

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Technology Transitions)	GN Docket No. 13-5
)	
AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition)	GN Docket No. 12-353

AT&T PROPOSAL FOR WIRE CENTER TRIALS

CHRISTOPHER M HEIMANN
GARY L PHILLIPS
LORI A FINK

Attorneys For:
AT&T Services INC.
1120 20th Street, NW
Suite 1000
Washington, D.C. 20036
(202) 457-3058 – phone

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TABLE OF CONTENTS

Introduction and Overview1

Trial Objectives12

Trial Locations and Scope13

Services Included in the Trials17

Protecting Enduring Values22

Wholesale Services27

Conclusion30

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Introduction and Overview

Fifteen months ago, recognizing the seismic forces that were reshaping the communications industry and the economy at large as IP platforms displaced legacy TDM networks and services, AT&T filed a petition asking the Commission to authorize trials to provide a forum for identifying and resolving the many operational, technical and social issues raised by those changes. Under the leadership of Chairman Wheeler, the Commission granted AT&T’s petition and provided a blueprint for those seeking approval to conduct such trials. AT&T is pleased to submit this proposal for two trials involving the transition of two wire centers — one rural and one suburban — to all IP services. AT&T’s hope and expectation is that

¹ AT&T Services, Inc. files this proposal on behalf of itself and its operating company affiliates (collectively “AT&T,” except where otherwise expressly noted). AT&T provides TDM and IP-based services in the wire centers in which AT&T proposes to conduct the TDM-to-IP transition trials proposed herein through multiple affiliates, including AT&T Communications of the Southern States, LLC, AT&T Corp., AT&T Long Distance, AT&T Mobility LLC, BellSouth Long Distance, Inc., BellSouth Telecommunications, LLC, and SBC of Florida. Throughout this operating plan, the term “AT&T” generically refers to all such entities.

the trials will provide the Commission, AT&T and other stakeholders valuable information to ensure that the historic transition from 20th Century TDM technology to next-generation IP networks and services proceeds as smoothly as possible, and in a way that is faithful to the enduring social values — ensuring universal connectivity, consumer protection, public safety, reliability and competition — that must continue to provide the foundation for communications policies in the 21st Century.

The significance of this transition from a circuit-switched network to an all-IP world cannot be overstated, nor can its potential to improve American lives and benefit consumers. Indeed, Chairman Wheeler has described the IP transition as “the fourth network revolution,” likening it to Gutenberg’s invention of the printing press, the birth of the railroad, and the advent of instantaneous communications via telegraph and telephone. Each of those revolutions collapsed time and distance as impediments to communication and human interaction. Each resulted in exponential improvements in innovation, creativity, efficiency and human communication.

The IP transition is well underway, even though its potential has barely been tapped. Already it has transformed the way we communicate, educate our children, deliver healthcare, consume energy, obtain news and other information, engage in commerce, and interact with government. These changes, though, are just the tip of the iceberg: we have not yet even begun to imagine, let alone experience, the promise of this Fourth Network Revolution.

Importantly, IP networks are also transforming the structure of the communications industry. In the mid-1990s, during the last significant rewrite of the Communications Act, it was assumed that a communications provider needed to own, or at the very least lease, transmission facilities to the home in order to deliver communications services to customers and countless

pages of new laws and regulations were written to promote investment in or sharing of those facilities. Today, that vision is all but obsolete. To be sure, facilities-based providers of rival broadband platforms engage in intense competition, as was envisioned by the 1996 Act. But this competition is supplemented by intense competition from “over the top” providers of applications and services, which compete head to head with facilities-based providers. Vonage and Skype, for example, compete aggressively with telephone companies, cable multiple system operators (MSOs) and others in the provision of voice telephone services, while Apple, Roku, Google and others deliver video content directly to consumers through small pieces of hardware that connect wirelessly to the consumer’s underlying broadband service. And just last week, Facebook paid \$19 billion for a provider of text messaging services that has more than 400 million users worldwide, despite the fact that it does not provide the underlying connectivity to any of them. Incredibly enough, just a decade ago Facebook itself was an incipient social networking service for Harvard University students; today it is a worldwide platform with 1.25 billion users.

These transformative changes are taking place at an extraordinary pace. Indeed, a significant majority of Americans *already* have transitioned away from circuit-switched telephony, even if many are not aware they have done so. More than 70 percent of residential consumers in the 22 states where AT&T is the legacy “phone company” have abandoned legacy phone service. They rely instead on wireless, VoIP, and/or other services offered by cable companies and others. Indeed, in some states, the number of housing units purchasing legacy circuit-switched services from an ILEC has fallen below 20 percent.

The reason so many consumers have made this transition so quickly is simple: IP-based services offer greater functionality than circuit-switched telephony ever could offer, and the

“value gap” will only widen with the continuing integration of IP networks with cloud computing and the Internet of things. In other words, it is inevitable that over time circuit-switched telephony will become irretrievably obsolete. And that day is fast approaching. Not only are customers abandoning circuit-switched networks and services in droves, making it increasingly uneconomic to maintain those legacy networks, but manufacturers of the equipment needed to maintain and operate those networks are likewise moving on. Those manufacturers want to focus their businesses on the networks of the future, not technology that is being displaced, and so they are discontinuing production of TDM equipment. As a result, it is becoming increasingly difficult to obtain needed spare parts to keep legacy TDM networks going. Indeed, as strange as it may seem, AT&T has had to turn to Ebay to locate spare parts for its TDM network. At the same time, much of the workforce with the expertise to support TDM networks and services has retired or is nearing retirement, and those who are replacing them have no interest in becoming experts in yesterday’s technology. To the contrary, the best and the brightest minds emerging from our nation’s leading engineering universities are focused on IP technologies, the technologies of the future. In short, the IP-transition is well past the tipping point, and at some point in the not-too-distant future it will no longer be possible to maintain traditional TDM-based telephone networks and services. The demand won’t be there, the economics won’t support it, and the parts and labor to keep these networks going will not be available.

This is not news to the Commission. The Commission recognized in its historic National Broadband Plan that IP networks and services are displacing TDM networks and services and that maintaining both platforms in parallel is not a viable long term option. Doing so both “reduces the incentive for incumbents to deploy” next generation facilities and “siphons

investments away from new networks and services.”² As Chairman Wheeler recently observed, “[d]ue in part to outdated rules, the majority of the capital investments made by U.S. telephone companies from 2006 to 2011 went toward maintaining the declining telephone network, despite the fact that only one-third of U.S. households use it at all.”³ “The challenge for the country,” as the Commission put it, “is to ensure that as IP-based services replace circuit-switched services, there is a smooth transition for Americans who use traditional phone service and for the businesses that provide it.”⁴ The trials that are now being initiated should provide valuable information that can ensure we meet that challenge. And these trials come not a moment too soon because they can be conducted while the existing circuit-switched infrastructure remains operational.

To be sure, the transition to IP services will continue at rapid pace organically. Certainly that is AT&T’s expectation, and AT&T is putting its money where its mouth is. Through our Project Velocity IP (VIP), AT&T is investing billions of dollars in wireless and wireline broadband networks to support future IP data growth and new services. We are planning to expand our award winning U-verse broadband and video footprint to an additional 8.5 million customer locations in our 22 state wireline footprint (resulting in a total of almost 33 million customer locations — representing approximately 43 percent of our customer footprint — having the capability of receiving a video, voice and broadband bundle). In total, we plan to expand our wireline IP-broadband service to approximately 57 million customer locations, including U-verse

² FCC, *Connecting America: The National Broadband Plan*, at 49, 59 (2010) (“*National Broadband Plan*”).

³ Prepared Remarks of FCC Chairman Tom Wheeler, Silicon Flatirons, University of Colorado Law School, Boulder, CO (Feb. 10, 2014), available at: <http://www.fcc.gov/document/fcc-chairman-tom-wheeler-remarks-silicon-flatirons> (last checked Feb. 25, 2014) (adding that we must “act to ensure that more investment flows to the fiber-optic networks of tomorrow. . .”).

⁴ *The National Broadband Plan* at 59.

services to a total of 33 million customer locations. We expect to be substantially complete in the 2015 and 2016 timeframe. At the same time, we are significantly increasing the broadband speeds available to U-verse customers as part of this plan. More than half of AT&T's U-verse broadband base has downstream speeds of 12MB or higher and we can deliver speeds of up to 45MB to approximately two-thirds of our U-verse video customers.

Our investments are not limited to residential customers. We also are expanding our fiber deployment, building fiber facilities to a planned 1,000,000 additional business locations within our 22 state wireline footprint. That investment will also serve as the platform for additional Distributed Antennae Systems, Cloud capabilities and enhanced Network-based security capabilities.

On the wireless side, we are expanding our 4G LTE network to cover approximately 300 million people across the nation and expect to essentially complete this expansion by the summer of 2014. To enhance that additional coverage, we announced plans to build 10,000 new macro cell sites, utilize over 40,000 small cells and construct over 1000 Distributed Antennae systems.

In total, we expect Project VIP to provide high-speed connectivity to approximately 99 percent of customer locations in AT&T's 22-state wireline service area, producing significantly greater broadband speeds and capabilities for AT&T's customers across the board. Our wireline IP network will reach approximately 75 percent of the customer locations in our 22-state wireline footprint, with many experiencing significantly faster speeds. Those customers will also have access to 4G LTE services, as will almost all the customers who will not be reached by U-verse or U-verse IPDSL. Our 4G LTE network will provide broadband at speeds up to 12 Mbps – significantly more robust than any of our legacy wireline DSL products. In addition to upgrading the reach of our 4G LTE networks, AT&T plans to introduce a Wireless Home Phone

service with LTE capabilities provided by AT&T Mobility, which will enable customers to use their existing home telephone to connect to our wireless broadband service with the features customers expect from a home telephone service, with the additional option of purchasing wireless broadband Internet access service. The only difference is that customers will be connected to our network wirelessly rather than through a legacy twisted-pair, copper loop. As a result of these investments, we will be able to ensure that there are robust options for customers throughout our serving area in an all-IP world. The underlying technology will change and customers will enjoy an expanded palate of enhanced features, functions, and capabilities. But while it is understandable that some consumers fear change, consumers are not going to lose phone service as a result of these trials, nor will AT&T abandon its commitment to the core principles that have guided communications policies over the past century.

To the contrary, in developing its plans for the trials (and the IP transition more generally), AT&T was guided by the same principles and values that the Commission articulated in its order authorizing these trials. These principles are:

- Universal Connectivity – All Americans, regardless of who they are or where they live, should have access to next generation broadband networks and services. The trials should shed light on how best to achieve that core goal.
- Consumer Protection – Consumers are entitled to certain basic protections, including a right to privacy, number portability, and safeguards against fraudulent, deceptive and unfair business practices.
- Public Safety – The transition to next generation wireless and IP-based services should not disrupt public safety, national security or emergency preparedness and response.
- Reliability – Next generation wireless and IP-based networks and services should be dependable and reliable. As we transition to services that rely increasingly on commercial power for customer premises equipment, service providers, manufacturers, consumers, and policymakers need to work together to ensure that such equipment has adequate battery back-up and consumers understand the steps they need to take to avoid losing connectivity during a power outage.

- Competition – Competition produces better outcomes for consumers than regulated or uncompetitive markets. Competition encourages innovation and investment, ensures that consumers have access to the services (including features, functions, and capabilities) they want at prices that are reasonable.

These principles (and the policies and rules enshrining them) have made America's existing communications network the envy of the world, and should continue to apply across all platforms and providers as we complete the historic transition to all-IP networks and services. But the way in which these principles are implemented must evolve to reflect marketplace and technological developments. While all of them are likely to undergo significant adaptation as we complete the IP transition, perhaps none will be as challenging as ensuring that next-generation services extend to all Americans, in particular to Americans who live in rural areas.

In the attached document, AT&T has laid out a detailed plan for how we propose to conduct TDM to all-IP trials in two wire centers. The plan identifies the geographic areas in which AT&T will conduct the trials, the specific TDM-based services that ultimately will be discontinued, the wireless and wireline IP-based alternatives that AT&T will offer, and other competitive alternatives available to customers in the test-bed wire centers. It also details AT&T's plans for notifying customers about the transition and migrating them to alternatives, and identifies special considerations, such as how AT&T proposes to address public safety, access by persons with disabilities, access by seniors and others with unique needs, and other important issues. AT&T is eager to receive input on its proposed trial plan from the Commission and other interested parties. We look forward to working with all stakeholders to resolve any issues that may arise.

For the most part, current federal and state rules will not stand in the way of these trials. We can introduce new IP-based services at any time and indeed already have introduced many

such services. However, we understand the need to work cooperatively with federal and state policymakers to retire the circuit-switched and TDM services that have served this country for so many years. By working together, policy-makers, consumers, service providers and other industry stakeholders will be able to develop plans to manage the IP transition in an efficient and pro-consumer manner, while the TDM network remains in place. This proceeding provides a forum to help ease this transition and address any unresolved or unknown issue that could impede our progress. But make no mistake, whether a customer subscribes to a wireless or a wireline broadband product, the capabilities of both of those services far exceed what is available in the circuit-switched POTs environment.

The Commission successfully has overseen similar technology transitions before. Twice in the past decade, the country has gone through similar transitions in communications technology and services – in the transition from analog to digital cellular service, and from analog to digital TV. In both cases, the Commission planned ahead and adopted policies to “ensure that legacy regulations and services did not become a drag on the transition to a more modern and efficient use of resources, that consumers did not lose services they needed and that business could plan and adjust to the new standards.”⁵ These prior transitions establish the critical importance of identifying and cooperatively planning for all of the challenges that may arise as the country completes the TDM-to-IP technology transition, which is likely to have more far-reaching consequences and be more important to the economic growth and well-being of the nation than any that came before. Like the DTV trial in Wilmington, North Carolina, geographically limited IP trials, like those proposed herein, will provide the Commission, industry, and customers invaluable real-world experience regarding the issues that may arise as

⁵ *National Broadband Plan* at 59.

we discontinue the TDM facilities and services on which many Americans still rely even as many others already have made the switch to next-generation wireless and wireline IP-based services.

Under the order the Commission adopted to oversee these trials, wholesale customer participation will be voluntary during the initial stage of the trials. Retirement of wholesale services does remain a critical issue in the conversion to an all-IP world. At the same time we recognize that wholesale access, and other issues, are likely to be contentious, and will spark much debate over the next few years. Consequently, we have included in this plan a description with details of how we intend to proceed with respect to wholesale issues. We will either address those issues by proposing additions to the trials themselves or through existing processes under the Communications Act and the Commission's rules. It is important to be transparent about how these issues fit into the overall IP transition. It is our goal to pursue consensus and certainty regarding these issues, as well as to ensure that all providers have sufficient notice to prepare for the transition and the day when TDM wholesale services no longer will be available.

The IP transition, and the wire center trials detailed herein, will not happen overnight. AT&T expects that the trials and transition will take several years. Many of the products and services AT&T intends to offer in place of traditional, wireline TDM telephone services are already available in the marketplace, and millions of customers already have transitioned to them. But AT&T is still working on developing and enhancing other services that will become available as the trials proceed. Thus, the transition of customers to IP will vary depending on the services at issue, and the trial and this detailed plan likely will change and evolve as we proceed. In all cases, AT&T will seek to encourage to the greatest extent possible a voluntary migration through customer outreach and education. During the first phase of the trial, and after the

Commission's approval, AT&T plans to grandfather existing customers, and offer only next generation wireless and wireline IP-based services for new orders. Ultimately, existing customers will also have to upgrade to such alternatives, but as the FCC has constructed the trials, that second phase will not begin until after the Commission has evaluated results of Phase 1 and authorized us once again to move forward to the full IP transition. In each case though, AT&T will afford customers ample notice regarding the transition so that they can plan accordingly. And consistent with the *Technology Transitions Trial Order*, AT&T will seek Commission approval at each stage in the process to ensure the Commission is satisfied that customers will be protected.

We note that AT&T's proposed wire center trials contemplate network and service changes beyond those addressed in the *Technology Transitions Trial Order*. Thus, we recognize that, at this time, the Commission may not approve all aspects of the trial proposed herein. But, all of the network and service changes identified in the attached plan will be essential to complete the IP transition. And, insofar as the purpose of the trials is to enable all interested parties to identify and resolve the many issues that will arise as the nation migrates to all-IP services, we have sought to identify all of the network, service and other changes that will be necessary to complete the transition (or at least all of the changes we have identified to date) to open a dialogue regarding all of the implications and questions that must be addressed as the transition proceeds. We emphasize that, at all phases of the trial and transition, AT&T will proceed in an open and transparent manner, and that the Commission will remain in control of the trials to ensure that the transition proceeds in a manner consistent with the public interest.

Trial Objectives

The trials AT&T is proposing have several important objectives. First, the trials are designed to provide a process and forum for identifying and resolving the operational, technical, logistic, and other issues (both known and unforeseen) that could arise when existing TDM-based networks and services are discontinued and the customers remaining on those networks have to transition to next-generation wireless and wireline IP-based alternatives. We need to understand how this major technology change will impact consumers to ensure that IP transition proceeds as smoothly as possible, and in a way that is faithful to the enduring social values that have been at the root of communications policies over the past century. The trials provide a forum to work with and hear from customers and policymakers to make sure that we are timely addressing any issues or concerns that could impede an orderly transition. Second, the trials are intended to help AT&T (working with policymakers, customers and other stakeholders) further develop and implement processes for migrating customers (including residential, small and large business, wholesale, and governmental customers) off of traditional TDM networks and services and onto all IP platforms. We need to understand how to actually operationalize this effort efficiently, so that we have as little customer disruption as possible. Third, the trials seek to ensure that customers, manufacturers, policymakers, and other stakeholders have sufficient education and notice regarding the impending transition so that they also have the opportunity to prepare for the time when TDM networks and services no longer are available. And fourth, we hope to come out of the trials with an actionable plan that we can utilize to continue this transition in our approximately 4,700 wire centers and across the country in order to meet our stated goal of completing the IP Transition by the end of 2020.

Consistent with these objectives, the trials seek to replicate on a small scale the broader TDM sunset and migration to all-IP networks and services. Although many of the issues posed by the transition are common to all customers, each customer segment (residential, small and large business, government, wholesale) has its own, unique needs and challenges. Consequently, what works well for one segment may not be the best for another. The trials AT&T is proposing thus seek a complete migration of all customers (or as many as possible) to IP-based services in two wire centers. Excluding particular customer segments and/or services (such as dedicated or wholesale services) from the trial will deprive the Commission, consumers, industry and others of important real-world experience needed to prepare for the IP transition.

Trial Locations and Scope

AT&T is proposing to conduct the trials in a rural wire center in Carbon Hill, AL, and in Kings Point, a suburban wire center in Palm Beach County, FL.⁶ AT&T chose these wire centers with an eye towards gaining insights into some of the more difficult issues that likely will be presented by the TDM sunset. For example, Carbon Hill is a sparsely populated wire center located in rural Alabama with particularly challenging economic and geographic characteristics. There are approximately 4,388 living units in the Carbon Hill wire center. Living units include both business and residential locations (even if not currently occupied), as well as business or residential locations currently under construction.⁷ Of the 4,388 living units in Carbon Hill to which AT&T offers wireline services, roughly **[CONFIDENTIAL – NOT FOR PUBLIC DISCLOSURE]** percent subscribe to AT&T’s retail wireline services (TDM and IP). This fact

⁶ The Kings Point serving wire center is located in an unincorporated part of Palm Beach County, west of the City of Delray Beach, FL. For purposes of this filing and the attached detailed plan, we will refer to that serving wire center as the “Kings Point” wire center.

⁷ Living Units are the units AT&T’s network engineers use when designing and building communications networks because each living unit is a separate location that AT&T historically has been required to serve upon request.

underscores the point that many customers already have made the choice, even in rural areas, to transition away from the traditional TDM telephone network and services; it also vividly illustrates the increasingly difficult economics of the traditional wireline business and the regulatory framework associated with it. It is also worth noting that while the Carbon Hill wire center may qualify for funding under the Commission's revised universal service rules, the amount of that funding has yet to be determined — we thus welcome the CAF Phase II trial proposed by the Commission to try to begin finding answers to some of these questions.

Under AT&T's proposed plan, we would provide wireline and/or wireless broadband services to approximately 96 percent of the Carbon Hill living units – **[CONFIDENTIAL – NOT FOR PUBLIC DISCLOSURE]** percent of those living units will have a wireline broadband alternative and **[CONFIDENTIAL – NOT FOR PUBLIC DISCLOSURE]** percent will have only a wireless 4G LTE solution available. Providing broadband services to the final 4 percent of the living units will be more difficult given the economics of deploying broadband services to those areas. AT&T recognizes that it is responsible for ensuring that these customers will have an alternative available to them prior to discontinuing TDM services and is, in all events, committed to working with the Commission, policymakers and other stakeholders to ensure that this happens. It is, however, critically important that we engage in a dialogue that addresses the geographic, demographic, and economic challenges of deploying and offering broadband in sparsely populated areas, like Carbon Hill. This is precisely why AT&T selected Carbon Hill as one of the trial wire centers, so that we and other stakeholders can begin that dialog on how best to resolve this issue while the TDM network remains in place.

Kings Point likewise raises important issues. Kings Point is a suburban wire center located in the West Palm Beach metropolitan area with a large population of older Americans

(according to US Census data, more than 70 percent of its population is over 50 years of age). Although many older Americans already have made the transition from traditional wireline telephone services to wireless and wireline IP-based services (often without even knowing they have done so), as a group they have been slower to migrate to these newer technologies. Kings Point thus will provide AT&T, the Commission and other stakeholders with critical insights into any unique challenges the IP transition may pose for seniors, and how best to address them. There are 49,712 living units in Kings Point to which AT&T offers wireline services, of which only [CONFIDENTIAL – NOT FOR PUBLIC DISCLOSURE] percent currently subscribe to an AT&T wireline retail service. That means that, like Carbon Hill, a large percentage of customers have already migrated to wireless, IP-based or other services. Under AT&T's current plans, we will offer wireless broadband services to 100 percent of the living units in Kings Point, and wireline broadband services to [CONFIDENTIAL – NOT FOR PUBLIC DISCLOSURE] percent of the living units.

The wire centers AT&T chose for these trials will raise some of the most challenging geographic and economic issues that we will face with respect to the IP transition. While we recognize that other locations will raise issues that may be different in either degree or kind, we believe that these two wire centers will provide many valuable insights into most of the challenges that must be overcome to make the transition as smooth as possible.

Among the most important of these issues is how to achieve universal access to broadband and other communications services in competitive markets. Over the last century, policy-makers and local telephone companies relied on a complex web of implicit subsidies (shifting costs from local to long distance, rural to urban, and residential to business) to fund universal wireline service in rural and other high cost areas. That system made sense at a time

when local telephone companies were granted monopoly franchises in return for their universal service commitment. But the 1996 Act made that regulatory compact obsolete by opening all telecommunications markets to competition and requiring that the web of implicit subsidies, which Congress recognized would no longer be sustainable with competition, be replaced with adequate explicit subsidies targeted to rural and other high cost areas. In the ensuing two decades, robust competition both in urban areas and for the lowest cost, most profitable customers, combined with intercarrier compensation reform, have eliminated the implicit subsidies on which local telephone companies relied to make universal, low-cost wireline service feasible. The introduction of broadband services and the arrival of even more competition from “over-the-top” service providers gave consumers even more choices, but also put the subsidy system in free fall. Existing federal and state universal service support mechanisms (at least for price cap carriers like AT&T) were not designed to make up the shortfall, and the Commission’s new mechanisms to support broadband deployment in high cost areas remain works in progress.

As a consequence, the system pursuant to which one provider (the ILEC) could shoulder the entire burden of achieving universal connectivity in high cost areas is long gone. The good news is that by opening up our markets to competition, we have seen investments by telephone companies that have enabled them to compete in the video market; investments by cable companies that enabled them to compete in the voice market; and investment by cable, telephone, wireless companies and others, resulting in a robustly competitive broadband market that has brought more service choices to consumers. According to a White House report on Broadband Growth released in June 2013, “two of the largest telecommunications companies account[ed] for greater combined stateside investment than the top five oil/gas companies, and

nearly four times more than the big three auto companies combined.”⁸ Indeed, between 2009 and 2012, nearly \$250 billion in private capital was invested in U.S. wired and wireless broadband networks, annual investment in U.S. wireless networks grew more than 40 percent, from \$21 billion to \$30 billion, and more high-speed fiber cables were laid in the United States than in any similar period since 2000.⁹ But, given the high cost, and limited returns, of deploying broadband in remote areas with sparse populations, some locations lack a positive business case for private sector investment. In these areas, additional universal service support may be necessary to solve the broadband equation for everyone. Thus, while universal connectivity is a bedrock principle that should continue in an all-IP ecosystem, how we as a nation achieve that goal will have to change.

The foregoing universal service, intercarrier compensation, and Lifeline issues have been raised in a myriad of different proceedings currently pending before the Commission. We hope and expect that the trials commenced in this proceeding will provide the context and information the Commission needs to complete its reform of universal service in a way that will enable the United States to achieve its goal of ensuring that all Americans have access to affordable broadband services. And, as we indicate above, AT&T is committed to working with policy-makers, customers, industry, and others to find the right solutions.

Services Included in the Trials

AT&T proposes to include in the trials all of its consumer TDM-based voice and internet access transport services, and to offer AT&T’s U-verse Voice service, AT&T’s U-verse High

⁸ Office of Science and Technology Policy & The National Economic Council, *Four Years of Broadband Growth*, at 5 (June 2013) (citations omitted), available at http://www.whitehouse.gov/sites/default/files/broadband_report_final.pdf (last checked Feb. 23, 2014).

⁹ *Id.* (citations omitted).

Speed Internet services, and AT&T Mobility's Wireless Home Phone and Wireless Home Phone and Internet with 4G LTE Broadband services in place of those TDM services. Customers within AT&T's wireline IP network footprint have access to AT&T's U-verse® Voice and High Speed Internet services, which provide next-generation voice calling features and high-speed broadband Internet access.¹⁰ Customers in AT&T's wireless footprint also will be able to purchase one of AT&T's commercial mobile radio services (CMRS) (including AT&T Mobility's Wireless Home Phone and Wireless Home Phone and Internet with 4G LTE Broadband service) in place of traditional, TDM-based voice telephone services. For those customers located outside AT&T's wireline IP footprint, AT&T will offer only its Wireless Home Phone and Wireless Home Phone and Internet with 4G LTE Broadband service (or other wireless services) in place of TDM services.¹¹ AT&T's Wireless Home Phone and Wireless Home Phone and Internet with 4G LTE Broadband services include nationwide calling with enhanced calling features. The wireless Internet component of Wireless Home Phone and Internet provides broadband Internet speeds generally capable of downstream speeds between 5-12 Mbps. AT&T's LTE network is consistently recognized as the fastest, most reliable LTE network in the nation.

AT&T also proposes to transition its current retail business customers in the trial wire centers from TDM-based voice and data services to wireless and wireline IP-based services over the next three years. AT&T will offer business customers within its wireline IP network

¹⁰Approximately [CONFIDENTIAL – NOT FOR PUBLIC DISCLOSURE] percent of the living units in the King's Point Wire Center will have access to AT&T's U-verse video service as well as broadband and voice.

¹¹ Fewer than one percent of AT&T existing consumer customers with TDM-based services are located in areas outside of AT&T's IP network footprint and are ineligible for the Wireless Home Phone products because of the wireless network coverage issues.

footprint a variety of IP-based business-class voice services that include next generation calling features,¹² such as U-verse® Business Voice, AT&T Voice DNA® and IP Flexible Reach, in place of legacy TDM services, such as BellSouth Centrex and Business Access line services. AT&T also offers IP-based Internet access and data services in the Trial Wire Centers, including U-verse® High Speed Internet-Business Edition, and a variety of business-class Ethernet services that deliver extremely reliable service at ultra-fast speeds. AT&T is in the process of developing a wireless business phone product, which (like Wireless Home Phone) will enable business customers in AT&T's wireless footprint to use their existing CPE to communicate over AT&T's wireless network. AT&T's Wireless Business Phone service will include nationwide calling with enhanced calling features designed for business and wireless Internet access using AT&T's 4G LTE network.

The wireless and wireline IP-based services that AT&T will offer in place of traditional TDM-based services will support the vast majority of the devices and applications enumerated in Appendix B of the *Transitions Trial Order*. However, AT&T does not currently plan to support certain limited applications with rapidly declining market demand or applications that are based on outdated technology. In the Device and Application Compatibility Chart included in the attached Wire Center Trial Operating Plan, AT&T has identified whether particular applications or devices currently supported over TDM also are (or will be) supported over AT&T's wireless and wireline IP-based replacement services (we also identify the date by which AT&T expects to support applications and devices still under development). We do so in order to ensure that all

¹² AT&T's wireline IP network in the Carbon Hill and Kings Point wire centers currently covers [CONFIDENTIAL – NOT FOR PUBLIC DISCLOSURE] percent of the service locations of AT&T's current business customers in Kings Point, percent in Carbon Hill. AT&T recognizes that it is and [CONFIDENTIAL – NOT FOR PUBLIC DISCLOSURE] responsible for ensuring that these customers will have an alternative available to them prior to discontinuing TDM services and is, in all events, committed to working with the Commission, policymakers and other stakeholders to ensure that this happens.

interested parties have an opportunity to engage in a dialog regarding the features and functions consumers and businesses that should continue in an all-IP ecosystem even if the particular application by which that functionality is provided today is retired.

In addition, AT&T Mobility's Wireless Home Phone and Wireless Home Phone and Internet services currently are not compatible with analog data devices and services (*e.g.*, home security systems, fax machines, and dial-up Internet service). AT&T understands the importance of some of these capabilities and is therefore developing enhancements to Wireless Home Phone with LTE that will allow this wireless service to work with analog data devices, such as alarm monitoring, medical alert and credit card applications. We currently plan to introduce all of the foregoing enhancements [**CONFIDENTIAL – NOT FOR PUBLIC DISCLOSURE**]. AT&T will not seek to grandfather its TDM-based voice services until these enhancements are available.

Like AT&T Mobility's other mobile wireless ("CMRS") service offerings, Wireless Home Phone presently complies with the Commission's existing CMRS 911 service regulations (47 C.F.R. Part 20). This means that, depending on the subscriber's location, Wireless Home Phone will provide access to Basic 911 Service (Basic), Phase I Enhanced 911 Service (Phase I), or Phase II Enhanced 911 Service (Phase II). As the Commission knows, Phase II service includes providing the PSAP both the telephone number of the originator of the 911 call and the caller's longitude and latitude in conformance with the Commission's Phase II accuracy requirements.¹³ All of the PSAPs serving the Carbon Hill and Kings Point wire centers are Phase II compliant.

¹³ 47 C.F.R. § 20.18(h).

AT&T recognizes that regulators and the public safety community have raised concerns regarding situations in which consumers are *required* to accept a different standard of 911 access, and thus is working on a solution to address these concerns. Specifically, AT&T is developing upgrades to the 911 capability of Wireless Home Phone by adding an ALI function to emulate the customer's experience with wireline TDM service.¹⁴ To emulate the wireline 911 experience in a mobile offering, we are developing enhancements that will allow AT&T to send MSAG information to the appropriate PSAP while the device is at a registered service address. Under any such solution, the service would have to allow subscribers to update their MSAG address easily and accurately when the base station device has been moved to a new location.¹⁵ To the extent a customer uses the device while in motion (such as in a mobile home or other vehicle), the device would provide the same 911 functionality as any other CMRS device. We currently plan to introduce this enhancement [**CONFIDENTIAL – NOT FOR PUBLIC DISCLOSURE**]. AT&T will not seek to grandfather its TDM-based voice services until this enhancement is available.

AT&T has included in Exhibit E Product Data sheets for each TDM-based service that AT&T proposes to grandfather, and ultimately sunset, in the trial wire centers. The Product Data sheets provide the following information concerning each service: current customer counts for the service, proposed grandfather and sunset dates, proposed customer notification dates, AT&T's replacement products, and the presence of competitive alternatives in the trial wire centers.

¹⁴ Today, with wireline telephony, calls to 9-1-1 provide both the call back telephone number (ANI) and the Master Street Address Guide (MSAG) location—*i.e.*, the dialing party's actual street address.

¹⁵ If the wireless device were not at the registered MSAG location, then the service could still provide the calling party's ANI and ALI, *i.e.*, the latitude and longitude of the caller's location, as appropriate for any other wireless device operating on AT&T's licensed spectrum.

Protecting Enduring Values

Protecting Consumers

AT&T will continue to meet its historic commitment to meeting the needs of persons with disabilities and populations with unique needs (including seniors, persons with limited English proficiency, low-income populations, and residents of Tribal lands).¹⁶ That commitment will not change during the trials proposed herein (or, indeed, during the broader IP transition). That commitment is unparalleled in the communications industry and is a model for service providers in other industries.

From its founding, AT&T has recognized the vital role that technology can play in enhancing the lives of all persons, especially those with disabilities, and how products designed to enable disability access can benefit all customers.¹⁷ Thus it has integrated accessibility into all aspects of the product and service life-cycle from basic research and product development to marketing and customer service in order to create cutting-edge products and services to meet the communications needs of persons with disabilities, seniors and other underrepresented populations with unique needs, and ensure that they can benefit from advances in communications technologies. Among other things, AT&T has developed a corporate

¹⁶ As discussed in section 6.2.2. of the Trial Operating Plan, one of the IP-based replacement services AT&T will offer in the trial wire centers is its Wireless Home Phone service. The price of Wireless Home Phone is lower than a typical customer pays today for traditional telephone service, providing low income consumers (including seniors on a fixed income) a low-cost option that meets their budgetary needs.

¹⁷ Indeed, Alexander Graham Bell, the founder of AT&T, was a teacher of deaf people, and his invention of the telephone in 1876 was an outgrowth of his efforts to develop the first hearing aid. Global Initiative for Inclusive Information and Communication Technologies (G3ict), White Paper, *Accessibility, Innovation, and Sustainability at AT&T: How a culture of inclusion and the adoption of Universal Design at AT&T drive business processes to serve persons with disabilities*, at 13 (2013) (listing early accessibility milestones at AT&T) (available at: http://www.att.com/Common/merger/files/pdf/G3ict_White_Paper.pdf), attached hereto as Exhibit G. G3ict is an Advocacy Initiative of the United Nations Global Alliance for ICT and Development, which seeks to facilitate and support implementation of the Convention on the Rights of Persons with Disabilities.

accessibility policy, which provides that AT&T will perform accessibility evaluations as early as feasible in the design of new and redesigned products and services, networks, and applications, and implement accessibility features where achievable. It has a Corporate Accessibility Technology Office to undertake those evaluations and to engage the disability community about how to improve the accessibility of products and services to persons with disabilities. AT&T also has a Human Factors Group to test company designs to evaluate the accessibility and usability of products and services, and invites aging adults and persons with disabilities to take part in these studies as appropriate.

Although AT&T itself does not develop or manufacture customer equipment, it works with manufacturers and third-party accessibility, aging, technology and disability organizations to encourage and specify the development of products that meet the needs of persons with disabilities, seniors, and others with unique needs. It also has an Advisory Panel on Access and Aging, which meets regularly with national leaders in assistive technology, aging and disabilities to discuss issues impacting customers, emerging accessible and usable technologies, current products and services, and customer service for persons with disabilities and seniors; a Citizenship & Sustainability Expert Team on Access and Aging to champion accessibility across AT&T; a National Center for Customers with Disabilities, which handles inquiries and requests relating to AT&T Mobility's products and services; and a Disability and Aging Center, which operates call centers dedicated to serving the elderly and persons with disabilities, in English and in Spanish, across AT&T's entire wireline footprint. In addition, AT&T has customer service representatives available to respond to inquiries from persons with limited English proficiency in Cantonese, Mandarin, Korean, Tagalog, Japanese, Russian, and Polish, in addition to Spanish. In short, ensuring that persons with disabilities, seniors and other populations with unique needs

have access to communications products and services that meet their needs is our commitment and integral to everything we do.

AT&T has a proven track record of delivering innovative solutions to ensure that persons with disabilities and others with unique needs have access to cutting edge communications technologies and services. The following list highlights just a few of these solutions:

FACETIME OVER CELLULAR

In October 2012, AT&T rolled out several new billing plans making FaceTime over Cellular available to deaf and hard of hearing customers who qualify for special text and data-only packages.

TEXT ACCESSIBILITY PLAN (TAP)

AT&T offers the Text Accessibility Plans (TAP), which was designed with input from the deaf community and provides lower-cost data and text plans for the deaf and hard of hearing.

FREE 411 (MOBILITY DIRECTORY ASSISTANCE)

Recognizing that directory assistance services can facilitate dialing by customers with significant visual, cognitive, and physical disabilities, AT&T provides 24/7 access to live operators to enable customers to obtain local and national telephone numbers and addresses (which can be delivered via a text message), and connections to those numbers at no additional fee to qualified customers. Customers also can use 4-1-1 Info to obtain information regarding nearby businesses, movie showtimes, turn-by-turn driving directions, reverse lookup, and business category search information.

U-VERSE® EASY REMOTE

AT&T developed Easy Remote to make it easier for persons with disabilities and older customers to access and use AT&T's award-winning U-verse television service through voice commands, and even customer gestures. U-verse Easy Remote provides access to more than 50 powerful and user-friendly features, like customizable screen displays and gesture commands, to help users quickly navigate to their favorite channels. Powered by AT&T WatsonSM speech recognition technology through the AT&T Speech API, the app not only recognizes voice input, but also will learn and adapt to individual speech patterns. The U-verse Easy Remote app is currently available for download free of charge in the iTunes store.

AT&T SPEECH MASHUP

AT&T's cloud-based Speech Mashup enables anyone to easily create innovative and accessible services for a wide variety of internet connected devices including smart phones, tablets, computers and television control boxes. In 2011, AT&T received the FCC Chairman's "Lifted By The Cloud Award" and the FCC Chairman's Award for Advancement in Accessibility for Speech Mashup.

ACCESSIBLE DVR PROGRAMMING FOR U-VERSE TV

AT&T U-verse customers can program their DVR from their PC, allowing visually impaired subscribers to easily schedule recordings.

HEARING AID COMPATIBLE MOBILE PHONES

To ensure that deaf and hard of hearing individuals have access to digital wireless devices that meet their needs, AT&T offers dozens of hearing aid compatible mobile phones with different features and at different price points. Nearly all of these devices carry a

compatibility rating of M3 or M4, which are less likely to generate interference to hearing devices.

AT&T also has been recognized frequently as a leading provider of accessibility and equal opportunity by disability organizations, including:

- American Foundation for the Blind Access Award, 2013, which honors individuals, corporations and organizations that eliminate or substantially reduce inequities faced by people with vision loss. AT&T won the award for its U-Verse Easy Remote App;
- DiversityInc Top 10 Companies for People with Disabilities, 2013, which ranked AT&T at number 6 (AT&T also ranked in the top 10 in 2012);
- DiversityInc Top Company for Supplier Diversity, 2013;
- Careers and the Disabled Magazine Top 50 Employers List, 2012 (AT&T ranked as Number 1 employer for professionals with disabilities);
- USBLN Market Share Corporation of the Year, 2011 (presented to the employer that has demonstrated exceptional products and/or services to benefit the disability community);
- Equal Opportunity Employer Magazine, 2011, Top 50 Employer;
- 2013 Company of the Year from the Texas Department of Assistive and Rehabilitative Services (DARS) for a “culture that gives all employees the opportunity to excel both personally and professionally.”

AT&T has included in its detailed plan for conducting TDM to all-IP trials an outreach plan for persons with disabilities and other populations with unique needs as an integral component of the trials to ensure that they will continue to have access to the communications services they need. That plan has five elements: identifying customers with disabilities in the trial wire centers; customer outreach and education; customer care and support; identifying accessible technology solutions; and transitioning persons with disabilities from one service to another. Taken together, these elements will ensure that AT&T can and will meet the needs of disabled persons and other populations with unique needs.

Protecting Customer Privacy.

AT&T will conduct all aspects of the trial consistent with the AT&T Privacy Policy, which applies to our legacy TDM services, as well as IP-based services. In addition, AT&T will continue to comply with applicable privacy laws and regulations, including those concerning customer proprietary network information (CPNI). AT&T has established comprehensive processes and procedures designed to ensure compliance with the Commission's CPNI regulations.¹⁸ Accordingly, pursuant to the Commission's 2007 order extending the CPNI regulations to interconnected VoIP providers, the AT&T business units that provide interconnected VoIP services – AT&T Business, AT&T Home Solutions and AT&T Mobility – apply these processes and procedures today to safeguard the CPNI of AT&T's interconnected VoIP customers.¹⁹ AT&T's CPNI processes and procedures are described in AT&T's annual CPNI compliance certifications filed with the Commission pursuant to 47 C.F.R. § 64.2009, and will apply to all CPNI generated in connection with the interconnected VoIP services used in the trial.²⁰

Wholesale Services

Any robust and meaningful examination of the processes necessary to effect an orderly transition from legacy TDM-based services to an all-IP ecosystem necessarily must include an assessment of the impact of that transition on wholesale customers. To that end, AT&T has endeavored to identify the extent to which wholesale customers are active in the two trial wire

¹⁸ 47 C.F.R. § 64.2001 *et seq.*

¹⁹ *See Implementation of the Telecommunications Act of 1996: Telecommunications Carriers' Use of Customer Proprietary Network Information*, 22 FCC Rcd. 6927, ¶¶ 54-59 (2007).

²⁰ *See, e.g.*, AT&T Annual CPNI Compliance Certifications Calendar Year 2012, EB Docket No. 06-36, filed Mar. 1, 2013; AT&T Annual CPNI Compliance Certifications Calendar Year 2011, EB Docket No. 06-36, filed Mar. 1, 2012; AT&T Annual CPNI Compliance Certifications Calendar Year 2010, EB Docket No. 06-36, filed Mar. 1, 2011.

centers, as well as the legacy TDM products and services they are obtaining and their IP-based replacements, and to develop plans for engaging those customers in the trials and encouraging them to purchase the replacement products and services. As is the case with AT&T's retail customers, a complete test of the transition will entail the required participation of all actors in the test wire centers, including wholesale customers. AT&T nevertheless is prepared to move forward with trials in the test wire centers subject to the condition established in the *Transition Trials Order* limiting the involvement of wholesale customers in the initial phase of the trials to those that participate voluntarily.²¹ But, as the *Order* contemplates,²² AT&T intends to pursue additional phases of these trials that would include, with the Commission's authorization through the Section 214 process, the complete withdrawal of TDM-based wholesale services. To that end, AT&T has identified in the detailed plan the interstate TDM wholesale services for which 214 applications will be filed, and anticipates submitting an application to grandfather those services in the trial wire centers.

AT&T values its relations with its wholesale customers, and intends to work aggressively to retain their business as the entire industry undergoes the transition to an all-IP ecosystem. AT&T is interested in receiving feedback from its wholesale customers on how the transition can work best for their needs as well as the needs of their customers. Accordingly, AT&T has identified the replacement products that already are available as alternatives to current legacy TDM services – such as the AT&T Switched Ethernet (ASE) service that is available to replace DS_n-level special access services and high capacity loop and transport UNEs – and will provide customers who choose to do so the opportunity to transition to those alternatives in this initial

²¹ *Transition Trials Order*, ¶ 59 and n.91.

²² *Id.*, n.91.

phase of the trial. Similarly, while AT&T will continue to meet its wholesale obligations under Section 251(c) of the Act (including by making UNEs available through the current stage of the trial), AT&T intends eventually not only to withdraw its legacy TDM services but also to retire the TDM electronics and other facilities used to provide those TDM services (and UNEs). At the same time, wholesale customers will have the opportunity to obtain bare copper loops and utilize their own electronics to provide high capacity services to their end user customers — TDM or IP or any other technology the wholesale customer desires to provision.²³ AT&T also is working diligently to develop IP replacement services that it will make available for [CONFIDENTIAL – NOT FOR PUBLIC DISCLOSURE]. AT&T's objective is to complete those development efforts, as well as those aimed at developing an IP-based alternative to the Local Wholesale Complete product, as soon as possible, although it is likely the final commercial products will not be available until the trials already are underway.

²³ The *Transition Trials Order* stated that the Commission did not intend to resolve legal and policy questions resulting from the transition in the context of any trials. *Technology Transitions, et al.*, GN Docket No. 13-5, *et al.*, Order, Report and Order and Further Notice of Proposed Rulemaking, FCC 14-5 at ¶ 8 (rel. Jan. 31, 2014) (*Transition Trials Order*). Consistent with the Commission's intent, AT&T is not seeking to resolve any issues through this application, nor in this phase of the proposed trial, on such issues, including those concerning the extent to which wholesale obligations associated with an ILEC's provision of TDM-based services, such as the required unbundling of high capacity loops or the resale of telecommunications services, apply to IP-based services.

Conclusion

For the foregoing reasons, the Commission should approve the trials proposed herein.

/s/ Christopher M Heimann

CHRISTOPHER M HEIMANN

GARY L PHILLIPS

LORI A FINK

Attorneys For:

AT&T Services INC.

1120 20th Street, NW

Suite 1000

Washington, D.C. 20036

(202) 457-3058 – phone

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