According to Windstream, continuing enterprise competition hinges on the availability of DS1 and DS3 unbundling over next-generation fiber networks. That is hardly the case. For some time, both retail and wholesale customers have been voluntarily migrating—in droves—away from DS1 and DS3 services, to more modern, more functional, and more economical broadband technologies such as Ethernet. In a gigabit world, a 1.5 Mbps DS1 simply does not have sufficient capacity to meet the needs of most customers.

1 These reply comments are filed by, and on behalf of, CenturyLink, Inc. and its subsidiaries.


3 In particular, unlike fixed-capacity DS1 and DS3 services, Ethernet can easily be augmented as a customer’s bandwidth demands increase. For example, CenturyLink offers Ethernet speeds ranging from 3 Mbps to 1 Gbps. CenturyLink website, http://www.centurylink.com/business/data/metro-optical-ethernet.html. Windstream offers a similar array of speeds. See Windstream website, http://carrier.windstreambusiness.com/ethernet-services/.

4 While the Petition covers both unbundled DS1s and DS3 loops, CenturyLink has almost no new demand for the latter, suggesting that CLECs have opted for other alternatives to serve customers at that level of capacity.
And ILECs are by no means dominant providers of Ethernet and other enterprise broadband services. Indeed, Level 3 has now surpassed both CenturyLink and Verizon as a provider of domestic Ethernet services.\(^5\) Cable providers also have muscled into this growing sector.\(^6\) Vertical Systems Group recently listed Cox, Comcast and Time Warner Cable as the fifth, sixth and seventh largest providers of Ethernet services.\(^7\) As Windstream has recognized, these cable providers have won a significant share of small business customers and are now intent on moving up market.\(^8\) Given their rapid growth in commercial services,\(^9\) there is every reason to believe that cable providers will continue their dramatic growth as they expand to larger customers.\(^10\) For its part, Time Warner Cable (“TWC”) recently announced that “[d]uring


\(^6\) Frost & Sullivan anticipates that U.S. Ethernet carrier revenues will grow from $4 billion to more than $10 billion in 2018. See CenturyLink Comments at 14 (citing Frost & Sullivan, Research Preview for the Business Carrier Ethernet Services Market Update, 2014, at 7 (Mar. 2014)).

\(^7\) 2014 Vertical Systems Leaderboard.

\(^8\) Jeff Gardner, CEO (former), Windstream, Windstream Corp. at Goldman Sachs 23rd Annual Communacopia Conference, Fierce Telecom (Sept. 12, 2014) (“We obviously got to be on our watch of the cable companies. . . . [O]nce Comcast and Time Warner get together, they are going to try to go up market and we need to increase our capabilities in our space.’’)

\(^9\) See, e.g., Letter from Robert C. Barber, AT&T, to Marlene H. Dortch, FCC, at 2-3, Special Access for Price Cap Local Exchange Carriers, WC Docket No. 05-25, RM-10593 (Oct. 10, 2014) (“Comcast just reported that its business services revenue increased 22 percent in the second quarter of 2014 to an annual run-rate of $4 billion, and Cablevision similarly reported that its second quarter revenues increased 6.7 percent to $88 million.”); Corrected Transcript of Time Warner Cable, Inc., Q4 2012 Earnings Call, at 5 (Jan. 31, 2013) (Robert D. Marcus, President & Chief Operating Officer, Time Warner Cable, Inc. (noting that, in 2012, TWC doubled the number of commercial buildings connected to fiber, and enjoyed “organic growth of more than 20%” among enterprise customers)).


2014, [it] added nearly 70,000 commercial buildings to its network, ending the year with connectivity to 930,000 commercial buildings."¹¹ Thus, Windstream’s charts suggesting that cable providers do not compete effectively for mid-sized and multi-location customers are destined to be a historical footnote to the rapid transformation of the enterprise marketplace.¹² Those charts also do not comport with CenturyLink’s experience in its ILEC service territory, as cable providers continue to expand their reach in the enterprise marketplace and win enterprise customers previously served by CenturyLink. And, outside its service territory, CenturyLink is capitalizing on the availability of cable providers’ Ethernet local access service as an alternative means of reaching commercial buildings not directly served by CenturyLink’s network.¹³

Although Ethernet-over-Copper (EoC) is clearly a transitional technology, likely to be supplanted by new non-ILEC fiber deployments over time, it allows both CLECs and ILECs access to commercial buildings through copper loops. CLECs such as Integra and TelePacific have very successfully used such loops to provide EoC services at speeds comparable to, and exceeding, both DS1 and DS3 services.¹⁴ Again, CenturyLink has experienced the utility of

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¹² See Petition at 8-9.
¹⁴ CenturyLink Comments at 10.
these services both within and outside its ILEC territory. In-region, it uses copper to provide Ethernet services to commercial locations not yet reached by fiber. Out-of-region, CenturyLink relies on CLECs’ EoC services as another means of off-net access to enterprise customers. Given the availability of such alternatives, DS1 and DS3 availability becomes a less important component of enterprise competition with each passing day, rendering Windstream’s proposed DS1/DS3 unbundling mandate strangely out-of-synch with the migration to next-generation IP networks and services.

In fact, this unbundling mandate would obstruct and delay the IP migration. Given plummeting demand for DS1 and DS3 services, there is no reason for CenturyLink and other providers to incorporate these aging TDM technologies into new IP-based fiber networks. The regulatory requirement sought by Windstream thus would force two inefficient and backward-looking choices on ILECs such as CenturyLink: continue to pour capital dollars into duplicative and underutilized legacy TDM networks or engineer obsolete DS1/DS3 functionality into its new fiber network facilities. Neither of these outcomes will serve the public interest. As Chairman Wheeler has recognized, ILECs currently devote more than half their capital budgets to

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15 See CenturyLink Comments at 11.
16 From January 2012 to December 2014, the number of DS1 special access circuits provided by CenturyLink declined by more than one-third. CenturyLink Comments at 13.
17 See Opposition of AT&T Services, Inc. at 3, In the Matter of Petition for Declaratory Ruling to Clarify that Technology Transitions Do Not Alter the Obligation of Incumbent Local Exchange Carriers to Provide DS1 and DS3 Unbundled Loops Pursuant to 47 U.S.C. §251(c)(3); Technology Transitions, WC Docket No. 15-1, GN Docket No. 13-5 (filed Feb. 5, 2015) (Opposition of AT&T). (“Windstream asks the Commission to subject ILECs to a regulatory Hobson’s Choice: either (a) maintain a TDM network, regardless of cost, solely to satisfy Windstream’s desire to continue receiving legacy DS1 and DS3 services on an unbundled basis, or (b) accept new and unwarranted unbundling obligations on the fiber and packetized capabilities of the next generation fiber network – obligations the Commission has considered and rejected and which would be imposed without the required impairment analysis.”)
maintaining TDM networks. There is simply no justification for any policy that would perpetuate this short-sighted diversion of investment from next-generation broadband networks. Equally wasteful would be a policy requiring ILECs to devote precious capital funding to add DS1 and DS3 functionality to next-generation networks—functionality that almost no one would want. This inefficient outcome would thus directly conflict with the Commission’s goal of increasing broadband coverage and speeds.

The ruling sought by Windstream also would be unlawful. In particular, it would conflict with Commission rules that largely exempt all-fiber and fiber-to-the-curb (FTTC) loops from unbundling, regardless of the type of customer served; the Eighth Circuit’s holding limiting ILEC unbundling to existing network capabilities; and the Commission’s determination a decade ago that ILECs are not required to add network functionality to network deployments that do not already have that functionality.

As specified in the Commission’s rules, greenfield all-fiber and FTTC loops are completely free of unbundling requirements: “An incumbent LEC is not required to provide nondiscriminatory access to a fiber-to-the-home loop or a fiber-to-the-curb loop on an unbundled basis when the incumbent LEC deploys such a loop to an end user’s customer premises that previously has not been served by any loop facility.” Brownfield deployments of such loops are also exempt from unbundling, except for the availability of a voice-grade channel when an ILEC retires the underlying copper loops. Given this clear language, the Commission cannot “confirm” the new unbundling requirements sought by Windstream.

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Windstream and its CLEC supporters make much of the *Triennial Review Order*’s references to fiber-to-the-home (FTTH) loops as “mass market” loops—claiming that these references demonstrate that the Commission’s pro-deployment, Section 706-based policies do not apply to all-fiber and FTTC loops that serve enterprise customers. These references do no such thing. Each of the tenets underlying the Commission’s decision to limit unbundling on all-fiber and FTTC loops apply universally to those loops, regardless whether they serve mass market or enterprise customers: all competing providers face largely the same entry barriers and revenue opportunities in deploying such loops; the cost of unbundling such loops would outweigh any potential benefit; and refraining from such unbundling would promote investment and innovation by both ILECs and their competitors. And, more to the point, Section 51.319(a)(3) includes no such limitation to mass market customers.

The text of the *Triennial Review Order* confirms this interpretation as well. There the Commission noted that the unbundling obligations for particular loop types do not “vary based on the customer to be served.”

Based on these considerations, two federal courts of appeals have held that Section 51.319(a)(3)’s limitations on unbundling—including DS1 and DS3 unbundling—apply equally to all-fiber loops used to serve enterprise customers as well as mass market customers.


[22](#) See BellSouth Telecomms., Inc. v. Kentucky Pub. Serv. Comm’n, 669 F.3d 704 (6th Cir. 2012); Ill. Bell Telephone Co. v. Box, 526 F.3d 1069 (7th Cir. 2008).
The Commission thus cannot lawfully grant the declaratory ruling sought by Windstream. It could impose that unbundling mandate only after finding in a rulemaking that CLECs will be “impaired” without unbundled access to DS1s and DS3s on fiber IP-based networks. In undertaking such an analysis, the Commission would also have to consider the investment-constraining effects of unbundling, which led the Commission to limit unbundling requirements on all-fiber and FTTC loops. To say the least, such an impairment finding would be difficult given the Commission’s earlier rulings and the massive investment spawned by the unbundling limitations adopted in the Triennial Review Order.

Windstream’s requested unbundling mandate would also be unlawful for two other reasons. First, this mandate would require CenturyLink and other ILECs to add DS1/DS3 functionalities in their IP-based fiber networks that they would not otherwise deploy. But the Eight Circuit concluded nearly two decades ago that ILECs’ unbundling obligations are limited to their existing network capabilities. Second, and in a similar vein, the Commission long ago

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24 See US Telecom Ass’n v. FCC, 359 F.3d 554, 584 (D.C. Cir. 2004).


26 Iowa Utils. Bd. v. FCC, 120 F.3d 753, 813 (8th Cir. 1997).
confirmed that ILECs are not required to add TDM functionality to network deployments that do not already have that functionality.\textsuperscript{27}

For all these reasons, the Commission should reject Windstream’s misguided attempt to turn back the clock on the IP migration. Enterprise customers will be best served by staying the course on the Commission’s successful policies designed to foster next-generation deployment and competition.

Respectfully submitted,

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\textsuperscript{27} See Verizon’s Opposition to Windstream’s Petition for Declaratory Ruling at 3-6, \textit{In the Matter of Petition for Declaratory Ruling To Clarify that Technology Transitions Do Not Alter the Obligation of Incumbent Local Exchange Carriers To Provide DS1 and DS3 Unbundled Loops Pursuant to 47 U.S.C. \$ 251(c)(3); Technology Transitions}, WC Docket No. 15-1, GN Docket No. 13-5 (filed Feb. 5, 2015) (noting that the Commission held in 2004 that its unbundling rules do not require ILECs to build TDM capabilities into their packet-switched networks or to add those capabilities into their networks that do not already have them in order to satisfy a CLEC’s request for unbundled network elements).