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Federal Communications Commission
Office of the Secretary

March 26, 2015

VIA COURIER & ECFS

EX PARTE

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

DOCKET FILE COPY ORIGINAL

Re: ***Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25*; AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, RM-10593; *Technology Transitions*, GN Docket No. 13-5; *AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition*, GN Docket No. 12-353**

Dear Ms. Dortch:

On behalf of TDS Telecommunications Corporation ("TDS"), please find enclosed two copies of the redacted version of an *ex parte* letter for filing in the above referenced proceedings. The letter contains information that the Wireline Competition Bureau has deemed confidential under the protective orders in these proceedings.[1] Pursuant to the procedures outlined in the protective orders, the original confidential version of the letter is being filed with the Secretary's office under separate cover. Two copies of the confidential version are being delivered to Andrew Mulitz of the Pricing Policy Division of the Wireline Competition Bureau, and two copies are being delivered to Jonathan Reel of the Competition Policy Division of the Wireline Competition Bureau. Additionally, one machine-readable copy of the redacted version is being filed electronically via ECFS.

[1] *Special Access 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,* Modified Protective Order, 20 FCC Rcd. 1994 (2005); *Technology Transitions; AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition*, Protective Order, 29 FCC Rcd. 2014 (2014).

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Please do not hesitate to contact Thomas Jones at (202) 303-1111 if you have any questions regarding this submission.

Respectfully submitted,

/s/ Thomas Jones

Thomas Jones
Matthew Jones

Counsel for TDS Telecommunications Corporation

Enclosure

cc: Matthew DelNero
Eric Ralph

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Dear Ms. Dortch:

In the above-referenced proceedings, the Commission is undertaking a comprehensive review of the regulations governing local transmission facilities used to provide business broadband services. This inquiry is long overdue. As the Commission has recently recognized, competitive carriers remain crucially dependent on incumbent LEC wholesale transmission facilities in order to serve business customers.[1] Moreover, it is clear to any industry observer that the incumbent LECs retain substantial and persisting market power over last-mile physical connections needed to serve business customers.[2]

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[1] *See Ensuring Customer Premises Equipment Backup Power for Continuity of Communications*, Notice of Proposed Rulemaking and Declaratory Ruling, 29 FCC Rcd 14968, ¶ 27 (rel. Nov. 25, 2014) (quoting the National Broadband Plan observation that "[b]ecause of the economies of scale, scope, and density that characterize telecommunications networks . . . it is not economically or practically feasible for competitors to build facilities in all geographic areas," especially for customers with relatively low telecommunications spend, and observing that "faced with these economic realities, competitive LECs continue to rely significantly on wholesale access to the last-mile facilities of incumbent LECs") ("*Technology Transitions NPRM*").

[2] *See Bernstein Research,* "Weekend Media Blast – Wired About Wired" at 4 n.12 (Jan. 9, 2015) (explaining that, in the special access market "the first mover (usually the incumbent telco) is usually the dominant provider with significant pricing power" and that the incumbent LECs have "pretty obviously a monopoly almost everywhere").

These two facts make it critically important that the Commission update the regulations governing wholesale local transmission facilities to ensure that competitive carriers are able to obtain those inputs on rates, terms, and conditions that enable competitors to compete for downstream retail services. Failure to adopt these regulations will significantly undermine, perhaps destroy entirely, many competitive carriers' ability to compete. That outcome would lead to higher prices, less innovation, and degraded service quality for business broadband services across the country, all in direct contravention of the policy goals of Section 706 in particular and the Communications Act generally.

The large incumbent LECs oppose any FCC effort to update its wholesale access rules to address this issue because it is in their business interest to do so. They have therefore argued, without any basis, that competitive carriers and incumbent LECs are on equal footing when deploying fiber loops. For example, CenturyLink recently asserted that "falling costs of fiber deployment" mean that "there are no 'incumbents'" in the provision of loops in the market today.[3] Similarly, the incumbent LECs have argued that, regardless of their ability to deploy fiber loops themselves, competitive carriers will be able to obtain these facilities from wholesale providers on reasonable rates, terms, and conditions because a competitive wholesale market and existing wholesale regulations ensure this outcome.[4]

TDS Telecommunications Corporation ("TDS") is well positioned to assess these claims. TDS has a wholly-owned subsidiary that operates incumbent LECs in 27 states across the country ("TDS ILEC") as well as a wholly-owned subsidiary that operates as a competitive LEC ("TDS CLEC") in four states. TDS can therefore draw on years of actual market experience in operating these entities to compare the extent to which ILECs and CLECs can compete for business customers. The attached declaration of James Butman, Group President of TDS, provides a comprehensive assessment of that experience.

As Mr. Butman explains, both TDS ILEC and TDS CLEC serve business customers that increasingly demand symmetric broadband data services that deliver capacities that range from 5 to100 Mbps of connectivity (depending on the needs of the customer), and all but the smallest customers view best-efforts broadband service as an inadequate substitute for such symmetric services.[5] TDS has found that its ILEC is able to deploy the facilities needed to provide these services efficiently but its CLEC has been unable to deploy or obtain such facilities on a consistent basis.

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[3] *See* CenturyLink Comments, GN Docket No. 13-5, WC Docket No. 05-25, RM-11358, RM-10593, at 12 (filed Feb. 5, 2015).

[4] *See* Verizon Reply Comments, GN Docket No. 13-5, WC Docket No. 05-25, RM-11358, RM-10593, at 15 (filed Mar. 9, 2015) ("Even as network technology transitions, wholesale customers will continue to have the ability to get wholesale inputs at reasonable terms and conditions. Market forces ensure that, and existing regulations provide a more than adequate process to address the concern").

[5] *See* Declaration of James Butman at ¶ 5 ("Butman Dec.").

To begin with, TDS ILEC's advantages as an incumbent cause it to incur significantly lower costs in deploying new loops to commercial buildings than TDS CLEC.[6] TDS CLEC has studied and tested this proposition in numerous real-world contexts. It has attempted to operate using fiber deployed to the incumbent LEC's remote terminal, using fiber deployed to the end user locations, and using both licensed and unlicensed spectrum. None of these strategies has proven to be sustainable on a widespread basis.[7]

This has left TDS CLEC with no choice but to rely on loops leased from wholesale providers. This was initially a viable strategy. Beginning in 1997 and relying on the FCC's and state commissions' initial implementation of the market-opening provisions of the 1996 Act, TDS CLEC aggressively deployed fiber rings and electronics that connected to leased incumbent LEC loops to serve business customers in second- and third-tier Midwestern cities.[8] The resulting competition yielded significant benefits for business customers. But the relentless lobbying machine of the large ILECs eventually resulted in FCC and state commission decisions to increase the price and reduce the availability of regulated wholesale loops needed to serve business customers. By 2004, the regulatory basis for local competition had been severely compromised, making it virtually impossible for CLECs to compete for small- and medium-sized business customers in second- and third-tier markets.[9] TDS CLEC has tried to adjust to the new environment by testing and studying the existing options for serving business customers that demand symmetric services: (1) purchasing Ethernet from incumbent LECs at unregulated rates, (2) bonding DS1s purchased as UNEs or special access, and (3) providing Ethernet over copper loops leased as UNEs.[10] None of these has proven to be a sustainable way for TDS CLEC to serve the needs of its customers.

Mr. Butman's analysis highlights the stark reality that competitive carriers are chronically disadvantaged in deploying fiber loops as compared to ILECs and that viable wholesale alternatives for obtaining loops necessary to serve business customers simply do not exist in most locations. If the FCC does not remedy this problem in the near term, competitors like TDS CLEC will exit the market or significantly scale back their presence. Again, the predictable result will be higher prices, less innovation, and degraded quality of broadband services for American businesses.

It is clear that the Commission must act promptly to ensure that competition in the business broadband marketplace survives. It should do so by taking the following steps in the above-referenced proceedings:

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[6] *See id.* at ¶¶ 7-17.

[7] *See id.* at ¶¶ 19-22.

[8] *See id.* at ¶¶ 24-25.

[9] *See id.* at ¶ 26.

[10] *See id.* at ¶ 28.

- The FCC should adopt the proposal set forth in the *Technology Transitions NPRM* that ILECs may not be permitted to discontinue legacy wholesale services unless and until they offer packet-based replacement services on terms and conditions that are equivalent to those applicable to the services to be discontinued,[11] and, furthermore, the Commission should also require that incumbent LEC IP-based replacement services be offered to CLECs at a wholesale discount from the ILECs' retail rates (*e.g.*, 20 percent) that reflects costs the ILEC avoids when offering the services at wholesale, and

- The FCC should adopt rate regulations governing incumbent LEC Ethernet special access services that yield wholesale prices that enable CLECs to effectively compete.

Only after these regulations are adopted will American businesses experience the benefits of competition in the provision of broadband services needed to compete in the 21st Century.

Respectfully submitted,

/s/ Thomas Jones

Thomas Jones
Matthew Jones

Counsel for TDS Telecommunications Corporation

Enclosure

[11] *See Technology Transitions NPRM* ¶¶ 106-113 (seeking comment on, among other things, Windstream's six proposed criteria for governing equivalent access).

REDACTED – FOR PUBLIC INSPECTION

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

In the Matter of	)	
	)	
Special Access for Price Cap Local Exchange Carriers	)	WC Docket No. 05-25
	)	
AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services	)	RM-10593
	)	
Technology Transitions	)	GN Docket No. 13-5
	)	
AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition	)	GN Docket No. 12-353
	)	

DECLARATION OF JAMES BUTMAN
ON BEHALF OF TDS TELECOMMUNICATIONS CORPORATION

1. I am Group President for TDS Telecommunications Corporation ("TDS"), a wholly owned subsidiary of Telephone and Data Systems, Inc., with incumbent LEC, competitive LEC, cable, and hosted managed services operations. In my role, I have leadership responsibilities for all wireline consumer and commercial sales, customer care, marketing, product management, product development, and business development.

2. The purpose of the affidavit is to describe (1) TDS's experience providing voice and data services to business customers through its incumbent LEC and competitive LEC segments; (2) the different economics faced by incumbent LECs and competitive LECs when attempting to deploy fiber to business customer locations; and (3) the impact of the FCC's lack

of regulation of incumbent LECs' rates, terms, and conditions for wholesale low-to-mid capacity Ethernet services on TDS's competitive LEC segment.

I. DESCRIPTION OF TDS BUSINESSES

3. Although originally founded as an incumbent LEC ("TDS ILEC"), TDS launched a competitive LEC, TDS Metrocom, in 1997 ("TDS CLEC"). TDS provides voice and data services—including hosted VoIP, SIP trunking, broadband Internet access, and a range of other networking capabilities—to business customers through both its ILEC and CLEC segments.[1] TDS is highly-regarded among customers for these services and for its ability to tailor its services options to each customer's specific needs. TDS's reliable and cost-effective managed voice and data platform offers a suite of productivity-enhancing features, including a secure and dedicated bandwidth connection to the customer, dynamically allocated bandwidth capabilities (*e.g.*, for prioritizing voice over data), and redundancy/disaster recovery capability for customers who deem such protection to be critical.

4. TDS ILEC serves approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** business customers in 27 states, and TDS CLEC serves approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** business customers in four states. Both segments serve business customers that vary in size from home offices to corporations with 1,000 employees. A large number of these customers are small businesses with fewer than 10 employees. Customers include hospitals and clinics, municipal governments,

[1] TDS provides wireline voice, video, and data services to approximately 1.1 million residential and business customers through its TDS ILEC, TDS CLEC, and cable segments. However, this Declaration focuses on services provided to business customers through the TDS ILEC and TDS CLEC segments.

school districts, manufacturing companies, financial services companies, and real estate companies.

5. The business customers that TDS ILEC and TDS CLEC seek to serve increasingly demand voice and data services provided over dedicated connections that offer symmetric bandwidth of approximately 5-100 Mbps. The customers that demand these services usually have 10 or more employees. They do not view best efforts broadband Internet access services, such as cable modem service, as their first choice to meet their needs. This is because these customers place significant value on the reliability and security associated with dedicated capacity and a very high quality of service (QoS), including network availability guaranteed close to 100% of the time. In addition, they often demand data services other than broadband Internet access, such as interoffice networking capabilities. In contrast, many of TDS CLEC's customers with 10 or fewer employees have different needs than larger companies and at times compromise on their preference for reliable and secure service by downgrading to best efforts broadband Internet access service for cost savings.

6. As explained below, TDS ILEC is generally able to meet the needs of its business customers, but TDS CLEC is increasingly unable to do the same. TDS CLEC has extensive experience investing in and exhausting possible options for last-mile access to business customers, including with direct fiber builds and a variety of wholesale alternatives. Unfortunately, none of these options have proven to be an economically viable means of providing the services that business customers demand at competitive prices.

II. IN MOST CIRCUMSTANCES, TDS ILEC INCURS SIGNIFICANTLY LOWER COSTS IN DEPLOYING NEW FIBER LOOPS TO COMMERCIAL BUILDINGS THAN TDS CLEC

7. TDS's experience in deploying new last-mile facilities as an incumbent LEC and a competitive LEC has enabled it to compare the deployment costs of these different types of businesses. TDS has found 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. This is so for several reasons.[2]

8. *First*, business customer locations are, on average, located much closer to TDS ILEC's existing fiber plant than TDS CLEC's. For example, the average distance from TDS ILEC's existing fiber plant to business customer locations is approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** miles in the rural market of Lancaster, Wisconsin and approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** miles in the suburban market of Verona, Wisconsin. By contrast, the average distance from TDS CLEC's existing fiber to business customer locations is approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** miles in the relatively large business density areas of Milwaukee and Madison, Wisconsin, and approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** miles in the somewhat smaller and less dense areas of Grand Rapids MI, Ann Arbor MI, Lansing MI, and Green Bay, WI.

9. This disparity is a result of the manner in which TDS ILEC's and TDS CLEC's networks originated and have evolved over time. As an incumbent LEC, the average distance from a TDS ILEC central office switch to a TDS ILEC business customer location is

[2] Large incumbent LECs, especially those with large wireless networks such as AT&T and Verizon, likely possess these advantages to a much greater degree than TDS ILEC.

approximately **[BEGIN CONFIDENTIAL]** ▌ **[END CONFIDENTIAL]** miles, but the average distance from a TDS CLEC hub switch is over **[BEGIN CONFIDENTIAL]** ▌ **[END CONFIDENTIAL]** miles. In addition, TDS ILEC has incrementally deployed shared fiber feeder facilities in high-demand portions of its network and has been able to allocate the costs of this deployment over both its existing residential and business customer bases. TDS CLEC has not been able to do so because it does not have the benefit of large, preexisting residential and business customer bases over which to spread deployment costs. TDS CLEC has deployed fiber rings in certain markets, but these routes were chosen primarily to connect TDS CLEC's hub switches with collocation sites in large incumbent LECs' central offices via routes where rights-of-way were affordable and readily available (*e.g.*, along highway corridors). TDS CLEC chose these fiber routes under the assumption that it would rely on last-mile access facilities leased as UNEs or special access circuits from these large incumbent LECs. These routes are generally not located close to business customer locations.

10. The greater distance between TDS CLEC's fiber routes and business customer locations has an enormous impact on TDS CLEC's deployment costs. This is so because deployment costs are very distance-sensitive. Thus, even if TDS ILEC's and TDS CLEC's per-mile costs for outside plant were equal, TDS CLEC's total costs to deploy fiber to a business customer location would be much greater. But the differential is in fact even more dramatic. This is because, due to the advantages of incumbency (*e.g.*, existing conduit, right-of-way easements, and aerial attachments, as discussed below), TDS ILEC frequently incurs lower per mile average outside plant costs. Because TDS CLEC lacks these advantages, it must incur costs

that are approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** higher per mile in many cases for outside plant prior to considering electronics costs.[3]

11. *Second* and relatedly, TDS ILEC possesses many advantages due of its operation of a preexisting network along potential fiber routes. For many potential routes, TDS ILEC has already deployed conduit or aerial attachments and has already obtained rights-of-way that can be repurposed for new fiber deployment to a business customer. TDS CLEC generally has not operated facilities along the routes over which it considers deploying fiber. Thus, TDS CLEC must deploy or obtain access to conduit or aerial attachments and/or negotiate rights-of-way along these routes for the first time. This difference is one reason why TDS ILEC has lower fiber deployment costs than TDS CLEC. But this difference also means that TDS ILEC, at times, can often deploy fiber based services more quickly than TDS CLEC, a significant advantage in competing for customers.

12. *Third*, TDS CLEC must incur much higher equipment and fiber splicing costs than TDS ILEC when deploying new fiber. TDS CLEC must exercise conservative network planning to account for its small customer base that is distributed across relatively large geographic areas. TDS CLEC addresses these challenges by deploying electronics at the new fiber splice point (into the existing fiber route) to create a dedicated broadband "wave" to the customer site rather than by deploying a dedicated pair of fibers to the customer location. This allows TDS CLEC's existing fiber feeder facilities to effectively serve many more business customers across its widely-distributed market footprint. Thus, when deploying fiber facilities to

[3] Both segments' costs vary based on the geographic characteristics of a given market. In more complex urban areas, deployment costs tend to be higher. In more rural areas, deployment costs can be lower (although costs in these areas can also be impacted by exceptional cost-causing factors such as railroad crossings).

a customer location, TDS CLEC generally must splice the new fiber into its existing fiber ring at the splice point and install electronics at its hub switch, at the splice point, and at the customer's premises. The equipment and labor associated with this deployment process cost, on average, approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**. TDS ILEC, on the other hand, generally does not have to install electronics at the splice point. This is because TDS ILEC's larger, more densely-distributed customer base make it economic for TDS ILEC to deploy one or more dedicated pairs of fiber all the way from the central office to the customer location. Thus, TDS ILEC's equipment costs are, on average, approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**.

13. *Fourth*, when deploying fiber to a building such as a "carrier hotel," TDS CLEC must often pay the building owner a monthly fee for fiber entrance and space in the building. This fee varies by site but is often in the range of several hundreds of dollars per month. By contrast, TDS ILEC frequently has a preexisting presence in buildings in its region and relationships with the building owners. This drives down fees significantly for TDS ILEC, and in some instances, TDS ILEC does not incur any such fees when deploying new fiber.

14. Due to the cost differentials described above, TDS ILEC can economically deploy new fiber to business customer locations far more frequently than TDS CLEC. Comparing the revenues that a project must offer to justify deployment illustrates this point. TDS ILEC recently deployed fiber to a business customer located approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** feet from its existing fiber plant in Hot Springs, Virginia. TDS ILEC was not required to incur electronics costs at its fiber splice point, and its deployment costs totaled approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**. In order to meet the internal rate of return ("IRR") required to justify this expenditure, the project

had to generate **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** per month for a period of **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** months. By contrast, TDS CLEC recently deployed fiber to a business customer located only approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** feet from its existing fiber plant in Madison, Wisconsin. Although this location was much closer to TDS CLEC's fiber facilities than was the case for TDS ILEC in the previous example (which is not usually the case), and although there is no material difference in the costs a carrier must incur to deploy fiber facilities in Hot Springs, Virginia as opposed to Madison, Wisconsin, TDS CLEC's deployment costs in Madison were far higher than TDS ILEC's deployment costs in Hot Springs. TDS CLEC incurred approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** in outside plant costs, approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** in fiber splice and remote terminal equipment costs, and approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** in other deployment costs – for a total of **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**. In order to meet the IRR required to justify this larger expenditure, the project had to generate at least **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** per month in revenue for a period of **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** months. The differential between ILEC and CLEC fiber deployment costs in these two projects is the norm in my experience.

15. Given that small businesses with 10 or fewer employees account for greater than 75 percent of the market for TDS CLEC, many business customer locations do not offer a sufficiently-high revenue opportunity to justify fiber deployment by TDS CLEC. Even where the revenue opportunity is sufficient, TDS CLEC's costs for fiber deployment as compared to ILECs' costs means that TDS CLEC often cannot compete with the ILEC on price.

16. Due to these cost disadvantages, TDS CLEC does not even attempt to bid on projects where the fiber build distance is greater than approximately **[BEGIN CONFIDENTIAL]** ■■■ **[END CONFIDENTIAL]** feet. And for projects where TDS CLEC does submit bids, it loses these bids far more often than TDS ILEC loses bids. For example, in 2014, TDS ILEC provided high-level cost estimates for potential fiber builds to **[BEGIN CONFIDENTIAL]** ■ **[END CONFIDENTIAL]** business customers in the Middleton, Wisconsin market. TDS ILEC won **[BEGIN CONFIDENTIAL]** ■ **[END CONFIDENTIAL]** (or approximately **[BEGIN CONFIDENTIAL]** ■ **[END CONFIDENTIAL]** percent) of these opportunities. During the same period, TDS CLEC provided such estimates to **[BEGIN CONFIDENTIAL]** ■ **[END CONFIDENTIAL]** business customers in the adjacent Madison, Wisconsin market. However, TDS CLEC was able to win only **[BEGIN CONFIDENTIAL]** ■ **[END CONFIDENTIAL]** (or approximately **[BEGIN CONFIDENTIAL]** ■ **[END CONFIDENTIAL]** percent) of these opportunities. Moreover, I am unaware of any inherent difference (*e.g.*, unusual differences in the costs of deployment, differences in customer demand, or other) between Middleton and Madison that contributed to this outcome. Instead, I have concluded that the difference in the success rates of the TDS affiliates was caused by the inherent differences between ILECs' and CLECs' costs and ability to deploy fiber in a timely manner.

17. Because of TDS CLEC's fundamental disadvantages, while **[BEGIN CONFIDENTIAL]** ■ **[END CONFIDENTIAL]** percent of TDS ILEC's business customers are now served over TDS ILEC's last-mile fiber facilities, less than **[BEGIN CONFIDENTIAL]** ■ **[END CONFIDENTIAL]** percent of TDS CLEC's business customers

are served over its last-mile fiber facilities.[4] Even in Madison, Wisconsin – one of TDS CLEC's primary target markets – TDS CLEC has been able to deploy fiber to less than **[BEGIN CONFIDENTIAL]** ▌ **[END CONFIDENTIAL]** percent of its customers.

III. TDS CLEC HAS ATTEMPTED DIFFERENT FACILTIES-BASED APPROACHES, BUT THESE EFFORTS HAVE GENERALLY PROVEN UNSUCCESSFUL

18. Due to the significant disadvantages that TDS CLEC faces when deploying last-mile facilities as compared to incumbent LECs, TDS CLEC has aggressively searched for a means of overcoming this disadvantage. In so doing, TDS CLEC has studied a variety of potential strategies for deploying its own facilities and has conducted several trials in order to test these strategies. Through these efforts, TDS CLEC has determined that each of the facilities-based approaches it has evaluated would be cost prohibitive and none of them would enable TDS CLEC to overcome its disadvantaged position as compared to incumbent LECs.

19. Between approximately 2006 and 2008, TDS CLEC evaluated a potential strategy in which it would deploy its own fiber to AT&T remote terminals in Madison, Wisconsin and purchase access to AT&T UNE sub-loops from those terminals to customer premises. Due to insufficient density of customer locations and the capital that would be required to deploy feeder facilities, electronics, and power capability to satisfy AT&T's network interconnection requirements, TDS CLEC concluded that this approach would not be economically viable.

20. In 2013, TDS CLEC launched a fiber deployment project in the Fox Valley region of Wisconsin prior to signing customers up for service contracts. It deployed fiber into an

[4] Moreover, TDS ILEC would likely serve significantly more than **[BEGIN CONFIDENTIAL]** ▌ **[END CONFIDENTIAL]** of its business customers over its own last-mile fiber facilities if it were the ILEC in larger, business-dense markets such as Milwaukee, Detroit, and Minneapolis (where RBOCs serve as the ILECs), rather than in the smaller, less dense markets where TDS ILEC operates.

industrial park and has actively marketed its services to business customers located within that industrial park. While TDS CLEC has had some success in signing customers up for services, the IRR projected for this project is much lower, and the payback period is much longer, than TDS CLEC's normal targets. Moreover, TDS CLEC has not been able to identify other areas in which this strategy would be economical.

21. TDS CLEC has also explored utilizing its own wireless end user connections to business customers. In 2007, TDS CLEC acquired spectrum licenses in the 2.5 GHz range from a company called Sky Cable in Madison, Wisconsin and deployed infrastructure to provide fixed wireless last mile connections to business customer locations in that area. TDS CLEC 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. In addition, fixed wireless technology proved insufficient to meet consumers' needs for bandwidth and reliability. This technology could not simultaneously support both voice and data services, and customers generally did not view the quality of the service as comparable to dedicated wireline connections. These difficulties were due in part to "line of sight" issues, which were especially pronounced due to the prevalence of trees and hills in the Madison area.

22. Since 2005, TDS CLEC has been conducting a trial of unlicensed fixed wireless connections in the Fox Valley region of Wisconsin. TDS CLEC has concluded that the unlicensed technology it has trialed would only support Internet access speeds up to 4 Mbps and would not reliably support voice service. Moreover, this technology is also subject to the operational challenges discussed above with respect to licensed wireless service (*i.e.*, obtaining

tower space and permission of building owners). Thus, TDS CLEC has decided not to pursue this trial any further and has begun to wind it down.

IV. THE ABSENCE OF REGULATED WHOLESALE LOOPS PREVENTS TDS CLEC FROM COMPETING TO SERVE BUSINESS CUSTOMERS

23. In light of the significant challenges TDS CLEC faces in deploying its own last-mile connections to end user customers, TDS CLEC has, over the course of its history, examined in detail and experimented with virtually every available means of leasing last-mile connections to business customers from a wholesale provider.

24. When TDS CLEC began operations in 1997, shortly after the rules implementing the local competition provisions of the Telecommunications Act of 1996 began to take effect, its primary strategy was to compete with incumbent LECs by investing in hub switches, fiber rings, and facilities collocated in incumbent LEC central offices while obtaining last-mile access services as UNEs. Accordingly, TDS CLEC selected geographic markets where (1) the incumbent LEC faced minimal competition for business customers; (2) there were a sufficient number of business customers to make investment in facilities cost-effective; and (3) the state's public utility commission had set UNE rates at reasonable levels. Following this strategy, TDS CLEC invested over $550,000,000 in infrastructure in second-tier cities in Midwestern states and began to successfully compete with incumbent LECs for business customers. TDS CLEC experienced exponential growth in its early years and was able to grow its market share as high as 30 percent in certain geographic areas.

25. Competition between incumbent LECs and TDS CLEC generated substantial benefits for business customers in the form of lower prices and improved service. For example, TDS CLEC was often able to price its services lower than those of the incumbent LEC by

tailoring its services to a customer's needs. This customization, combined with a consistent focus on customer service, gained the loyalty of many business customers in the Midwestern markets. In addition, TDS CLEC initially deployed and aggressively marketed DSL service to many customer locations before the incumbent LEC serving those locations had begun to do so. In many cases, this prompted the incumbent LEC to upgrade its network where necessary and to deploy its own DSL service to compete with TDS CLEC's offering.

26. After this initial period of success, a series of regulatory decisions and incumbent LEC actions began to hinder TDS CLEC's ability to compete. Largely in response to large incumbent LECs' advocacy, the public utility commissions in the states where TDS CLEC operated began to raise rates for UNEs—up to 30 percent in some instances. These increases accrued directly to TDS CLEC as increased costs and were often, by necessity, passed on to customers in the form of higher prices. In addition, the FCC dramatically reduced the availability of UNEs by, among other things, (1) eliminating incumbent LECs' obligation to provide access to packetized loops, OCn loops, and dark fiber as UNEs; (2) establishing an impairment threshold that eliminated the availability of DS1 and DS3 UNEs in and between key wire centers; and (3) limiting the number of DS1 and DS3 UNEs available to a given customer location to ten and one, respectively. To make matters worse, incumbent LECs began to significantly increase the frequency with which they would claim (whether accurately or not) that facilities were not available to provide UNEs to TDS CLEC. Taken together, these developments dramatically reduced the value of TDS CLEC's infrastructure investments. Accordingly, in 2004, the company was required to write off approximately $94,000,000 in investment. TDS CLEC also withdrew from Indiana and Ohio entirely, despite having invested

over $10,000,000 in those markets, leaving many business customers with no competitor to the local incumbent LEC.

27. TDS CLEC continues to operate, but its ability to compete with incumbent LECs for business customers has continued to decline. Today, a significant factor contributing to this decline is that TDS CLEC cannot competitively offer the dedicated 5-100 Mbps connections that these customers increasingly demand. If incumbent LECs' low-to-mid capacity Ethernet offerings were available on regulated rates, terms, and conditions for wholesale purposes, TDS CLEC could purchase these inputs at appropriate levels of bandwidth (*e.g.*, 20 Mbps) and provide dedicated Ethernet connections to its business customers. Due to the FCC's current regulatory framework (in which incumbent LEC Ethernet services are not subject to rate regulation), this is not an option, and TDS CLEC is left with a shrinking variety of bad alternatives.

28. TDS CLEC has explored using virtually every means of wholesale last-mile access available to competitive LECs, including purchasing Ethernet at unregulated rates, bonding DS1s purchased as UNEs and/or special access, and providing Ethernet over copper loops purchased as UNEs. None of these alternatives have proven to be sustainable:

- *Purchasing Ethernet at unregulated rates.* TDS CLEC has attempted to rely on Ethernet purchased from incumbent LECs at unregulated rates pursuant to "commercial agreements." TDS CLEC has generally been satisfied with the quality of these services where it has obtained them. However, even during TDS CLEC's

initial experimentation with this approach, incumbent LECs have insisted on excessive rates.[5]

- *Bonding DS1s purchased as UNEs or Special Access.* Because TDS CLEC views this as the most reliable means of last-mile access currently available, TDS CLEC primarily serves its business customers over bonded DS1 loops that TDS CLEC purchases as UNEs. However, while DS1 UNEs are sold at regulated rates, these rates are still too high to allow TDS CLEC to offer higher bandwidth services to business customers at affordable prices. In addition, the fact that only 10 DS1s are available as UNEs to each location severely limits the amount of bandwidth that TDS CLEC can provide over UNEs.[6] On occasion, TDS CLEC purchases additional DS1 circuits from incumbent LECs as special access circuits (and bonds these together with the DS1 UNEs) in order to increase the level of bandwidth it can provide to a particular location. However, the rates that TDS CLEC pays for special access service are approximately 2.27 times higher than the rates it pays for UNEs (and are especially high in markets where incumbent LECs have received Phase II "pricing flexibility").[7]

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[5] TDS CLEC has also attempted to purchase Ethernet from cable companies, but it has found that these services are somewhat limited in availability and are also priced at excessive levels.

[6] For example, even if TDS CLEC were to bond all 10 DS1s together to serve a single customer, this would only allow for a dedicated connection of approximately 15 Mbps upstream and downstream (and would require TDS CLEC to price its service at a rate that is far too high for most commercial customers).

[7] Moreover, incumbent LECs often require competitors to agree to excessive term and volume commitments to obtain discounts from their excessive month-to-month rates.

- *Providing Ethernet over copper loops purchased as UNEs.* TDS CLEC has considered providing Ethernet-over-copper, but this approach would require access to several (*e.g.*, 6-8 or more) "home-run" copper pairs from the incumbent LEC's central office to a given customer's premises. Especially as incumbent LECs announce plans for widespread removal of copper facilities, the availability of these facilities is far from guaranteed. In order to serve customers using this technology, TDS CLEC would incur substantial capital costs to deploy equipment at collocations in incumbent LEC wire centers and at customer premises, and to provide adequate backhaul capacity. Given the risk associated with availability of copper loops, TDS CLEC has concluded that incurring these capital costs is not a viable alternative.

29. As has been the case for many competitive LECs, the lack of a sustainable option for wholesale last-mile access has placed TDS CLEC's future in jeopardy. In 2012, **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** TDS remains committed to the CLEC strategy and retains hope that policymakers will realize the value of the CLEC industry to the needs of commercial customers for high quality service options.

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

James Butman

Dated: 3/26/15