

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554

|                                                     |   |                      |
|-----------------------------------------------------|---|----------------------|
| In the Matter of                                    | ) |                      |
|                                                     | ) |                      |
| AT&T Petition to Launch a Proceeding Concerning     | ) |                      |
| the TDM-to-IP Transition                            | ) |                      |
|                                                     | ) | GN Docket No. 12-353 |
| Petition of the National Telecommunications         | ) |                      |
| Cooperative Association for a Rulemaking to Promote | ) |                      |
| and Sustain the Ongoing TDM-to-IP Evolution         | ) |                      |

**COMMENTS OF CENTURYLINK**

**I. INTRODUCTION**

CenturyLink submits these comments in response to the petitions of AT&T and the National Telecommunications Cooperative Association (NTCA) regarding the telecommunications industry's transition from time-division multiplexed (TDM) to Internet Protocol (IP) based facilities and services.<sup>1</sup>

CenturyLink agrees that the Commission should initiate a proceeding to examine and facilitate this critical transition, by rationalizing the regulation of these next-generation networks and services. Given its importance and complexity, the TDM-to-IP transition demands urgent action. The convergence of multiple IP-based services on a single network "creates extraordinary opportunities to improve American life and benefit [American] consumers."<sup>2</sup> At the same time, this convergence "has a significant impact on the legacy Public Switched Telephone Network (PSTN), a system that has provided, and continues to provide, essential

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<sup>1</sup> See *Pleading Cycle Established on AT&T and NTCA Petitions*, DA 12-1999, GN Docket No. 12-353, Public Notice (rel. Dec. 14, 2012); AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition (filed Nov. 7, 2012) (AT&T Petition); Petition of the National Telecommunications Cooperative Association for a Rulemaking to Promote and Sustain the Ongoing TDM-to-IP Evolution (filed Nov. 19, 2012) (NTCA Petition).

<sup>2</sup> National Broadband Plan at 59.

services to the American people.”<sup>3</sup> Despite their continuing utility, TDM networks are increasingly becoming obsolete, with equipment and software for TDM-based voice services sometimes unavailable. More importantly, deployment of IP-based broadband networks promises innumerable consumer benefits, including the availability of new services and the potential for accelerated job growth. Thus, it is imperative that the Commission move forward with a rigorous analysis of the appropriate regulatory framework for highly competitive next-generation IP services, building on its creation of the Technology Transitions Policy Task Force.<sup>4</sup>

In approaching the IP transition, the Commission should be guided by three overriding principles:

*First*, regulatory obligations should apply in the same manner to all providers of IP services. ILECs currently face asymmetric regulatory burdens with respect to their TDM networks. These rules presume the existence of a single monopoly provider in each geographic area. That premise could hardly be more untrue today and will certainly not be true for the IP networks of the future. CenturyLink faces intense competition from a variety of both well-established and new providers, as well as rapidly-evolving new technologies, for all the services it provides and is not dominant with respect to any of them. The Commission should use the proposed IP-transition proceeding to identify the legacy regulations that are unnecessary and counterproductive to achieving the promise of IP communications.

*Second*, no regulation should be applied in an all-IP world unless it is shown to be useful and necessary, based on real-world experience. Until the Commission and the industry gain that experience, it would be premature to establish the regulatory framework that will govern nascent

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<sup>3</sup> National Broadband Plan at 59 (reference omitted).

<sup>4</sup> *FCC Chairman Julius Genachowski Announces Formation of ‘Technology Transitions Policy Task Force’*, News Release (Dec. 10, 2012), available at <http://www.fcc.gov/document/fcc-chairman-announces-technology-transitions-policy-task-force>.

next-generation IP networks. Given the transformational nature of the IP revolution, the Commission should presume that many, if not most, legacy regulations should not be applied to next-generation IP networks. The Commission also should reject NTCA's misguided proposal to apply TDM-based section 251 and 252 interconnection obligations to the interconnection of IP networks.<sup>5</sup>

*Third*, the Commission should establish flexible guidelines for the transition to IP, rather than one-size-fits-all standards and deadlines. Each carrier faces unique circumstances and challenges as it migrates its network and services to IP. For example, with its relatively rural service area and exclusively-wireline network, CenturyLink's transition to IP is likely to be more measured than a carrier that serves predominantly urban and suburban areas or has a wireless network.

By adhering to these principles, the Commission will ensure that its rules facilitate, rather than impede, the IP migration and its potential benefits for consumers.

## **II. THE COMMISSION SHOULD INITIATE A PROCEEDING TO FACILITATE THE TDM-TO-IP TRANSITION**

As recommended in the National Broadband Plan, and as the Commission has done for previous transitions in the communications industry, the Commission should initiate a proceeding to ensure that legacy regulations do not become a drag on the transition to next-generation IP networks.<sup>6</sup> This proceeding will also enable the Commission to determine the appropriate regulation of next-generation IP networks.

The TDM-to-IP transition has begun. Last year, CenturyLink invested nearly \$3 billion in its network, including expenditures to enhance its broadband reach and expand fiber-based

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<sup>5</sup> As discussed below, this NTCA proposal would also be unlawful.

<sup>6</sup> National Broadband Plan at 59.

backhaul to mobile wireless cell sites. CenturyLink ended the third quarter of 2012 with more than 5.8 million broadband customers. In just that quarter, CenturyLink added nearly 155,000 broadband subscribers, enabled over 310,000 living units with fiber-to-the-node service (for a total of 6.8 million), completed construction of fiber backhaul facilities to nearly 1,400 wireless cell sites (for a total of 13,500), and expanded its Ethernet-over-copper footprint.<sup>7</sup> Network migration to an IP platform continues in real time for many providers -- particularly competitive providers unencumbered by expansive legacy networks and most legacy regulation. CenturyLink is no exception and continues to plan the migration of its TDM-based network equipment and facilities to IP in 37 states.

Nevertheless, as an industry, we are still in the early stages of the TDM-to-IP transition. ILECs face the costly and daunting task of migrating TDM networks and systems that were developed over decades. In the case of CenturyLink, its existing local networks currently include approximately 3,800 circuit switches. Complete migration to IP will require the company to replace these switches with packet-based switches, extend IP functionality throughout the network, modify countless internal systems, and reconfigure its local and toll trunking network.

Particularly in high-cost areas, the Commission can facilitate a faster transition by proactively eliminating burdensome and unnecessary regulation. Saddling ILEC next-generation networks and services in these areas with unnecessary regulations would further erode the tenuous business case for broadband deployment, which is already under pressure given the reduction in federal high-cost support and access revenues occasioned by the *USF/ICC Transformation Order* and the continuing loss of customers to wireless and other alternative

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<sup>7</sup> See CenturyLink Presentation for UBS Conference, *available at* <http://ir.centurylink.com/phoenix.zhtml?c=112635&p=irol-presentations> (dated Dec. 5, 2012).

providers, without a proportionate reduction in the cost of maintaining the legacy network. By minimizing the regulation of IP networks, the Commission will improve the business case for deploying these networks and thereby make it easier for providers such as CenturyLink to raise the capital necessary for these deployments.

By initiating a new proceeding focused on the TDM-to-IP transition, the Commission can also systematically and holistically examine the current regulatory framework and identify those legacy regulations that create hurdles for the transition to an all-IP environment. The fact that the Commission is already considering related discrete issues in other proceedings should not preclude the Commission from opening a proceeding to develop a unified approach for the transition.<sup>8</sup>

The ultimate beneficiaries of such enlightened regulatory policies are consumers. By spurring faster deployment of IP networks and accelerating IP convergence -- including in rural areas -- the Commission will help realize the “extraordinary opportunities to improve American life and benefit [American] consumers” identified in the National Broadband Plan:<sup>9</sup> improvements in health care, education, energy policies, economic opportunity, government performance and civic engagement.

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<sup>8</sup> For example, the Commission is currently considering USTelecom’s request for forbearance from network disclosure rules to the extent they require duplicative notice to carriers affected by network changes, and forbearance from section 214 and its associated rules to the extent they require a broadband provider to obtain Commission approval prior to discontinuing legacy offerings. *See* Petition of USTelecom, *In the Matter of Petition of USTelecom For Forbearance Under 47 U.S.C. § 106(c) From Enforcement of Certain Legacy Telecommunications Regulations*, WC Docket No. 12-61, at 56-63 (filed Feb. 16, 2012). The Commission should grant that requested relief. *See* Comments of CenturyLink, WC Docket No. 12-61 (filed Apr. 9, 2012).

<sup>9</sup> National Broadband Plan at 59.

### **III. THE TDM-TO-IP TRANSITION IS ALTERING THE ASSUMPTIONS UNDERLYING THE COMMISSION'S LEGACY REGULATIONS**

Many of the Commission's current rules are rooted in 1930s-era monopoly regulation, far out of step with the realities of technology and the highly competitive marketplace for telecommunications services. Such rules are even more ill suited to next-generation IP networks and services. IP technology upends the basic assumptions underlying today's legacy regulations: the existence of "incumbent" providers and the need for extensive regulation -- particularly of the "incumbents" -- to ensure smooth functioning of telecommunications markets. The tremendous growth and success of the Internet has swept away the rationale for these outdated assumptions. As it considers the appropriate regulatory framework for next-generation IP networks, the Commission therefore should be guided by the following principles: (1) regulatory obligations should apply in the same manner to all providers; (2) the Commission should not apply any regulation to IP networks and services unless that regulation is shown to be useful and necessary; and (3) the Commission should avoid one-size-fits-all standards and deadlines.

#### **A. All Providers of IP Services Should Be Subject to the Same Regulatory Obligations**

As a starting point, any regulation employed in an all-IP world should be applied uniformly to all providers of IP services. Burdensome, ILEC-centric regulations are misplaced in IP-based voice and broadband markets that have no dominant providers, and where ILECs have far fewer customers than many of their competitors. Today, less than 40% of households purchase voice services from ILECs, and that number is shrinking at a 10% annual rate.<sup>10</sup>

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<sup>10</sup> As of June 2012, 36% of U.S. households had disconnected their wireline telephone services. See Stephen J. Blumberg, Ph.D., & Julian V. Luke, Div. of Health Interview Statistics, Nat'l Center for Health Statistics, Centers for Disease Control and Prevention, *Wireless Substitution: Early Release of Estimates from the National Health Interview Survey, January-June 2012*, at 1 (Dec. 2012, available at <http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201212.pdf>). As

Similarly, for consumer broadband services, cable providers have substantially more residential broadband customers than their competitors, including ILECs, in virtually all areas. Further, the rollout of 4G LTE networks makes wireless providers head-to-head competitors with CenturyLink and other wireline providers. With LTE deployment to 300 million people by year-end 2014,<sup>11</sup> AT&T is able to offer bundled wireless voice *and* broadband services that are an attractive alternative to the regulated wireline services that consumers purchase from CenturyLink today.

**B. The Commission Should Not Apply Any Regulation in an All-IP World Until It Is Shown That the Regulation Is Useful and Necessary**

The Commission should not apply any regulation in the dynamic IP sector until and unless it determines that the regulation is both useful and necessary. The transition from TDM to IP networks is not just another technological progression. It is transformational. When IP networks are ubiquitous, and have replaced TDM networks, voice service will simply be another application running on competing IP networks. This IP convergence will spur head-to-head competition on both the physical layer and the application layer.<sup>12</sup> At that point, the Commission can presume that most legacy regulation will no longer be needed. For decades, providers of IP *data* services have successfully exchanged traffic through commercially negotiated arrangements, without regulatory oversight. This has occurred despite rocketing growth,

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of year-end 2011, non-ILEC providers served approximately 37% of residential retail local telephone service connections, or approximately 24% of total households. *See Local Telephone Competition: Status as of December 31, 2011*, Industry Analysis and Technology Division, Wireline Competition Bureau, FCC (Jan. 2013), available at [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2013/db0114/DOC-318397A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2013/db0114/DOC-318397A1.pdf).

<sup>11</sup> AT&T Petition at 9.

<sup>12</sup> *See* Letter from Frank S. Simone, AT&T, to Marlene H. Dortch, FCC, GN Docket No. 12-353, *et al.* (Jan. 15, 2013), attaching Letter from Robert W. Quinn, Jr., AT&T, to Marlene H. Dortch, FCC, WC Docket No. 05-25, at 2 (Jan. 14, 2013).

continual evolution and a stunning variety of IP applications on the Internet, including those that require real-time quality, such as video streaming and voice services. There is no reason to believe that additional IP voice traffic will somehow alter this market-based equilibrium.

Since the vast majority of voice customers are still served by circuit-switched networks, however, it is premature for the Commission to establish the appropriate regulatory framework for IP networks and services. But the Commission can readily identify certain rules currently applicable to TDM networks that it should proactively eliminate. AT&T's petition identifies certain such legacy regulatory requirements.

Similarly, the Commission should reject NTCA's recommendation to "confirm[] that all interconnection for the exchange of traffic subject to sections 251 and 252 is governed by the Act, regardless of the technology that might happen to be used to achieve such interconnection."<sup>13</sup> To the extent NTCA is asking the Commission to rule that interconnection for the exchange of IP voice traffic is subject to section 251(c)(2), the Commission lacks both legal authority and a sound policy basis to do so. Section 251(c)(2) does not grant CLECs access to a "yet unbuilt, superior" network, and the Commission also could not require IP-to-IP interconnection under that provision without first classifying VoIP as a telecommunications service and a local exchange and/or exchange access service. The Commission should allow IP-to-IP interconnection arrangements to develop organically, through good faith negotiations, as local TDM networks are migrated to IP. In the long run, when all voice customers are served on IP networks, voice will be just another IP service that can be handled through the flexible IP transiting and peering arrangements that have facilitated the dramatic growth and transformation of the Internet. In the meantime, VoIP providers can continue to exchange traffic in IP format

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<sup>13</sup> NTCA Petition at 14 (emphasis in original).

through an established peering arrangement (either directly or through a third party), as some VoIP providers do today, or they can convert their traffic to TDM and use existing interconnection arrangements.

**C. The Commission Should Avoid One-Size-Fits-All Standards and Deadlines for the TDM-to-IP Transition**

The Commission should recognize the diverse and unique network configurations and geography of individual providers and establish flexible guidelines for the TDM-to-IP transition, rather than one-size-fits-all standards and deadlines. While the CAF I and CAF II mechanisms will facilitate the deployment of broadband services in rural areas, the bulk of the funding for such deployment must come from carriers' capital budgets. The large capital expenditures necessary to replace the ILECs' TDM-based switches and interoffice network also will come from private funding. By definition, uniform, regulatory-mandated standards and deadlines will not take account of the unique business conditions faced by each carrier as it maps out its timetable for the IP transition.

For an ILEC, the IP transition requires a multi-step, capital-intensive process, including extending broadband capability in the last mile network, modifying its internal systems *and* replacing the TDM-based switches and components in its interoffice network. Given finite capital budgets, these initiatives must be phased in over multiple years, subject to sound business and appropriately-timed transitional planning. As is the case for any business, CenturyLink's expected revenues must exceed expected costs within a reasonable time horizon. The transition to IP ultimately may yield increased revenues from new IP-based services, but the payback in many sparsely-populated areas will be longer than in more densely-populated areas. With its relatively rural service area and exclusively-wireline network, CenturyLink's transition to IP is

likely to be more measured than a carrier that serves predominantly urban and suburban areas or has a wireless network to improve the business case for its IP broadband build-out.<sup>14</sup>

At the same time, the Commission need not establish regulatory-based incentives for the TDM-to-IP transition. Mutual self interest will motivate carriers to transition their networks to IP as quickly as their network capital budgets will allow. All carriers have incentives to hasten this transition.

#### IV. CONCLUSION

For the reasons discussed, the Commission should initiate a proceeding to facilitate the TDM-to-IP transition.

Respectfully submitted,

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January 28, 2013

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<sup>14</sup> See AT&T Petition at 4 (“There will be many high-cost areas where the business case for broadband deployment remains highly challenging.”) Also, unlike AT&T, CenturyLink cannot fill in its wireline broadband network with wireless broadband services in high-cost areas. See AT&T Petition at 9.