

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of )  
 )  
Technological Transition of the ) GN Docket No. 12-353  
Nations Communications )  
Infrastructure )  
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**COMMENTS OF AMERICAN AGRI-WOMEN, NATIONAL FARMERS UNION, THE  
NATIONAL GRANGE, US CATTLEMEN’S ASSOCIATION, UNITED STATES  
DISTANCE LEARNING ASSOCIATION, AND WOMEN INVOLVED IN FARM  
ECONOMICS**

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States Distance Learning Association, and Women Involved in Farm Economics**

The undersigned organizations<sup>1</sup> (“we” or “our”) file these comments in support of AT&T’s IP Transition Petition<sup>2</sup> (“AT&T Petition” or “Petition”) that asks the Federal Communications Commission (“FCC”) to initiate a proceeding and start a process to modernize our country’s telecommunication infrastructure and accelerate the transition to all-IP networks. In particular, our comments focus on rural America and the ability of ubiquitous IP-enabled networks to encourage economic growth and to deliver new education, health care, and other life-enhancing opportunities to communities that have often been hampered by geographic and economic barriers.

**I. Introduction and Summary of Discussion**

As AT&T’s Petition notes, consumers have already begun abandoning limited voice-only networks in favor of IP-based networks capable of supporting high-speed broadband Internet access, higher-layer VoIP, and other advanced services<sup>3</sup>. Because of their sometimes challenging geographic situations and usage requirements, rural

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<sup>1</sup> This filing reflects the views of each of the undersigned organizations as institutions and does not reflect the views of the individual officers, directors, members or staff of each entity. United States Distance Learning Association <http://www.usdla.org/>; The National Grange <http://www.nationalgrange.org/>; US Cattlemen’s Association <http://www.uscattlemen.org/>; Women Involved in Farm Economics <http://www.wifeline.com/>; American Agri-Women <http://www.americanagriwomen.org/>; National Farmer’s Union <http://www.nfu.org/>.

<sup>2</sup> Petition of AT&T, *Petition to Launch a Proceeding Concerning the TDM-to-IP Transition*, GN Docket No. 12-353, (filed Nov. 7, 2012) (“AT&T Petition” or “Petition”).

<sup>3</sup> *Id.* at 10.

Americans, in particular, have begun embracing communications options beyond traditional land-line service in recent years.<sup>4</sup>

AT&T's petition is unique in that it does not request specific rule changes. Instead, in seeking to modernize and upgrade its network, AT&T asks the government to start a new process wherein stakeholders - network operators, communications providers, regulators and consumers - can work together to address the issues likely to arise in transitioning from old to new. Rather than seeking one-size-fits-all regulatory relief, as is often the case in requests to the FCC, the beta-trial process envisioned in AT&T's Petition would help all interested stakeholders begin to understand the technical and policy dimensions of the IP Transition. Each part of the country faces different challenges, and the beta trials proposed by AT&T are the best way to determine how most efficiently and successfully to handle the transition nationwide.

The transition from the antiquated legacy voice-centric system to all-IP networks that can seamlessly deliver data, video, and voice across a range of wired and wireless devices is the next step in the technological evolution that has historically spurred American prosperity. Just as government provided critical support for the electrification of rural America, the universal delivery of telephone service, and the transition to digital television, it should also play an important role in helping drive the fastest possible deployment of IP networks to every corner of America. Indeed, the FCC has already taken an important first step by creating the Connect America Fund<sup>5</sup> to spur deployment in high-cost, largely rural, areas that now lack broadband service.

The National Broadband Plan estimates that making broadband available to every American will cost approximately \$24 billion.<sup>6</sup> Under existing fiscal constraints, the federal government resources necessary to unilaterally fund universal high-speed broadband deployment may fall short. Instead, robust deployment of next generation broadband networks to rural Americans will require a creative partnership between the government and the private sector.

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<sup>4</sup> Stephen J. Blumberg and Julian V. Luke, *Wireless Substitution: Early Release of Estimates from the National Health Interview Survey, January–June 2012*, National Center for Health Statistics (Dec. 2012) available at <http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201206.pdf>

<sup>5</sup> See generally Report and Order and Further Notice of Proposed Rulemaking, *Connect America Fund et al.*, 26 FCC Rcd 17663 (2011) (“*USF/ICC Transformation Order*”).

<sup>6</sup> FCC, *Connecting America: The National Broadband Plan*, at 136 (2010) (“*National Broadband Plan*”), <http://www.broadband.gov/>.

We believe that AT&T's proposed framework can provide a critical forum for designing a joint public-private strategy for delivering the benefits of high-speed advanced broadband throughout the United States, including rural America. Accelerating the transition away from the voice-centric networks of the 20<sup>th</sup> century will help ensure U.S. technology leadership, drive economic growth, and deliver vast new opportunities to every American. Doing so will require key policy choices to maximize the benefits and minimize disruption. As Chairman Genachowski observed, "[T]he ongoing changes in our nation's communications networks require a hard look at many rules that were written for a different technological and market landscape."<sup>7</sup> The beta-trial process proposed by AT&T is designed to address these challenges. We urge the Commission to get the process started by approving the company's Petition.

***A. Rural America's Future Rides on Next Generation Broadband***

Across America, next generation broadband service can be the critical driver for long-term investment and economic growth that creates quality jobs and enables the United States to achieve national priorities in education, health care, energy independence and environmental sustainability. Modern all-IP infrastructure can lead to new efficiencies and drive productivity by enabling 24-7 communication from people-to-people and machine- to-machine. As the National Broadband Plan observed, "Today, high-speed Internet is transforming the landscape of America more rapidly and more pervasively than earlier infrastructure networks. Like railroads and highways, broadband accelerates the velocity of commerce, reducing the costs of distance. Like electricity, it creates a platform for America's creativity to lead in developing new and better ways to solve existing problems. Like telephony and broadcasting, it expands our ability to communicate, inform and entertain."<sup>8</sup>

The challenges confronting America are often magnified in rural parts of the nation as economic and geographic barriers make it harder to attract businesses, medical facilities and specialists, and educational resources. The rapid build out of next-generation IP-enabled networks can deliver new job opportunities, connect rural citizens to distant medical specialists and facilities, and allow young students to take advantage of distance-learning, providing them with the same high-quality courses available to their urban peers.

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<sup>7</sup> Press Release, Federal Communications Commission, FCC Chairman Julius Genachowski Announces Formation of 'Technology Transitions Policy Task Force' (Dec. 10, 2012), *available at* [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2012/db1210/DOC-317837A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db1210/DOC-317837A1.pdf).

<sup>8</sup> *National Broadband Plan* at 3.

***B. All IP-enabled networks and services provide the opportunity for rural businesses, ranchers and farmers to expand markets and boost efficiency.***

All-IP infrastructure will not just attract new resources. It also will enhance opportunities for existing businesses and farming operations in America's smaller and remote communities. With IP-networks, small business owners can market their goods and services around the world, enabling them to expand their businesses and contribute to the economic well-being of the communities which they love and in which they have chosen to live. The growth of these local businesses will create job opportunities for younger workers who will no longer be forced to move away from home to achieve career success.

High-speed broadband can allow work anytime, anywhere. Rural Sourcing, for example, is a company that uses broadband connections to link high-skilled workers in rural areas with clients for a variety of high-tech jobs.<sup>9</sup> Another company, the software development firm ImproMed, has chosen to headquarter in rural Wisconsin instead of Silicon Valley. While the company credits Wisconsin's educational system and its citizens' strong work ethic as reasons for its success, the growth of rural broadband has also undoubtedly been an enabling factor.<sup>10</sup> For those willing to relocate, high speed broadband will enable them to identify job opportunities with distant companies who increasingly conduct employment searches primarily and, at times, exclusively, online.

Ranchers and farmers, too, are enhancing their market opportunities and boosting their productivity by taking advantage of broadband and other IP-based technologies. Indeed, ranchers and farmers have helped lead broadband adoption in rural America. As of 2011, more than 62 percent of all U.S. farms and about 82 percent of larger farms had Internet connectivity.<sup>11</sup> By combining GPS and other broadband technologies, ranchers and farmers are helping to plant and water more efficiently, access weather and commodity market information in real time, and even connect to customers and suppliers wirelessly while at work in the fields.

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<sup>9</sup> Howard Berkes, *Outsourcing High-Tech Jobs to Rural America*, NPR News, February 14, 2005, at <http://www.npr.org/2005/02/14/4496502/outsourcing-high-tech-jobs-to-rural-america> (Last visited January 16, 2013).

<sup>10</sup> Jessica La Plante-Wikgren, *Going Digital in Dairyland*, New North at B2B, at <http://www.newnorthb2b.com/going-digital-in-dairyland.html> (last visited January 17, 2013).

<sup>11</sup> U.S. Department of Agriculture, *Farm Computer Usage and Ownership* at 1 (August 2011), available at <http://usda01.library.cornell.edu/usda/current/FarmComp/FarmComp-08-12-2011.pdf> (Last visited January 16, 2013).

***C. IP-enabled networks provide a substantial boost to education and healthcare, bridging the gap between rural and urban opportunities.***

Perhaps the most momentous changes delivered by IP-based networks will be in education and health care, two areas in which rural citizens are often handicapped by resource limitations that can stunt economic and physical well-being.

Today, too many rural students lack the educational opportunities of their peers in urban schools, leaving them at a disadvantage when competing for college admission and in keeping up with other students once they arrive on a college campus. In fact, more than thirty percent of rural students attend high schools that fail to offer Advanced Placement (“AP”) courses, compared to just seven percent of students in city schools and just four percent of suburban students.<sup>12</sup>

Distance learning, delivered over advanced high speed IP networks, can offer part of the answer. With high-speed broadband, students and schools can connect to AP and other specialized courses taught by skilled teachers hundreds or thousands of miles away. The more advanced the network, the more advanced the tools available for such classes and the more advanced the interaction between student and teacher.

As the U.S. Distance Learning Association (“USDLA”) reported in 2010, broadband enables students of all ages to achieve educational goals that they could not reach without the Internet. “Teenagers at high schools too small or poor to offer advanced courses, working parents who can’t leave their jobs to attend school fulltime, people who find it hard to get back and forth to campus because of distance or disabilities that complicate mobility, and thousands of others with reasons of their own, are using online learning to pursue new academic opportunities,” USDLA noted.<sup>13</sup>

USDLA added that Internet-enabled communications also enable teachers and students to supplement classroom experience by accessing a range of resources, museums, experts, lecturers, and interactive experiences from around the world. Many rural school districts (and schools everywhere) are already taking advantage of broadband connections to enhance students’ educational experiences. Almost six of ten (59%) rural school districts

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<sup>12</sup> Alliance for Excellent Education, *Current Challenges and Opportunities in Preparing Rural High School Students for Success in College and Careers: What Federal Policymakers Need to Know* at 16 (February 2010) available at <http://www.all4ed.org/files/RuralHSReportChallengesOpps.pdf> at 16 (Last visited January 16, 2013).

<sup>13</sup> U.S. Distance Learning Association, *Enabled by Broadband, Education Enters a New Frontier* (November 2010) at 2, available at [http://www.usdla.org/assets/pdf\\_files/OnlineWhitePaper-V10312.pdf](http://www.usdla.org/assets/pdf_files/OnlineWhitePaper-V10312.pdf) (Last visited January 16, 2013).

reported students enrolled in distance learning in 2009-10, and nearly three-quarters of these districts (74%) planned to expand distance learning offerings.<sup>14</sup> For example, Florida Virtual School (FLVS) develops and provides virtual K-12 education to students around the country, regardless of where they may live.<sup>15</sup> Students can access more than 120 courses ranging in subject matter from Geometry to AP Art History to Drivers Education.

But many rural communities still lack the necessary high-speed IP-enabled broadband connections needed to take full advantage of distance learning. A significant number of classrooms either do not have service or the service is too limited to effectively support robust distance learning programs. The FCC reported that rural schools are twice as likely as urban schools to cite connectivity shortfalls as a barrier to Internet-based classes and other online tools.<sup>16</sup> Even when schools are connected, individual students may not have access to broadband outside of the classroom, restricting their ability to build on classroom experience. For these schools and their students, transitioning to all IP-enabled networks that can deliver 21<sup>st</sup> century service to rural America is essential for providing the educational experiences required for success. The sooner we begin the transition as proposed by AT&T, the sooner every American student will experience the next generation of learning.

In healthcare, America's 50 million rural residents are often forced to settle for less than the best. Rural residents face higher levels of chronic illnesses such as heart disease and diabetes, but have access to just half the number of primary care physicians per 100,000 people than Americans in urban areas. They also travel about twice as far as people living in cities, 60 miles on average, when visiting a specialist.<sup>17</sup>

As with education, next generation IP-enabled broadband networks can shrink this disparity by linking rural patients to distant specialists and advanced technologies in state-of-the-art health care facilities, wherever they are located. These networks also enable remote monitoring of vital signs to better manage chronic conditions and post-hospital recoveries while cutting costs. In emergency situations such as strokes, in which vital interventions are

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<sup>14</sup> Barbara Queen and Laurie Lewis, U.S. Department of Education, National Center for Education Statistics, *Distance Education Courses for Public Elementary and Secondary School Students: 2009 - 2010* at 4 (November 2011) available at <http://nces.ed.gov/pubs2012/2012008.pdf> (Last visited January 16, 2013).

<sup>15</sup> Florida Virtual School, *About Us*, at <http://www.flvs.net/areas/aboutus/Pages/default.aspx> (Last visited January 17, 2013).

<sup>16</sup> Federal Communications Commission, *2010 E-Rate Program and Broadband Usage Report* at 10, (available at [http://transition.fcc.gov/010511\\_Eratereport.pdf](http://transition.fcc.gov/010511_Eratereport.pdf) (Last visited January 16, 2013).

<sup>17</sup> UnitedHealth Center for Health Reform & Modernization, *Modernizing Rural Healthcare: Coverage, Quality and Innovation* at 18, (July 2010) available at [http://www.unitedhealthgroup.com/hrm/UNH\\_WorkingPaper6.pdf](http://www.unitedhealthgroup.com/hrm/UNH_WorkingPaper6.pdf) (Last visited January 17, 2013).

required in the first hours, broadband enables real-time transmission of images and vital signs to enable consultations between distance specialists and emergency personnel on the scene or in transit to save lives.

Already, an estimated 10 million Americans are receiving some form of telehealth services annually<sup>18</sup> and millions more are turning to the Internet for medical information to help manage their own healthcare. At a mHealth summit in June 2012, Chairman Genachowski said that among elderly patients alone, mobile health can cut costs by about 25 percent by reducing face-to-face visits with physicians.<sup>19</sup> Citing Robert Litan, Genachowski said that remote monitoring alone could save as much as \$197 billion over 25 years, due to better management of chronic disease.<sup>20</sup>

## **II. To Move America Forward, the IP Transition Must Start Now**

The United States is poised for a historic transition in communications. Completing the transformation from legacy TDM-based network technology designed in the 20<sup>th</sup> century to the all-IP networks of the 21<sup>st</sup> century will allow every computer, laptop, smartphone, machine and tablet to communicate with each another and work seamlessly around the clock. These devices, connected with each other and with a host of other machines ranging from cars to thermostats via these IP-enabled networks, are changing almost every aspect of our lives in areas well beyond traditional communications. If the FCC grants AT&T's Petition, the full build out of 21<sup>st</sup> century IP-based networks can be to spur growth, create jobs, and stimulate new opportunity across America, but especially in rural communities that are often handicapped by distance and other opportunity-limiting barriers.

All-IP based networks can help us overcome these barriers, delivering better education and health care in rural communities and narrowing the opportunity gap between city and farm. Together, government and the private sector must work together to complete and accelerate the proliferation of IP-enabled networks so that every American can enjoy the full benefits of the most advanced networks available.

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<sup>18</sup> Kimber Solana, *Despite Potential Benefits, Medicare Slow to Utilize Telehealth*, Reporting on Health: The California Endowment Health Journalism Fellowships (Jan. 15, 2013), at [http://www.reportingonhealth.org/2013/01/15/despite-potential-benefits-medicare-slow-connect-telehealth?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+reportingonhealth%2Fmain+\(ReportingonHealth+-+All+Content\)](http://www.reportingonhealth.org/2013/01/15/despite-potential-benefits-medicare-slow-connect-telehealth?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+reportingonhealth%2Fmain+(ReportingonHealth+-+All+Content)) (Last visited January 17, 2013).

<sup>19</sup> Julius Genachowski, Prepared Remarks for FCC Chairman Julius Genachowski FCC mHealth Summit, at 3 (June 6, 2012).

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

### **III. The FCC should grant AT&T's Petition and immediately commence the beta test initiatives**

For the foregoing reasons, we urge the FCC to quickly approve AT&T's petition so that the beta test process can identify the key questions and develop the right solutions to determine how best to move forward with the nationwide transition. In supporting AT&T's Petition, we neither prejudge the specific rules that can or should be jettisoned nor those that may be required for effective implementation of transition; however, we believe AT&T's Petition contemplates the best process for designing the right path for this transition, and that process should begin now.

Respectfully submitted,

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