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Federal Trade Commission
Office of the Secretary
Constitution Center
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Re: Comments of CenturyLink on the FTC's Competition and Consumer Protection in the 21st Century Hearing, Project Number P181201

CenturyLink welcomes the opportunity to participate in this important and timely inquiry into competition and consumer protection. Facilities-based communications providers, such as CenturyLink, deploy and maintain the infrastructure that enables our increasingly internetworked daily life. Domestically, CenturyLink is the second largest supplier of communications services to global enterprise customers and a provider of residential telecommunications and broadband services in rural and urban portions of 37 states. We provide a comprehensive suite of communications services to business, government, and wholesale customers in more than 350 metropolitan areas in the United States and more than 60 countries. We are also one of the nation's largest Internet backbone providers. We also help our customers manage increasing network and IT complexity and provide a robust set of managed network and cybersecurity solutions for organizations of various sizes. CenturyLink thus is a key participant in the domestic and global Internet ecosystem, facilitating digital innovations that increase prosperity, creativity, and civic engagement of people throughout the world.

In updating its competition and consumer protection policy and agenda, the Commission should be mindful of certain fundamental economic principles that distinguish the networked telecommunications industry from other sectors of the economy. This submission briefly highlights those principles and their application today.

High Fixed and Sunk Costs. It goes without saying that networks are essential for all forms of electronic communication. Whether calling, emailing, or snap chatting, our communications with friends and coworkers traverse at least one, and frequently many, physical networks. Similarly, our website visits and Internet searches depend on connectivity. Large network providers such as CenturyLink invest billions of dollars each year to extend communications facilities to new locations and upgrade facilities to existing locations. Thus, the bulk of investment and cost in the network business is fixed and sunk, with marginal costs that are

relatively low. These dynamics apply to all types of wireline and wireless telecommunications networks.¹

The phenomenon of low marginal costs resulting from the high fixed/sunk costs dynamic discussed above means that the presence of just two wireline competitors can drive intense competition at the retail level.² It also explains why more than two or three facilities-based wireline entrants are unlikely for consumer communications services, which generate relatively low revenues and therefore entail long payback periods, and why the Herfindahl-Hirschman Index (HHI) is not an appropriate measure for assessing the competitiveness of telecommunications markets.

Communications services provided to enterprise customers, in particular, often generate sufficiently high revenues to justify entry by many wireline competitors, especially for customers that are on or near the competitor's existing network. Indeed, the presence of nearby competitors provides a significant constraint on prices in that area. Thus, it is critical that any competitive analysis properly account for the impact of potential competition.

Economics of Network Industries, and Importance of Interconnection. Given these attributes of the communications industry and others – such as the impact of network effects dynamics – adequate interconnection between all networks for all services is essential to keep this industry competitive.

This has been a concern since the early days of antitrust law and the 20th Century telephone monopoly framework. At that time, despite the existence of the Sherman Act, the Department of Justice was prompted to initiate an antitrust investigation of AT&T – specifically challenging AT&T as not providing adequate interconnection.³ In fact, this was the genesis of the landmark 1913 Kingsbury Commitment where AT&T agreed to interconnect its Long Lines Division with “independent” local telephone companies to resolve the investigation.⁴

Interconnection also continued to be a concern throughout the evolution of the legacy telephone business and regulatory framework in the 20th Century. For example, seventy years after the Kingsbury Commitment, the break-up of the Bell System into local and long distance components was done, in part, to facilitate adequate interconnection between long distance

¹ Jonathan E. Nuechterlein and Philip J. Weiser, *Digital Crossroads: Telecommunications Law and Policy in the Internet Age* at 8-9 (2nd Ed. 2013).

² George S. Ford, Ph.D., and Michael Stern, Ph.D., Phoenix Center for Advanced Legal & Economic Public Policy Studies, Perspective 10-07, *Endogenous Sunk Costs, Quality Competition and Welfare: A Technical Note* (Dec. 16, 2010).

³ *Digital Crossroads* at 5-6.

⁴ *Id.* at 5.

competitors with local Bell companies.⁵ Later, the Telecommunications Act of 1996 (1996 Act) brought with it a foundational interconnection obligation by which all telecommunications carriers are required to interconnect with other requesting carriers.⁶

The telecommunications environment has changed considerably since the 1996 Act. Those changes have meant that, even as interconnection remains an important issue—as it has for more than a hundred years—some of the details of an appropriate regulatory framework have evolved too. For example, the local telephone company no longer plays nearly the same outsized role it did prior to the 1996 Act’s passage, with many consumers having switched long ago to a wireline phone from their cable company or having dropped wireline telephone service entirely.

As a result, the FCC has, over time, been modernizing its approach to interconnection for the public switched telephone network, although more remains to be done to align the regulatory framework with the modern marketplace by eliminating obligations that specifically target “incumbent” telephone companies.

Those legacy telephone regulations do not apply to interconnection between ISPs and others in the Internet ecosystem for the exchange of Internet traffic. Nevertheless, similar basic economic and public policy principles apply, and the federal government, including the FTC, should take seriously its duty to protect the public interest in that context. CenturyLink believes that a light-touch approach is appropriate. Commercial negotiations will generally lead to reasonable outcomes. However, the federal government should serve as a backstop, available to take action when negotiations break down or lead to unreasonable arrangements, which would have real costs for consumers and the Internet ecosystem.⁷ In CenturyLink’s view, the best way to secure an Open Internet going forward is through bipartisan federal legislation to put in place stable net neutrality rules that will protect consumers and encourage investment, innovation, and the deployment of broadband. But, in the meantime, the Commission will need to be vigilant for the prospect that it may need to act in this area. In no event should state regulation of traffic exchange be permitted as that will result in an unworkable patchwork of inconsistent state decisions.

Policies of One-Sided and Two-Sided Markets. Historically, the marketplace for at least some communications services has been viewed as two-sided. For example, for legacy telecommunications voice services, the FCC’s regulatory framework has historically called for providers to recover their costs from both end users (via both local charges for plain old telephone service (POTS) generally overseen by the states as well as certain tariffed interstate

⁵ *Id.*

⁶ 47 U.S.C. § 251(a)(1).

⁷ See ex parte notice letter from Jeffrey S. Lanning, CenturyLink to Marlene H. Dortch, FCC, WC Docket No. 17-108, *Restoring Internet Freedom*, at 1-2 (Nov. 20, 2017).

end user charges administered by the FCC)⁸ and certain other charges recovered from other carriers (“carrier’s carrier” or “access” charges).⁹ Though, the FCC has also accomplished a consistent transformation of this framework to slowly increase the former and decrease the latter.¹⁰ A two-sided model has existed for cable communications services as well, as providers have looked to both end user charges and advertising to recover their costs.¹¹

In the current Internet-driven communications world, a true two-sided approach has yet to take hold. In the wireless realm, there has been some experimentation with an indirect form known as sponsored-data. These arrangements have started to emerge whereby providers extend the ability of edge providers to purchase exemptions for their traffic from usage-based billing caps generally in place for wireless data plans.¹² However, sponsored data plans have yet to emerge in a material way for wireline services where usage-based billing itself has yet to truly take hold. And, at the same time, most ISPs, wireless and wireline, have stated that they don’t currently

⁸ See, e.g., *Connect America Fund; A National Broadband Plan for Our Future; Establishing Just and Reasonable Rates for Local Exchange Carriers; High-Cost Universal Service Support; Developing an Unified Inter-carrier Compensation Regime; Federal-State Joint Board on Universal Service; Lifeline and Link-Up*, WC Docket Nos. 10-90, et al., Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking, 26 FCC Rcd 4554, 4571-72 ¶¶ 45-49 (2011) (summarizes and provides citations to key aspects of access charge history and how costs were recovered historically in this context in the federal and state jurisdictions); see also generally, *MTS and WATS Market Structure*, CC Docket No. 78-72 (Ph. I), Third Report and Order, 93 FCC 2d 241 (1983); *MTS and WATS Market Structure*, CC Docket No. 78-72 (Ph. I), Memorandum Opinion and Order, 97 FCC 2d 682 (1983).

⁹ *MTS and WATS Market Structure*, Third Report and Order, 93 FCC 2d at 243-45 ¶¶ 2-6, 280 ¶ 129; *MTS and WATS Market Structure*, Memorandum Opinion and Order, 97 FCC 2d at 706 ¶ 61.

¹⁰ Generally, for the last roughly two decades, this process was accomplished by a variety of different actions taken by the FCC beginning with the FCC access reform proceedings that led to its 1999 *Pricing Flexibility Order* (*Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers; Interexchange Carrier Purchases of Switched Access Services Offered by Competitive Local Exchange Carriers; Petition of U S West Communications, Inc. for Forbearance from Regulation as a Dominant Carrier in the Phoenix, Arizona MSA*, CC Docket Nos. 96-262, et al., First Report and Order and Further Notice of Proposed Rulemaking, 14 FCC Rcd 14221 (1999)) and continuing through the *2011 Transformation Order* and its subsequent 6-year implementation process (*Connect America Fund; A National Broadband Plan for Our Future; Establishing Just and Reasonable Rates for Local Exchange Carriers; High-Cost Universal Service Support; Developing an Unified Inter-carrier Compensation Regime; Federal-State Joint Board on Universal Service; Lifeline and Link-Up; Universal Service Reform - Mobility Fund*, WC Docket Nos. 10-90, 07-135, 05-337, 03-109, CC Docket Nos. 01-92, 96-45, GN Docket No. 09-51, WT Docket No. 10-208, Report and Order and Further Notice of Proposed Rulemaking, FCC 11-161, 26 FCC Rcd 17663, 17932-955 ¶¶ 798-846, 18109-20 ¶¶ 1297-1325 (2011) (*2011 Transformation Order*), *aff’d sub nom.*, *Direct Communs. Cedar Valley, LLC v. FCC and In re: FCC 11-161*, Nos. 11-9900, et al., 753 F.3d 1015 (10th Cir. 2014), *petitions for rehearing en banc denied*, Orders, Aug. 27, 2014, *cert. denied*, 135 S. Ct. 2072, May 4, 2015 (Nos. 14-610, et al.)).

¹¹ See, e.g., *Applications of Charter Communications, Inc., Time Warner Cable Inc., and Advance/Newhouse Partnership; For Consent to Assign or Transfer Control of Licenses and Authorizations*, MB Docket No. 15-149, Memorandum Opinion and Order, 31 FCC Rcd 6327, 6393 ¶ 143 (2016).

¹² See e.g., <https://www.t-mobile.com/offers/binge-on-streaming-video> and <https://www.att.com/att/sponsoreddata/en/index.html> (describing current sponsored data offerings of T-Mobile and AT&T, respectively).

engage in more direct two-sided business models – the quintessential form of which would be third party-paid prioritization practices whereby edge providers could pay for the application of prioritization traffic management practices for their traffic on a given ISP’s network.

A critical point must be made here about the interplay of all that is discussed above regarding the significance of high sunk/fixed costs, the importance of interconnection and the impact of two-sided business models. As noted above, the phenomenon of low marginal costs resulting from the high fixed/sunk costs dynamic discussed above means that the presence of just two wireline competitors can drive intense competition at the retail level. At the same time, all providers will have potential bargaining power over access to their own retail end users, even if there are many providers, each with relatively small shares of end users. And, a terminating provider in a two-sided market will have relatively more bargaining power if it also has a larger retail market share. Specifically, in a two-sided market, a terminating provider might have bargaining power vis-a-vis interconnecting providers, even though it possesses no retail market power.¹³ While, as discussed more fully below, this does not mean that full legacy utility regulation is called for. But, it does underscore the importance of ensuring that adequate interconnection relationships are available – consistent with the discussion above.

Finally, it is important to note that, if broadband Internet access offerings are *not* to include two-sided market business models, it will be essential that ISPs be given significant flexibility to develop innovative offerings directly to end users that are consumer-enhancing – for example, metered or otherwise differentiated pricing that account for usage patterns and consumer-directed and possibly even consumer-paid prioritization models.

Technological Evolution and Costs of Utility Regulation. As demonstrated by the discussion above, despite their histories, today’s communications providers are far from being utilities warranting the 20th Century model of legacy utility telecom regulation. Because of this, and because of the fact that regulators have been slow to recognize development in competition, government regulation has, for decades now, stood in the way of innovation. In many countries, telecommunications providers were government-owned through most of the 20th Century – and, in some cases, they still are to some extent. While this has not been the case in the U.S., extensive regulation persisted in the U.S. until the tail end of that century. And, while progress has been made and continues to be made to reduce such regulation in response to emerging competition, much remains to be done.

Most modern economies realized that innovation depends on less regulation and are focused on reducing regulation. In the U.S., this is evident in the migration from the strictest possible command and control telecommunications regulatory frameworks in place before the 1996 Act to the less strictly applied, asymmetrical approach of the 1996 Act. As noted above, the latter

¹³ Though it should be noted that it is questionable whether ISPs have the incentive to engage in harmful blocking, throttling, or prioritization of specific types of traffic except where the end user customer requests such arrangements. This is because such conduct could diminish end users’ use of the network, which would undermine the ISPs’ business model.

put in place a new framework which combined certain foundational regulatory requirements applicable to all types of providers with additional (more onerous) requirements applicable to solely to incumbents. At the same time, the 1996 Act also put in place various built-in de-regulatory mechanisms.¹⁴ And, an intentional trend toward de-regulation has continued in the more recent decade-plus long effort to peel-away more asymmetrical aspects of this regime.¹⁵

As noted above, CenturyLink believes that some continued vigilance is needed in the post-RIF Order era, particularly when it comes to Internet traffic exchange. This concern, and even the potential terminating monopoly problem discussed above, does not mean that legacy utility regulation is the answer. The consistent march away from legacy utility regulation of communications providers and their networks has occurred for legacy telecommunications services despite the fact that each terminating provider in that realm still possesses a terminating monopoly as to its own end users. As in that realm, the challenge is to let the market work as a first resort wherever possible, but stand ready to take action if necessary to ensure the continuation of the “virtuous cycle” of innovation that is responsible for the great strides in technological evolution that we have witnessed in the last two decades.

Privacy

Unlike some other countries, the United States regulates privacy through a sectoral approach, with differing laws applied to specific industries. For example, Section 222 of the Federal Communications Act restricts a telecommunications carrier’s use of customer data that is considered customer proprietary network data. Those statutory restrictions do not apply to entities that possess similar or even identical data but are not classified as telecommunications carriers. This disparate regulation means that certain categories of providers are regulated more onerously even though others, who are less regulated, may have access to more of the customer’s

¹⁴ See, e.g., 47 U.S.C. §§ 160, 161.

¹⁵ See, e.g., *Section 272(f)(1) Sunset of the BOC Separate Affiliate and Related Requirements, 2000 Biennial Regulatory Review Separate Affiliate Requirements of Section 64.1903 of the Commission’s Rules; Petition of AT&T Inc. for Forbearance Under 47 U.S.C. § 160(c) with Regard to Certain Dominant Carrier Regulations for In-Region, Interexchange Services*, Report and Order and Memorandum Opinion and Order, WC Docket Nos. 02-112, et al., Report and Order and Memorandum Opinion and Order, 22 FCC Rcd 16440 (2007) (accomplishing the elimination of the bulk of the 1996 Act’s strict regulatory requirements applicable to BOC long distance offerings) (*2007 272 Sunset Order*); *Technology Transitions; USTelecom Petition for Declaratory Ruling That Incumbent Local Exchange Carriers Are Non-Dominant in the Provision of Switched Access Services; Policies and Rules Governing Retirement of Copper Loops by Incumbent Local Exchange Carriers*, GN Docket Nos. 13-5, et al., Declaratory Ruling, Second Report and Order, and Order on Reconsideration, 31 FCC Rcd 8283 (2016) (finding incumbent carriers to be no longer dominant in the provision of switched access services – the offerings by which third party long distance providers get access to local telecommunications networks) (*2016 LEC Non-Dominant Order*) and *Business Data Services in an Internet Protocol Environment; Technology Transitions; Special Access for Price Cap Local Exchange Carriers; AT&T Corporation Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, WC Docket Nos. 16-143, et al., Report and Order, 32 FCC Rcd 3459 (2017) (finding the bulk of telecommunication special access services to be fully competitive) (*2018 BDS Order*), *appeals pending sub nom., Citizens Telecommunications Company of Minnesota, LLC, et al. v. FCC*, Nos. 17-2296, et al. (8th Cir. *pets. for review filed* June 12, 2017 & *oral argument held* May 15, 2018).

data across more devices/networks. This skews investment and competition. The U.S. should move toward an approach that generally focuses on the sensitivity of the data involved. This approach would permit all providers to employ their array of end user data, with appropriate end user notice and choice, to serve customers in new and creative ways.

Importance of Linear Density. From its beginnings, the U.S. telephone system included subsidies to make telephone service affordable for all Americans. This universal service policy was deemed necessary to enable ubiquitous subscribership, given the wildly varying cost of providing service in dense urban and sparsely populated rural areas. The per-customer cost of extending wireline telephone service to 100 rural farms, for example, greatly exceeds that to serve 100 customers in an apartment complex. Indeed, a telephone company serving a rural area may have to deploy and maintain a telephone wire several miles long to serve just a single farm, while the 100 apartment dwellers can be served over a set of wires buried in a single trench.¹⁶

For decades, the FCC's universal service subsidies were implicit. Regulators enabled low, below-cost rural rates by permitting the Bell System to charge above-cost urban, business, and long-distance rates. With the AT&T breakup and growth of competition, however, these implicit subsidies became unsustainable and were gradually replaced, to a large extent, by explicit subsidies.¹⁷ Without these subsidies, there would be no business case to provide telecommunications service to some rural, high cost areas.

In recent years, the FCC has shifted the focus of its universal service subsidies from traditional telephone service to broadband service, which is subject to similar economic realities. The FCC's Connect America Fund (CAF) subsidizes a portion of the cost of deploying and maintaining wireline broadband service in high-cost areas that would otherwise lack a broadband provider. In contrast with its earlier universal service programs, the FCC has also limited CAF support to a single provider in each area, after acknowledging the inefficiency of subsidizing multiple providers.¹⁸

The FCC's CAF program has enabled broadband service to millions of Americans that would otherwise be unserved. Some areas are still unserved or underserved, however, where it remains uneconomic to deploy or upgrade broadband service even with the FCC's current subsidies. The FCC is working to address these gaps through reverse auctions and other mechanisms.

Impact of Linear Density on Broadband Speeds and Service Quality. Linear density also has a direct and significant effect on broadband speeds and service quality. To offer a customer higher broadband speeds, a local telephone company typically must replace at least a portion of the customer's copper loop with fiber optic cable. Generally, the shorter the copper portion of

¹⁶ See *Digital Crossroads* at 9.

¹⁷ *Id.* at 295-96.

¹⁸ See *id.* at 305-06.

the loop, the faster the speed available to the customer. Similarly, the availability of higher wireless broadband speeds depends on the availability of more spectrum. In urban and suburban areas, these high fixed costs can be spread across many customers, thus shortening the payback period for these upgrades. Opportunities for such cost sharing are much lower in rural areas, which tends to depress the availability of higher broadband speeds in those areas.

Conclusion. The communications industry is a critical component of today's networked economy, providing the wired and wireless infrastructure that underlies the steady march of digital innovation. This industry is also characterized by certain key economic principles that distinguish it from other parts of the economy, including the need for meaningful interconnection between all providers. CenturyLink encourages the Commission to keep the principles discussed above in mind as it conducts the upcoming hearings and updates its competition and consumer protection policies.

Sincerely,

/s/ Jeffrey S. Lanning