

Hearing on “The AT&T/DIRECTV Merger: The Impact on Competition and Consumers in the Video Market and Beyond”

Before the Subcommittee on Antitrust, Competition Policy and Consumer Rights

U.S. Senate

Written Testimony of Larry Downes¹

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Chairman Klobuchar, Ranking Member Lee and members of the Subcommittee, thank you for this opportunity to testify on the pending merger between AT&T and DIRECTV.

My name is Larry Downes. Based in Silicon Valley for over twenty years, I am an Internet industry veteran and the author of several books on the information economy, innovation, and the impact of regulation. I have also written extensively on the effect of regulation on the dynamic broadband ecosystem, and in particular the role played by the FCC and local regulators.

Summary

Over the last three years, I have been involved in a research project focused on the changing nature of technology innovation and market disruption, performed in conjunction with the Accenture Institute for High Performance. Our recently published findings demonstrate that technological and market forces have put unprecedented and accelerating pressures on incumbent businesses, especially those subject to a long history of regulatory oversight.

Like many of the industries we studied, the video marketplace, and its cousins in voice and data, is in the midst of a profound and exciting transformation—at least for consumers and

¹ Larry Downes is Project Director of the Evolution of Regulation and Innovation Project at the Georgetown Center for Business and Public Policy. His books include *Unleashing the Killer App* (Harvard Business School Press, 1998), *The Laws of Disruption* (Basic Books, 2009) and *Big Bang Disruption: Strategy in the Age of Devastating Innovation* (Penguin Portfolio, 2014).

entrepreneurs. For multi-channel video programming distributors (MVPDs), including both AT&T and DIRECTV, that transformation poses a daunting triple play of threats to their current business model:

1. The rise of a few very powerful content and distribution companies, including Disney, Fox, and CBS, have weighed the scales in program carriage and other negotiations strongly on the side of the programmers, bloating channel bundles and raising prices for consumers even as many users demand more a la carte solutions.
2. Largely unregulated over-the-top program providers, including Google, Amazon, Apple Aereo and Netflix—as well as hundreds of venture-backed start-ups, entrepreneurs, and even average users—are experimenting with abandon with new technologies and new business models for producing, collecting, distributing and monetizing a cornucopia of new and old programming.
3. In developing strategies both to compete and cooperate with these and other threats both inside and outside the media supply chain, MVPDs are severely constrained by a long history of policy decisions and compromises structured to resolve previous tensions between old business models and new technologies. Taken together, they form a sclerotic tangle of interconnected, contradictory and in many cases counter-productive constraints that limit the ability of MVPDs to adapt to the accelerating pace of technical and business change, often for reasons that no longer serve any public interest.
4. Each transaction, of course, must be evaluated separately on its own merits. This transaction in particular makes sound strategic sense. And it presents few if any of the traditional markers for concern either under antitrust law or the FCC's public interest standard. Competition will be enhanced, not harmed, and consumers will have more, not fewer choices, both now and, assuming the integration of the two companies goes smoothly, in the future.
5. As structured, the transaction also has positive side effects that will accelerate the deployment of better and cheaper broadband networks, help to close what remains of the digital divide, enhance the competitive impact of mobile broadband technologies on wired networks, and reinforce the FCC's open internet goals.

Technology Innovation and Disruption

The true driver of change in the media market—its unmoved mover—is the exploding availability of increasingly better and cheaper core technology components. Nearly fifty years, Intel co-founder Gordon Moore made a startling but prescient prediction that computing technologies, notably semiconductors, would continue to double in power and capacity every 12-18 months while price held constant, an unprecedented economic phenomenon known as Moore's Law,²

Today, Moore's Law continues to operate, and my colleagues in Silicon Valley expect it to continue to do so for the rest of our working lives. Indeed, other core technologies in fields as varied as materials, genetics, optics and energy, are now demonstrating similar properties, though most are in the nascent stages of commercial development.³

In a growing list of industries well beyond the ground zero of computing and communications, exponential improvement in price and performance of digital technologies has led to continued price deflation for commodity components, including chips, memory, storage, sensors, displays, optics and communications capacity, a trend accelerated by economies of scale in the production of over a billion smartphones.

At the same time, these components continue to become smaller and require less power, expanding the range of cost-effective applications. It is now virtually costless to embed some measure of computing capacity into nearly every one of over a trillion items in commerce.

Entrepreneurs are now turning their attention from an Internet of people to the Internet of things, where cloud-based computing will connect us not only to each other but to the world around us, sending and receiving massive volumes of information that, if used wisely, will generate a virtuous circle of economic, social, political and personal gains that will raise the standard of living for everyone.

That deflation, coupled with growing connectivity among consumers across traditional marketing segments, has already changed the dynamics of competition. Consumers have implicitly and explicitly internalized the benefits of Moore's Law, and are quick to punish providers, using social media, user reviews and message boards, who don't make full use of its potential.

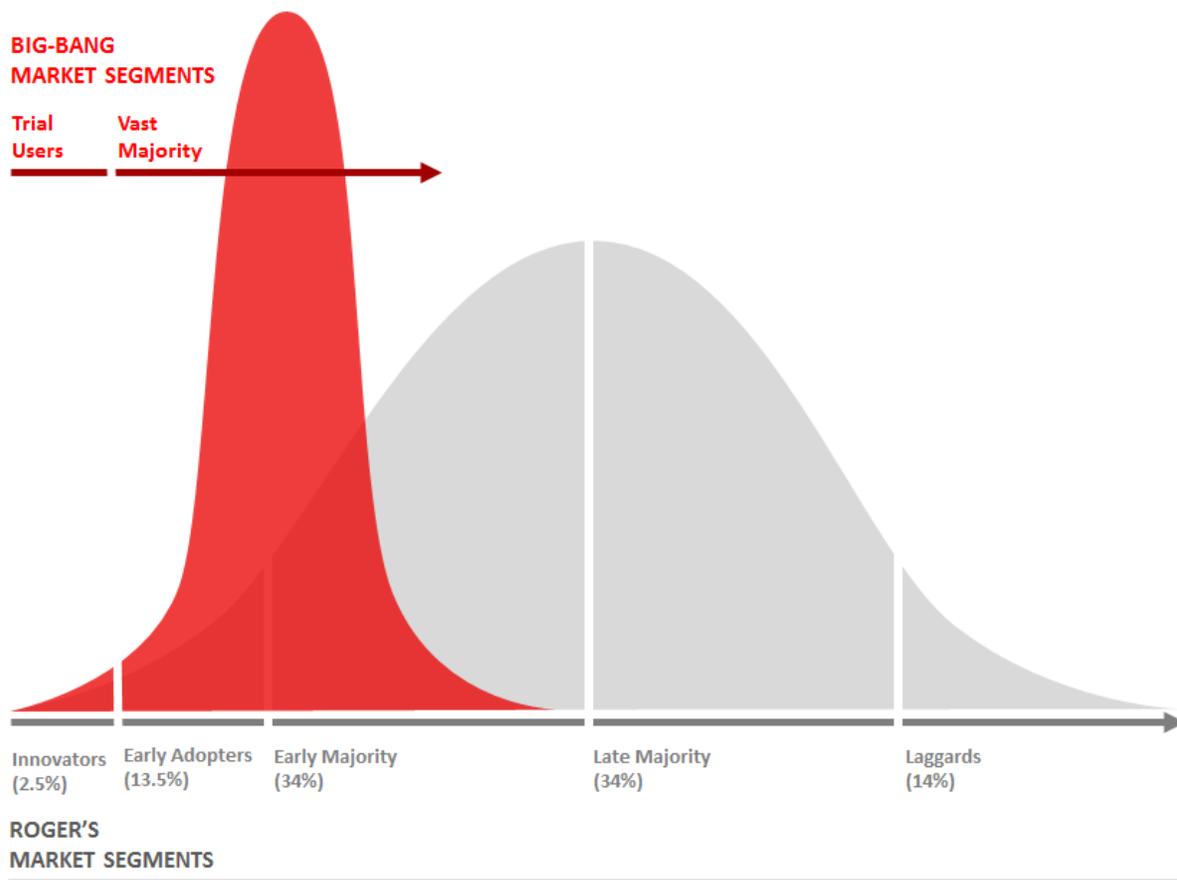
It is now the regular and predictable improvements in technology that dominate the market behaviors of both consumers and producers, providing a more potent form of competitive

² Gordon E. Moore, *Cramming more components onto integrated circuits*, ELECTRONICS MAGAZINE, April 19, 1965.

³ Larry Downes and Paul Nunes, *BIG BANG DISRUPTION: STRATEGY IN THE AGE OF DEVASTATING INNOVATION* 21-30 (Portfolio 2014)

pressure than any strategic moves by traditional rivals or other participants in mature supply chains.

The traditional life-cycle of new product diffusion, once the placid bell curve made famous by the work of Everett Rogers,⁴ has been squashed and stretched into something that resembles, appropriately enough, a shark fin. (Figure 1) Disruptors appear out of nowhere, saturate the market quickly, and are themselves quickly replaced by the next wave, using the next generation of core technologies.



(Source: *Downes and Nunes*, BIG BANG DISRUPTION)

Figure 1 – The New Model of Technology Adoption

⁴ Everett M. Rogers, *DIFFUSION OF INNOVATIONS* (5th Ed.) (Free Press 2003)

Big Bang Disruption in the Video Market

This phenomenon, which we refer to as “Big Bang Disruption,” is nowhere more visible than it is in markets for computing, communications, and entertainment.⁵ The related trends of technology cost deflation and collective consumer behavior have sped up the pace of change for every participant in the video ecosystem. Providers are now racing to compete not so much with each other as with an inevitable future of constant disruption.

Most significantly, Big Bang Disruption has led to the convergence of vastly different forms of content and specialized networks for transporting them onto the single platform of broadband Internet. We now have genuine competition between cable, satellite, fiber, and hybrid networks, all supporting new products and services that combine video, voice, and data.

Though some technologies are better for some services than others, rapid engineering improvements are taking place across the board, with infrastructure providers investing billions not only to compete with each other but to meet insatiable consumer demand for more of everything, in more forms and combinations and under more business models.

In addition to legacy infrastructure technologies, moreover, the last decade has seen dramatic improvement in mobile broadband networks, super-charged by the release of the iPhone and Android operating systems and the best-in-the-world deployment in the U.S. of 4G LTE networks. Triple plays of broadband video, voice and data are evolving to quadruple plays, adding mobile connectivity.

As both the quality and reach of LTE proliferates from a variety of providers, mobile broadband is becoming a true intermodal competitor for wired broadband in many markets and applications. Cord cutting is a growing phenomenon, except by younger consumers, who never had a cord to cut in the first place.

As a direct result of convergence onto the IP platform, the lines between video, voice and data have been erased, at least as far as consumers are concerned. We watch “TV” on our tablets, and use social media on our television sets to comment on programming as it airs. Standalone voice is giving way to native video conferencing and other forms of collaboration. Content begun on one device is expected to be available on all the others, and the network is expected to keep track of where we were, our playlists and favorites, and to recommend related content and interactivity through the cloud.

Increasingly, consumers want to access the full range of content anytime, anywhere, and on whatever device they happen to be nearest. And with the continued application of Moore’s Law,

⁵ Larry Downes and John W. Mayo, *The Evolution of Innovation and the Evolution of Regulation: Emerging Tensions and Emerging Opportunities in Communications*, presented at FCC “Future of Broadband Regulation” workshop, May 29, 2014 (working paper).

that content and the networks for delivering it will continue to improve in quality, moving from today's high definition standard to 4K or "ultra high definition" and to future innovations, all fueled by continued deflation in core technology costs.

This on-going disruptive innovation in the video market means that predicting future consumer demand has become largely impossible. Preferred forms of bundling and pricing have splintered, for example, with each user increasingly demanding their own unique configuration, one that will change on a whim. In the future, consequently, pricing for premium content will run the gamut from monthly subscription to pay-per-view, with combinations and new business models (such as "freemium" services that offer more or better quality for a fee on top of otherwise free access) yet to be defined.

The Triple Play of Threats Driving Consolidation in the Video Market

With consumers expanding their expectations with each cycle of Moore's Law, mature businesses must become more adaptable and flexible to remain relevant. But incumbents, architected for an earlier era where both forms of content and the networks for delivering it were separate both from an engineering and regulatory standpoint, now regularly find their options unintentionally narrowed by earlier strategic and policy choices. Protected markers are abandoned by consumers who value the new over the stable. Assets, even the crown jewels of the balance sheet, transform quickly into liabilities.

As a result, as our research across industries revealed over and over, consolidation among incumbents is often the essential starting point for incumbents hoping to thrive in the face of new opportunities and new threats posed by this dizzying pace of innovation.

As traditional markets disappear and customers embrace the disruptors, the strongest incumbents look to pool their technical strengths as well as their combined customer bases both to compete with new entrants and to broaden the range of engineering and business innovations they can introduce themselves.

That imperative, at the core, is the true driver of consolidation in the computing, communications and entertainment industries in general and in particular among existing multi-channel video programming distributors (MVPDs).

The video market also demonstrates another common feature in our research. For industries with a long history of regulation, incumbents are even harder-pressed than elsewhere to leverage their remaining assets to compete with unregulated start-ups and other industry outsiders.

In the race to respond to expanding and rapidly-changing consumer requirements, MVPDs, including both AT&T and DIRECTV, find their strategic options constrained by a long history of regulatory and policy compromises. Individually, the resulting regulations were designed to resolve previous tensions between old business models and new technologies. But taken together, the result is a sclerotic tangle of interconnected, contradictory and in many cases counter-productive constraints that no longer serve any public interest.⁶

Unfortunately, as Congress has learned through recent hearings on reforming various aspects of media regulation, it is impossible to pull on just one thread without risking the unraveling of the entire structure.

In the meantime, unfortunately, the rules that apply today to MVPDs, some dependent on the increasingly irrelevant distinctions between broadcast, cable, satellite, copper, and cellular and fiber networks, are now unintentionally slowing the deployment of the new services and new models of delivery that consumers demand. These include regulations regarding must carry, compulsory licenses, financial syndication rules and media ownership restrictions, retransmission consent, network nonduplication, syndicated exclusivity, sports broadcast limits, and set top boxes—just to name a few.

Like zombies, these shadows of former policy decisions good and bad refuse to die, with the unintended effect of hamstringing the ability of MVPDs to keep up with the pace of change.

Consumers, of course, have no intention of living in the past, and entrepreneurs stand by to help them overcome what they see as artificial and inefficient limits. Startups including Aereo, which operate at the very edge (and perhaps, in a case to be determined by the U.S. Supreme Court, over the edge) of a complex web of legal rules and court decisions,⁷ are testing the structural soundness of this system, exposing just how fragile it has become over the years.

⁶ Adam Thierer and Brent Skorup, *VIDEO MARKETPLACE REGULATION: A Primer on the History of Television Regulation and Current Legislative Proposals*, MERCATUS RESEARCH, May, 2014, available at http://mercatus.org/sites/default/files/Thierer_VideoMarketplaceRegulation_v1.pdf. See also Jack Shafer, *Who's Afraid of Comcast?* REUTERS, Feb. 19, 2014, available at <http://blogs.reuters.com/jackshafer/2014/02/19/whos-afraid-of-comcast/>.

⁷ Larry Downes, *AereoTV: Barely Legal by Design*, HARVARD BUSINESS REVIEW, Mar. 7, 2013, available at <http://blogs.hbr.org/2013/03/aereo-tv-barely-legal-by-desig/>; Larry Downes, *Aereo's Fate Should be Decided by*

In the face of this growing regulatory burden, new business pressures on regulated MVPDs are now arriving separately and together from two principal disruptors. First, consolidation in the content industry (a function of its own disruptive changes) has tipped the balance in carriage negotiations strongly to the side of the producers. Though details, for sound business reasons, are largely kept private, there's little doubt that programming costs, the largest component of variable cost for MVPDs, have grown dramatically in the last several years, perhaps as much as 50%.

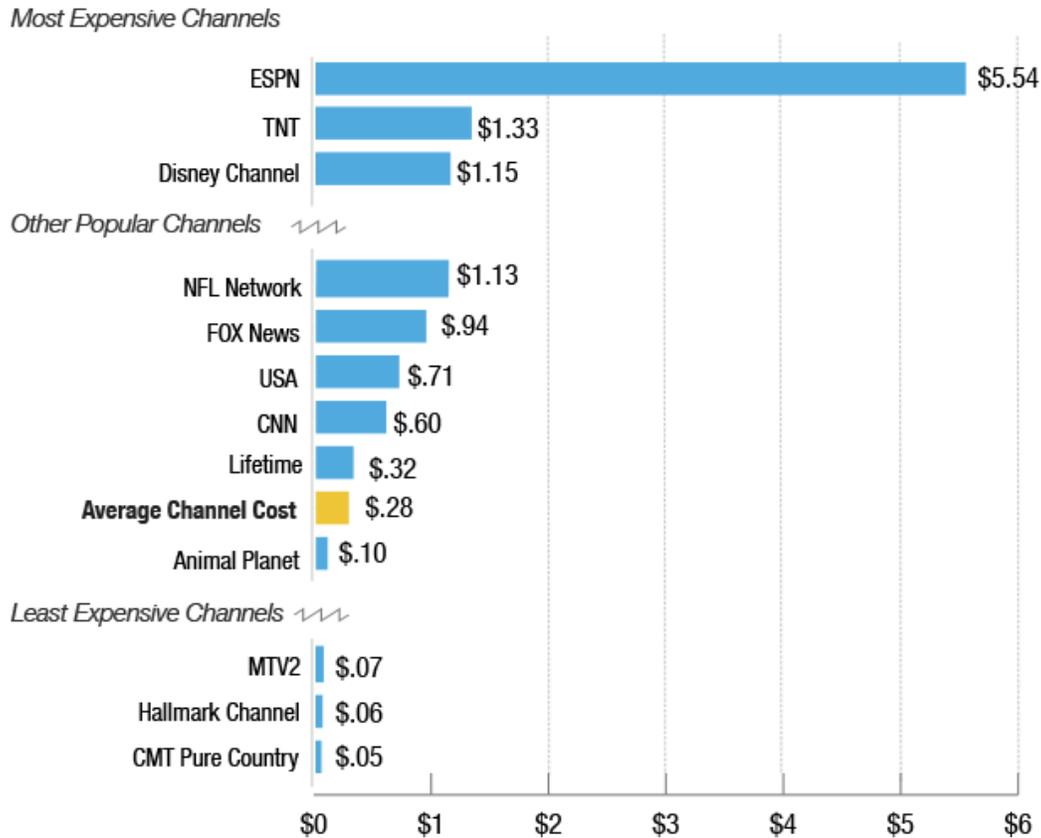
For the most popular produced content, MVPDs have little leverage but to accept the terms offered. And while the FCC finds that overall the average price per channel has declined, the number of channels continues to expand, on average from 44 to 150 since 1995.⁸ Leading content aggregators, including Disney, CBS, and Fox, pressure MVPDs to accept larger bundles of channels at higher prices.⁹ Premium channels carry premium prices, and are often used as bargaining chips to promote less popular content. For example, analysts estimate that cable customers pay as much as \$6 a month just to cover the cost of ESPN--whether they watch it or not.¹⁰ (See Figure 2)

Congress, not the Supreme Court, WASHINGTON POST, April 23, 2014, available at <http://www.washingtonpost.com/blogs/innovations/wp/2014/04/23/aereos-fate-should-be-decided-by-congress-not-the-supreme-court/>.

⁸ Larry Downes, *Why the Case against the Comcast-Time Warner Cable Merger is Evaporating*, CNET NEWS.COM, April 23, 2014, available at <http://www.cnet.com/news/why-the-case-against-the-comcast-time-warner-cable-merger-is-evaporating/>. See also Edward Wyatt, *As Services Expand, Cable Bill Keeps Rising*, THE NEW YORK TIMES, Feb. 14, 2014, available at http://www.nytimes.com/2014/02/15/business/media/as-services-expand-cable-bills-keep-rising.html?_r=1 ("The most recent F.C.C. study on cable industry prices shows that the average monthly price of expanded basic cable service, which had an average of 150 channels, was \$61.63 for the year ended Jan. 1, 2012. That was up from \$22.35 for the same tier of service in 1995, when the average expanded basic service had only 44 channels. So while the total cost increased, the price per channel decreased by about 10 cents.").

⁹ Alex Sherman, *Your Cable Bill is Going up Again, but Forget A La Carte Pricing*, BLOOMBERG, Jan. 13, 2013, available at <http://go.bloomberg.com/tech-blog/2013-01-31-your-cable-bills-going-up-again-but-forget-a-la-carte-pricing/>

¹⁰ Quoc Trung Bui, *The Most (and Least) Expensive Cable Channels, in 1 Graph*, NPR NEWS.COM, Sept. 27, 2013, available at <http://www.npr.org/blogs/money/2013/09/27/226499294/the-most-and-least-expensive-cable-channels-in-1-graph>.



(Source: SNL Kagan)

Figure 2 – Estimated Monthly Cost per Subscriber per Channel (Cable)

The net result is rising prices for consumers, increasing their incentive to cut the cord to MVPD services and look for alternatives. Right on cue, unregulated over-the-top (OTT) content providers are experimenting with abandon, finding new ways to produce, collect, distribute and monetize a cornucopia of new and old programming. Today, more than 50% of American households subscribe to at least one paid OTT service. OTT providers including Hulu, Netflix, iTunes and Amazon already have larger customer bases than the largest MVPDs, and have begun producing their own proprietary, premium programming. Netflix alone has more than 30 million customers in the U.S.

Falling costs for core technologies—including broadband access, hardware and software, also mean consumers themselves now contribute significantly to the overflowing bounty of new

content and access choices in what many rightly call the new Golden Age of Content.¹¹ Everyone can be a producer and, these days, everyone is. Users upload 100 hours of new video every minute just to YouTube¹² and many user channels have viewerships in the millions. Crowdfunding sites including Kickstarter and Indiegogo are flooded with proposals for more elaborate content production, many of which are oversubscribed.

These new models are thriving because consumers want more options than the current regulated industry structure makes possible, or at least at the clock speed of Moore's Law. And when consumers don't get what they want, as has become abundantly clear in recent years, they form alliances with entrepreneurs to revolt, even when doing so brings them into direct conflict with legacy regulations.¹³

The AT&T/DIRECTV Transaction

As explained by our Big Bang Disruption research, the continued deflation of core digital technologies, convergence on IP standards, and the growing ability of consumers to express and influence demand for better and cheaper goods and services, has put tremendous pressure on the entire video ecosystem, particularly for incumbent MVPDs operating under legacy regulations.

Thus I see the proposed transaction, as well as the pending merger of Comcast and Time Warner Cable,¹⁴ as largely defensive moves. MVPDs need larger audiences to improve their bargaining position with programmers, and to achieve economies of scale for the content they license. And to participate in—let alone compete with—the expanding universe of OTT services, no MVPD can long survive without the native ability to integrate broadband Internet with produced content.

To remain competitive, especially with dominant cable MVPDs, AT&T needs the audience DIRECTV has already built. DIRECTV, likewise, needs the broadband network AT&T has built.

¹¹ Larry Downes, *The Comcast-Time Warner Cable Merger is not a Sign of Strength*, HARVARD BUSINESS REVIEW, Feb 14, 2014, available at <http://blogs.hbr.org/2014/02/the-comcast-time-warner-merger-is-not-a-sign-of-strength/>

¹² See "Statistics," available at <https://www.youtube.com/yt/press/statistics.html>.

¹³ Larry Downes, *Uber's Battle in Seattle Highlights the Irony of Regulation Hurting Consumers it was Designed to Help*, WASHINGTON POST, March 24, 2014, available at <http://www.washingtonpost.com/blogs/innovations/wp/2014/03/24/ubers-battle-in-seattle-highlights-the-irony-of-regulation-hurting-the-consumers-it-was-designed-to-help/>.

¹⁴ See Downes, *supra* note 11.

In that regard, consumers of both companies stand to benefit significantly from the transaction, as do consumers as a whole. With a native broadband offering, DIRECTV will remain a viable competitor, enforcing market discipline on cable-based, satellite, and other MVPDs. With a greatly expanded customer base, AT&T will be able to negotiate more equally with programming providers and spread the programming costs of its U-Verse offering over a larger base. The result should be more competitive pressure, both within the supply chain and in the market as a whole.

In the broader context of the industry's on-going digital transformation, the proposed transaction makes sound strategic sense. At the same time, it presents few if any of the traditional markers for concern either under antitrust law or the FCC's public interest standard. Competition will be enhanced, not harmed, and consumers will have more, not fewer choices, both now and, assuming the integration of the two companies goes smoothly, in the future.

The structure of the deal also has two key side-effects I view as positive and worth highlighting:

1. Faster deployment of fiber and fixed wireless technology – AT&T claims the economies of scale the combined company will achieve will generate capital that can be used to accelerate the already-aggressive upgrades and expansion of its broadband networks. Two million additional consumers will have access to fiber, and 13 million additional consumers, largely in underserved rural areas, will have access to high-speed fixed wireless Internet, using wireless local loop (WLL) technology and AT&T's existing 4G LTE network.

That commitment, of course, supports many key policy goals of both Congress and the FCC, including the expanded availability of increasingly robust broadband networks. According to research from the Pew Internet and American Life Project,¹⁵ rural adults are more likely not to use the Internet than any other demographic category. Though relevance is cited far more frequently than availability as the reason they remain offline, improved access will no doubt do much to close what remains of the digital divide.

A large-scale deployment of WLL will also have other positive benefits. For one thing, an investment of this size will invariably lead to innovation and improvement of relatively-new fixed wireless technology, spinning off additional innovations that cannot be predicted. But it is almost certain that better WLL technology will accelerate the speed with which mobile broadband will become a true source of competition with fixed

¹⁵ Pew Research Internet Project, OFFLINE ADULTS, available at <http://www.pewinternet.org/data-trend/internet-use/offline-adults/>. See also Larry Downes, *Who's Still Offline and Why? The Real Reasons*, CNET NEWS.COM, September 30, 2013, available at <http://www.cnet.com/news/whos-still-offline-and-why-the-real-reasons/>.

broadband networks, adding to the pressure on incumbent network operators to innovate with better and cheaper technologies.

2. Commitment to the 2010 Open Internet rules for the combined entity - While some critics felt the FCC's 2010 Open Internet Report and Order did not go far enough toward prophylactically policing broadband Internet providers, there can be no argument that the 2010 rules were at least as strict as those the FCC has recently proposed to replace them.¹⁶

As part of its Public Interest Showing, AT&T has voluntarily committed to make the combined entity subject to the 2010 rules for three years following the completion of the transaction, despite the fact that the bulk of the rules were found to exceed the FCC's authority by the D.C. Circuit Court of Appeals in January, 2014.¹⁷ Comcast, it is worth noting, is already committed, as condition of its 2011 merger with NBC Universal, to a similar version of the rules.

Thus no matter what comes of the current FCC proceeding, two of the three largest ISPs will remain committed to a set of Open Internet rules most participants, including leaders in Congress and in the Internet content industry, felt achieved an appropriate balance.¹⁸

I thank you again for the opportunity to testify and look forward to your questions.

¹⁶ FCC, *In the Matter of Protecting and Preserving the Open Internet*, Notice of Proposed Rulemaking, GN Docket No. 14-28, May 15, 2014, available at http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0515/FCC-14-61A1.pdf.

¹⁷ *Verizon v. FCC*, 11-1355 (D.C. Circuit Jan 14, 2014), available at [http://www.cadc.uscourts.gov/internet/opinions.nsf/3AF8B4D938CDEEA685257C6000532062/\\$file/11-1355-1474943.pdf](http://www.cadc.uscourts.gov/internet/opinions.nsf/3AF8B4D938CDEEA685257C6000532062/$file/11-1355-1474943.pdf).

¹⁸ Larry Downes, *Unscrambling the FCC's Net Neutrality Order: Preserving the Open Internet, but Which One?*, 20 COMM LAW CONSPPECTUS 83 (2011), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2164985.