

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

In the Matter of	)	
Petition for Declaratory Ruling to Clarify	)	WC Docket No. 15-1
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	)	GN Docket No. 13-5

**REPLY COMMENTS OF  
THE UNITED STATES TELECOM ASSOCIATION**

The United States Telecom Association (USTelecom)<sup>1</sup> submits these reply comments in the above-referenced proceedings. As noted in our comments, Windstream’s Petition<sup>2</sup> implicates important and complex issues about how the ongoing transition from legacy communications networks will be accomplished. It is critical that the Commission, as it addresses those issues, also ensures that it has imposed “only those regulations necessary to create the right incentives, in a minimally regulatory environment, that will allow providers to help achieve the nation’s reasonable broadband deployment goals.”<sup>3</sup>

In the *Triennial Review Proceeding*, the Commission established a regulatory regime that was designed to encourage and provide incentives for investment in new equipment and facilities

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<sup>1</sup> USTelecom is the premier trade association representing service providers and suppliers for the telecommunications industry. USTelecom members provide a full array of services, including broadband, voice, data and video over wireline and wireless networks.

<sup>2</sup> *Petition for Declaratory Ruling of Windstream Corporation*, WC Docket No. 15-1, GN Docket No. 13-5 (Dec. 29, 2014) (“*Windstream Petition*”).

<sup>3</sup> *Comments of the United States Telecom Association*, WC Docket No. 15-1, GN Docket No. 13-5, at 2 (Feb. 5, 2015) (“*USTelecom Comments*”).

to meet the growing consumer demand for high-speed broadband services and more robust network capability.<sup>4</sup> Those goals are even more pressing today. But investment and competition will actually be impaired if the Commission retreats from its current unbundling regime by requiring unbundled access to next-generation networks and facilities after certain legacy facilities and technologies are retired or transitioned. Unbundling beyond what is already required is not necessary to achieve the nationwide broadband goals, nor to preserve competition and consumer choice. For these and the reasons discussed below, the Commission should deny the petition.

### **I. UNBUNDLING OBLIGATIONS WERE NEVER INTENDED TO BE PERMANENT OR TECHNOLOGY NEUTRAL**

The Commission, in drawing a bright line between “greater unbundling for legacy copper facilities and more limited unbundling for next-generation network facilities,” sought to balance the goal of promoting facilities-based investment in next generation networks and technologies with the goal of stimulating competition.<sup>5</sup> Further, the Commission acknowledged a direct nexus between increased facilities investment in upgraded networks and facilities and a decline in the need for unbundled access to network elements, stating that it specifically designed its unbundling rules “to remove unbundling obligations over time as carriers deploy their own networks and downstream local exchange markets exhibit the same robust competition that

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<sup>4</sup> See generally *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Report and Order on Remand and Further Notice of Proposed Rulemaking, CC Docket Nos. 01-338, 96-98, 98-147, 18 FCC Rcd. 16978 (2003) (“*TRO*”); *Unbundled Access to Network Elements, Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Order on Remand, WC Docket No. 04-312, CC Docket No. 01-338, 20 FCC Rcd 2533 (2005) (“*TRRO*”). These and other Commission orders (collectively, the “*Triennial Review Proceeding*”) set forth the Commission’s implementation of the unbundling provisions of the Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56. See also 47 U.S.C. § 251(c)(3); 47 C.F.R. § 51.319.

<sup>5</sup> *TRO*, 18 FCC Rcd at 17103, ¶ 200; see also *TRRO*, 20 FCC Rcd. at 2535, ¶ 2 (noting the additional steps it was taking “to encourage the innovation and investment that come from facilities-based competition”).

characterizes the long distance and wireless markets.”<sup>6</sup> In the decade that this unbundling policy has been in place, both of the Commission’s goals – more investment in fiber and IP technology and more competition – are being realized. That is, CLEC and cable business lines have increased, and reliance on ILEC UNEs is down. FCC data show that the non-ILEC share of business lines reached 45 percent at the end of 2013.<sup>7</sup>

With regard to unbundling obligations for DS1 and DS3 loops, the Commission decided that once business lines and fiber-based collocators exceed a certain minimum threshold in an ILEC service area, requesting providers would no longer be impaired without unbundled access to these network elements.<sup>8</sup> Notably, these limitations expressly apply to DS1 and DS3 copper loops,<sup>9</sup> and to DS1 and DS3 hybrid loops used to provide broadband services.<sup>10</sup> The permissive nature of the copper retirement rules are additional evidence of the Commission’s understanding that the requirement to unbundle DS1 and DS3 copper loops (and DS1 and DS3 hybrid loops once they cease to exist due to retirement of copper distribution plant) would end as copper is

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<sup>6</sup> *TRRO*, 20 FCC Rcd. at 2536, ¶ 3.

<sup>7</sup> See Federal Communications Commission (FCC), Local Telephone Competition: Status as of December 31, 2013 and Excel Tables (lcom1213\_tables.xls) (Oct. 2014) (collectively, “*FCC Local Competition Data Year-End 2013*”) at Table 11, available at <http://transition.fcc.gov/wcb/iatd/comp.html> (visited Mar. 1, 2015).

<sup>8</sup> See 47 C.F.R. §§ 51.319(a)(4), (5); *TRRO*, 20 FCC Rcd. at 2614, ¶ 146; *id.* at 2625, ¶ 166 (“we find it appropriate to adopt tests that preclude DS1 and DS3 loop unbundling throughout a wire center service area where that area’s revenue opportunities and the presence of extensive competitive fiber deployment indicate the feasibility of competitive provision at the relevant capacity level”).

<sup>9</sup> 47 C.F.R. § 51.319(a)(1) (“The availability of DS1 and DS3 copper loops is subject to the requirements of paragraphs (a)(4) and (5) of this section.”). See also 47 C.F.R. § 51.319(a)(4), (5).

<sup>10</sup> 47 C.F.R. § 51.319(a)(2) (“... for the provision of broadband services, an incumbent LEC shall provide the requesting telecommunications carrier with access to the [TDM] features, functions and capabilities of that hybrid loop, including DS1 or DS3 capacity (where impairment has been found to exist) on an unbundled basis ...”). The Commission’s rules currently do not require unbundled access to one hundred percent fiber loops, with the exception of a requirement to provide a voice-grade transmission path over fiber in limited circumstances. See 47 C.F.R. § 51.319(a)(3)(C). USTelecom has sought forbearance of this requirement, explaining that it “results in unnecessary burdens for one set of providers and undermines the broader shift to next-generation fiber facilities while providing no meaningful offsetting benefits to consumers.” *Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. §160(c) from Obsolete ILEC Regulatory Obligations that Inhibit Deployment of Next-Generation Networks*, WC Docket No. 14-192, at 51 (Oct. 6, 2014).

decommissioned or replaced by fiber.<sup>11</sup> Thus, the Commission knew and fully intended over a decade ago that at some point in the future and under appropriate circumstances, DS1 and DS3 unbundling obligations would go away under its unbundling regime.

This is just common sense. As competing providers increase their ability to effectively compete by investing in their own infrastructure, they no longer need to depend on ILEC facilities to compete. At the same time, competitors who choose not to invest where it is feasible to do so should not be artificially propped up by the permanent availability of unbundled DS1 and DS3 loops if that would require ILEC providers to maintain legacy networks instead of (or in addition to) deploying modern facilities and technologies.

## **II. MARKET TRENDS SHOW AN INCREASE IN COMPETITION AND BROADBAND DEPLOYMENT**

The FCC's decision not to require unbundling of services and facilities used to provide advanced telecommunications has resulted in significant broadband-related investment. Capital expenditures by broadband providers alone reached \$75 billion in 2013 and, as discussed below, competition continues to increase.<sup>12</sup> This is precisely the outcome that the FCC sought to achieve by exempting such services and facilities from its unbundling rules. Having already determined over a decade ago that forgoing unbundled access mandates for next-generation networks and facilities would incent investment in the modern broadband networks that the country needs, and that such mandates would not be necessary to preserve competition and consumer choice, the FCC need not change course now.

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<sup>11</sup> See 47 C.F.R. §§ 51.319(a)(3), 51.325 – 51.335 (allowing retirement of copper loops and subloops with proper notice).

<sup>12</sup> See USTelecom Association, Historical Broadband Provider Capex, *available at* <http://www.ustelecom.org/broadband-industry-stats/investment/historical-broadbandprovider-capex> (visited Feb. 23, 2015).

### **A. Overall Reliance on UNE Loops has Steadily Declined.**

FCC data indicate that over the last decade non-ILECs have become increasingly less dependent on UNE loops to serve their customers even as their share of the business lines continues to grow steadily, having reached 45 percent at the end of 2013.<sup>13</sup> Competitor use of UNE loops has fallen at least 40 percent from a peak of 4.5 million at the end of 2005 to 2.7 million as of the end of 2013.<sup>14</sup> Additionally, the share of total U.S. lines served over UNE loops was only 2.0 percent at the end of 2013, down from 2.6 percent at the end of 2005.<sup>15</sup> Among Non-ILEC connections, the share using UNE loops was only 4.6 percent in 2013, down from a peak of near 18.8 percent in 2002.<sup>16</sup>

Of course, these UNE loop share calculations include all lines, business and residential. This proceeding is primarily concerned with business services. It is possible to estimate UNE loop share of business lines if one makes a simplifying assumption that nearly all UNE loops – at least in recent years – are used to serve business customers. Based on this assumption, UNE loops comprised 10.4 percent of Non-ILEC business connections at the end of 2013, down from 20.0 percent at the end of 2008.<sup>17</sup> In earlier years, the UNE loop share of Non-ILEC lines was even greater, peaking at 41.5 percent at the end of 2002.<sup>18</sup>

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<sup>13</sup> See *FCC Local Competition Data Year-End 2013* at Table 11.

<sup>14</sup> *Id.* at Table 5.

<sup>15</sup> *Id.* at Tables 1 and 5.

<sup>16</sup> *Id.* Prior to 2008, the FCC did not require Non-ILECs to report interconnected Voice over Internet Protocol (VoIP) connections, so there was little consistency in whether or how Non-ILECs reported these connections. As interconnected VoIP became more prevalent in the 2000s, the skews in the data became increasingly significant. Starting with year-end 2008, when the FCC set rules for reporting interconnected VoIP connections, the data became more consistent. However, because VoIP was less prevalent earlier in the 2000s, the distortions in the data from that period are much less significant.

<sup>17</sup> *Id.* at Tables 2 and 5.

<sup>18</sup> *Id.* The FCC Telephone Competition Reports and Form 477 data do not distinguish business and residential UNE loops. However, it seems safe to assume the vast majority of UNE loops in recent years are being used to serve business customers. In earlier years, it is less clear whether UNE loop counts included some small amount of residential connections. In the late 1990s and early 2000s, “data CLECs” sought to serve residential customers by

## **B. Providers Are Investing In Their Own Broadband Infrastructure.**

ILECs and Non-ILECs are deploying their own fiber and high-speed IP networks, enabling them to compete for small and medium-sized business customers. According to the Telecommunications Industry Association (TIA), the broadband industry deployed sixteen million miles of single-mode fiber in 2014, with wireline companies – consisting of both ILECs and Non-ILECs – deploying 75 percent of the total, cable companies deploying 11 percent, and other players such as governments, utilities, and private businesses deploying 14 percent.<sup>19</sup>

Fiber deployment is projected to remain elevated and the wireline telecommunications industry is deploying the vast majority. Total fiber deployment is projected to be approximately 16 million miles or more annually from 2015 through 2017 and the wireline telecom category is projected to account for approximately 70 percent over the next several years.<sup>20</sup> While 2013 saw a drop in fiber miles deployed compared to the 19 million miles deployed in each of 2011 and 2012, the decline can be attributed to a spike in spending during 2011 and 2012 due to inflows from federal stimulus funds provided through the American Recovery and Reinvestment Act (ARRA). Fiber deployment for the five years from 2013 to 2017 is projected to be 16.3 million miles per year on average compared to 14.5 million miles during the five years from 2006

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purchasing UNE loops. Sometimes they would use “line sharing” arrangements in which the CLEC leased the data portion of the loop while the ILEC provided voice service; and there were also “line splitting” arrangements under which one CLEC would use the data portion of the loop and another CLEC would use the voice portion of the loop. The CLECS would connect these lines to their own voice and data switches collocated in ILEC central offices. These CLEC business models did not gain much traction, especially in residential markets, before policy changes nearly a decade ago led to a greater focus on intermodal competition. So, the data CLEC model is no longer a factor in the residential market, and likely was never a significant factor. But, it is unclear the extent to which these arrangements were reflected in early UNE loop data, and given the risk that the data contain some UNE loops used by data CLECs to serve residential markets in the late 1990s and early 2000s, along with the distortions associated with VoIP in the mid-2000s discussed above, it is safest to focus an analysis of Non-ILEC business connections on the period starting at the end of 2008 when the data are more consistent.

<sup>19</sup> Telecommunications Industry Association, TIA’S 2014-2017 ICT Market Review & Forecast (2014) (“*TIA 2014 Market Review*”) at 3-40 – 3-41.

<sup>20</sup> *Id.*

through 2010, when there was not a large exogenous impact on fiber spending such as the ARRA program.<sup>21</sup> Local fiber deployments are part of an increased effort to bring advanced broadband networks to consumers and businesses. AT&T, for example, states that it is deploying fiber loop facilities within as well as outside its own wireline footprint to compete more effectively.<sup>22</sup> AT&T also noted that “[b]etween 2003 and 2007, ILECs deployed more than 280,000 kilometers of fiber.”<sup>23</sup> Further, according to one analysis, BOCs’ capital expenditures on broadband leapt 65 percent from \$7.2 billion to \$11.9 billion between 2006 and 2008.<sup>24</sup> USTelecom estimates that wireline providers invested \$28 billion in 2013, with ILECs and their affiliated wireline properties accounting for nearly \$23 billion, in large part to expand availability of advanced networks.<sup>25</sup>

Other Non-ILEC providers are touting their investment activities and network footprints as well. For example, XO has deployed its own network “in more than three dozen large and mid-size metropolitan markets, which are connected by XO’s nationwide fiber backhaul facilities, and connect more than 3,300 buildings.”<sup>26</sup> Similarly, Level 3 explained that its acquisition of tw telecom would provide its global customers with the benefit of “tw telecom’s deep metropolitan footprint and buildings connected to the network, enabling a higher quality

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<sup>21</sup> *Id.* See also Telecommunications Industry Association, TIA’S 2013-2016 ICT Market Review & Forecast (2013) (“TIA 2013 Market Review”) at pp. 3-60 – 3-62.

<sup>22</sup> See *Opposition of AT&T Services, Inc.*, WC Docket No. 15-1, GN Docket No. 13-5, at 19 (Feb. 5, 2015) (“AT&T Opposition”).

<sup>23</sup> *Id.* at 23 (citing FCC, ARMIS Infrastructure Report, FCC Report 43-07, Table II).

<sup>24</sup> See Robert C. Atkinson & Ivy E. Schultz, Columbia Inst. For Tele-Info., *Broadband in America: Where it is and Where it is Going*, at 30, Table 5 (Nov. 11, 2009). See also Robert C. Atkinson & Ivy E. Schultz, Columbia Inst. For Tele-Info., *Broadband in America – 2<sup>nd</sup> Edition: Where it is and Where it is Going*, at 42, Table 5 (May 2011).

<sup>25</sup> See USTelecom Association, *Historical Wireline Provider Capex*, available at <http://www.ustelecom.org/broadband-industry-stats/investment/historical-wireline-provider-capex> (visited Mar. 5, 2015). The ILEC and affiliated wireline provider portion is estimated based on USTelecom analysis of financial reports and estimates for non-reporting companies.

<sup>26</sup> *Comments of XO Communications LLC*, WC Docket No. 14-192, at 8 (Dec. 5, 2014) (also noting that XO has an ongoing \$500 million capital expansion project that will “light many more buildings”).

and more reliable on-net experience for customers doing business in North America.”<sup>27</sup> Also, the Zayo Group states that its network footprint extends 82,280 route miles, serves 46 states plus the District of Columbia, and reaches 16,712 buildings, including 10,151 enterprise buildings, connecting large cities as well as “many Tier 2-5 U.S. markets.”<sup>28</sup> In addition, as discussed in greater detail below, cable operators have made a broad push into small and medium enterprise markets using their own widely deployed network facilities, including self-provided last mile fiber and coaxial cable loops, and they are expanding their reach to include increasingly larger enterprise customers.

### **C. Competitive Providers Are Increasingly Deploying Their Own Last Mile Facilities.**

As reliance on UNE loops declined over the last decade, self-provision of loops has become increasingly important. Non-ILECs provide both switched and VoIP services using their own loop facilities. A large portion of Non-ILEC VoIP services, particularly from cable operators, are provided over Non-ILEC owned lines.<sup>29</sup> The combined number of Non-ILEC owned switched lines and VoIP connections has grown to 43.9 million at the end of 2013 from 27.6 million at the end of 2008, and this was up from 6.5 million at the end of 2002, consisting almost entirely of switched lines.<sup>30</sup> From 2008 to 2013 the ratio of Non-ILEC owned loops and interconnected VoIP connections to UNE loops grew from 7.2:1 to 16.3:1. While the time series immediately prior to 2008 is distorted as a result of the inconsistencies in interconnected VoIP

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<sup>27</sup> Level 3, Press Release, *Level 3 to Acquire tw telecom*, (Jun. 16, 2014) available at <http://investors.level3.com/investor-relations/press-releases/press-release-details/2014/Level-3-to-Acquire-tw-telecom/default.aspx>.

<sup>28</sup> Zayo, About Zayo, <http://www.zayo.com/company/company-overview> (visited Mar. 6, 2015).

<sup>29</sup> Providers are in the midst of a widespread migration from switched to VoIP services. While Non-ILECs’ owned switched lines are declining, their combined owned switched lines and VoIP lines are growing. For cable providers, VoIP is self-provisioned over their own facilities, typically coaxial cable or fiber. For other non-ILECs, VoIP is likely provided over a combination of owned and leased last mile facilities.

<sup>30</sup> *FCC Local Competition Data Year-End 2013* at Table 4.

reporting, as of year-end 2002 this ratio had been as low as 1.5:1.<sup>31</sup> Thus, the role of self-provisioned loops relative to UNE loops has increased dramatically, and that trend continues.

These data also combine residential and business services; and the residential side of the business weighs heavily in this instance because much of the VoIP growth is driven by cable voice service, a large portion of which is residential. Unfortunately, there is no way to separate Non-ILEC business and residential owned loops. However, it is possible to back out most cable lines to look at Non-Cable CLECs, which are proportionally more focused on business customers. Since 2008, the FCC has reported the technology used to provide ILEC and Non-ILEC VoIP connections when bundled with Internet service, and for all ILEC and Non-ILEC retail switched lines. The connections technology data include coaxial cable, which can be subtracted from the total of Non-ILEC owned loop plus VoIP connections to focus on Non-Cable CLECs. In this case, the ratio of owned loops plus VoIP connections to UNE loops more than doubled from 2.3:1 in 2008 to 5.5:1 in 2013.<sup>32</sup> So, even when excluding cable lines from the analysis, it appears that Non-ILECs are increasingly choosing to deploy their own loop facilities.

Of course, cable entry into enterprise services over the last decade has been a critical new development in the marketplace. Last-mile cable facilities can and already do provide an alternative to ILEC last-mile facilities. Cable networks pass at least three-quarters of small and

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<sup>31</sup> *Id.* at Tables 4 and 5.

<sup>32</sup> *Id.* at Tables 5 and 11 (or predecessors). While Non-ILEC VoIP services are likely provided over a combination of owned and leased loops, including not only UNE loops, but also special access or private lines, there is no reason to believe the portion provided over owned loops is declining. At least anecdotally, we know that Non-ILEC owned loops continue to grow as evidenced by the increasing number of “lit” and “on-net” buildings they report. Also, backing out coaxial cable does not eliminate all cable provider lines, which may include fiber loops. But, to the extent cable providers are using fiber instead of coaxial cable to serve customers, they are predominantly doing so to serve business services.

medium businesses and their enterprise service footprints have been growing.<sup>33</sup> According to a *Heavy Reading* analysis, the number of small businesses directly passed by cable systems grew from 3.7 million in 2008 to 4.8 million in 2012 while the number for mid-sized businesses passed grew from 295,000 in 2008 to 735,000 in 2012.<sup>34</sup> The analysis notes that “many other smaller firms lie just outside cable’s reach, making for relatively easy, inexpensive plant extensions,” and concludes that “the five leading U.S. [cable multiple system operators] collectively have more than 11 million companies within their reach” and have “many, if not most, of the nation’s small and mid-sized firms already within their wired grasp.”<sup>35</sup>

Cable companies have already had significant success providing enterprise services using their own last mile facilities and continue to demonstrate dramatic growth as they move up market to serve increasingly larger businesses. For example, analysts estimated that as of 2010 Cox Business, which was among the earliest of cable operators to enter business markets, had approximately 25 percent share of the small and medium business market within its service area.<sup>36</sup> Cox’s business services revenue reached \$1 billion in 2009 and was projected to reach \$2 billion by next year.<sup>37</sup> Time Warner cable has grown its business services from \$900 million to

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<sup>33</sup> Alan Breznick, *Heavy Reading, Cable Finds Big Opportunity in Big(ger) Business* (May 2013) at 4-5 (*available at* [http://www.cyaninc.com/assets/docs/whitepapers/cable\\_operators\\_big\\_business\\_opportunity\\_white\\_paper.pdf](http://www.cyaninc.com/assets/docs/whitepapers/cable_operators_big_business_opportunity_white_paper.pdf)) (visited Mar. 4, 2015).

<sup>34</sup> *Id.*

<sup>35</sup> *Id.*

<sup>36</sup> Craig Moffett, Nicholas Del Deo, and Regina Possavino, *Bernstein Research, U.S. Cable & U.S. Telecom: Getting Down to Business...The Battle for Commercial Services and Wireless Backhaul* (Sep. 8, 2010) at 3.

<sup>37</sup> *See Fierce Telecom, Cox Business: Wireless Backhaul, Healthcare Will Drive Our Revenues* (Dec. 4, 2009), *available at* <http://www.fiercetelecom.com/story/cox-business-wireless-backhaul-health-care-will-drive-our-revenues/2009-12-04> (visited Mar. 5, 2015). *See also* Multichannel News, *Cox Eyes \$2 Billion From Business* (Mar. 24, 2014), *available at* <http://www.multichannel.com/news/news/cox-eyes-2-billion-business/373456> (visited Mar. 5, 2015).

\$3 billion in the five years from 2009 to 2014.<sup>38</sup> During the same period, Comcast grew business services revenue from \$800 million to \$4 billion.<sup>39</sup> Comcast's and Time Warner's combined business services revenues exceed \$5 billion and are growing 20 percent annually.<sup>40</sup> Overall, cable industry business services revenue has grown from \$4 billion in 2009 to an estimated \$10 billion in 2014.<sup>41</sup> *Heavy Reading* has estimated that by now cable would have nearly one-quarter of the Ethernet services market, nearly one-third in metro areas.<sup>42</sup>

Moreover, cable providers are in a position to provide both wholesale and retail service over their own networks. With Metro Ethernet Forum Carrier Ethernet 2.0 certification, cable providers can more easily interconnect to provide service outside of their footprints via wholesale arrangement, including arrangements among different cable operators.<sup>43</sup> Some non-cable service providers are also trying to take advantage of cable wholesale opportunities.

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<sup>38</sup> See Time Warner Cable untangled, Phil Meeks: The Future of Cable Business Services (Dec. 11, 2014), available at <http://www.twcableuntangled.com/2014/12/phil-meeks-the-future-of-cable-business-services/> (visited Mar. 4, 2015).

<sup>39</sup> See Comcast Investor Relations, 4Q14 Trending Schedule at p. 1 and Comcast 4Q10 Trending Schedule at 2, available at <http://www.cmcsk.com/financials.cfm>.

<sup>40</sup> See Reuters, Comcast: Business services is sweet spot in Time Warner Cable deal (Apr. 1, 2014), available at <http://www.reuters.com/article/2014/04/01/us-comcast-twc-business-analysis-idUSBREA3022F20140401> (visited Mar. 4, 2015).

<sup>41</sup> See Tim McElgunn, Pike & Fisher Broadband Advisory Services, Cable Commercial Services Strategies: Analysis and Revenue Forecast (3<sup>rd</sup> Ed.) (Sep. 2010) at 7. See also Light Reading, US Cable Nears \$10B in Business Service Revenues (Dec. 4, 2014), available at [http://www.lightreading.com/cable-video/cable-business-services/us-cable-nears-\\$10b-in-business-service-revenues/d/d-id/712347](http://www.lightreading.com/cable-video/cable-business-services/us-cable-nears-$10b-in-business-service-revenues/d/d-id/712347) (visited Mar. 4, 2015).

<sup>42</sup> Heavy Reading, Cable Industry Insider (Vol. 8, No. 4), Cable Operators and Ethernet: Serious Market Share (Aug. 2013) at 28.

<sup>43</sup> See Metro Ethernet Forum (MEF), Carrier Ethernet & CE 2.0, available at <http://www.metroethernetforum.org/carrier-ethernet-services/carrier-ethernet-and-ce-2-0> (visited Mar. 4, 2015). See also Services Certification Registry, available at <http://www.metroethernetforum.org/certification/services-certification-registry> (visited Mar. 4, 2015) (indicating that the largest cable providers, Comcast, Time Warner Cable, and Cox, among others, are CE 2.0 certified).

CenturyLink, for example, notes that it is currently working toward gaining access to customer locations through contracts with cable companies.<sup>44</sup>

Non-cable CLECs are also serving a large number of buildings across a diverse geographic area using their own last mile facilities. *Telecom Ramblings* tracks on-net buildings for dozens of CLECs (and some cable providers) and has identified more than 269,000 buildings on-net as of January 2015.<sup>45</sup> CLEC on-net buildings are growing. Level 3, for example, recently reported that upon completion of its acquisition of tw telecom, it served approximately 30,000 on-net buildings in the United States.<sup>46</sup> This is up from approximately 18,000 combined lines in 2009.<sup>47</sup> As discussed above, Zayo has grown its on-net buildings to 16,712 as of the end of 2014 from 11,104 at the end of 2012.<sup>48</sup> Zayo had 2,160 on-buildings at the end of 2009,<sup>49</sup> though

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<sup>44</sup> *Comments of CenturyLink*, WC Docket No. 15-1, GN Docket No. 13-5, at 11 (Feb. 5, 2015) (“*CenturyLink Comments*”).

<sup>45</sup> See Telecom Ramblings, “Metro Fiber and On-Net Buildings List” (updated 1-2015) available at <http://www.telecomramblings.com/metro-fiber-provider-list/> (visited Mar. 5, 2015). The buildings are predominantly located in the U.S, though some are international. The list excludes many large U.S. providers – ILEC, CLEC, and Cable – such as AT&T, CenturyLink, Comcast, Windstream, and Verizon.

<sup>46</sup> See Level 3, Press Release, *Level 3 Completes Acquisition of tw telecom* (Oct. 31, 2014), available at <http://investors.level3.com/investor-relations/press-releases/press-release-details/2014/Level-3-Completes-Acquisition-of-tw-telecom/default.aspx> (visited Mar. 5, 2015). See also Level 3 Investor Presentation, Fourth Quarter and Full Year 2014 Results (Feb. 4, 2015) at 19 (indicating that Level 3 serves 41,000 on-net buildings, of which 79 percent, or about 32,000, are in North America).

<sup>47</sup> See Telecom Ramblings, Metro Fiber and On-Net Buildings List, available at <http://www.telecomramblings.com/metro-fiber-provider-list/> (visited Mar. 5, 2015) (comments indicating Level 3 reported 8,100 on-net buildings in 2009), and Telecom Ramblings, Where the On Net Buildings Are (Jun. 14, 2011), available at <http://www.telecomramblings.com/2011/06/where-the-on-net-buildings-are/> (visited Mar. 5, 2015) (stating that Level 3’s on-net buildings were around 8,000). See also tw telecom Press Release, *tw telecom Reports Fourth Quarter and Full Year 2009 Results* (Feb. 10, 2010) at 2 (stating tw telecom had more than 10,000 buildings lit with on-net fiber), available at <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=actaeqZHvxLw>.

<sup>48</sup> See Zayo Group Holdings, Inc., Fiscal Year 2015 Q2 Supplemental Earnings Information at 43-44 and “Fiscal Year 2Q 2014 Supplemental Earnings Information” at 39, available at <http://investors.zayo.com/> (visited Mar. 5, 2015). See also *supra* note 28 and accompanying text.

<sup>49</sup> See Zayo Bandwidth, Zayo Bandwidth Recaps Exciting and Prosperous 2009 (Jan. 12, 2010) at 2, available at <http://www.zayo.com/news/zayo-bandwidth-recaps-exciting-and-prosperous-2009> (visited Mar. 6, 2015).

much of its growth since then included acquisitions. Moreover, Zayo is serving a wide range of geographic areas, including, as noted above, Tier 2-5 markets.<sup>50</sup>

Based on evidence of actual deployment, it would appear that the economics for self-deployment of last mile connections to businesses may have improved significantly since the unbundling standards were implemented a decade ago. First and foremost, cable operators providing services over their own last mile facilities have entered the marketplace across a large portion of the nation. In addition, CLECs are self-deploying loops, including deployment in diverse geographic areas. Moreover, economies of scale and scope associated with deployment to large anchor institutions, mobile broadband networks, and burgeoning data centers can lower the incremental cost of serving additional business customers.

#### **D. The Demand For DSn Loops is Declining.**

Demand for TDM-based DSn services is reportedly declining as customers seek economical substitutes that will provide the same or better capacity and features. For example, CenturyLink notes that “IDC forecasts that, by 2017, DS1 and Dedicated Internet Access services combined will account for only 3 percent of the broadband marketplace for small and medium businesses. Not surprisingly, DSn equipment manufacturers have begun to discontinue the equipment used to provide these aging services.”<sup>51</sup>

CenturyLink further states that from January 2012 to December 2014, the number of DS1 special access circuits it provided declined by 36 percent, and that unbundled DS1 and DS3 loops have similarly declined. “From the beginning of 2012 to the end of 2014, CenturyLink’s base of DS1 unbundled loops declined 14 percent, while its base of DS3 unbundled loops fell by

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<sup>50</sup> See Zayo On-Net Building List and Metro Fiber Network Maps, available at <http://www.zayo.com/network/file-downloads> (visited Mar. 5, 2015). See also *supra* note 28 and accompanying text.

<sup>51</sup> *CenturyLink Comments* at 4 (citing IDC, Market Analysis Perspective: U.S. SMB Telecom, Broadband, and Video, 2014 at 11).

more than 40 percent. In fact, across its ILEC service territory, CenturyLink now has only a negligible number of unbundled DS3 loops in service.”<sup>52</sup>

AT&T has reported similar trends, stating that the marketplace is shifting away from legacy DS<sub>n</sub> services to competing Ethernet services. From March 2011 to December 2012, for example, “the number of DS1 special access circuits AT&T provided to wireless providers dropped by more than 30 percent.”<sup>53</sup>

### **III. AMPLE ALTERNATIVES TO UNBUNDLED DS1 AND DS3 LOOPS ARE AVAILABLE**

As the availability of TDM-based DS1 and DS3 network elements phases down, competitors who rely on wholesale access to last-mile facilities and their customers will not be left without alternatives. As AT&T notes, “[p]roviders of all types — including CLECs, cable companies, and fixed and mobile wireless providers — are fully capable of deploying their own fiber facilities and using them to compete without unbundled access to ILEC fiber loops.”<sup>54</sup>

*Copper.* Insofar as the ILECs maintain copper loops and sub-loops in their networks during and after the transition, those facilities would remain available to CLECs under the existing rules. Competitors will thus continue to have access to ILEC facilities to which they can attach their own electronics, including access under the existing rules to “ILEC collocation space, poles, conduit and rights of way to deploy their own transmission facilities.”<sup>55</sup>

Competitors interested in maintaining copper-based networks will likely also have opportunities to purchase copper facilities targeted for retirement that can be used to deploy their own facilities. As AT&T notes, the FCC found more than a decade ago that CLECs were

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<sup>52</sup> *Id.* at 13.

<sup>53</sup> *Reply Comments of AT&T, Inc.*, WC Docket No. 05-25, RM 10593, at 5 (Mar. 12, 2013) (citing Reply Declaration of Parley Casto, ¶ 28 (Mar. 11, 2013) (Attachment B thereto)).

<sup>54</sup> *AT&T Opposition* at 19.

<sup>55</sup> *AT&T Opposition* at 20.

actively deploying their own packet switches to serve enterprise and mass markets using facilities that were “much cheaper to deploy than circuit switches.”<sup>56</sup> We agree that “CLECs are no less capable of obtaining the necessary TDM electronics to attach to copper loops.”<sup>57</sup>

*Special Access.* The FCC has an opportunity in the ongoing special access proceeding to review this ILEC wholesale alternative for competitors. To the extent competitors claim that the cost of special access service makes it an unsuitable substitute for unbundled DS1 and DS3, any purported cost disadvantage to the CLECs relative to the ILECs in deploying these new facilities would not justify imposing onerous regulations.<sup>58</sup> Moreover, “nearly all communications providers have expanded into cloud services, managed services, data hosting, and various over-the-top offerings that were unknown at the time of the Triennial Review Order, giving these providers new potential revenue streams to fund fiber deployment.”<sup>59</sup>

*Cable.* Cable companies continue to increase their share of the business services market served by DS1 and DS3 loops. Comcast recently reported that its business services revenue increased 22 percent in the fourth quarter of 2014 to an annual run rate of near \$4 billion.<sup>60</sup> Time Warner Cable reported its business service grew 23 percent in 2014, to an annual run rate of nearly \$3 billion.<sup>61</sup> Cablevision Lightpath reported that its fourth quarter revenues increased

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<sup>56</sup> *Id.* (citing *TRO*, 18 FCC Rcd at 17321-22, ¶ 538).

<sup>57</sup> *AT&T Opposition* at 20.

<sup>58</sup> See *AT&T Opposition* at 21 (citing *U.S. Telecom Ass’n v. FCC*, 290 F.3d 415, 427 (DC Cir. 2002) and explaining that cost disparities standing alone are not enough for impairment, but they must be “linked (in some degree) to natural monopoly . . . that would make genuinely competitive provision of an element’s function wasteful”).

<sup>59</sup> *CenturyLink Comments* at 15.

<sup>60</sup> Comcast, Press Release, *Comcast Reports Fourth Quarter 2014 Results*, (Feb. 24, 2015) at 3.

<sup>61</sup> Time Warner Cable Press Release, *Time Warner Cable Reports 2014 Fourth Quarter and Full Year Results* (Jan. 29, 2015) at 6.

6.2 percent to \$90 million.<sup>62</sup> Charter Business reported business revenue growth of 18 percent to nearly \$1 billion in 2014.<sup>63</sup>

*Ethernet.* Many commenters report that customers increasingly view Ethernet as a superior alternative to DS1s and DS3s.<sup>64</sup> “Ethernet services are economical substitutes for DS1 and DS3 facilities and provide speeds many times higher than those legacy offerings. Consequently, business users of all sizes, as well as wholesale customers, are trading in ILEC-provided data services, including DS1s and DS3s, for more efficient and scalable services, such as Ethernet and multi-protocol label switching (MPLS) service.”<sup>65</sup>

Ethernet port installations grew 23 percent in 2014.<sup>66</sup> There are multiple providers offering these services. AT&T, Level 3, Verizon, CenturyLink, Time Warner Cable, Comcast, Cox, and XO all have more than 4 percent of the Ethernet retail ports. Five other providers have between 1 and 4 percent.<sup>67</sup> As AT&T noted in its comments, “[d]uring the first half of 2014, more new Ethernet customer ports were installed than during any previous corresponding period.”<sup>68</sup> Verizon also states that “small and medium business customers [ ] have been — and

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<sup>62</sup> Cablevision Systems Corporation Press Release, *Cablevision System Corporation Reports, Fourth Quarter 2014 and Full Year Results* (Feb. 25, 2015) at 8. Lightpath is Cablevision’s fiber-based CLEC serving large and mid-sized businesses. Cablevision does not break out data for Optimum Business unit, which provides services to smaller businesses using traditional cable fiber-coax plant.

<sup>63</sup> Charter Communications Press Release, *Charter Announces Fourth Quarter and Full Year 2014 Results* (Feb. 5, 2015) at 2. Charter results are “pro forma,” meaning they report results as if acquisitions had been effective on the dates reported.

<sup>64</sup> See, e.g., *CenturyLink Comments* at 13 (citations omitted).

<sup>65</sup> *CenturyLink Comments* at 12-13.

<sup>66</sup> Vertical Systems Group, 2014 U.S. Carrier Ethernet LEADERBOARD (“Year-End 2014 Leaderboard”) available at <http://www.verticalsystems.com/vsglb/2014-u-s-carrier-ethernet-leaderboard/> (visited Mar. 5, 2015).

<sup>67</sup> *Id.* (describing the availability of broad choice of companies with substantial Ethernet assets, including the thirty-two Market Players on the Year-End 2014 LEADERBOARD in addition to the top eight on the Leaderboard and the five providers in the Challenge Tier).

<sup>68</sup> *AT&T* at 24 (citing Vertical Systems Group, Mid-Year 2014 U.S. Carrier Ethernet LEADERBOARD, (Aug. 20, 2014), <http://www.verticalsystems.com/vsglb/mid-year-2014-u-s-carrier-ethernet-leaderboard/>). AT&T also noted that Windstream grew its next-generation Ethernet services faster than both AT&T and Verizon in 2013. *Id.* (citing Vertical Systems Group, *CenturyLink, Windstream Take Bigger Bite Out of Incumbent Ethernet Market, Says VSG*

continue to be — voluntarily migrating to superior carrier Ethernet services,” and that customers “shopping for Ethernet services have a broad choice of companies with substantial Ethernet assets from which to choose.”<sup>69</sup>

Time Warner Cable Business Class recently announced “significant enhancements to its Ethernet Services portfolio” to target U.S. midmarket and enterprise customers with business, including a 150,000-fiber-route-mile network infrastructure that is currently serving 31 major metro markets with “more than 80,000 fiber-lit buildings, 835,000 DOCSIS-equipped buildings and connectivity into 64 data centers across the nation.”<sup>70</sup>

#### **IV. CONCLUSION**

The technology transitions – to fiber and IP – envisioned in the Commission’s *Triennial Review Proceeding* are well underway, and the Commission’s policies are demonstrably serving their purposes. Limiting unbundling of next generation facilities appears to be working both to encourage ILEC investment as well as investment by CLECs and Cable. As demonstrated by the robust activity among competing providers vying for their share of the broadband market as described herein, the best approach for the Commission would be to maintain its current policy approach and work to emphasize the key overall goal of driving investment in modern robust networks to service consumers and businesses throughout the country.

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(Mar. 24, 2014), available at <http://www.fiercetelecom.com/story/centurylink-windstream-take-bigger-bite-out-incident-ethernet-market-says/2014-03-24>).

<sup>69</sup> See *Verizon’s Opposition to Windstream’s Petition for Declaratory Ruling*, WC Docket No. 15-1, GN Docket No. 15-1, at 6-7 (Feb. 5, 2015).

<sup>70</sup> TWC: Business Class, Press Release, *Time Warner Cable Business Class Announces Major Enhancements to Its Ethernet Services Portfolio* (Sep. 2014) available at <http://business.timewarnercable.com/resource-center/news/twcbc-announces-major-enhancements-to-its-ethernet-services-portfolio.html>.

Respectfully submitted,

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