

**WRITTEN STATEMENT OF**

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**TO THE**  
**U.S. SENATE COMMITTEE ON**  
**COMMERCE, SCIENCE, & TRANSPORTATION**

**HEARING ON**

**“AT A TIPPING POINT: CONSUMER CHOICE, CONSOLIDATION**  
**AND THE FUTURE VIDEO MARKETPLACE”**

**JULY 16, 2014**

Mr. Chairman, Ranking Member Thune, and members of the Committee, I appreciate this opportunity to testify today about the state of competition in the video marketplace.

## **I. The Video Marketplace Is Robustly Competitive.**

The title of this hearing is apt – we are at a notable tipping point in the development of the video marketplace, and it is tipping decidedly in favor of American consumers.

They are enjoying what many are rightly calling a “golden age” of video services thanks to an exceptionally dynamic and competitive marketplace. As David Carr of *The New York Times* has observed, “[t]he vast wasteland of television has been replaced by an excess of excellence.”<sup>1</sup>

A growing number of companies are producing significantly more high-quality and diverse programming than ever before. And more companies are competing to deliver that programming using a greater array of technologies and business models than ever before. And even more companies are experimenting and competing in *both* the production and delivery of content than at any time in our history.

All of this competition is great for American consumers, giving them access to more of the content they want, whenever and wherever they want it. This competition has flourished largely because Congress, led by the bipartisan efforts of this Committee in the 1980s and 1990s, dramatically reduced the role of regulation in the video marketplace, facilitated intermodal competition, threw open the opportunity for investment in broadband Internet, and let the marketplace thrive.

In fact, it is fair to say that the Telecommunications Act of 1996 (“1996 Act”)<sup>2</sup> worked better than could have been imagined to create competition, choice, and innovation – in some expected ways and in some unexpected ways.

Consider all of the diverse methods that consumers are now accessing video content in its many forms. In addition to traditional broadcasting and multichannel video programming distributor (“MVPD”) services, which now include cable, satellite, telephone companies, and others, there is an astonishing proliferation of new sources of video content – most of them using the broadband Internet that cable companies helped lead the way in providing to American consumers. As reported by the White House last year, “[s]ince 2009, the percentage of American homes reached by high-speed broadband networks have more than quadrupled (from less than 20% to more than 80%) and average broadband speeds have doubled.”<sup>3</sup>

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<sup>1</sup> David Carr, *Barely Keeping Up in TV's New Golden Age*, N.Y. Times, Mar. 9, 2014, <http://www.nytimes.com/2014/03/10/business/media/fenced-in-by-televisions-excess-of-excellence.html>.

<sup>2</sup> Telecommunications Act of 1996, Pub. L. No. 104-104 (1996).

<sup>3</sup> See Press Release, White House, Fact Sheet: Administration Provides Another Boost to Wireless Broadband and Technological Innovation (June 14, 2013), <http://www.whitehouse.gov/the-press-office/2013/06/14/fact-sheet-administration-provides-another-boost-wireless-broadband-and->.

The power of technology and free markets continues to radically transform how consumers access video. Now, virtually any device with a screen and an Internet connection delivers video. Indeed, in 2013, 66 percent of all Internet traffic was video. This number is projected to increase to *79 percent* in the next five years.<sup>4</sup>

Americans are increasingly turning to devices other than their televisions for consuming video content, such as iPads, smartphones, and laptops. And when they use their TVs, they are increasingly connecting them to new intermediate devices like Apple TV, Roku, TiVo, and Google Chromecast to stream or download video; or watching content on entertainment apps on Smart TVs. A recent study found that, during a typical week, nearly a quarter of all adults watch downloaded or streaming video through their smartphone, making it the top device for consuming that type of content. And in the same study, nearly half of game console users reported that they primarily use those devices to stream and watch video.<sup>5</sup>

YouTube alone registers more than *1 billion* unique user visits each month; over *6 billion* hours of content are watched each month; and more than 100 hours of content is uploaded to YouTube *every minute*. According to Nielsen, YouTube reaches more U.S. adults ages 18 to 34 than any cable network.<sup>6</sup>

Streaming services have similarly surpassed traditional MVPDs in customers. Netflix has approximately 44 million subscribers worldwide – 35.7 million domestic subscribers (greater than the number of subscribers of any MVPD, including Comcast and Time Warner Cable combined) – and announces services to new countries every month.<sup>7</sup> Amazon Prime, which launched its Prime Instant Video service just two-and-one-half years ago, already has approximately 20 million subscribers worldwide.<sup>8</sup>

With this rapid transformation in the way video content is distributed has come even more investment and innovation in content production.

Online video distributors (“OVDs”) are producing their own content and curating other programming. Netflix, for example, has developed highly successful original series, such as

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<sup>4</sup> Cisco, Visual Networking Index: Forecast and Methodology, 2013-2018 (June 10, 2014), [http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/VNI\\_Hyperconnectivity\\_WP.html](http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/VNI_Hyperconnectivity_WP.html).

<sup>5</sup> Experian Marketing Services, *Cross-Device Video Analysis* (2013), <http://www.experian.com/marketing-services/cross-device-video-analysis.html>.

<sup>6</sup> *Follow the audience . . .*, YouTube Official Blog (May 1, 2013), <http://youtube-global.blogspot.com/2013/05/yt-brandcast-2013.html>.

<sup>7</sup> See Netflix Inc., Quarterly Report (Form 10-Q), at 16 (Apr. 23, 2014), <http://files.shareholder.com/downloads/NFLX/3300463643x0xS1065280%2D14%2D12/1065280/filing.pdf>; Netflix Inc., Annual Report (Form 10-K), at 1 (Feb. 3, 2014), <http://ir.netflix.com/common/download/sec.cfm?companyid=NFLX&fid=1065280-14-6&cik=1065280>.

<sup>8</sup> See Jay Yarow, *Amazon Says It Has At Least 20 Million Prime Members*, Business Insider, Jan. 6, 2013, <http://www.businessinsider.com/amazon-prime-members-2014-1>.

*House of Cards* and *Orange is the New Black*, and now has a \$3 billion annual programming budget that exceeds the programming budgets of many cable networks.<sup>9</sup> In addition, Netflix has established an exclusive “next season” window for valuable television content, including *Mad Men*, *Breaking Bad*, *Revolution*, and *Pretty Little Liars*, and has announced exclusive deals for content from Disney, DreamWorks, and The Weinstein Company.<sup>10</sup> Similarly, Amazon Studios created a half-hour political comedy, *Alpha House*, and has ordered full seasons of six more original series.<sup>11</sup> Amazon also recently announced an exclusive streaming arrangement for HBO’s library of productions, including *The Sopranos* and *The Wire*.<sup>12</sup>

Last year, Hulu launched five original series, *Moone Boy*, *East Los High*, *Quick Draw*, *Behind the Mask*, and *The Awesomes*, and announced plans to expand its slate of originals this summer. Hulu also has exclusive subscription video-on-demand (“VOD”) rights to over 5,300 episodes from the CBS library, including current hits *Blue Bloods* and *Elementary*, as well as popular series such as *Everybody Loves Raymond* and *Survivor*.<sup>13</sup> Yahoo! has announced plans to produce two original TV-length comedy series and to live-stream via Live Nation one concert per day for a year on Yahoo!’s websites and apps, plunging Yahoo! “directly into the increasingly competitive world of high-quality digital video.”<sup>14</sup> And just last month, Yahoo! struck a deal with Sony Pictures Television to stream a 13-episode season of the sitcom *Community*.<sup>15</sup>

And what I have just described only scratches the surface of the content explosion being driven by new technology. There are literally millions of viewing options, offerings thousands upon thousands of hours of long- and short-form content, being offered by dozens of other

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<sup>9</sup> See Lacey Rose, *Netflix’s Original Content VP on Development Plans, Pilots, Late-Night and Rival HBO (Q&A)*, The Hollywood Reporter, June 18, 2014, available at <http://www.hollywoodreporter.com/news/netflixs-original-content-vp-development-712293>.

<sup>10</sup> See Netflix Q3 2013 Investor Letter (Oct. 21, 2013); Netflix Q2 2013 Investor Letter (July 22, 2013); Netflix Q4 2012 Investor Letter (Jan. 23, 2013).

<sup>11</sup> See Joan Solsman, *Amazon Renews ‘Alpha House,’ Picks Up 6 Series*, CNET, Mar. 31, 2014, <http://www.cnet.com/news/amazon-renews-alpha-house-picks-up-6-new-series/>.

<sup>12</sup> Liana Baker & Lisa Richwine, *Amazon Grabs Tights to Stream Older HBO Shows*, Reuters, Apr. 23, 2014, <http://www.reuters.com/article/2014/04/23/us-hbo-amazon-idUSBREA3M14J20140423>.

<sup>13</sup> See Meredith Blake, *Hulu Expands Original Content, Boasts 6 Million Hulu Plus Subscribers*, L.A. Times, Apr. 30, 2014, available at <http://www.latimes.com/entertainment/tv/showtracker/la-et-st-hulu-upfront-originals-6-million-hulu-plus-subscribers-20140430-story.html>.

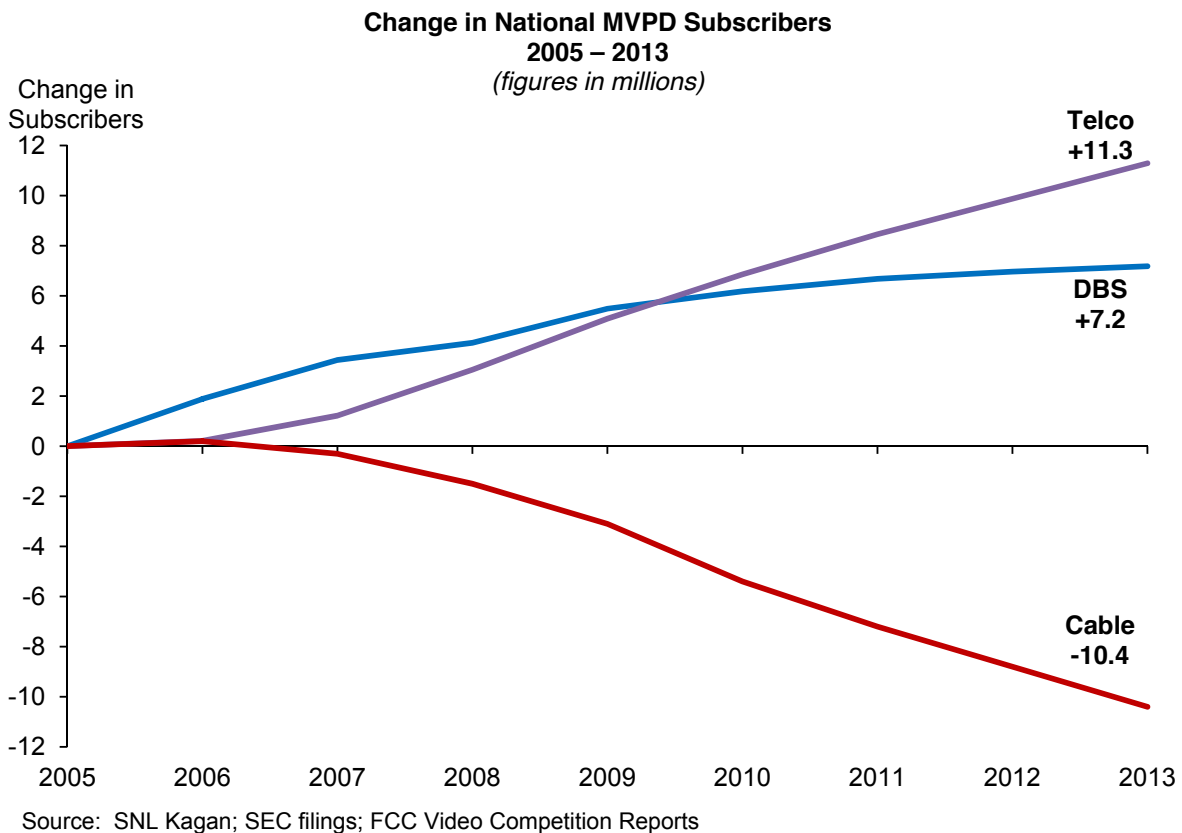
<sup>14</sup> See Vindu Goel & Bill Carter, *Yahoo to Offer TV-Style Comedy Series on the Web*, N.Y. Times, Apr. 28, 2014, available at <http://www.nytimes.com/2014/04/29/technology/yahoo-to-offer-two-tv-length-comedy-series-on-web.html?hpw&rref=television&r=0>.

<sup>15</sup> See Josef Adalian, *Community Moving to Yahoo for Sixth Season*, Vulture, June 30, 2014, <http://www.vulture.com/2014/06/community-moving-to-yahoo-for-sixth-season.html>.

websites such as Vimeo, DailyMotion, Vube, Twitch, LiveLeak, UStream, Break, MetaCafe, Viewster, and Crackle, attracting millions and millions of viewers.<sup>16</sup>

In the face of all of this new competition, MVPDs are working harder than ever for consumer attention and loyalty with one another *and* with these new online competitors.

Cable operators currently compete against DirecTV and Dish in every market in which cable provides service. In many of those markets, cable companies also face competition from telephone companies like AT&T and Verizon, as well as overbuilders like RCN, WOW!, and Google Fiber. In fact, in 2011, *98.6 percent of homes in America had access to at least three MVPDs* and *35.3 percent had access to at least four*. Cable operators' collective share of MVPD subscribers has plummeted from 87 percent in 1999 to 55.7 percent in 2012.<sup>17</sup> And that percentage has further declined as telephone competitors continue to invest in upgrading their networks to deliver video:



<sup>16</sup> See, e.g., *Top 15 Most Popular Video Websites/July 2014*, eBiz/MBA, [www.ebizmba.com/articles/video-websites](http://www.ebizmba.com/articles/video-websites) (last visited July 12, 2014).

<sup>17</sup> *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, Fifteenth Report, 28 FCC Rcd. 10496, ¶ 3 (2013).

MVPDs are also responding to new competing video devices and interfaces by accelerating their own pace of pro-consumer innovations. Comcast, in particular, has made major investments to develop and deploy X1, its nationally acclaimed entertainment operating system with cloud technology, to provide its customers with greater access to more content on a variety of devices inside and outside the home. The X1 platform provides an unmatched interactive TV experience featuring a state-of-the-art user interface and other product features that transform our customers' viewing experiences.<sup>18</sup> Comcast has also launched its new X1 cloud DVR, which enables customers to watch their DVR recordings on computers and mobile devices in the home, and to download recorded content to take on-the-go. In addition, Comcast has launched a live in-home streaming feature in certain markets that allows customers on the X1 platform to stream practically their entire TV channel lineup to computers and mobile devices in the home at no extra cost.

Comcast has likewise led the cable industry in going all-digital, dramatically improving the video experience while simultaneously freeing up valuable bandwidth for enhanced data, video, and voice services. Comcast customers now have more cable channel viewing and Xfinity On Demand choices, offering over 55,000 programming options, including the most current TV shows and movies; 80 percent of this content is free of charge. Xfinity On Demand also has the best new release movies from all the major studios, and one of the broadest selections of independent films. Through XfinityTV.com and Xfinity TV mobile apps, for example, Comcast cable customers can access more than four dozen live TV channels, and over 25,000 movies and TV shows that can be watched anytime, anywhere, including by downloading programming to watch offline later.

*All of this competition, investment, and innovation is great for consumers.* And it is the direct result of government policies that removed barriers to competitive entry, reduced regulation, and allowed the marketplace to flourish.

## **II. The Broadband Marketplace Is Also Robustly Competitive – And It's Driving Even More Video Competition.**

The innovations in the video marketplace are made possible in large part by the \$1.2 trillion that cable companies, phone companies, and wireless companies have invested to bring open and competitive broadband Internet to every corner of America.<sup>19</sup> The dramatic growth of Internet video has driven the rapid growth in demand for broadband Internet services,

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<sup>18</sup> Praise for the value and innovation of the X1 platform has been widespread. *See, e.g.*, Todd Bishop, *Xfinity X1: How Comcast Roped Me Back in to Cable*, GeekWire, Aug. 22, 2013, <http://www.geekwire.com/2013/xfinity-x1/> (“I have been testing this sleek black cable box for the past three weeks, but to call it a cable box really doesn’t do it justice. It is a nice blend of Internet content, live television, apps, a multi-tuner DVR and on-demand programming, in one of the cleanest user interfaces that you’ll find from a cable company.”); Tim Carmody, *Comcast’s New X1 UI Integrates Real-time and Streaming TV with News and Social Apps*, The Verge, May 21, 2012, <http://www.theverge.com/2012/5/21/3033972/comcast-ui-platforms-video-news-social-apps> (“[X1] feels like a genuinely 21st-century way to use a widescreen television set – like a smart TV inside your cable box.”).

<sup>19</sup> *Broadband Investment*, United States Telecom Association, <http://www.ustelecom.org/broadband-industry/broadband-industry-stats/investment> (last visited July 9, 2014).

and the companies that build broadband networks have been highly responsive to that growing demand.

Comcast and other cable operators, along with other wireline and wireless broadband providers, have played a leading role in making this transformation of the video world possible, empowering greater innovation. Comcast alone has made broadband Internet available to tens of millions of households, increasing speeds 13 times in 12 years, driving prices per Mbps down 92 percent over that same period, and leading the way for Internet adoption in low-income households with our acclaimed *Internet Essentials* program.<sup>20</sup>

Comcast's investments have spurred intense competition from other companies. Today, telcos, cable, overbuilders, satellite providers, and wireless broadband providers compete with traditional cable providers to serve the needs of broadband Internet consumers across America. For example, nearly half of the homes in Comcast's current footprint have access to AT&T's U-verse and/or Verizon's FiOS.<sup>21</sup>

DSL is increasingly competitive with cable, as a result of ongoing investments in next-generation DSL technology – including fiber-to-the-node (“FTTN”), IP-DSLAM, VDSL2, and pair bonding. In fact, AT&T's U-verse currently delivers speeds up to 45 Mbps and will deliver speeds up to 100 Mbps to FTTN-based locations; CenturyLink offers speeds up to 40 Mbps; Frontier offers speeds up to 25 Mbps; and Verizon DSL offers speeds up to 15 Mbps.<sup>22</sup> These speeds are *no less than five times greater* than the speeds that Netflix tells users they need to stream videos in full DVD quality.<sup>23</sup> The FCC's latest “Measuring Broadband America” report

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<sup>20</sup> Since Comcast launched *Internet Essentials* during the 2011 back-to-school season, more than 1.2 million Americans, from 300,000 families, have been connected to the power of the Internet at home. We have also sold more than 23,000 low-cost, subsidized computers to program families.

<sup>21</sup> As of June 2013, about 99 percent of households are located in census tracts where three or more fixed or mobile broadband providers reported offering at least 3 Mbps downstream and 768 kbps upstream; and over 92 percent of households are located in census tracts where two or more providers reported offering at least 10 Mbps downstream and at least 1.5 Mbps upstream. FCC, *Internet Access Services: Status as of June 30, 2013*, at 9-10 (June 2014), [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2014/db0625/DOC-327829A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0625/DOC-327829A1.pdf).

<sup>22</sup> As the head of MLB Advanced Media recently stated, in response to the claim that “[t]he cable guys pretty much control broadband”:

How? We have telcos now. You've got wireless. The only pay TV business that's growing now is U-[v]erse and FiOS. They're owned by AT&T and Verizon. I don't think you should discount what AT&T and Verizon can do without a landline – what they can do through the air. Who knows what this is going to look like? \* \* \* A lot of our people watch our live games in 4G. . . . If you watch [a] live baseball game in 4G it looks pretty good and 5G is just round the corner.

David Lieberman, *Q&A: MLB Advanced Media CEO Bob Bowman on WWE Network, Sony's Virtual Pay TV Plans, and What's Next for Streaming Video*, Deadline, Jan. 21, 2014, <http://www.deadline.com/2014/01/qa-mlb-advanced-media-ceo-bob-bowman-on-wwe-network-sonys-virtual-pay-tv-plans-and-whats-next-for-streaming-video/> (quoting Bob Bowman).

<sup>23</sup> See *Internet Connect Speed Recommendations*, Netflix, <https://help.netflix.com/en/node/306> (last visited July 10, 2014) (stating that users can stream Netflix videos at speeds as low as 0.5 Mbps, and can stream them in full-DVD quality with speeds of 3 Mbps).

shows that these newer DSL technologies are very competitive for broadband consumers.<sup>24</sup> Moreover, contrary to the false picture some have painted of DSL as a moribund service, between December 2008 and December 2012, DSL-based broadband connections grew at an average annual rate of 25 percent, exceeding cable broadband's 18 percent annual pace of growth.<sup>25</sup>

Importantly, these current measures of broadband competition *are already becoming stale*. Almost daily, companies are announcing new plans and breaking ground to deliver faster speeds and expanded services across the country.

For example, just last week, Alcatel-Lucent reported that it has achieved data transmission speeds of 10 Gbps over a 30-meters length of bonded copper using a next-generation DSL technology it is calling XG-FAST. The technology is an extension of G.fast "that promises theoretical speeds of up to 1 Gbps over the copper connection to a broadband user's premises."<sup>26</sup>

AT&T is expanding U-verse, a service based primarily on FTTN technology, as part of its "Project VIP" investment plan. This will enable AT&T to offer FTTN-based U-Verse services to 33 million customer locations, and "U-Verse IP-DSLAM" services to an additional 23 million customer locations, by the end of 2015. AT&T also announced plans for potential expansion of its 1 Gbps fiber-optic service to up to 21 new metropolitan areas. On top of these expansion plans, and as part of its proposed acquisition of DirecTV, AT&T has announced that it will use the merger synergies to build and enhance high-speed broadband service to 15 million customer locations utilizing a combination of technologies, including fiber-to-the-premises and fixed wireless local loop capabilities.

CenturyLink is on a similar path, with announced network investments that include gigabit fiber, VDSL2, and pair bonding deployments to efficiently enable higher speeds.

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<sup>24</sup> FCC, *2014 Measuring Broadband America – Fixed Broadband Report*, Charts 9.4 & 9.5 (June 2014), <http://data.fcc.gov/download/measuring-broadband-america/2014/2014-Fixed-Measuring-Broadband-America-Report.pdf>. Despite recent media stories suggesting otherwise, the FCC's report shows that when the data for *traditional* DSL (or "ADSL") – i.e., downstream speeds generally of 1 to 6 Mbps – are separated out from the data for *next generation* DSL (known as "VDSL") – i.e., downstream speeds generally from 6 to 40 Mbps – there is no doubt that newer DSL technologies are very competitive. It is only traditional ADSL that is "lagging" behind cable broadband. For example, in the 18 to 25 Mbps tier, the tests were all of VDSL, cable, and fiber. The FCC's data show that, at these speeds, VDSL performs at the same levels as cable (i.e., at or above 100 percent).

<sup>25</sup> See Applications of Comcast Corp. and Time Warner Cable Inc. for Consent to Transfer Control of Licenses and Authorizations, MB Docket No. 14-57, Applications and Public Interest Statement, at 48 (filed Apr. 8, 2014).

<sup>26</sup> See Ray Le Maistre, *Bell Labs Claims Copper Speed Record*, Light Reading, July 9, 2014, <http://www.lightreading.com/broadband/dsl-vectoring-gfast/bell-labs-claims-copper-speed-record/d/d-id/709846>.



Google Fiber is planning to launch its competitive broadband services in nine new metro areas, which will include expansive Wi-Fi service.<sup>27</sup>

Mobile wireless is also a bona fide competitor in delivering all broadband services, including high-quality video. Mobile wireless data speeds and capacity continue to increase rapidly with next-generation services like LTE/LTE-Advanced and radio technology (i.e., beaming data via satellite over 40 MHz blocks of spectrum). Between June 2012 and June 2013, mobile connections offering 3 Mbps downstream or faster more than doubled, increasing from 43 million to 93.2 million.<sup>28</sup> Recently, Masayoshi Son of SoftBank (which owns Sprint) noted that he intends to outstrip typical cable broadband speeds by building a wireless broadband network offering up to 200 Mbps.<sup>29</sup>

Looking ahead to 2018, SNL Kagan predicts that there will be 224 million 4G subscriptions active in the United States, up from 22.6 million at year-end 2013.<sup>30</sup> This alone will easily surpass the rate of growth of cable broadband service during the past five years and over the next five. The FCC will contribute significantly to that growth story as it moves forward with its upcoming spectrum auctions.

As a result of all of this investment, innovation, and competition in broadband networks, OVDs have *flourished* in the last several years.

According to a recent SNL Kagan report, the number of online video subscribers has increased from 18.2 million in 2010 to approximately 53.9 million at the end of 2013. Revenue for subscription services alone reached nearly \$3.67 billion at year-end 2013, up over 35 percent from \$2.7 billion in 2012. Total online video revenue grew 32 percent in 2013, topping nearly \$5.45 billion and up from \$4.12 billion in 2012. SNL Kagan predicts that figure will more than double in the next decade. Between 2012 and 2013, the number of online movie and television show purchases also nearly doubled, while the number of online movie and television show rentals more than doubled.<sup>31</sup>

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<sup>27</sup> See James O'Toole, *People in Overland Park, Kansas, May Soon Have 100 Times Faster Internet Than You*, CNNMoney, July 8, 2014, <http://money.cnn.com/2014/07/08/technology/innovation/google-fiber-overland-park/index.html>.

<sup>28</sup> See FCC, *Internet Access Services: Status as of June 30, 2013*, at 2 (June 2014), [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2014/db0625/DOC-327829A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0625/DOC-327829A1.pdf).

<sup>29</sup> See Presentation by Masayoshi Son, *The Promise of Mobile Internet in Driving American Innovation, the Economy and Education*, Tr. at 12 (Mar. 11, 2014), available at [http://cdn.softbank.jp/en/corp/set/data/irinfo/presentations/vod/2013/pdf/press\\_20140311\\_02.pdf](http://cdn.softbank.jp/en/corp/set/data/irinfo/presentations/vod/2013/pdf/press_20140311_02.pdf).

<sup>30</sup> See SNL Kagan, *Covered Pops & Subscribers by Technology in U.S. Wireless* (July 2013). Similarly, Cisco predicts the number of 4G connections in North America in 2018 to be 372 million. *Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2013–2018*, at 36 (Feb. 5, 2014), [http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/white\\_paper\\_c11-520862.html](http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/white_paper_c11-520862.html).

<sup>31</sup> SNL Kagan, *Internet VOD Revenues, 2010-2023* (June 30, 2014), <http://www.snl.com/interactivex/doc.aspx?ID=28510695&KeyFile=24251620>.

Furthermore, according to recent estimates, nearly 6.5 percent of U.S. households – or 7.6 million homes – are now considered “cord-cutters” or “cord-nevers,” meaning they have high speed Internet but no cable or satellite television service – a dramatic 44 percent increase since 2010.<sup>32</sup> (The percentage of 18 to 34 year olds – a key demographic for advertising purposes – in this category is 12.4 percent, nearly double the 6.5 percent nationwide rate. And if the household has either a Netflix or Hulu subscription, the percentage nearly *triples*, from 6.5 percent to over 18 percent.)

### **III. The Proposed Comcast-Time Warner Cable Transaction Will Spur Even Greater Innovation And Competition In The Industry, Bringing More Consumer Benefits.**

Americans will continue to benefit from the dynamic growth in video and broadband services as more and more companies, including such powerhouses as AT&T, Verizon, DirecTV, Dish, Amazon, Apple, Sony, Google, Netflix, and Facebook, compete for their attention and loyalty. The increasing rivalry and experimentation among these national and global companies is a primary business driver for the Comcast/Time Warner Cable (“TWC”) merger.

The proposed transaction will give Comcast the increased geographic reach and economies of scale necessary to compete in this capital intensive, rapidly evolving industry, where continued research and development and innovation are essential. By combining with TWC, Comcast can also achieve the increased geographic reach and economies of scale necessary to invest the billions of dollars required for next-generation technologies, greater service reliability, secure networks, and faster Internet speeds. This will let us drive more innovative products and services into the marketplace, allowing us to meet the needs of American consumers, businesses, and institutions in ways better than the two companies could do separately.

For example, TWC customers will immediately benefit from Comcast’s commitment to invest continuously in high-speed data services, as well as Comcast’s next-generation products like the X1 operating platform, greater cable channel and VOD choices, best in-home Wi-Fi, and superior TV Everywhere services. The transaction will also enable Comcast to accelerate and expand the availability of Wi-Fi “hotspots” across the combined footprint, which will provide greater mobile access to Internet content. In less than three years, Comcast has deployed over one million Xfinity WiFi access points in its current footprint – and seen a significant spike in usage. And, on April 30, 2014, Comcast unveiled plans to reach *eight million* Xfinity WiFi hotspots in major cities coast to coast by the end of this year.<sup>33</sup>

With larger scale and network coverage, Comcast will also have the capability to deploy other new products and technologies more quickly and efficiently than either company could do

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<sup>32</sup> Experian Marketing Services, *Cross-Device Video Analysis* (2013), <http://www.experian.com/marketing-services/cross-device-video-analysis.html>.

<sup>33</sup> See Press Release, Comcast Corp., Comcast to Reach Eight Million Xfinity WiFi Hotspots in 2014 (Apr. 30, 2014), <http://corporate.comcast.com/news-information/news-feed/comcast-to-reach-8-million-xfinity-wifi-hotspots-in-2014>.

on its own, such as IP cable and related technologies. Accelerating the IP cable transition will yield a number of consumer and public interest benefits. Among other things, IP cable will:

- Enable consumers to access their cable and advanced video services in their homes on an even greater variety of IP-enabled retail devices – such as video game consoles, tablets, and other connected devices;
- Shift more of the network intelligence to the cloud, allowing Comcast to rapidly roll out new functionalities to consumers;
- Simplify its existing distribution networks by relying on IP technology to transport all of its services and relying on innovative off-the-shelf IP-based retail devices, thereby reducing home equipment and inventory costs; and
- Reduce energy consumption for consumer set-top boxes.

The transaction will further enable Comcast to provide more accessible services and features for disabled Americans. For example, Comcast is leveraging the X1 cloud-based platform to deliver the first “talking guide” in the MVPD industry. The remote control for the X1 platform – known as the XR2 – also includes “soft keys” that a customer with a disability will be able to configure to enable quick access to the talking guide and other accessibility features, such as closed captioning and video description.

Furthermore, because Comcast and TWC serve separate and distinct geographic areas and do not compete for video, broadband, or other services, the proposed combination of the two companies will not reduce consumer choice *in any market*. This transaction is not a horizontal merger and there will be no loss of competition anywhere.

Nor will the transaction harm competition in other markets where the combined company is involved. The transaction will leave Comcast, after planned divestitures, with about 29 million subscribers in systems it manages. Comcast’s share of the MVPD market will be below 30 percent – around the same share that Comcast had after the AT&T Broadband (2002) and Adelphia (2006) transactions. This will also be below the 30 percent “ownership cap” that the FCC had adopted based on a stated intention to prevent a cable operator from exercising bottleneck or monopsony control over programmers. The D.C. Circuit twice rejected the ownership cap, finding, among other things, that “the record is *replete* with evidence of ever increasing competition among video providers . . . . *Cable operators, therefore, no longer have the bottleneck power over programming that concerned the Congress in 1992.*”<sup>34</sup> Of course, the MVPD marketplace is even more competitive now than it was five or more years ago.

Far from harming competition, the greater investment and innovation resulting from the transaction will spur other companies to respond to consumer demands with their own investments and innovations. The mere announcement of our transaction has already created a

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<sup>34</sup> See *Comcast Corp. v. FCC*, 579 F.3d 1, 8 (D.C. Cir. 2009) (emphasis added).

“heightened sense of urgency” at AT&T to accelerate investments in its broadband networks.<sup>35</sup> Other companies are also speeding up and expanding their plans for further investments in broadband infrastructure.<sup>36</sup> Verizon’s CFO, for example, expressed the same eagerness to compete, stating: “I compete against Time Warner Cable today. I compete against Comcast today. I’ll just compete against Comcast tomorrow [by offering] a superior product to any of them . . . .”<sup>37</sup>

This heightened competition, which AT&T’s CEO Randall Stephenson has aptly described as “a *dogfight*,” will result in even greater video and broadband choices and services for American consumers, extending the new “golden age” of television well into the future.<sup>38</sup>

#### **IV. Further Regulation Is Unnecessary And Could Risk Disrupting Today’s Dynamic Video Marketplace.**

As I stated earlier, the massive investment and robust competition in the video marketplace can be largely attributed to the deregulatory policies that this Committee and others set in motion, most notably through the 1996 Act. Although the passage of time alone may justify a review of the law, Congress should continue to let the video marketplace grow and evolve without further regulation. If anything, Congress should re-examine and eliminate regulatory burdens that only apply to some of the companies competing in today’s marketplace, so that all providers have a level playing field to invest, innovate, and serve consumers.

I will briefly touch upon some of the proposals that have been made to “rewrite” the current regulatory landscape, and why these are unnecessary and could have unintended, adverse consequences for consumers.

##### **A. OVDs Do Not Face Barriers To Accessing Video Programming.**

The nearly ubiquitous availability of online content for American consumers proves that OVDs face no meaningful barriers to accessing video programming. The online video marketplace has grown exponentially in the past several years. OVDs are licensing from the

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<sup>35</sup> See Randall Stephenson, Chairman & CEO, AT&T, Inc., Morgan Stanley Technology, Media & Telecom Conference, Tr. at 3 (Mar. 6, 2014).

<sup>36</sup> Since this transaction was announced, numerous companies have reported plans for major investments in infrastructure, as well as the deployment of new technologies and services for video content and delivery. See Exhibit 1 (Timeline of Technology and Communications Investment and Innovation Since Comcast-TWC Merger Announcement).

<sup>37</sup> See Fran Shammo, EVP & CFO, Verizon, Deutsche Bank Media, Internet and Telecom Conference, Tr. at 13 (Mar. 10, 2014); see also Gautham Nagesh, *Comcast Sees Time Warner Cable Deal Boosting Broadband Competition*, Wall St. J., Feb. 21, 2014, <http://online.wsj.com/news/articles/SB10001424052702304275304579397541413329198> (“Verizon has a history of introducing the next big thing for our video and Internet customers. This [transaction] just changes the name of the competitor in some of our markets.”) (quoting Verizon spokesman Ed McFadden).

<sup>38</sup> See Shalini Ramachandran & Thomas Gryta, *Cutting the Cable and Getting “Phone TV”*, Wall St. J., Nov. 1, 2013, <http://online.wsj.com/news/articles/SB10001424052702303843104579169971029572160>.

widest imaginable range of programming sources as well as producing more of their own content. While some insist that the programming marketplace needs to be heavily regulated to the benefit of OVDs, the facts show that is not necessary.

Video content producers have no economic incentive to block access to their programming. That is because it is in the content provider's economic interest to license programming broadly to gain as much revenue as possible from expensive-to-produce content.<sup>39</sup>

In the case of NBCUniversal, for example, agreements with OVDs are now a regular part of our licensing business. Since the Comcast-NBCUniversal transaction alone, NBCUniversal has worked aggressively to free up content rights for online distribution and entered into or renewed agreements with dozens of OVDs, including Amazon, Netflix, and YouTube,<sup>40</sup> as well as with several MVPDs that include online access to linear channels across multiple platforms and devices through our industry-leading TV Everywhere service. Similarly, early this year, not only did CBS extend its streaming deal with Amazon so that CBS's current catalogue of shows remains available to Amazon Prime subscribers, but it also added more series to Amazon's library including *Medium* and *Criminal Minds: Suspect Behavior*. CBS also announced that episodes of its new summer series *Extant* will be exclusively available on Amazon four days after they premiere on CBS.<sup>41</sup>

In 2013, Netflix received nine Emmy nominations for its *House of Cards* original drama series, winning three of them, and three nominations for *Arrested Development*. Netflix "will once again have a big presence at the Emmys" in 2014, having recently received nominations for "a wide array of awards . . . including outstanding drama series for *House of Cards* and outstanding comedy series for *Orange is the New Black*."<sup>42</sup>

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<sup>39</sup> Programming costs are the single biggest driver of cable prices. From 2004 through 2013, Comcast's programming costs per video subscriber have cumulatively increased by over 120 percent, an astonishing amount. Our prices to customers have risen at about half that rate. (The average Comcast customer bill increased by only 2 percent this year, with no price changes for Limited Basic, Digital Preferred, or DVR services.)

<sup>40</sup> For example, in 2011, NBCUniversal renewed a multiyear deal with Netflix to stream TV shows ranging from *Leave it to Beaver* to *30 Rock* and *Keeping Up with the Kardashians*. See Paul Bond, *Netflix Renews Deal With NBCUniversal for Streaming TV Shows, Movies*, The Hollywood Reporter, July 13, 2011, <http://www.hollywoodreporter.com/news/netflix-renews-deal-nbcuniversal-streaming-210792>. In 2013, NBCUniversal struck a deal with Amazon to stream the first seasons of *Grimm* and *Suits*, and children's programs such as *Curious George* and *Land Before Time*. See Jeff Chabot, *NBC Shows Added to Amazon Prime Instant Video*, HD Report, May 16, 2013, <http://hd-report.com/2013/05/16/nbc-shows-added-to-amazon-prime-instant-video/>. Hulu has exclusive rights to prior seasons of popular shows from NBC's vault, including *Brooklyn Nine-Nine* and *The Mindy Project* (both of which air on Fox), and reality shows from Bravo and E!, such as *Top Chef*. See Ryan Waniata, *Hulu Secures a New Licensing Deal With NBC In Pursuit of 'Bingers'*, Digital Trends, Apr. 2, 2014, <http://www.digitaltrends.com/home-theater/hulu-secures-new-licensing-deal-nbc-pursuit-bingers/#!bbJB18>.

<sup>41</sup> See Michael O'Connell, *CBS Extends Streaming Deal with Amazon Prime*, The Hollywood Reporter, Jan. 29, 2014, available at <http://www.hollywoodreporter.com/news/cbs-extends-streaming-deal-amazon-675295>.

<sup>42</sup> See Jacob Kastrenakes, *Netflix Scores Top Emmy Nominations for 'House of Cards' and 'Orange is the New Black'*, The Verge, July 10, 2014, <http://www.theverge.com/2014/7/10/5886937/netflix-emmy-nominations-2014-house-of-cards-orange-new-black>.

Given consumers' seemingly insatiable demand for online access to video, content providers will continue to have strong incentives to make their programming available to OVDs. There is no need for government intervention into this increasingly dynamic and competitive marketplace. It is thriving without intrusive regulation and should be permitted to evolve.

**B. The FCC Is Taking Appropriate Action To Ensure An Open Internet For The Benefit Of American Consumers.**

Consumers should have the right and ability to access whatever legal content they desire using the broadband services they purchase, without any improper blocking or discrimination and with appropriate transparency, over the "last-mile" connections between their ISP network and their homes.

Comcast has always been for a free and open Internet. We support the FCC putting in place reasonable and legally enforceable industry-wide rules to ensure a free and open Internet for all Americans, including transparency, no blocking, and anti-discrimination protections.

Comcast was a strong proponent of the FCC's 2010 Open Internet Order because it struck a proper balance between consumer protection and reasonable network management rights for ISPs. The 2010 Order also maintained the right incentives for Comcast and other ISPs to invest and thereby empower more and more innovation on the Internet.<sup>43</sup>

Comcast was sufficiently comfortable with the 2010 Open Internet Order that, as part of the NBCUniversal transaction, we agreed to be bound by it even if the courts later struck it down. As a result, today Comcast is the only ISP in the country that is legally bound by the FCC's original Open Internet rules.<sup>44</sup>

Comcast continues to advocate for reasonable and legally binding rules that protect all Internet users, not just our customers. We believe the D.C. Circuit has, for the first time, laid out express authority and a clear path under Section 706 of the 1996 Act for the FCC to adopt those rules. But we do *not* support reclassification of broadband as a telecommunications service under Title II, and believe that any attempt to do so would cast a huge cloud of uncertainty over the marketplace and create significant and immediate disincentives to further investment and innovation in this vital segment of our economy.

The FCC has issued a Notice of Proposed Rulemaking and is currently collecting comments to develop new open Internet rules based on its Section 706 authority. And FCC Chairman Tom Wheeler has expressed his commitment to complete the task by the end of this

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<sup>43</sup> Comcast has built its business on delivering the highest quality Internet access, and we have every incentive to keep doing so. We have no interest in degrading our broadband services to disadvantage OVDs or providers of other content and services; doing so would only harm our fastest-growing business, which makes no sense. If we were to try to limit our subscribers' ability to access content from legitimate sources, they would use the power of the Internet to excoriate us for placing limits on their enjoyment of content and even leave us for a competitor's service.

<sup>44</sup> Approval of the Comcast-TWC transaction will extend these open Internet protections to millions of current TWC customers.

year. Comcast supports the FCC's ongoing process and continues to advocate for the prompt adoption of appropriate, legally enforceable open Internet rules.

In short, we believe that the FCC is taking the appropriate steps to ensure that *all* American consumers enjoy an open Internet. While Congress should certainly continue to oversee the agency's activities, there is no compelling justification for legislative intervention into this area at this time.

**C. Comcast Supports Reauthorization Of The Satellite Television Extension And Localism Act ("STELA"), But Does Not Support Changes To The Current Retransmission Consent Regime.**

Comcast generally supports a "clean" reauthorization of STELA and believes a five-year extension is an appropriate length of time.<sup>45</sup> A shorter extension of only two or three years could cause unnecessary disruption to the industry.

The vibrancy of today's video marketplace, as highlighted above, refutes any notion that there is a general "market failure" warranting government intervention in the wholesale programming business or further regulation of contractual arrangements between MVPDs and programmers. Similarly, the online video segment of the marketplace is flourishing without regulation and should be allowed to continue to grow and evolve.

Comcast also does not support addressing issues or concerns associated with the current retransmission consent regime as part of STELA reauthorization or through other legislative action. We enjoy positive relationships on all sides in retransmission consent negotiations. We have not lost the signal of any major local broadcaster in a dispute over retransmission consent fees.<sup>46</sup>

Consumers today have access to an unprecedented number of video programming choices, and broadcast television continues to be a significant source of programming for tens of millions of households. Broadcasters and MVPDs have, in the vast majority of cases, succeeded in negotiating retransmission consent agreements that allow for the carriage of broadcast programming to MVPD households across the country. We believe that most parties involved in such negotiations will continue to act responsibly and bargain in good faith and in a manner that reflects consumers' best interests. And when parties fail to do so, consumers can switch – and have switched – to other providers. The marketplace thus remains the best forum where any disputes can and should be resolved, without further regulatory intervention.

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<sup>45</sup> To the extent that the Committee considers any changes to STELA, the National Cable Television Association has suggested revisions in three areas: elimination of the integration ban; prohibition of JSA stations in retransmission consent negotiations; and elimination of the must-carry buy through requirement.

<sup>46</sup> Further, as part of the NBCUniversal transaction, Comcast agreed it would not seek repeal of the retransmission consent regimen in existence as of June 2010.

**D. Congress Can Best Serve Consumers By Paring Back On Stale, Monopoly-Era Regulations That Distort Fair Competition.**

Rather than imposing new regulations, Congress can best serve consumers by paring back and eliminating monopoly-era regulations that only impede healthy experimentation and innovation. Comcast and other MVPDs operate under burdensome outdated regulations that do not apply to our DBS competitors, while DBS providers in turn operate under rules that do not apply to our mutual OVD competitors.

For example, the time for regulation of cable rates has long since come and gone. Today's cable rate regulation regime was established in 1992, before the emergence of the Internet and prior to the entry into the video marketplace of DBS, telephone companies, over-the-top video, and other non-cable video providers. The two DBS providers are now the second and third largest MVPDs in the nation; tens of millions can obtain video from Verizon or AT&T; and, as my statement demonstrates, consumers across the nation enjoy a wealth of additional choices from online and mobile platforms. Rate regulation inhibits investment, stifles innovation, and imposes regulatory compliance costs and burdens that are unnecessary and unfair in a competitive marketplace. It is time to let this unbelievably robust video marketplace work.

Similarly, the integration ban should be repealed. The principal effects of the integration ban have been to increase costs for set-top devices leased to cable consumers, while needlessly intruding upon the design and functionality of converter boxes offered by cable operators. There is a large and growing number of video reception devices in the retail marketplace that do not depend on using a cable-provided device. These devices have been developed entirely outside the context of the integration ban, and this marketplace growth shows how unnecessary it is to continue to regulate cable set-top boxes.

In summary, to the extent that Congress takes any legislative action involving the video industry, Congress should level the playing field across *all* content providers and allow the dynamics of the marketplace to evolve.



## V. Conclusion

The state of the video marketplace is extraordinary – some have rightly dubbed today the “true golden age of television.”<sup>47</sup>

Investment is flowing into the video marketplace, and consumers are reaping an amazing harvest of entertainment and information. Consumers are benefitting from more and faster broadband from more competitors, wireline and wireless, providing the platform for massive consumption of video. The FCC is on track to ensure that all Americans continue to enjoy an open Internet as they do today. Video competitors successfully conclude business agreements every day and are able to work out any differences without regulatory intervention. New video competitors are growing at extraordinary rates, readily obtaining immense amounts of content from third parties (and producing more and more of their own), and benefitting from existing regulatory backstops to guard against any market malfunction. And Americans are enjoying an excess of high quality video programming, as Comcast and other video providers compete intensely to offer the best value proposition to consumers, with greater choices that encourage more – not less – video consumption.

In this increasingly competitive marketplace, at this extraordinarily disruptive time, it would not benefit consumers or businesses to add significant legislative uncertainty into the mix. We urge Congress to tread extremely carefully, and not to inadvertently place the dynamism and innovation in today’s video marketplace at risk.

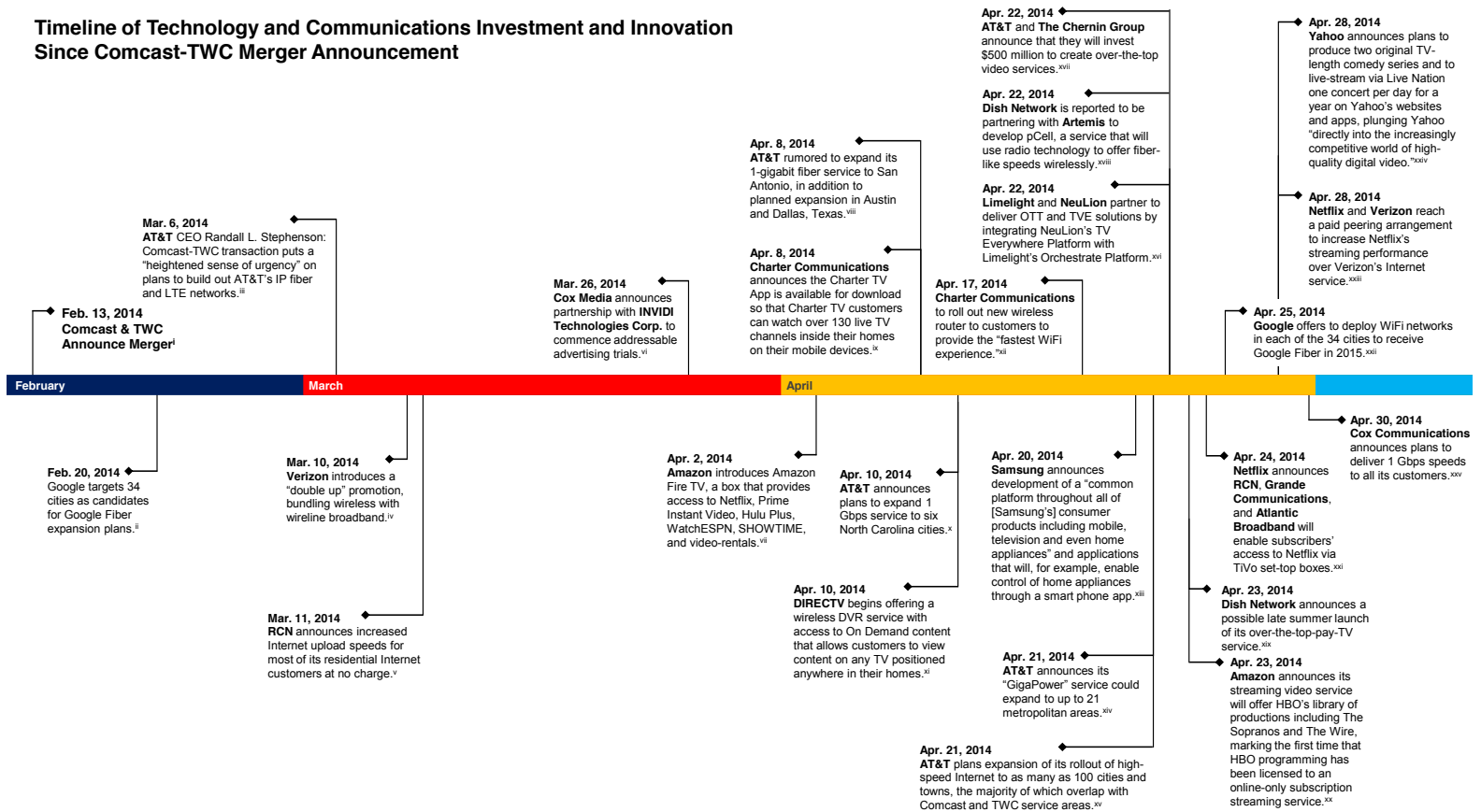
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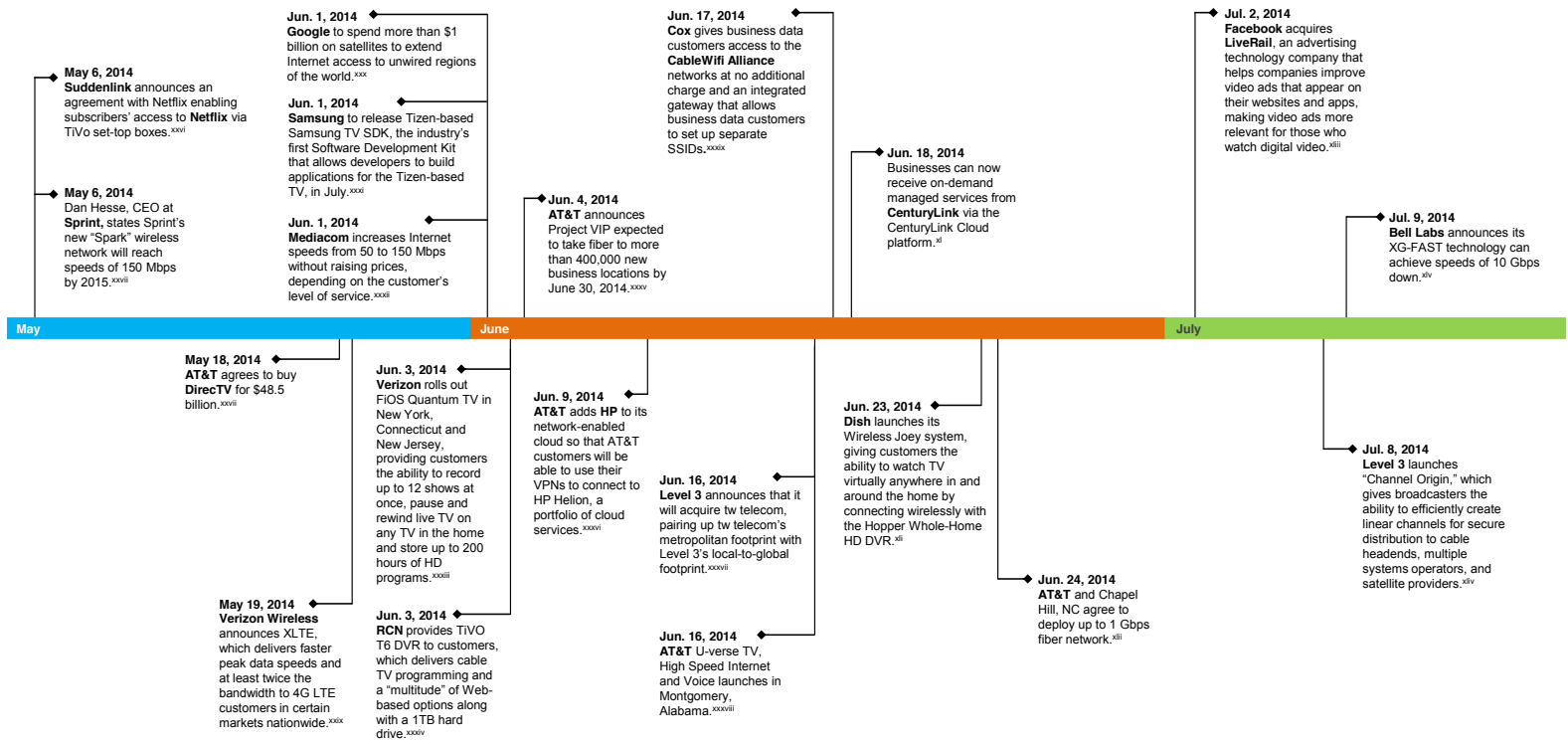
<sup>47</sup> See Marcus Wohlsen, *When TV Is Obsolete, TV Shows Will Enter Their Real Golden Era*, Wired.com, May 15, 2014, <http://www.wired.com/2014/05/real-golden-age-television/> (“Streaming video as offered by Netflix and Amazon Instant Video are not constrained by any of the commercial or technical boundaries of traditional broadcast television or cable. There aren’t schedules. There aren’t channels. The only limitations are how much bandwidth their data centers and the internet itself can support. . . . Welcome to the real new golden age of television — television without limits.”); Todd Leopold, *The new, new TV golden age*, CNN, May 6, 2013, <http://www.cnn.com/2013/05/06/showbiz/golden-age-of-tv/> (“We are living in good TV times. . . . With more channels and more choices, there are also more creative voices being heard.”); Brett Martin *et al.*, *Stop Flipping! The New Rules of TV*, GQ.com, June 2012, <http://www.gq.com/entertainment/movies-and-tv/201206/new-rules-of-tv#slide=1> (“Nearly everything about how we watch television has changed. For starters, we can do it anytime we want. . . . And yes: The shows are a whole lot sexier, more terrifying, complex, and hilarious than the ones we grew up with. It is, as people like to say, a new golden age of television.”).

# **EXHIBIT 1**

## Timeline of Technology and Communications Investment and Innovation Since Comcast-TWC Merger Announcement



## Timeline of Technology and Communications Investment and Innovation Since Comcast-TWC Merger Announcement



## Timeline of Technology and Communications Investment and Innovation Since Comcast-TWC Merger Announcement

- i Press Release, Comcast Corp., Time Warner Cable to Merge with Comcast Corporation to Create a World-Class Technology and Media Company (Feb. 13, 2014), <http://corporate.comcast.com/news-information/news-feed/time-warner-cable-to-merge-with-comcast-corporation>.
- ii Cheryl Conner, *Google Fiber Plan Expansion to 34 New Cities*, Forbes, Feb. 20, 2014, available at <http://www.forbes.com/sites/cherylnappconner/2014/02/20/google-fiber-plans-expansion-to-34-new-cities-including-salt-lake/>.
- iii Randall L. Stephenson, Chairman & CEO, AT&T, Inc., Morgan Stanley Technology, Media & Telecom Conference (Mar. 6, 2014); see also Thomas Gryta, *Comcast Has AT&T Worrying About the US*, Wall St. J., Mar. 6, 2014, available at <http://blogs.wsj.com/corporate-intelligence/2014/03/06/comcast-has-att-worrying-about-the-us/>.
- iv Sean Buckley, *Verizon's Shammo: We'll Look at FIOS Expansions Once It Returns the Cost of Capital*, FierceTelecom, Mar. 10, 2014, <http://www.fiercetelecom.com/story/verizons-shammo-well-look-fios-expansions-once-it-returns-cost-capital/2014-03-10>.
- v Press Release, RCN Telecom Services, LLC, RCN Increases Internet Speeds at No Additional Cost (Mar. 11, 2014), <http://www.rcn.com/about-rcn/newsroom/rcn-increases-internet-speeds>.
- vi Press Release, Cox Communications, Inc., Cox Media to Launch Addressable TV Advertising Trial (Mar. 26, 2014), <http://cox.mediaroom.com/index.php?s=43&item=732>.
- vii Press Release, Amazon.com, Inc., Introducing Amazon Fire TV: The Easiest Way to Watch Netflix, Prime Instant Video, Hulu Plus, WatchESPN, and More on Your Big-Screen TV (Apr. 2, 2014), <http://phx.corporate-ir.net/phoenix.zhtml?c=176060&p=irol-newsArticle&ID=1915168&highlight=>.
- viii Jeff Baumgartner, *AT&T Eyes San Antonio for 'GigaPower' Expansion*, Multichannel News, Apr. 8, 2014, available at <http://www.multichannel.com/news/news-articles/att-eyes-san-antonio-gigapower-expansion/373723>.
- ix Press Release, Charter Communications, Inc., Charter Announces Launch of Charter TV App (Apr. 8, 2014), <http://phx.corporate-ir.net/phoenix.zhtml?c=112298&p=irol-newsArticle&ID=1916892&highlight=>.
- x Thomas Gryta, *AT&T to Build Out Ultrafast Internet in North Carolina*, Wall St. J., Apr. 10, 2014, available at <http://online.wsj.com/news/articles/SB10001424052702303873604579492103338327532>; see also AT&T, Cable, and Google Fiber: Spending Other People's Money, MoffettNathanson Research (Apr. 10, 2014).
- xi Press Release, DIRECTV, LLC, DIRECTV's New Wireless Genie Mini Now Available Nationwide (Apr. 10, 2014), <http://investor.directv.com/press-releases/press-release-details/2014/DIRECTVs-New-Wireless-Genie-Mini-Now-Available-Nationwide/default.aspx>.
- xii Press Release, Charter Communications, Inc., Charter Announces Launch of 802.11ac WiFi Router Capable of Providing the Fastest WiFi (Apr. 17, 2014), <http://www.prnewswire.com/news-releases/charter-announces-launch-of-80211ac-wifi-router-capable-of-providing-the-fastest-wifi-255648271.html>.
- xiii Yun-Hee Kim & Jonathan Krim, *Samsung Is Developing Its Own Platform, Apps*, Wall St. J., Apr. 20, 2014, <http://online.wsj.com/news/articles/SB10001424052702304311204579506531408901234?mod=ST1>.
- xiv Grant Gross, *AT&T's Expanded 1 Gbps Fiber Rollout Could Go Head to Head with Google*, Network World, Apr. 21, 2014, <http://www.networkworld.com/news/2014/042114-atamp139s-expanded-1-gbps-fiber-280882.html>.
- xv Thomas Gryta, *AT&T Expands High-Speed Internet Rollout*, Wall St. J., Apr. 21, 2014, available at <http://online.wsj.com/news/articles/SB10001424052702304049904579515790508491128>.
- xvi Press Release, Limelight Networks, Inc., Limelight Partners with NeuLion to Deliver OTT and TVE Solutions (Apr. 22, 2014), <http://www.businesswire.com/news/home/20140422005335/en/Limelight-Partners-NeuLion-Deliver-OTT-TVE-Solutions>.
- xvii Todd Spangler, *AT&T, Chernin Group Invest \$500 Million in Over-The-Top Video Venture*, Variety, Apr. 22, 2014, available at <http://variety.com/2014/digital/news/att-cherin-group-invest-500-million-to-form-over-the-top-tv-venture-1201160876/#>.
- xviii Kyle Russell, *Dish Network Is Partnering With This Startup To Make Cellphone Internet 1,000 Times Faster Than 4G*, Business Insider, Apr. 22, 2014, <http://www.businessinsider.com/dish-network-and-artisan-partnering-to-make-cell-phone-internet-1000-times-faster-than-4g-2014-4>.
- xix Jeff Baumgartner, *Report: Dish Eyeing Summer Launch of OTT TV Service*, Multichannel News, Apr. 23, 2014, available at <http://www.multichannel.com/news/technology/report-dish-eyeing-summer-launch-ott-tv-service/374044>.
- xx Liana B. Baker & Lisa Richwine, *Amazon Grabs Rights to Stream Older HBO Shows*, Reuters, Apr. 23, 2014, available at <http://www.reuters.com/article/2014/04/23/us-hbo-amazon-idUSBREA3M14J20140423>.
- xxi Brian Fung, *Netflix to Become Real TV and Get Its Own 'Cable Channel' Next Week*, Wash. Post, Apr. 24, 2014, available at <http://www.washingtonpost.com/blogs/the-switch/wp/2014/04/24/netflix-to-become-real-tv-and-get-its-own-cable-channel-next-week/>.
- xxii Hayley Tsukayama, *The Switchboard: Google May be Giving Free WiFi to Fiber Cities*, Wash. Post, Apr. 25, 2014, available at <http://www.washingtonpost.com/blogs/the-switch/wp/2014/04/25/the-switchboard-google-may-be-giving-free-wifi-to-fiber-cities/>.
- xxiii Janko Roettgers, *Verizon Inks Paid Peering Deal with Netflix*, Gigaom, Apr. 28, 2014, <https://gigaom.com/2014/04/28/verizon-inks-paid-peering-deal-with-netflix/>.
- xxiv Vindu Goel & Bill Carter, *Yahoo to Offer TV-Style Comedy Series on the Web*, N.Y. Times, Apr. 28, 2014, available at [http://www.nytimes.com/2014/04/29/technology/yahoo-to-offer-two-tv-length-comedy-series-on-web.html?hpw&ref=television&\\_r=0](http://www.nytimes.com/2014/04/29/technology/yahoo-to-offer-two-tv-length-comedy-series-on-web.html?hpw&ref=television&_r=0).
- xxv Jeff Baumgartner, *Cable Show: Cox to Offer 1-Gig to All*, Multichannel News, Apr. 30, 2014, <http://www.multichannel.com/news/technology/cox-offer-1-gig-all/374284>.

## Timeline of Technology and Communications Investment and Innovation Since Comcast-TWC Merger Announcement

- xxvi Amol Sharma, *Netflix Reaches Pact With U.S. Cable Provider Suddenlink*, Wall St. J., May 6, 2014, available at <http://online.wsj.com/news/articles/SB10001424052702303417104579545764019069966?mg=reno64-wsj>.
- xxvii *Wireless Needs Strong No. 3 to Compete: Sprint CEO*, Bloomberg TV, May 6, 2014, <http://www.bloomberg.com/video/wireless-needs-strong-3-to-compete-sprint-ceo-gctbwYN8RiWmIneDS0u9AQ.html>.
- xxviii Roger Yu, *AT&T Buys DirecTV for \$48.5 billion*, USA Today, May 19, 2014, available at <http://www.usatoday.com/story/money/business/2014/05/18/att-buys-directv/9247795/>.
- xxix Press Release, XLTE: America's Best Network Gets Even Better (May 19, 2014), <http://newscenter.verizon.com/corporate/news-articles/2014/05-19-verizon-announces-xlte/>.
- xxx Alistair Barr & Andy Pasztor, *Google Invests in Satellites to Spread Internet Access*, Wall St. J., June 1, 2014, available at [http://online.wsj.com/news/article\\_email/google-invests-in-satellites-to-spread-internet-access-1401666287-IMyQjAxMTA0MDwMTEwNDEyWjI](http://online.wsj.com/news/article_email/google-invests-in-satellites-to-spread-internet-access-1401666287-IMyQjAxMTA0MDwMTEwNDEyWjI).
- xxxi Press Release, Samsung Electronics Co., Ltd., Samsung Improves Development Environment and Announces Tizen-based Samsung TV SDK (June 1, 2014), [http://www.samsung.com/us/aboutsamsung/news/newsIrRead.do?news\\_ctory=newsrelease&page=2&news\\_seq=23207&rdoPeriod=ALL&from\\_dt=&to\\_dt=&search\\_keyword](http://www.samsung.com/us/aboutsamsung/news/newsIrRead.do?news_ctory=newsrelease&page=2&news_seq=23207&rdoPeriod=ALL&from_dt=&to_dt=&search_keyword).
- xxxii Press Release, New Faster Speeds Without Any Additional Costs on the Way to Mediacom High Speed Customers (June 1, 2014), [https://mediacomcable.com/site/about\\_news\\_01\\_06\\_2014.html](https://mediacomcable.com/site/about_news_01_06_2014.html).
- xxxiii Press Release, Verizon Rolls Out FIOS Quantum TV Service to New York, Connecticut and New Jersey; Redefines Customers' TV Viewing Experience (June 3, 2014), <http://newscenter.verizon.com/corporate/news-articles/2014/06-03-fios-quantum-tv-ny-nj/>.
- xxxiv Press Release, RCN Delivers Its Most Powerful DVR to Date (June 3, 2014), <http://www.rcn.com/about-rcn/newsroom/rcn-delivers-most-powerful-dvr>.
- xxxv *Comm Daily Notebook*, Communications Daily, June 4, 2014.
- xxxvi Press Release, AT&T Adds HP to Network-Enabled Cloud Ecosystem (June 9, 2014), [http://about.att.com/story/att\\_adds\\_hp\\_to\\_network\\_enabled\\_cloud\\_ecosystem0.html](http://about.att.com/story/att_adds_hp_to_network_enabled_cloud_ecosystem0.html).
- xxxvii Press Release, Level 3 Communications, Inc., Level 3 to Acquire tw telecom (June 16, 2014), <http://investors.level3.com/investor-relations/press-releases/press-release-details/2014/Level-3-to-Acquire-tw-telecom/default.aspx>.
- xxxviii Press Release, AT&T U-verse Arrives in Montgomery, AL (June 16, 2014), [http://about.att.com/story/att\\_u\\_verse\\_arrives\\_in\\_montgomery\\_al.html](http://about.att.com/story/att_u_verse_arrives_in_montgomery_al.html).
- xxxix Mike Robuck, *Cox Business Debuts Dual Wi-Fi Router; Access to CableWifi Hotspots*, CED Magazine, June 17, 2014, available at <http://www.cedmagazine.com/news/2014/06/cox-business-debuts-dual-wi-fi-router-access-to-cablewifi-hotspots>.
- xi Press Release, CenturyLink, Inc., CenturyLink Brings Pay-By-The-Hour Managed Services to CenturyLink Cloud Platform (June 18, 2014), <http://ir.centurylink.com/file.aspx?IID=4057179&FID=24100050>.
- xii Press Release, DISH Eliminates Wire Clutter with New Wireless Joey (June 23, 2014), <http://about.dish.com/press-release/products-and-services/dish-eliminates-wire-clutter-new-wireless-joey>.
- xiii Press Release, AT&T and Town of Chapel Hill Reach Agreement to Deploy Up to 1 Gigabit Network (June 24, 2014), [http://about.att.com/story/att\\_uverse\\_with\\_gigapower\\_fiber\\_network\\_coming\\_to\\_chapel\\_hill.html](http://about.att.com/story/att_uverse_with_gigapower_fiber_network_coming_to_chapel_hill.html).
- xliii Press Release, Facebook, Facebook to Acquire LiveRail (July 2, 2014), <http://investor.fb.com/releasedetail.cfm?ReleaseID=857644>.
- xliv Press Release, Level 3 Communications, Inc., Level 3 Launches Channel Origination Solution to Address Demand for Simplified Global Delivery of Broadcast Content (July 8, 2014), <http://investors.level3.com/investor-relations/press-releases/press-release-details/2014/Level-3-Launches-Channel-Origination-Solution-to-Address-Demand-for-Simplified-Global-Delivery-of-Broadcast-Content/default.aspx#sthash.Q3uznzJt.dpuf>.
- xlv Ray Le Maistre, *Bell Labs Claims Copper Speed Record*, Light Reading, July 9, 2014, <http://www.lightreading.com/broadband/dsl-vectoring-qfast/bell-labs-claims-copper-speed-record/d/d-id/709846>.