes, and as explained above, a competitive LEC may not switch a wholesale dedicated service from an incumbent LEC to a lower-priced competitive LEC alternative because doing so will cause the wholesale buyer to incur a penalty that is larger than the cost savings associated with the lower-priced wholesale offering. Thus, as Dr. Baker explains,

A CLEC's disincentive to switch away from an ILEC may also inhibit the incentive of other providers to offer discounts to induce the CLEC to do so. Hence the price of wholesale circuits would tend not to decline as the number of rivals grows even if prices are above competitive levels and even if prices would be inversely related to the number of rivals in the absence of penalty clauses and loyalty discounts. **[BEGIN HIGHLY CONFIDENTIAL]**

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¹⁵³ *Id.* ¶ 92.

¹⁵⁴ *Id.* ¶ 93.

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In addition, Dr. Baker explains that incumbent LECs often set their wholesale prices at the same level for all buildings within a particular category, which might be defined as a geographic area or some other classification.¹⁵⁵ This policy of setting uniform prices across many locations means that incumbent LECs’ wholesale prices tend not to be influenced significantly by rivalry. As Dr. Baker explains, the best way to measure the effect of entry on a firm with such pricing practices is to use time series data. **[BEGIN HIGHLY CONFIDENTIAL]**

¹⁵⁶ **[END HIGHLY CONFIDENTIAL]**

III. THE EXISTING REGULATORY FRAMEWORK IS INSUFFICIENT TO CONSTRAIN INCUMBENT LECs’ EXERCISE OF MARKET POWER.

The FCC’s existing regulatory framework for Ethernet-based and DSn-based dedicated services is flawed in numerous ways. As a result of these flaws, the existing regime does not effectively constrain the incumbent LECs’ ability to abuse their market power.

First, due to the Commission’s forbearance decisions (and, in some cases, non-decisions), the major incumbent LECs are not subject to dominant carrier regulation in the provision of certain Ethernet-based dedicated services even though there is no basis for concluding that the incumbent LECs lack market power in the provision of such services. In late 2004, Verizon filed a petition for forbearance from the application of all “Title II common carriage requirements” and “*Computer Inquiry* rules” to certain of its Ethernet-based services.¹⁵⁷

¹⁵⁵ *Id.* ¶ 94.

¹⁵⁶ *Id.*

¹⁵⁷ Petition of the Verizon Telephone Companies for Forbearance under 47 U.S.C. § 160(c) from Title II and *Computer Inquiry* Rules with Respect to Their Broadband Services, WC Docket No. 04-440 (filed Dec. 20, 2004). Verizon originally requested this forbearance for “any broadband services offered by Verizon.” *Id.* at 1. However, it subsequently clarified that its request

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Although Verizon offered virtually no factual support for this request, its petition was deemed granted because the Commission failed to issue a written decision by the statutory deadline.¹⁵⁸

As a result of the deemed grant, the Verizon services that were the subject of the petition are not subject to even the limited common carrier obligations, such as the duties to offer services on just, reasonable, and not unjustly or unreasonably discriminatory rates, terms, and conditions under Sections 201(b) and 202(a), that apply to non-dominant competitive LEC Ethernet-based dedicated services.

Shortly thereafter, AT&T, legacy Embarq, Frontier, and legacy Qwest each filed petitions seeking “relief comparable to the relief granted [to] Verizon through that deemed grant.”¹⁵⁹ In

pertained to 10 specific services, including several Ethernet-based services. *See* Letter from Edward Shakin, Vice President and Associate General Counsel, Verizon, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 04-440, Attach. 1 (filed Feb. 7, 2006) (“List of Broadband Services for Which Verizon Is Seeking Forbearance”); *see also* *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*; *Petition of BellSouth Corporation for Forbearance Under Section 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to Its Broadband Services*, Memorandum Opinion and Order, 22 FCC Rcd. 18705, ¶ 14 n.59 (2007) (“Verizon restricted its forbearance request to ten of its then-existing telecommunications services offerings.”). Verizon explained that these services fell within two categories: (1) “packet-switched services capable of 200 kbps in each direction” (including “Frame Relay services, ATM services, IP-VPN services, and Ethernet services”) and (2) “non-TDM based optical networking, optical hubbing, and optical transmission services.” *See* Letter from Edward Shakin, Vice President and Associate General Counsel, Verizon, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 04-440, at 2-3 (filed Feb. 7, 2006).

¹⁵⁸ *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).

¹⁵⁹ *See* *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*; *Petition of BellSouth Corporation for Forbearance Under Section 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to Its Broadband Services*, Memorandum Opinion and Order, 22 FCC Rcd. 18705, ¶ 1 (2007) (“AT&T Forbearance Order”); *Petition of the Embarq Local Operating Companies for Forbearance Under 47 U.S.C. § 160(c) from Application of Computer Inquiry*

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its evaluation of these “me too” petitions, the Commission conducted only minimal analysis. It failed to define relevant product or geographic markets and calculate market shares, opting instead to “consider marketplace conditions for these services broadly” and to rely on vague predictive judgments about the development of competition in the future.¹⁶⁰ Based on this faulty analysis, the Commission granted the incumbents forbearance from, among other things, the tariff filing, cost support, and pricing requirements applicable to the incumbents’ Ethernet-based dedicated services offered at the time of the forbearance grant.¹⁶¹ The Commission denied forbearance with regard to Sections 201, 202, and 208.¹⁶² The Commission also stated that forbearance would not apply to Ethernet-based special access services introduced by the incumbent LECs after the grant of forbearance.¹⁶³

More recently, CenturyLink filed a petition requesting similar relief for certain Ethernet-based services in the portions of its service area where it had not yet obtained forbearance. The Commission requested thorough supporting information from CenturyLink, indicating that it planned to conduct a more economically sound analysis of CenturyLink’s request than it had of

and Certain Title II Common-Carriage Requirements; Petition of the Frontier and Citizens ILECs for Forbearance Under Section 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to Their Broadband Services, Memorandum Opinion and Order, 22 FCC Rcd. 19478, ¶ 1 (2007); *Qwest Petition for Forbearance Under 47 U.S.C. § 160(c) from Title II and Computer Inquiry Rules with Respect to Broadband Services*, Memorandum Opinion and Order, 23 FCC Rcd. 12260, ¶ 1 (2008).

¹⁶⁰ See, e.g., *AT&T Forbearance Order* ¶¶ 20-25.

¹⁶¹ See, e.g., *id.* ¶ 12.

¹⁶² See, e.g., *id.* ¶¶ 35-36.

¹⁶³ See, e.g., *id.* ¶ 40 (“Our forbearance grant is restricted to broadband services that AT&T currently offers and lists in its petitions.”).

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the other incumbents' requests.¹⁶⁴ Apparently recognizing that any such analysis would result in denial of its request, CenturyLink withdrew its petition shortly thereafter. However, CenturyLink subsequently re-filed essentially the same petition in 2014, and it was deemed granted when the Commission failed to issue a decision by the statutory deadline.¹⁶⁵ The deemed grant applies to the specific services listed in CenturyLink's petition and, like the other grants of forbearance, does not apply to any other services that CenturyLink may offer in the future.¹⁶⁶

The result of these actions (and inactions) is that the major incumbent LECs are now free from tariffing, pricing, and other requirements for the Ethernet-based dedicated services for which they obtained forbearance. Thus, there are virtually no constraints on their ability to exercise their power in the product and geographic markets for these services. In addition, the FCC's actions have produced a regulatory regime for Ethernet-based services that is extremely inconsistent. Because the Commission's grants of forbearance apply only to the services that the incumbents offered at the time of the grants, any Ethernet-based services introduced after that time are not subject to forbearance relief. In addition, the Ethernet-based services for which Verizon obtained forbearance are not even subject to the basic common carrier duties that apply to all other providers' Ethernet-based services. The result is an incoherent patchwork that yields

¹⁶⁴ Letter from Julie A. Veach, Chief, Wireline Competition Bureau, FCC, to Craig J. Brown, Associate General Counsel, CenturyLink, Inc., 28 FCC Rcd. 2090, at 1 (2013)

¹⁶⁵ See FCC News Release, *CenturyLink's Petition for Forbearance from Dominant Carrier Regulation and the Computer Inquiry Tariffing Requirement with Respect to its Enterprise Broadband Services Is Granted by Operation of Law*, WC Docket No. 14-9 (rel. Mar. 16, 2015).

¹⁶⁶ See CenturyLink Petition for Forbearance, WC Docket No. 14-9, Attach. 1 (filed Dec. 13, 2013).

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excessive and unpredictable prices, impedes the development of competition, and harms the public.

Second, the Commission’s failure to update its price cap regime for DSn-based dedicated services has left the price caps for these services too high. The Commission adopted the CALLS proposal in 2000 as an “interim” solution to govern dedicated service rates for a five-year period.¹⁶⁷ It hoped that this period would serve as a transition to a time when effective competition would govern the incumbents’ rates, but it recognized that there was “no guarantee that, at the end of the CALLS Proposal’s five-year term, competition will exist to such a degree that deregulation of access charges for price cap LECs is the next logical step.”¹⁶⁸ Accordingly, it committed to “re-examine the issue [at that time] to determine whether competition has emerged to constrain rates effectively.”¹⁶⁹

The Commission initiated this proceeding to conduct such a reexamination so that it could “ensure that rates for special access services remain just and reasonable after the expiration of the CALLS plan.”¹⁷⁰ Given the harms that would result if the Commission failed to achieve this goal, the Commission sought comment on whether it “should adopt any interim requirements in the event that the Commission is unable to conclude this NPRM in time for any adopted rule

¹⁶⁷ See *Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers; Low-Volume Long-Distance Users; Federal-State Joint Board On Universal Service*, Sixth Report and Order in CC Docket Nos. 96-262 and 94-1, Report and Order in CC Docket No. 99-249, Eleventh Report and Order in CC Docket No. 96-45, 15 FCC Rcd. 12962, ¶ 57 (2000).

¹⁶⁸ *Id.* ¶ 35.

¹⁶⁹ *Id.* ¶ 166; see also *id.* ¶ 170 (“[T]he rates will remain at the target rates until July 1, 2005, at which time the Commission will re-examine them.”).

¹⁷⁰ 2005 *Special Access NPRM* ¶ 2.

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changes to be implemented in the 2005 annual tariff filings.”¹⁷¹ Of course, the Commission did not conclude the proceeding before the 2005 annual tariff filings, and it did not adopt any interim requirements to govern special access rates.

Ten years later, the proceeding still remains pending, and price caps remain essentially frozen at the levels they were at upon the expiration of the CALLS plan in 2005.¹⁷² This is problematic because the incumbents have likely achieved significant productivity gains, and thus significant cost savings, since that time. Effective competition, which would give the incumbents the incentive to pass some of these savings on to their customers, has not developed. Thus, the incumbents have maintained their rates for DS_n-based dedicated services at unreasonably high levels despite their declining costs, and in so doing, have reaped enormous windfalls.

Third, due to relief granted under the Commission’s flawed and now-suspended pricing flexibility triggers for DS_n-based dedicated services, the incumbents are able to enter into individually tailored agreements and price these services above price cap levels in areas where they do not face effective competition. In the 1999 *Pricing Flexibility Order*, the FCC explained that, if granted prematurely, this flexibility “might enable price cap LECs to (1) exclude new

¹⁷¹ *Id.* ¶ 6.

¹⁷² Since 2003, the special access X-factor has been set equal to a measure of inflation, essentially freezing rates, but price cap carriers have retained the ability to adjust their price cap indices to account for changes in exogenous costs. *See* 47 C.F.R. § 61.45(b)(1)(iv) (“Starting in the 2004 annual filing, X shall be equal to GDP-PI for the special access basket.”); *id.* § 61.45(a) (“Price cap local exchange carriers shall file adjustments to the PCI for each basket as part of the annual price cap tariff filing, and shall maintain updated PCIs to reflect the effect of mid-year exogenous cost changes.”).

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entrants from their markets, or (2) increase rates to unreasonable levels.”¹⁷³ Accordingly, it conditioned the grant of Phase I and Phase II pricing flexibility on the satisfaction of competitive triggers designed to determine when there was sufficient facilities-based competition in an MSA to deter such behavior.¹⁷⁴ Based on these triggers, the incumbents obtained Phase I and Phase II pricing flexibility in a large number of MSAs across the country.¹⁷⁵

In 2012, the Commission found that the triggers were “not working as predicted.”¹⁷⁶ Specifically, it determined that “contrary to the Commission’s prediction in 1999, MSAs have generally failed to reflect the scope of competitive entry”¹⁷⁷ and that “[e]vidence submitted to the Commission since 1999 calls into question the Commission’s prediction that collocators would eventually build their own channel terminations to end users.”¹⁷⁸ Given these findings, the Commission concluded that “it would not serve the public interest to allow continued grants of pricing flexibility” and suspended operation of the triggers on a forward-looking basis.¹⁷⁹ It did not, however, reverse the many grants of Phase I and Phase II pricing flexibility that the

¹⁷³ *Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers; Interexchange Carrier Purchases of Switched Access Services Offered by Competitive Local Exchange Carriers; Petition of US West Communications, Inc. for Forbearance from Regulation as a Dominant Carrier in the Phoenix, Arizona MSA*, Fifth Report and Order and Further Notice of Proposed Rulemaking, 14 FCC Rcd. 14221, ¶ 68 (1999), *aff’d*, *WorldCom Inc. v. FCC*, 238 F.3d 449 (D.C. Cir. 2001).

¹⁷⁴ *Id.*

¹⁷⁵ *Pricing Flexibility Suspension Order*, App. D (listing the markets subject to Phase I and Phase II pricing flexibility).

¹⁷⁶ *Id.* ¶ 3.

¹⁷⁷ *Id.* ¶ 35.

¹⁷⁸ *Id.* ¶ 68.

¹⁷⁹ *Id.* ¶ 76.

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incumbents had already received. Thus, the incumbents remain free to enter into individually tailored agreements or increase their rates above price cap levels in these MSAs even though there is no reason to believe that they face competition in large portions of these areas.

Fourth, the Commission has failed to adopt rules to prevent the incumbent LECs from abusing and reinforcing their market power by imposing lock-up agreements on purchasers of dedicated services. The FCC has recognized that “market power can . . . be exercised through exclusionary conduct” effected through “the terms and conditions contained in a carrier’s tariff offering.”¹⁸⁰ In the past, it has “found that some large discounts might be anticompetitive or raise questions of discrimination,” “prohibited price cap LECs from incorporating growth discounts into their tariffs,” and “limited the termination liabilities that carriers may include in their tariffs.”¹⁸¹ Nevertheless, the current regulatory regime permits the incumbents to impose lock-up agreements that contain large prior-purchase-based volume commitments and other terms and conditions that deter competitive entry and slow the transition to Ethernet-based services. As discussed above, the incumbents have taken full advantage of this lack of regulation.¹⁸² The Wireline Competition Bureau has concluded that “the record raises sufficient questions regarding the lawfulness” of the incumbents’ terms and conditions “to warrant their investigation.”¹⁸³ Until the Commission acts, however, the incumbents remain free to impose

¹⁸⁰ *2005 Special Access NPRM* ¶ 114.

¹⁸¹ *Id.* ¶ 115.

¹⁸² *See supra*, Section II.F.

¹⁸³ *Investigation of Certain Price Cap Local Exchange Carrier Business Data Services Tariff Pricing Plans*, Order Initiating Investigation and Designating Issues for Investigation, 30 FCC Rcd. 11417, ¶ 21 (2015).

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and enforce their lock-up agreements to the detriment of competition and business customers nationwide.

IV. THE COMMISSION MUST PROMPTLY ADOPT MEANINGFUL CONSTRAINTS ON ILEC ABUSE OF MARKET POWER IN RELEVANT DEDICATED SERVICES MARKETS.

As discussed above, it is clear that incumbent LECs possess market power in the provision of dedicated services across the country, yet the existing regulatory regime is insufficient to prevent them from abusing this market power. The available evidence indicates that incumbents have taken advantage of this situation by setting rates above competitive levels and imposing terms and conditions that reduce competition. The FCC has a duty to ensure that carriers' rates, terms, and conditions for telecommunications services are just, reasonable, and not unjustly or unreasonably discriminatory.¹⁸⁴ Accordingly, it is imperative that the FCC adopt reforms to its regulatory regime to ensure that the incumbents, rates, terms, and conditions for both DSN-based and Ethernet-based dedicated services meet these standards.

First, the Commission should adopt a presumption that the incumbent LECs' control over connections to end users gives them market power in all relevant dedicated services markets. This is essentially the approach the Commission has utilized since the Competitive Carrier rulemaking proceedings, and it continues to make sense given the overwhelming percentage of customer locations to which the incumbent LEC has the only connection.¹⁸⁵ Of course, an incumbent LEC would be free to seek to demonstrate in a forbearance petition that it no longer has market power in a relevant dedicated services market, but it would bear the burden of proving that this is the case.

¹⁸⁴ 47 U.S.C. §§ 201-202.

¹⁸⁵ See *Competitive Carrier Order* ¶ 60 n.55.

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Second, the Commission should declare the volume commitments in the incumbent LEC lock-up plans to be unlawful, or, alternatively, the Commission should adopt a rule that prior purchase-based commitments cannot exceed 50 percent of a customer’s historic spend with the incumbent LEC and that packet-based services must count toward such commitments.

Addressing this issue would jumpstart the process of bringing competition to the dedicated services marketplace by removing the artificial barrier to customer purchases of lower-priced competitive carrier dedicated services. The resulting increase in sales would accelerate the deployment of fiber connections and fiber transport facilities, resulting in larger competitive carrier networks. American businesses would reap the benefits of more competition, lower prices, and increased innovation.

Third, the Commission should bring dedicated services that are not currently subject to price caps (*e.g.*, Phase II price flex DSn and Ethernet-based dedicated services) within the price cap regime. To do so, the Commission would need to attribute prices to those services for purposes of establishing the appropriate PCI for the special access basket.¹⁸⁶ The Commission has wide discretion in determining these prices. For example, the Commission could attribute to Phase II price flex DSn special access services the same prices attributed to DSn services already governed by price caps or prices for comparable UNEs. And for the Ethernet-based dedicated service prices needed to establish the PCI, the Commission could use existing Ethernet-based service prices charged by competitive LECs. The Commission could also use the Ethernet special access rates set forth in the National Exchange Carrier Association (“NECA”) Tariff 5 for

¹⁸⁶ See *Policy and Rules Concerning Rates for Dominant Carriers*, Second Report and Order, 5 FCC Rcd. 6786, ¶ 230 (1990) (“*LEC Price Cap Order*”) (using existing LEC interstate access rates to initiate price caps).

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this purpose.¹⁸⁷ If those rates are reasonable for high-cost NECA carriers, they can be presumed to be reasonable for price cap incumbent LECs. Regardless of which of these methods the Commission chooses, however, it can ensure that the resulting rates are reasonable as to all affected carriers by granting the incumbents the right to set the rates for the PCI pursuant to a forward-looking cost study. Bringing services within the price cap regime in this manner would prevent the incumbents from charging supracompetitive rates in markets where they do not face effective competition.

Fourth, the Commission should reduce the PCI for the special access basket to a level that ensures reasonable prices. The Commission can make such a reduction based on evidence that incumbent LECs have experienced, and continue to experience, a windfall (*i.e.*, because incumbent LECs' productivity gains have surpassed those of the economy as a whole and the Commission's X-factor has failed to capture those productivity gains). The Commission has taken similar steps in the past. In 1995, the Commission found that, because the productivity factor that it had selected was "lower than the actual difference between LEC productivity and that of the economy as a whole," the price cap formula that was in place at that time "was less favorable to ratepayers, and more favorable to shareholders, than [the FCC] intended."¹⁸⁸ To account for this discrepancy, the Commission implemented "[a] one-time reduction in LEC PCIs."¹⁸⁹

¹⁸⁷ See Comments of COMPTTEL, WC Docket No. 05-25, RM-10593, 10-11 & App. A (filed Apr. 16, 2013).

¹⁸⁸ *Price Cap Performance Review for Local Exchange Carriers*, First Report and Order, 10 FCC Rcd. 8961, ¶ 246 (1995) ("*LEC Price Cap Performance Review Order*").

¹⁸⁹ *Id.*

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Fifth, the Commission should adopt a prospective X-factor to pass incumbent LECs' savings from decreased costs and/or increased productivity on to consumers. Ever since the Commission first applied price cap regulation to the major incumbent LECs, it recognized that “[s]etting a reasonable target and requirement for LEC productivity is one of the critical tasks in ensuring that the price cap plan will work as intended.”¹⁹⁰ This was and continues to be true because “there is a substantial body of evidence indicating that the telecommunications industry has historically been more productive than the American economy as a whole.”¹⁹¹ There is no reason to believe that incumbent LECs have or will stop achieving productivity gains in the provision of dedicated services. While a one-time reduction of the PCI for the special access basket would account for the productivity gains that the incumbents have achieved since the expiration of the CALLS plan, this would not account for additional productivity gains that the incumbents achieve in the future. Adopting a prospective X-factor would ensure that these future gains are shared with purchasers of dedicated services.

Sixth, pursuant to Sections 251(c)(4) and 252(d)(3) of the Communications Act, the Commission should require that each incumbent LEC provide dedicated services to wholesale customers at prices that are no higher than the incumbent LEC's retail price minus the costs that are “avoided” when the services are offered at wholesale. This requirement will establish much-needed protection against the possibility that incumbent LECs would place competitive LECs in a price squeeze.

¹⁹⁰ *LEC Price Cap Order* ¶ 75.

¹⁹¹ *Id.*; see also *LEC Price Cap Performance Review Order* ¶ 99 (explaining that the Commission created the X-factor to serve as “an offset that reflects the fact that telephone carriers, historically, have experienced cost changes, due to differences in productivity and input prices relative to the economy as a whole, resulting in telephone rate trends being below the level of inflation”).

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V. **ADOPTING THESE REFORMS WOULD ENABLE A VIRTUOUS CYCLE OF INNOVATION AND INVESTMENT IN BROADBAND INFRASTRUCTURE.**

The problems in the dedicated services marketplace are not unlike those that the FCC recently confronted in the Open Internet proceeding. In that proceeding, the Commission determined that “Internet openness drives a ‘virtuous cycle’ in which innovations at the edges of the network enhance consumer demand, leading to expanded investments in broadband infrastructure that, in turn, spark new innovations at the edge.”¹⁹² The Commission found, however, that broadband providers have both the incentive and the ability to act as gatekeepers and limit Internet openness by impeding consumer access to their competitors’ upstream content.¹⁹³ It further found that broadband providers’ incentives to do so are strengthened by the lack of competition in the market for broadband Internet access services and the high costs that consumers face when attempting to switch between providers.¹⁹⁴ Accordingly, the Commission adopted rules to prevent broadband providers from engaging in this conduct. It held that these rules would facilitate the virtuous cycle and promote the deployment of broadband infrastructure, consistent with the goals of Section 706 of the Telecommunications Act of 1996.¹⁹⁵

¹⁹² *Protecting and Promoting the Open Internet*, Report and Order on Remand, Declaratory Ruling, and Order, 30 FCC Rcd. 5601, ¶ 7 (2015) (“*2015 Open Internet Order*”). The Commission first made this determination in the 2010 Open Internet Order. *See Preserving the Open Internet; Broadband Industry Practices*, Report and Order, 25 FCC Rcd. 17905, ¶ 14 (2010). While aspects of that order were vacated by the D.C. Circuit, the court held that the Commission’s finding regarding the “virtuous cycle” was “reasonable and grounded in substantial evidence.” *See Verizon v. FCC*, 740 F.3d 623, 644-45 (D.C. Cir. 2014).

¹⁹³ *2015 Open Internet Order* ¶¶ 78-85.

¹⁹⁴ *Id.* ¶ 81.

¹⁹⁵ *Id.* ¶¶ 275-282.

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The Commission faces a similar challenge, and a similar opportunity, here. When competitors are afforded reasonable access to business customer locations, this enables them to develop and offer innovative higher-layer business services. However, because many competitors rely on the incumbent LECs' last-mile networks to reach business customer locations, the incumbents act as gatekeepers in the business services marketplace. Just as the Commission found to be the case for broadband Internet access providers, incumbent LECs possess both the incentive and the ability to inhibit business customers' access to competitive services. Their incentives to do so are strengthened by the lack of competition in the business services marketplace and the high costs that buyers face when attempting to switch providers. The incumbents act on these incentives by charging competitors supracompetitive rates and imposing anticompetitive terms and conditions for last-mile dedicated services, which inhibits competitors' ability to offer robust and affordable services at many business customer locations.

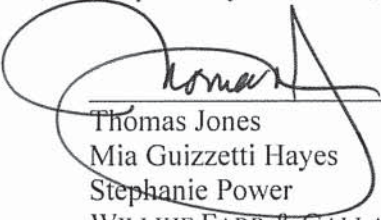
By adopting rules that prevent the incumbents from engaging in this conduct and expanding business customers' access to competitive services, the Commission could enable a "virtuous cycle" of innovation and investment in the business services marketplace. Competitors would be more able to develop innovative higher-layer services that meet the diverse needs of business customers around the country. This would spur an increase in the demand for last-mile capacity, providing both incumbent and competitive LECs with greater incentives to deploy fiber to business customer locations, consistent with the goals of Section 706.

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VI. CONCLUSION

For the foregoing reasons, the Commission should promptly reform the regulatory regime governing incumbent LEC dedicated services in order to prevent incumbents from exercising their market power and to provide American business with greater access to competitive broadband infrastructure and services.

Respectfully submitted,



Thomas Jones
Mia Guizzetti Hayes
Stephanie Power

WILLKIE FARR & GALLAGHER LLP
1875 K Street, NW
Washington, DC 20006
(202) 303-1000

*Counsel for Birch Communications, Inc., BT
Americas Inc., EarthLink, Inc., and Level 3
Communications, LLC*

January 22, 2016

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APPENDIX A

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**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 Internet Special Access Services)	RM-10593
)	

**DECLARATION OF CHRIS MCREYNOLDS
ON BEHALF OF LEVEL 3 COMMUNICATIONS, LLC**

1. I, Chris McReynolds, am Vice President Global Product Management of Core Network Services at Level 3 Communications. I am responsible for the management of our transport, cloud, sub-sea, off-net access, and Ethernet services globally. My responsibilities include profit and loss management, product strategy, pricing, and complex customer opportunity support.

2. The purpose of this declaration is to (1) describe Level 3’s experience as a provider of dedicated services¹ and (2) identify the service providers with which Level 3

¹ For purposes of this declaration, I use the term “dedicated services” as the FCC defined it in the special access data request. *See 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*, Order on Reconsideration, 29 FCC Rcd. 10899, App. A at 2 (2014) (defining “dedicated service” as a service that “transports data between two or more designated points, e.g., between an End User’s premises and a point-of-presence, between the central office of a local exchange carrier (LEC) and a point-of-presence, or between two End User premises, at a rate of at least 1.5 Mbps in both directions (upstream/downstream) with prescribed performance requirements that include bandwidth-

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competes in the provision of these services. Level 3's experience as a purchaser of dedicated services is described in the separate declaration of Gary Black, Jr.

3. Level 3 provides dedicated services to both retail business customers and wholesale carrier customers. Retail business customers generally purchase these services from Level 3 along with higher-layer services such as voice, Internet access, and networking capabilities. In contrast, wholesale carrier customers generally purchase dedicated services from Level 3 on a standalone basis. This is because wholesale customers usually use dedicated services purchased from Level 3 to offer their own higher-layer services. In addition, Level 3's wholesale customers **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL] than Level 3's retail customers.

4. Level 3 often serves customers that require dedicated services at multiple locations. Multi-location retail business customers prefer to purchase services from a single provider that can serve all of their locations, rather than having to purchase services from different providers in different locations. In fact, these customers sometimes will not accept bids from providers that can only offer service to a subset of their locations. Frequently, when Level 3 provides services to a multi-location customer, it serves some of the customer's locations over Level 3's own facilities and other customer locations over incumbent LEC facilities.

5. **[BEGIN CONFIDENTIAL]**

latency-, or error-rate guarantees or other parameters that define delivery under a Tariff or in a service-level agreement.”).

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[END CONFIDENTIAL] My experience is that Level 3 faces competition in the provision of dedicated services primarily from (1) an incumbent LEC in almost every location, (2) other competitive LECs in some locations (subject to the limitations discussed below), and (3) cable companies where they provide service via their fiber local transmission facilities.

6. Level 3 is sometimes able to obtain information about these competitors' rates, terms, and conditions from prospective customers (who request competing bids for services), although this information is not always reliable. Level 3 also obtains general information on pricing trends from third-party vendors such as Alsbridge and Telegeography. Moreover, Level 3 can obtain information about the incumbent LECs' rates, terms and conditions for their DSn-based dedicated services from the incumbent LECs' federal tariffs. Even the tariffs do not, however, provide a complete picture of the incumbent LECs' prices for DSn-based dedicated services since the incumbent LECs' contract tariffs do not provide the name of the customer to the agreement, and some incumbent LECs enter into overlay non-tariffed commercial agreements that affect the prices of DSn-based dedicated services (*e.g.*, by offering credits that in effect reduce the charges otherwise applicable to DSn-based dedicated services under tariffs and contract tariffs). Level 3 is unable to obtain information regarding other dedicated services (*e.g.*, Ethernet) in this manner because of the incumbent LECs are not generally required to file tariffs for such services.

7. Level 3 does not seek to monitor or respond to the rates, terms and conditions on which other services, such as the standard, best-efforts broadband Internet access services, are offered. Below, I describe Level 3's perception of and experience with various types of providers in the marketplace.

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8. **Incumbent LECs.** Incumbent LECs provide dedicated services to virtually every commercial building in the United States over their own facilities. Thus, at the locations where Level 3 provides dedicated services, it does so in competition with an incumbent LEC that is using its own facilities. At many of these locations, the incumbent LEC provides Level 3 with wholesale dedicated services that Level 3 uses to provide its own service offerings. Level 3's reliance on dedicated services purchased from incumbent LECs is described in the declarations of Gary Black, Jr..

9. Level 3 sometimes adjusts the rates, terms, and conditions applicable to its DSn-based and Ethernet-based dedicated services in response to competing offers from incumbent LECs. Level 3 has some flexibility to adjust these rates, terms, and conditions where Level 3 offers those services via its own facilities. For example, on December 1, 2015, Level 3 offered a business customer **[BEGIN HIGHLY CONFIDENTIAL]**

[END HIGHLY CONFIDENTIAL] in order to beat a competing offer from the incumbent LEC.

10. Level 3 is less able to offer competitive rates, terms, and conditions at locations where it must rely on circuits leased from incumbent LECs than at locations where it can provide service over its own facilities. Moreover, incumbent LECs often charge Level 3 the same or similar rates for wholesale dedicated services that they charge retail customers for the same dedicated services. Where this is the case, Level 3 often cannot set its rates below the incumbent LEC's retail price and still make a profit. This often causes Level 3 to lose business to the incumbents. For example, on August 11, 2015, Level 3 **[BEGIN HIGHLY CONFIDENTIAL]**

[END HIGHLY

CONFIDENTIAL]

11. This phenomenon has far-reaching consequences for competition in serving multi-location customers. In my experience, multi-location customers that need to obtain connectivity both at locations where Level 3, and possibly other competitive LECs, have deployed loop facilities and at locations where the incumbent LEC owns the only loop facility have less ability to negotiate favorable prices than customers that only demand connectivity at locations where competitive LECs have deployed loop facilities. This is because, as mentioned, the incumbent LEC can increase the prices that competitive LECs pay to lease dedicated services at the locations where the incumbent LEC owns the only last-mile connection, thereby weakening the competitive LEC's ability to charge low prices across all of the prospective customer's locations.

12. **Competitive LECs.** Level 3 faces competition from other competitive LECs in the provision of dedicated services at some locations. As discussed below, the competitiveness of competitive LECs' dedicated service offerings varies significantly based on the manner in which the competitive LEC obtains the physical connection to the end user (*e.g.*, self-deployed vs. purchased at wholesale from an incumbent LEC). As also discussed below, the significance of these offerings as competition to Level 3's dedicated services depends on the price and service quality of the offerings, which, in turn, are significantly affected by whether the competitive LEC offers the services over its own facilities.

13. Competitive LECs provide dedicated services in a number of different ways. In some cases, they do so via unbundled network elements ("UNEs") purchased from incumbent

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LECs. For example, competitive LECs purchase copper loops from incumbent LECs as UNEs and use these loops to provide Ethernet-over-copper (“EoC”) services. Competitive LEC EoC service offerings are subject to significant limitations. First, there are many locations where copper loops suitable for EoC cannot be obtained as UNEs. In addition, given that incumbent LECs are gradually replacing copper feeder and/or home run facilities with fiber, the number of locations where EoC can be offered is steadily declining. Moreover, in most cases, EoC can only be used, as a practical matter, to provide dedicated services at relatively low capacities in the range of 1-20 Mbps. EoC can be used to provide higher speeds to a small number of locations, but this is impossible in most locations due to the length of the copper loop and other factors.

14. Competitive LECs also sometimes purchase DS1 loops as UNEs or special access and use these loops to provide Ethernet-over-DSn services. In order to increase the capacity of Ethernet provided in this manner, competitive LECs often bond multiple DS1s. Competitive LEC Ethernet-over-DSn services are, like EoC services, subject to significant limitations. First, DS1 UNEs are not available in some locations under the FCC’s rules. Where this is the case, competitive LECs must rely on special access, but DS1 loops purchased as special access are usually far more expensive than DS1 loops purchase as UNEs. Moreover, Ethernet-over-DSn is usually used to offer Ethernet at very low capacities. Due to the cost of the DS1 loops used to offer these services, competitive LECs often cannot profitably offer Ethernet-over-DSn services at capacities above approximately 6 Mbps when relying on special access and approximately 7.5 Mbps when relying on UNEs.

15. Competitive LECs also rely on the dedicated services that they purchase as special access from other carriers to provide DSn-based dedicated services. Where this is the

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case, the underlying circuit is usually an incumbent LEC DSn-based dedicated service that the competitive LEC has purchased directly from an incumbent LEC as either a UNE or a special access service. Dedicated services offered in this manner are also subject to the significant limitation that the competitor cannot rationally charge a price below the incumbent LEC wholesale price for the underlying circuit. This underlying wholesale price is usually very high where, as is often the case, the circuit has been purchased as special access from an incumbent LEC.

16. Finally, in a relatively small number of locations, competitive LECs provide dedicated services via local fiber transmission facilities that they own or that they have acquired as dark fiber pursuant to long-term lease arrangements. Competitive LECs generally offer service in this manner only to locations with sufficient demand for telecommunications services to justify the cost of deploying facilities. Competitive LECs pose the most meaningful competition to Level 3 when offering services in this manner because the competitive LEC can tailor the rates, terms, and conditions to the particular needs of the customer and to the competitive environment.

17. Level 3 sometimes adjusts the rates, terms, and conditions on which it offers dedicated services in response to competing offers from competitive LECs. Level 3 has more flexibility to do this in the locations to which Level 3 has deployed last-mile transmission facilities. For example, on November 23, 2015, Level 3 offered a business customer **[BEGIN HIGHLY CONFIDENTIAL]**

[END HIGHLY CONFIDENTIAL] in order to beat a competing offer from a competitive LEC. Level 3 has less flexibility to alter its offer of dedicated services in response to competition from another competitive LEC at locations where

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Level 3 relies on the incumbent’s last-mile facilities. This is because the price charged by the incumbent LEC for leasing the local transmission facilities establishes a floor below which Level 3 cannot set the price for dedicated services.

18. **Cable Companies.** Cable companies offer best-efforts broadband Internet access services, usually via a hybrid fiber-coaxial cable (“HFC”) connection to the end user, to many of the business locations within their network footprints. Frequently, these are standard, mass market cable modem services that are not sold pursuant to service level agreements and are not tailored to the needs of individual customers. Some cable companies have begun to offer broadband Internet access services subject to service level agreements on a limited basis, but the commitments in those agreements are significantly less robust than those applicable to dedicated services. In addition, in a relatively small number of locations, cable companies also offer DSn and Ethernet services over fiber optic facilities (“DSn-over-fiber” and “Ethernet-over-fiber”) as well as Ethernet over HFC facilities (“Ethernet-over-HFC”). As explained below, while the cable companies’ Ethernet-over-fiber and DSn-over-fiber services are competitive with Level 3’s dedicated services, the cable companies’ best-efforts broadband Internet access and their Ethernet-over-HFC services generally are not competitive with Level 3’s dedicated services.

19. Level 3 sometimes 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. For example, on August 19, 2015, Level 3 offered a business customer **[BEGIN HIGHLY CONFIDENTIAL]**

[END HIGHLY CONFIDENTIAL] in order to beat a competing offer for dedicated services from a cable company who had deployed fiber facilities to that location.

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20. Level 3 generally does not consider the cable companies' standard best-efforts broadband Internet access services to be competitive with Level 3's dedicated services. This is because most of Level 3's customers do not view these services as sufficient to meet their needs. As mentioned above, Level 3 provides dedicated services to both retail business customers and wholesale carrier customers. Level 3's retail business customers generally demand services that offer dedicated bandwidth, symmetrical speeds, robust service level agreements, and a high level of security. Cable companies' best-efforts broadband Internet access services do not provide any of these features. As mentioned, Level 3's wholesale carrier customers generally purchase dedicated services from Level 3 in order to provide their own higher-layer services (such as voice, Internet access, and networking capabilities) over this capacity. Wholesale carrier customers cannot use the cable companies' broadband Internet access services for this purpose. Accordingly, Level 3 generally does not monitor or respond to the cable companies' rates, terms, and conditions for these services.

21. When cable companies offer broadband Internet access services subject to service level agreements, they may become somewhat more appealing to a small subset of customers. However, these services have technological limitations that prevent them from meeting the needs of customers that demand services beyond basic voice and Internet access. For example, these services do not provide interoffice networking capabilities. In addition, the limited service level agreements that cable companies offer for these services are not as robust as those offered by incumbent and competitive LECs in connection with their dedicated services. For example, most cable companies do not guarantee performance levels for latency and jitter in these agreements. Thus, these services do not meet the needs of customers that demand a high level of reliability.

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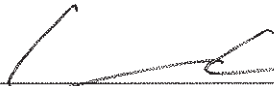
The service level agreements also fall below what is needed to employ performance-sensitive applications, such as audio and video communication products.

22. Level 3 also does not consider the cable companies' Ethernet-over-HFC services to be competitive with Level 3's dedicated services. Most of Level 3's customers do not view these services as sufficient to meet their needs. Ethernet-over-HFC services are often subject to high levels of jitter and a relatively low maximum transmission unit. They are not as reliable as the cable companies' Ethernet-over-fiber services or the dedicated services offered by incumbent and competitive LECs. Relatedly, cable companies generally do not offer robust service level agreements for these services.

23. **Fixed Wireless Providers.** A small number of companies have experimented with providing services to businesses over fixed wireless connections. These services are subject to well-known limitations, including line-of-sight restrictions and limited range. Because of these limitations, these services generally do not offer the level of speed and reliability that Level 3's customers demand. In my experience, fixed wireless services play only a fringe role in the marketplace. Level 3 generally does not view these services as competitive with Level 3's dedicated services. Accordingly, while Level 3 generally monitors developments in this area, it does not respond to the rates, terms, and conditions offered by providers of these services.

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



Chris McReynolds

Dated: 1/21/16

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APPENDIX B

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**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 Internet Special Access Services)	RM-10593
)	

**DECLARATION OF GARY BLACK, JR.
ON BEHALF OF LEVEL 3 COMMUNICATIONS, LLC**

1. I, Gary Black, Jr., am Vice President, Carrier Relations for the North American Off-Net Access Planning organization of Level 3 Communications, LLC (“Level 3”). I am responsible for managing Level 3’s relationships with service providers from which Level 3 purchases wholesale last-mile access services in North America. My responsibilities include contract management, cost management, and ensuring vendor compliance with negotiated agreements and regulated conditions.

2. The purpose of this declaration is to (1) describe Level 3’s experience as a purchaser of dedicated services¹ and (2) identify the service providers from which Level 3 can purchase these services.

¹ For purposes of this declaration, I use the term “dedicated services” as the FCC defined it in the special access data request. *See 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*, Order on Reconsideration, 29 FCC Rcd. 10899, App. A at 2 (2014) (defining “dedicated service” as a service that “transports data between two or more designated points, e.g., between an *End User’s* premises and a point-of-

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3. Level 3 provides its customers with a range of services, including dedicated services as well as voice, Internet access, and networking capabilities. Level 3's experience as a provider of dedicated services is described in the separate declaration of Chris McReynolds. Level 3 constructs its own fiber optic last-mile facilities to customer locations that exhibit a level of demand that is sufficient to justify this investment. To date, Level 3 has deployed fiber optic last-mile facilities to approximately 34,000 commercial buildings in the United States.

4. 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. In order to serve these locations, Level 3 must purchase wholesale dedicated services from another provider. Below, I discuss the extent to which various types of providers are able to provide wholesale dedicated services to Level 3.

5. **Incumbent LECs.** Incumbent LECs offer DS1 and DS3 (together "DSn-based") dedicated services over their own last-mile facilities to virtually every commercial building in the United States. Incumbent LECs also provide Ethernet services over their own last-mile facilities to many commercial buildings.

6. Level 3 prefers to purchase dedicated services from providers other than incumbent LECs as frequently as possible. In my experience, however, the incumbent LEC is the only facilities-based provider of dedicated services to the vast majority of commercial

presence, between the central office of a local exchange carrier (LEC) and a point-of-presence, or between two *End User* premises, at a rate of at least 1.5 Mbps in both directions (upstream/downstream) with prescribed performance requirements that include bandwidth-, latency-, or error-rate guarantees or other parameters that define delivery under a *Tariff* or in a service-level agreement").

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buildings around the country. Thus, Level 3 frequently has no choice but to rely on the incumbents' dedicated services.

7. The incumbent LECs' undiscounted month-to-month rates and other standard terms and conditions for dedicated services are extremely unfavorable. Based on my experience, if Level 3 were regularly to purchase the incumbents' services as wholesale inputs pursuant to these rates, terms and conditions, Level 3 would be less able to compete for retail customers at these off-net locations. In order to obtain more favorable rates, terms and conditions, Level 3 has entered into tariff pricing plans, contract tariffs, and non-tariffed commercial agreements with the incumbents (hereafter "volume and term" or "lock-up" plans). Unfortunately, many of these lock-up plans contain restrictive volume and term commitments that prevent Level 3 from purchasing dedicated services from other providers where it would otherwise do so. I describe the effects of these restrictive commitments in a separate declaration.

8. Given the lack of competition at many locations and the constraints associated with the terms and conditions in incumbent LEC discount plans, Level 3 purchases a significant majority of its dedicated services requirements from the incumbent LECs. As shown in the Appendix to this declaration, in 2012, 2013, and 2014 Level 3 purchased a total of [BEGIN HIGHLY CONFIDENTIAL] [END HIGHLY CONFIDENTIAL] DSn-based dedicated service circuits, respectively, and [BEGIN HIGHLY CONFIDENTIAL] [END HIGHLY CONFIDENTIAL] Ethernet-based dedicated service circuits, respectively, from the incumbents.

9. **Competitive LECs.** At some locations, Level 3 has the option to purchase dedicated services from competitive LECs. As discussed below, the availability of competitive LECs' wholesale dedicated service offerings varies significantly based on the manner in which

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the competitive LEC obtains the physical connection to the end user (*e.g.*, self-deployed vs. purchased at wholesale from an incumbent LEC). As also discussed below, the extent to which Level 3 can profitably rely on these wholesale offerings depends on the price and service quality of the offerings, which, in turn, are significantly affected by whether the competitive LEC offers the services over its own facilities.

10. Competitive LECs provide dedicated services in a number of different ways. In some cases they do so via unbundled network elements (“UNEs”) purchased from incumbent LECs. For example, competitive LECs purchase copper loops from incumbent LECs as UNEs and use these loops to provide Ethernet-over-copper (“EoC”) services. Competitive LEC EoC service offerings are subject to significant limitations. First, there are many locations where copper loops suitable for EoC cannot be obtained as UNEs. In addition, given that incumbent LECs are gradually replacing copper feeder and/or home run facilities with fiber, the number of locations where EoC can be offered is steadily declining. Moreover, in most cases, EoC can only be used to provide dedicated services at relatively low capacities, in the range of 1-20 Mbps. EoC can be used to provide higher speeds to a small number of locations, but this is impossible in most locations due to the length of the copper loop and other factors. In some cases, however, Level 3 has no choice but to rely on EoC services. This is the case, for example, where the incumbent LEC’s copper loop is the only connection to a customer location, it is not efficient or possible for Level 3 to deploy its own loop facility, and the incumbent LEC’s price for deploying fiber to the location is too high to enable Level 3 to compete profitably. As shown in the Appendix to this declaration, in 2012, 2013, and 2014 Level 3 purchased a total of

[BEGIN HIGHLY CONFIDENTIAL]

[END HIGHLY

CONFIDENTIAL] EoC dedicated service circuits, respectively, from competitive LECs.

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11. Competitive LECs also sometimes purchase DS1 loops as UNEs or special access and use these loops to provide Ethernet-over-DSn services. In order to increase the capacity of Ethernet provided in this manner, competitive LECs often bond multiple DS1s. Competitive LEC Ethernet-over-DSn services are, like EoC services, subject to significant limitations. First, DS1 UNEs are not available in some locations. Where this is the case, competitive LECs must rely on special access, but DS1 loops purchased as special access are far more expensive than DS1 loops purchased as UNEs. Moreover, Ethernet-over-DSn is usually used to offer Ethernet at very low capacities. Thus, Level 3 is rarely able to rely on competitive LECs' Ethernet-over-DSn services to reach its customers. In 2012, 2013, and 2014 Level 3 purchased a total of

[BEGIN HIGHLY CONFIDENTIAL]

[END HIGHLY

CONFIDENTIAL] Ethernet-over DSn dedicated service circuits, respectively, from competitive LECs.

12. Competitive LECs also rely on the dedicated services that they purchase as special access from other carriers to provide DSn-based dedicated services. Where this is the case, the underlying circuit is usually an incumbent LEC DSn-based dedicated service that the competitive LEC has purchased directly from an incumbent LEC as either a UNE or a special access service. Dedicated services offered in this manner are also subject to the significant limitation that the competitor often cannot rationally charge a price below the incumbent LEC wholesale price for the underlying circuit. This underlying wholesale price is usually very high where, as is often the case, the circuit has been purchased as special access. Accordingly, competitive LEC services provided in this manner do not provide Level 3 with a meaningful competitive choice for reaching its customers in most circumstances. As shown in the Appendix to this declaration, in 2012, 2013, and 2014 Level 3 purchased a total of **[BEGIN HIGHLY**

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[END HIGHLY CONFIDENTIAL] DS_n-based

dedicated service circuits, respectively, from competitive LECs that rely on dedicated services purchased from other carriers.

13. Finally, in a small number of locations, competitive LECs provide dedicated services via local fiber transmission facilities that they own or that they have acquired as dark fiber pursuant to long-term lease arrangements. When they provide dedicated services in this manner, competitive LECs offer Level 3 a viable alternative to purchasing dedicated services from the incumbent LECs. However, because competitive LECs generally offer service in this manner only to locations with large demand for telecommunications services, this option is not available to Level 3 at most locations around the country. In addition, because of the restrictive terms and conditions in incumbent LEC lock-up plans discussed above, Level 3 is often unable to shift purchases away from the incumbents to competitors even at the locations where competitors offer services in this manner. As shown in the Appendix to this declaration, in 2012, 2013, and 2014 Level 3 purchased a total of **[BEGIN HIGHLY CONFIDENTIAL]**

[END HIGHLY CONFIDENTIAL] DS_n-based dedicated service circuits, respectively, from competitive LECs provided over their own fiber facilities.

14. **Cable Companies.** Cable companies offer best-efforts broadband Internet access services, usually via a hybrid fiber-coaxial cable (“HFC”) connection to the end user, to many of the business locations within their network footprints. Frequently, these are standard, mass market cable modem services that are not sold pursuant to service level agreements and are not tailored to the needs of individual customers. Some cable companies have begun to offer broadband Internet access services subject to service level agreements, but the commitments in those agreements are significantly less robust than those applicable to dedicated services. In

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addition, in a relatively small number of locations, some cable companies also offer DSn and Ethernet services over fiber optic facilities (“DSn-over-fiber” and “Ethernet-over-fiber”) as well as Ethernet over HFC facilities (“Ethernet-over-HFC”).

15. The cable companies’ DSn-over-fiber and Ethernet-over-fiber services are comparable to DSn and Ethernet services offered by incumbent and competitive LECs. However, the cable companies offer these services to only a relatively small number of commercial buildings around the country. Thus, in many locations, Level 3 does not have the option of purchasing such a service from a cable company. Moreover, because of the restrictive terms and conditions in incumbent LEC lock-up plans discussed above, Level 3 is often unable to shift purchases away from the incumbents to cable companies, even at the locations where cable companies offer services in this manner. As shown in the Appendix to this declaration, in 2012, 2013, and 2014 Level 3 purchased a total of **[BEGIN HIGHLY CONFIDENTIAL]**

[END HIGHLY CONFIDENTIAL] DSn-based dedicated service circuits, respectively, from cable companies provided over their own fiber facilities. As shown in the Appendix to this declaration, in 2012, 2013, and 2014 Level 3 purchased a total of **[BEGIN HIGHLY CONFIDENTIAL]** **[END HIGHLY CONFIDENTIAL]** Ethernet-based dedicated service circuits, respectively, from cable companies provided over their own fiber facilities.

16. Level 3 generally cannot rely on the cable companies’ standard best-efforts broadband Internet access in order to reach its customers. As mentioned above, Level 3 purchases wholesale dedicated services in order to provide its own services (such as voice, Internet access, and networking capabilities) over this capacity. Level 3 cannot use standard best-efforts broadband Internet access services for this purpose. Level 3’s retail business

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customers generally demand services that offer dedicated bandwidth, symmetrical speeds, robust service level agreements, and a high level of security. Cable companies' best-efforts broadband Internet access services do not provide any of these features. For these reasons, based on my experience, if providers of dedicated services were to increase the price of those services by

[BEGIN HIGHLY CONFIDENTIAL]

[END HIGHLY

CONFIDENTIAL], Level 3 would be unable to shift a significant number of its dedicated services purchases from the incumbent LEC's dedicated services to the cable companies' best-efforts broadband Internet access services.

17. Level 3 has purchased broadband Internet access services pursuant to limited service level agreements from some cable companies. However, Level 3 can rely on these services to serve only a small subset of customers. Given the technological limitations of these services, Level 3 cannot use them to serve customers that demand services other than basic voice and Internet access, such as interoffice networking capabilities. In addition, the service level agreements that cable companies offer for these services are not nearly as robust as those offered by incumbent and competitive LECs in connection with their dedicated services. For example, most cable companies do not guarantee maximum levels of latency and jitter in these agreements. Thus, Level 3 cannot rely on these services to serve customers that demand a high level of reliability or wish to employ certain performance-sensitive applications.

18. Due to these limitations, Level 3 has been able to rely on these services to serve only **[BEGIN HIGHLY CONFIDENTIAL]** **[END HIGHLY CONFIDENTIAL]** customers to date, both of which are retail chains without complex data needs. In both cases, given the shortcomings of the cable companies' service level agreements, Level 3 has had to offer a backup connectivity solution in order to provide these customers with a baseline level of

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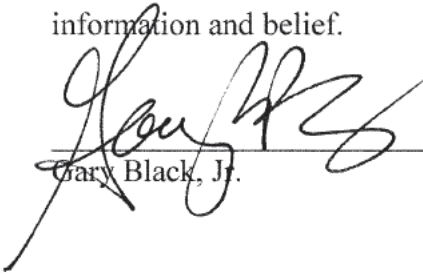
reliability. To do so, Level 3 has purchased and provided these customers with wireless connectivity, which, as described below, is subject to its own technological limitations.

19. Level 3 also generally cannot rely on Ethernet-over-HFC to serve its customers. These services are available in a relatively small number of locations, and even where they are available, they are often subject to high levels of jitter and a relatively low maximum transmission unit (MTU). Ethernet-over-HFC services are not as reliable as the cable companies' Ethernet-over-fiber services or the dedicated services offered by incumbent and competitive LECs. Relatedly, cable companies generally do not offer robust service level agreements for these services. For these reasons, based on my experience, if providers of dedicated services were to increase the price of those services by **[BEGIN HIGHLY CONFIDENTIAL]** **[END HIGHLY CONFIDENTIAL]**, Level 3 would be unable to shift a significant number of its dedicated services purchases from the incumbent LEC's dedicated services to the cable companies' Ethernet-over-HFC services.

20. **Fixed Wireless Providers.** A small number of companies have experimented with providing services to businesses over fixed wireless connections. These services are subject to well-known limitations, including line-of-sight restrictions and limited range. Because of these limitations, Level 3 is generally unable to rely on these services as wholesale inputs to Level 3's service offerings. Level 3 sometimes purchases wireless connectivity to provide a backup solution to customers that primarily rely on other technologies. However, in my experience, this connectivity alone is not sufficient to meet the needs of most customers that demand dedicated services.

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



Gary Black, Jr.

Dated: 11/21/66

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Appendix

[BEGIN HIGHLY CONFIDENTIAL]

[END HIGHLY CONFIDENTIAL]

¹ Provided over an underlying connection purchased from another provider of dedicated services, usually an incumbent LEC.

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APPENDIX C

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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 Internet Special Access Services)	RM-10593
)	

**DECLARATION OF GARY BLACK, JR.
ON BEHALF OF LEVEL 3 COMMUNICATIONS, LLC**

1. I, Gary Black, Jr., am Vice President, Carrier Relations for the North American Off-Net Access Planning organization of Level 3 Communications, LLC (“Level 3”). I am responsible for managing Level 3’s relationships with service providers from which Level 3 purchases wholesale last-mile access services in North America. My responsibilities include contract management, cost management, and ensuring vendor compliance with negotiated agreements and regulated conditions.

2. The purpose of this declaration is to describe the manner in which the volume and term plans, including tariffs, contract tariffs, and non-tariffed agreements (together, “volume and term” or “lock-up” plans) under which incumbent local exchange carriers (“LECs”) sell

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dedicated services harm Level 3¹ both in its capacity as a purchaser of dedicated services and in its capacity as a wholesaler of dedicated services.²

3. Level 3 purchases a large volume of dedicated services from other carriers in order to serve locations that Level 3 cannot serve using its own network facilities. Level 3 would prefer to purchase dedicated services from providers other than incumbent LECs (*i.e.*, competitive LECs) as frequently as possible. However, because competitive LECs do not serve many locations, and because Level 3 is bound by the terms and conditions in incumbent LEC lock-up plans, Level 3 has no choice but to purchase a significant majority of its dedicated services requirements from incumbent LECs.

4. In addition to purchasing dedicated services, Level 3 sells dedicated services to wholesale and retail customers. It is my experience that most of Level 3's prospective wholesale customers currently purchase a large percentage of their dedicated services requirements from incumbent LECs pursuant to lock-up plans that are the same as, or that closely resemble, those under which Level 3 purchases dedicated services from incumbent LECs.

¹ Except where otherwise noted, "Level 3" refers to Level 3 Communications, LLC and its affiliates, including legacy tw telecom.

² For purposes of this declaration, I use the term "dedicated services" as the FCC defined it in the special access data request. *See 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*, Order on Reconsideration, 29 FCC Rcd. 10899, App. A at 2 (2014) (defining "dedicated service" as a service that "transports data between two or more designated points, *e.g.*, between an End User's premises and a point-of-presence, between the central office of a local exchange carrier (LEC) and a point-of-presence, or between two End User premises, at a rate of at least 1.5 Mbps in both directions (upstream/downstream) with prescribed performance requirements that include bandwidth-, latency-, or error-rate guarantees or other parameters that define delivery under a Tariff or in a service-level agreement.").

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5. The lock-up plans under which Level 3 and its prospective wholesale customers purchase dedicated services from incumbent LECs require that purchasers make term commitments and/or volume commitments, often in the form of prior purchase-based commitments, in order to obtain benefits such as discounts, credits, and circuit portability. If the purchaser fails to meet a volume or term commitment, it incurs a large penalty (or receives a significantly reduced discount or credit, which is effectively the same as a penalty) for the shortfall. Purchasers are also subject to large penalties if they terminate a lock-up plan before it expires. Although these plans offer some relief from the incumbent LECs' unreasonable and cost-prohibitive undiscounted rates and early termination fees, I have observed the ways in which they restrict competitive LECs' ability to purchase dedicated services from competitive LECs, to the detriment of Level 3 as both a buyer and seller of dedicated services.

Level 3's Experience as a Buyer of Dedicated Services

6. **Lock-Up Plans under which Level 3 Purchases Dedicated Services from Incumbent LECs.** Level 3 purchases dedicated services from AT&T, CenturyLink, and Verizon under lock-up plans. As explained in the Level 3 and tw telecom responses to Question II.F.8 of the Mandatory Data Request, **[BEGIN HIGHLY CONFIDENTIAL]**

³ **[BEGIN HIGHLY CONFIDENTIAL]**

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⁶ [BEGIN HIGHLY CONFIDENTIAL]

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11.

⁷ [BEGIN HIGHLY CONFIDENTIAL]

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[END

⁸ [BEGIN HIGHLY CONFIDENTIAL]

[END HIGHLY CONFIDENTIAL]

⁹ [BEGIN HIGHLY CONFIDENTIAL]

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12.

[END HIGHLY CONFIDENTIAL]

13. Volume Commitments and Shortfall Penalties under Incumbent LEC Plans.

In overseeing Level 3's wholesale purchases of dedicated services, I have observed numerous instances in which the incumbent LECs' lock-up plans restrict Level 3's ability to purchase dedicated services provided by competitive LECs.

14. Where Level 3 purchases dedicated services from an incumbent LEC pursuant to a plan that requires Level 3 to make a volume commitment, Level 3 has little ability to switch its base of existing dedicated services from the incumbent LEC to competitive LECs. Since this "embedded" base of circuits represents the vast majority of Level 3's dedicated services spend in a particular region, Level 3 must usually purchase a large percentage of its overall dedicated services requirements from the incumbent LEC in order to meet its volume commitment to the incumbent LEC.

15. Moreover, as discussed above, Level 3 incurs significant costs in the form of shortfall penalties and foregone credits or discounts (together "shortfall penalties") if Level 3 fails to meet its volume commitments under the incumbent LEC lock-up plans. These high

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shortfall penalties, combined with the large volume of dedicated services that Level 3 must purchase from incumbent LECs in order to meet the volume commitments, have the effect of locking up Level 3's demand for dedicated services and restricting the extent to which competitive LEC wholesalers can sell dedicated services to Level 3.

16. For example, in order to meet its volume commitments to **[BEGIN HIGHLY CONFIDENTIAL]** **[END HIGHLY CONFIDENTIAL]** and to avoid costs associated with failing to meet those commitments, Level 3 purchases dedicated services from **[BEGIN HIGHLY CONFIDENTIAL]** **[END HIGHLY CONFIDENTIAL]** in locations where it could purchase such services from competitive LECs. The competitive LECs offer dedicated services using a combination resold facilities and their own facilities. Level 3 would prefer to purchase dedicated services from a competitive LECs where the competitive LEC relies on its own loop facilities because the competitive LEC can ensure higher quality service and has greater flexibility to lower its prices where it offers services in this manner. Nevertheless, Level 3 would likely purchase services from competitive LECs in some locations where they resell another carrier's loop facilities (in this example, usually **[BEGIN HIGHLY CONFIDENTIAL]** **[END HIGHLY CONFIDENTIAL]**) because the competitive LECs' prices and other terms and conditions are often more favorable than the incumbent LEC's. Level 3 pays **[BEGIN HIGHLY CONFIDENTIAL]** **[END HIGHLY CONFIDENTIAL]** approximately \$103 million per year for dedicated services at the locations where competitive LECs have offered to serve Level 3, but Level 3 would only pay competitive carriers approximately \$86 million per year for those same dedicated services. While Level 3 would save \$17 million per year as a result of purchasing the dedicated services from competitive LECs, it would incur higher prices (due to lost discounts) and penalties, resulting in losses that far exceed that amount

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if it were to switch these purchases from **[BEGIN HIGHLY CONFIDENTIAL]** **[END HIGHLY CONFIDENTIAL]** to competitive LECs. In particular, Level 3 would incur approximately \$100 million in higher prices over three years and incur penalties of, at a minimum, \$700,000 per month. As a result, Level 3 has foregone purchasing dedicated services from competitive LECs at the locations in question.

17. **[BEGIN HIGHLY CONFIDENTIAL]**

[END HIGHLY CONFIDENTIAL]

18. It is my understanding that incumbent LECs have argued that the volume commitments and shortfall penalties in the incumbent LEC lock-up plans do not in fact prevent buyers from purchasing dedicated services from competitive LEC wholesalers because (1) buyers have significant “headroom” under the plans (*i.e.*, they purchase a large volume of dedicated services above minimum volume commitment under the plan), (2) buyers with growing demand for dedicated services can purchase their future incremental growth in dedicated services (*i.e.*, dedicated services at new locations in the future) from competitive LECs, (3) buyers are free to reduce their volume commitments under incumbent LEC plans, and correspondingly increase the volume they purchase from competitive LEC wholesalers, when they renew their lock-up plans with the incumbent LECs, and (4) incumbent LECs offer many

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different plans, some of which do not require purchasers to make a volume commitment. I address these assertions below as they apply to Level 3 as a buyer of dedicated services.

19. **[BEGIN HIGHLY CONFIDENTIAL]**

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[END HIGHLY CONFIDENTIAL] Level

3 is therefore wary of committing to purchase from competitive providers dedicated services in excess of its volume commitments under the lock-up plans because doing so could well expose Level 3 to shortfall penalties. Moreover, no competitive LEC has deployed, or could deploy, network facilities to most of the locations where Level 3 needs to purchase dedicated services from a wholesale provider.

21. *Second*, Level 3's volume commitments to incumbent LECs limit its ability to purchase dedicated services from competitive LECs in order to serve new customer locations.

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[END HIGHLY

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22. *Third*, it is my experience that Level 3 often is unable to reduce its volume commitment to an incumbent LEC when it renews a lock-up plan. As explained above, it is often not feasible for Level 3 to divert large volumes of its existing purchases of dedicated services to competitive LECs during the life of a lock-up plan. Level 3 also has little ability to switch large volumes of dedicated services to a competitive LEC's facilities after an incumbent LEC volume commitment expires because (1) as mentioned above, Level 3 would prefer to purchase dedicated services from competitive LECs where the competitive LECs provide the services over their own loop facilities but, as mentioned, competitive LECs' networks usually do not, and cannot, reach most of the locations where Level 3 needs to purchase dedicated services from a wholesale provider, and (2) the process required to cut over dedicated services from the incumbent LEC's network to a competitive LEC's network is often extremely slow.

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Accordingly, in order to switch a large volume of dedicated services currently purchased from an incumbent LEC to competitive LECs after the expiration of an incumbent LEC volume commitment, Level 3 must cease purchasing dedicated services under a plan with a volume commitment for the extended period of time it takes for either competitive LECs or Level 3 itself to build facilities to the locations in question and perform the necessary cutover of service. But this is not a viable business model in many cases.

23. This is because the rates, terms, and conditions under which Level 3 would be required to purchase dedicated services from incumbent LECs outside of plans that include volume commitments are often too costly to permit Level 3 to operate under those conditions for an extended period of time. This is in part because Level 3's primary competitor in most markets for business customers is the incumbent LEC itself. It is often not possible for Level 3 to compete with incumbent LECs for an extended period of time during which Level 3 must incur much higher costs for local transmission facilities (*e.g.*, due to early termination penalties that Level 3 is likely to incur when purchasing on term-only plans) than those incurred by incumbent LECs themselves.

24. **[BEGIN HIGHLY CONFIDENTIAL]**

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25. *Fourth*, while it is true that the incumbent LECs offer a number of different lock-up plans for the purchase of dedicated services, this fact often does not diminish the pressure Level 3 feels to enter into a lock-up plan that has the effect of locking up Level 3's demand for dedicated services. **[BEGIN HIGHLY CONFIDENTIAL]**

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26. **Rates, Terms, and Conditions offered by Competitive LECs.** It is my understanding that the incumbent LECs have sought to justify the volume commitments and shortfall penalties in their lock-up plans by arguing that the competitive LEC wholesalers impose similar terms on their customers. This has not been my experience.

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27. Competitive LECs generally offer dedicated services on one-year terms at affordable rates, without imposing shortfall penalties, overage penalties, or ratcheting provisions (*i.e.*, provisions that automatically increase a customer's volume commitment to capture increases in the customer's dedicated services purchases). After the expiration of the initial term of a dedicated services contract with a competitive LEC wholesaler, Level 3 typically has the option to purchase dedicated services from a competitive LEC on a month-to-month basis at the rate that applied under the term commitment. Level 3's purchase arrangements with competitive LECs usually do not include volume commitments. Where volume commitments apply, the volumes are small, and competitive LECs do not base the volumes on customers' prior purchases. Moreover, competitive LECs offer circuit portability on far more favorable terms than is the case with incumbent LECs, and, unlike incumbent LECs, competitive do not charge Level 3 to aggregate DS1s to DS3 facilities. Finally, in all cases where Level 3 might be subject to a penalty under a wholesale agreement with a competitive LEC (*e.g.*, where it must terminate a circuit prior to the expiration of the applicable term commitment), the competitive LEC is usually more willing to waive or reduce the penalty as part of a negotiated solution than is the case with incumbent LECs (this is true even where incumbent LECs sell dedicated services not subject to tariffs).

28. **Migration from DS_n-based Dedicated Services to Ethernet Dedicated Services.** Business end users increasingly demand Ethernet dedicated services. The volume commitments in incumbent LEC tariffs, however, generally prevent purchasers from counting their Ethernet dedicated services purchases toward those volume commitments. Many of the tariffed plans do not allow customers to count circuits upgraded from DS1s and DS3s to Ethernet toward their volume commitments under any circumstances. Some plans contain limited

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“technology migration” provisions, which allow purchasers to either reduce their volume commitment levels when they upgrade circuits from DS1 or DS3 to Ethernet or to count circuits upgraded from DS1 or DS3 to Ethernet toward their volume commitments. However, because these provisions apply only to upgrades to current end users’ services, they fail to account for the broader demand shift in the market for dedicated services. Moreover, even the provisions allowing upgrades to existing end users’ services are subject to a number of limiting conditions. As a result, Level 3 is left with a Hobson’s choice. It can either incur an ever-growing risk of incurring high shortfall penalties under incumbent LEC lock-up plans as its dedicated services purchases from incumbent LECs transition from DSn dedicated services to Ethernet dedicated services, or it can enter into an overlay agreement with the incumbent LEC **[BEGIN HIGHLY CONFIDENTIAL]** **[END HIGHLY CONFIDENTIAL]** in which it obtains relief from shortfall penalties, among other things, in return for committing to purchase large volumes of Ethernet dedicated services from the incumbent LEC.

29. **[BEGIN HIGHLY CONFIDENTIAL]**

¹⁰ **[BEGIN HIGHLY CONFIDENTIAL]**

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30.

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[END HIGHLY CONFIDENTIAL]

¹¹ **[BEGIN HIGHLY CONFIDENTIAL]**

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¹² **[BEGIN HIGHLY CONFIDENTIAL]**

[END HIGHLY CONFIDENTIAL]

31. Over the past several years, the incumbent LECs have gradually shifted from stunting the migration from DS_n to Ethernet dedicated services (*i.e.*, by not permitting customers to count their Ethernet dedicated services purchases toward volume commitments), to seeking to use new volume commitments in overlay agreements to lock up the market for Ethernet dedicated services. They have done 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 and other non-TDM-based dedicated services. As explained above, in order to meet these volume commitments, Level 3 will need to purchase larger and larger volumes of Ethernet dedicated services from incumbent LECs. In this manner, incumbent LECs are exploiting their dominance in the provision of DS_n dedicated services as a means of locking up Level 3's demand for Ethernet dedicated services.

Level 3's Experience as a Seller of Dedicated Services

32. It is my experience that the incumbent LECs' lock-up plans restrict Level 3's prospective wholesale customers' ability to purchase dedicated services from Level 3 for the same reasons, described above, that those tariffs and overlay agreements restrict Level 3 from buying dedicated services from other competitive LECs. While the prospective buyers themselves are better placed to describe these effects, Level 3 does sometimes become aware of

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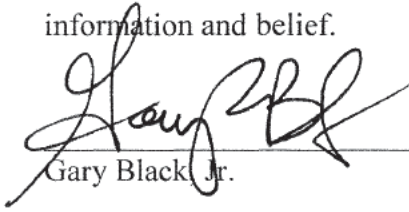
specific circumstances in which prospective buyers forego purchasing dedicated services from Level 3 because of the lock-up effect of the volume commitments they have made to incumbent LECs.

33. For example, one Level 3 wholesale customer, which consistently purchased several million dollars in services (including dedicated services) from Level 3 each year, recently dramatically reduced its purchases from Level 3, including dedicated service purchases. Although the customer was satisfied with Level 3's pricing and service quality, the Level 3 sales team learned that the customer had no choice but to move its purchases to an incumbent LEC because of penalties the customer would otherwise face pursuant to its agreement for the purchase of dedicated services from the incumbent LEC.

34. Another Level 3 customer informed Level 3 that it had analyzed a sample of locations where it currently purchases services from incumbent LECs to determine the extent to which it would save money by purchasing the services from a competitive LEC. In a large number of locations within the sample areas, the customer wanted to purchase services from Level 3 and would have saved approximately \$65,000 per year if it could have done so. However, the customer determined that it could not purchase the services from Level 3 because doing so would compromise its ability to meet the volume commitments it has made to incumbent LECs for the purchase of dedicated services.

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



Gary Black, Jr.

Dated: 1/21/16

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EXHIBITS FOR APPENDIX C

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Exhibits 1-5 to Appendix C are Highly Confidential and have been redacted in their entirety.

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APPENDIX D

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BANKRUPTCY FILINGS OF FACILITIES-BASED CLECS THAT WERE PUBLICLY TRADED AS OF 2001

<u>CLEC¹</u>	<u>Filed for Chapter 11 Bankruptcy?</u>	<u>Acquired by Firm that Filed for Chapter 11 Bankruptcy?</u>	<u>Acquired at Steep Discount?</u>
Adelphia Business Solutions (renamed TelCove in 2004)	Yes (Filed 2002)	No	No
Advanced Radio Telecom Corp.	Yes (Filed 2001)	Yes ⁱ	No
Allegiance Telecom Inc.	Yes (Filed 2003)	No	No
Allied Riser	No	No	Yes ⁱⁱ
Avista Corporation	No	No	No
CapRock	No	Yes ⁱⁱⁱ	Yes ^{iv}
Choice One	Yes (Filed 2004)	No	No
Convergent Communications Inc.	Yes (Filed 2001)	No	Yes ^v
CoreComm Ltd. (renamed ATX Comm. in 2002)	Yes (Filed 2004)	No	Yes ^{vi}
Covad Communications Group Inc.	Yes (Filed 2001)	No	No
CTC Communications Corp.	Yes (Filed 2002)	No	Yes ^{vii}
Cypress Communications, Inc.	No	No	Yes ^{viii}
e.spire Communications Inc.	Yes (Filed 2001)	No	Yes ^{ix}
Elec Communications (renamed Pervasip Corp. in 2006)	No	No	No
Electric Lightwave Inc.	No	No	No
Focal Communications Corp.	Yes (Filed 2002)	No	Yes ^x
GST Telecommunications	Yes (Filed 2000)	No	No
ICG Telecommunications Inc.	Yes (Filed 2000)	No	Yes ^{xi}
Intermedia Communications	No	Yes ^{xii}	Yes ^{xiii}
ITC^DeltaCom Inc.	Yes (Filed 2002)	No	No
McLeodUSA Inc.	Yes (Filed 2002 & 2005)	No	No
Mpower Communications Corp.	Yes (Filed 2002)	No	No
Net2000	Yes (Filed 2001)	No	Yes ^{xiv}
Network Access Solutions Corp.	Yes (Filed 2002)	No	Yes ^{xv}
Network Plus Corp.	Yes (Filed 2002)	No	No
North Pittsburgh Systems, Inc.	No	No	No
Pac-West	Yes (Filed 2007 & 2013)	Yes ^{xvi}	No
Primus Telecommunications (renamed HC2 Holdings Inc. in 2014)	Yes (Filed 2009)	No	No
RCN Corp.	No	No	No
RMI.Net (renamed ICC after 2000 merger)	Yes (Filed 2001)	Yes ^{xvii}	No
RSL	Yes (Filed 2001)	No	No
Teligent Inc.	Yes (Filed 2001)	Yes ^{xviii}	Yes ^{xix}
Telocity	No	No	Yes ^{xx}
Time Warner TLC (renamed tw telecom Inc. in 2008)	No	No	No
US LEC Corp	No	No	No

¹ CLECs were included if they were identified as publicly traded in Robert Crandall's 2001 study of the CLEC industry and if, based on a review of the company's public statements (e.g., SEC filings), it is reasonable to conclude that the company deployed local transmission facilities. See Robert W. Crandall, *An Assessment of the Competitive Local Exchange Carriers Five Years After the Passage of the Telecommunications Act 16* (June 2001).

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<u>CLEC¹</u>	<u>Filed for Chapter 11 Bankruptcy?</u>	<u>Acquired by Firm that Filed for Chapter 11 Bankruptcy?</u>	<u>Acquired at Steep Discount?</u>
Winstar Communications Inc.	Yes (Filed 2001)	No	Yes ^{xxi}
World Access	Yes (Filed 2001)	No	No
XO Comm. (formerly Nextlink)	Yes (Filed 2002)	No	No

ⁱ Advanced Radio Telecom Corp. reorganized and was renamed First Avenue Networks Inc. in February 2002, which merged with FiberTower in 2006, who later filed for bankruptcy in 2012.

ⁱⁱ In 2002, Cogent Communications acquired Allied Riser, issuing 0.032 shares of common stock for each share of Allied Riser.

ⁱⁱⁱ McLeodUSA Inc. acquired CapRock in 2000, declared bankruptcy in 2002, and reorganized that year by divesting approximately \$1 billion of non-core assets, including CapRock.

^{iv} In October 2000, CapRock was acquired by McLeodUSA, Inc. for approximately \$532 million despite CapRock’s fiber assets being valued between \$660 and \$880 million in August 2000.

^v A day before Convergent filed for bankruptcy, a former employee (Michael Mikesell) purchased Denver-based Convergent’s St. Louis assets to create Convergent Communications of St. Louis for an estimated price of less than \$500,000.

^{vi} Recapitalized ATX Communications was acquired by Broadview Network Holdings for \$88.8 million in cash in June 2006.

^{vii} In 2003, Columbia Ventures Corporation purchased CTC Communications out of bankruptcy for \$32 million in cash and took the company private

^{viii} In 2002, U.S. RealTel (renamed Cypress Communications Holding Co. in 2004) acquired Cypress Communications for \$16.9 million despite Cypress reporting nearly \$200 million in assets in 2001.

^{ix} In 2002, Xspedius Management Corporation acquired e.spire Communications Inc. out of bankruptcy for \$68 million, despite e.spire having received \$1.6 billion in investments and generating \$164 million of revenue a year.

^x In 2004, Corvis Corporation acquired Focal Communications Corporation, once valued at more than \$3 billion, to merge with previously acquired Broadwing Corporation for about \$210 million.

^{xi} ICG emerged from bankruptcy in 2002 after undergoing a substantial reorganization and was taken private in October 2004 after two venture capital firms bought the company (once valued at \$2 billion) for \$106 million.

^{xii} Allegiance Telecom acquired all Intermedia Business Internet assets from WorldCom in 2002 and filed for bankruptcy in 2003.

^{xiii} In 2002, Allegiance Telecom acquired all Intermedia Business Internet assets from WorldCom in a transaction that was not financially material.

^{xiv} In 2001, Cavalier Telephone acquired the assets of Net2000, listed at \$258.8 million, out of bankruptcy for \$25 million.

^{xv} In 2002, DSL.net acquired the assets of bankrupt Network Access Solutions Corporation for \$14 million.

^{xvi} In 2007, Pac-West entered bankruptcy and was acquired by Columbia Ventures Corp., later merged with UniPoint Holdings in 2011, and declared bankruptcy again in 2013.

^{xvii} RMI.Net, which was renamed ICC after a 2000 merger, was purchased by ICC Speed Cell in 2001, but ICC Speed Cell appears to have gone bankrupt soon after.

^{xviii} First Avenue Networks, Inc. acquired the assets of Teligent, Inc. in 2005 and merged with FiberTower Corp. in 2006, which declared bankruptcy in 2012.

^{xix} In 2005, First Avenue Networks, Inc. acquired the assets of Teligent, Inc. for about \$105 million of stock, after the company was valued at \$4 billion in 2000 and had assets of \$1.21 billion when it filed for bankruptcy in 2001.

^{xx} In 2001, Hughes acquired Telocity for approximately \$178 million, 82% less than its IPO.

^{xxi} In 2001, IDT purchased Winstar’s business assets out of bankruptcy for \$42.5 million and formed Winstar Holdings, which was shut down in 2004.