

Before the  
Federal Communications Commission  
Washington, D.C. 20554

In the Matter of )  
 )  
Annual Assessment of the Status of Competition in ) MB Docket No. 14-16  
the Market for the Delivery of Video Programming )

SIXTEENTH REPORT

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By the Commission: Commissioner Pai issuing a statement.

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## I. EXECUTIVE SUMMARY

1. This is the sixteenth report (“16<sup>th</sup> Report” or “Report”) of the Federal Communications Commission to the United States Congress on the status of competition in the market for the delivery of video programming as required by Section 628(g) of the Communications Act of 1934, as amended (the “Act”).<sup>1</sup> In this Report, we focus on developments in the video marketplace in 2013. As described below, the most significant trends since the last report include the continuing development, and consumer usage, of time and location shifted viewing of video programming, the expansion of digital and high definition programming, and the progress of the online video industry. Herein, we categorize entities into one of three groups – multichannel video programming distributors (“MVPDs”),<sup>2</sup> broadcast television stations,<sup>3</sup> and online video distributors (“OVDs”).<sup>4</sup> We describe the providers of delivered video programming in each group, summarize their business models and competitive strategies, and present selected operating and financial statistics. The following is an overview of our findings.

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<sup>1</sup> 47 U.S.C. § 548(g).

<sup>2</sup> For purposes of this Report, MVPDs are entities that offer multiple channels of video programming to consumers for a subscription fee. The term “MVPD” is defined more fully below in Sec. III.A.1.

<sup>3</sup> We consider broadcast television stations separately for the 16<sup>th</sup> Report, as we have done in previous reports. Although broadcasters have transitioned to digital transmission and have the capability to offer additional linear channels, they still offer far fewer programs and channels than are available from MVPDs, and do not provide a subscription service. Accordingly, we treat broadcasters as a separate group. See 47 U.S.C. § 521(1); S. REP. NO. 102-92, at 8-12 (1991). See also *General Motors Corporation and Hughes Electronics Corporation, Transferors, and The News Corporation Limited, Transferee for Authority to Transfer Control*, MB Docket No. 03-124, Memorandum Opinion and Order, 19 FCC Rcd 473, 509, ¶ 75 (2004) (citing *Competition, Rate Deregulation, and the Commission’s Policies Relating to the Provision of Cable Television Services*, MM Docket No. 89-600, Report, 5 FCC Rcd 4962, 5003, ¶ 69 (1990)); *Application of EchoStar Communications Corporation, General Motors Corporation, and Hughes Electronics Corporation (Transferors) and EchoStar Communications Corporation (Transferee)*, CS Docket No. 01-348, Hearing Designation Order, 17 FCC Rcd 20559, 20607-09, ¶¶ 109-115 (2002) (“*EchoStar-DIRECTV HDO*”).

<sup>4</sup> An “OVD” is any entity that offers video content by means of the Internet or other Internet Protocol (IP)-based transmission path provided by a person or entity other than the OVD. An OVD does not include an MVPD to the extent it is offering online video content as a component of an MVPD subscription to customers whose homes are inside its MVPD footprint. See Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses and Transfer Control of Licensees, MB Docket No. 10-56, Memorandum Opinion and Order, 26 FCC Rcd 4238, 4357, App. A (2011) (“Comcast-NBCU Order”). Consumers need a broadband connection to receive video content from OVDs. The issue of whether a certain type of OVD also qualifies as an MVPD under the Act and our regulations has been raised in pending program access complaint proceedings. See, e.g., *VDC Corp. v. Turner Network Sales, Inc., et al.*, Program Access Complaint (Jan. 18, 2007); and *Sky Angel U.S., LLC v. Discovery Communications LLC, et al.*, Program Access Complaint, MB Docket No. 12-80, CSR-8605-P (Mar. 24, 2010). In March 2012, the Media Bureau sought comment on the interpretation of the terms “MVPD” and “channel.” See Media Bureau Seeks Comment On Interpretation of the Terms “Multichannel Video Programming Distributor” and “Channel” as Raised in Pending Program Access Complaint Proceeding, MB Docket No. 12-83, Public Notice, 27 FCC Rcd 3079 (MB 2012). In December 2014, the Commission adopted a Notice of Proposed Rulemaking that proposes to change the interpretation of an MVPD by including services that make available for purchase, by subscribers or customers, multiple linear streams of video programming, regardless of the technology used to distribute the programming. See Promoting Innovation and Competition in the Provision of Multichannel Video Programming Distribution Services, MB Docket No. 14-261, Notice of Proposed Rulemaking, 29 FCC Rcd 15995 (2014) (“MVPD NPRM”); see also *Sky Angel U.S., LLC v. Discovery Communications, LLC and Animal Planet, L.L.C.*, MB Docket Nos. 12-80, 12-83, CSR Docket No. 8605-P, Order, DA 14-1874 (MB rel. Dec. 19, 2014) (holding the Sky Angel program access complaint in abeyance and terminating the Media Bureau’s March 2012 PN docket). Nothing in this Report should be read to state or imply our determination on the issue.

2. *MVPDs.* From year-end 2012 to year-end 2013, the total number of MVPD video subscribers posted its first-ever, full-year decline, falling from 101.0 million to 100.9 million households. All of the decrease came from cable MVPDs, which fell from 56.4 million to 54.4 million. Direct Broadcast Satellite (“DBS”) MVPD video subscribers increased slightly from 34.1 million to 34.2 million, and telephone MVPD video subscribers increased significantly from 9.9 million to 11.3 million.

3. MVPDs have responded to cord cutters, cord nevers, cord shavers, and the increased viewing of OVDs by creating and deploying video services similar to those offered by OVDs.<sup>5</sup> These services, referred to as “TV Everywhere,” allow MVPD subscribers to access both linear and video-on-demand (“VOD”) programming on a variety of in-home and mobile Internet-connected devices.<sup>6</sup> At the end of 2013, most live linear and some on-demand programming was limited to in-home viewing. Recent initiatives include making more video content available, supporting more viewing devices, and offering more viewing options for video programming outside the home.

4. Although MVPDs have been increasing video revenue, in part, by raising the prices charged for video services, some data suggest that programming expenses are rising faster than revenue. Data for 2013 show that MVPD programming expenses as a percent of MVPD video revenue were 44.6 percent.

5. To free up bandwidth for additional services (*e.g.*, more digital channels, more HD channels, more VOD programming, and faster Internet speeds), many cable MVPDs are transitioning from the delivery of their programming in an analog format to an “all-digital” format. At the end of 2013, this all-digital transition had reached approximately 57 percent of the collective footprints of the top eight cable MVPDs. Cable operators are also deploying switched digital video (“SDV”) in order to free up bandwidth by transmitting only the most popular channels to all customers and then transmitting other less popular channels as a customer tunes in to that channel instead of transmitting all channels in a single stream of programming. At the end of 2013, SDV served approximately 45 percent of digital cable subscribers of the top eight cable MVPDs.

6. *Broadcast Television Stations.* Since the last report, full-power television stations have continued to take advantage of digital broadcasting technology to offer improved service to the public. However, as of the beginning of 2014, 1,517 (85.7 percent) of full-power stations were broadcasting in high definition (“HD”), down slightly from 1,536 stations at the beginning of 2013. In addition to HD content, broadcasters are bringing more programming to consumers in smaller, rural markets by expanding the availability of the four major networks through digital multicast signals.

7. Patterns of consumer behavior noted in the last report, including increases in the number of households with HD television sets, penetration of digital video recorders (DVRs), and increased availability of broadband and mobile devices, have continued. As of 2013, 94.7 million U.S. television households, or 81.8 percent of such households, have sets capable of displaying and/or receiving digital signals, including HD television signals, up from 85.9 million, or 75.2 percent of television households, in 2012. In 2013, 54.2 million television households had DVRs, representing 46.8 percent of all such households, an increase from the 50.3 million households, or 44.1 percent of all television households, reported in 2012. In addition, broadcasters are using a variety of mechanisms to respond to consumers’ desire to watch video on a time-shifted basis either on television sets or on other screens, including mobile DTV, VOD, online video distribution, and social media.

8. Since the last report, the number of households relying exclusively on over-the-air broadcast service increased slightly from 11.2 million households in 2013 to 11.4 million households in 2014, although the percentage of all households they represent has remained steady at 9.8 percent. Broadcast station revenues appear to have fallen somewhat in 2013, in part due to decreased political

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<sup>5</sup> See *infra*, ¶ 85.

<sup>6</sup> See *infra*, ¶ 18.

advertising, following a decline from election year 2012, with broadcasters relying chiefly on advertising sales, and, increasingly, retransmission consent fees from MVPDs. Industry revenues rose to \$24.6 billion in 2012 from the \$21.6 billion in 2011, but were reported to fall to \$24.2 billion in 2013.

9. *OVDs*. While the OVD industry continues to evolve, a few trends emerged during the period covered by this Report. OVDs continue to expand the amount of video content available to consumers through original programming and new licensing agreements with traditional content creators. Some OVDs like Netflix have invested in their own servers, content delivery networks, and other infrastructure to facilitate the delivery of video programming. Several technology companies, notably Amazon, Apple, Google, and Microsoft, are delivering end-to-end solutions of Internet infrastructure, software, devices, and video programming.

10. Viewing of OVDs' video programming on multiple devices is becoming increasingly prevalent. SNL Kagan estimates that as of 2013, more than 53 million U.S. households watched online programming with at least one Internet-connected device, including computers, game consoles, streaming media players, television sets, and Blu-ray players, with an average of 4.8 such devices per online viewing household. In addition, Adobe Systems, which publishes quarterly reports about U.S. online video consumption, found that during the fourth quarter of 2013, 12.8 percent of video streams were viewed on smartphones, compared with 7.2 percent during the fourth quarter of 2012; 9.2 percent of video streams were viewed on tablets, compared with 7.3 percent during the fourth quarter of 2012.

11. OVDs account for an increasing portion of Internet traffic during peak hours. For instance, Sandvine states that Netflix accounted for 34.2 percent of peak period downstream traffic in March 2014, compared with 31.6 percent during the second half of 2013.

## II. INTRODUCTION

### A. Scope of the Report

12. Section 19 of the Cable Television Consumer Protection and Competition Act of 1992 ("1992 Cable Act")<sup>7</sup> amended the Communications Act and established regulations with the goal of increasing competition and diversity in multichannel video programming distribution, increasing the availability of satellite delivered programming, and spurring the development of communications technologies.<sup>8</sup> To measure progress toward these goals, Congress required the Commission to report annually on "the status of competition in the market for the delivery of video programming."<sup>9</sup>

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<sup>7</sup> 1992 Cable Act, Pub. L. No. 102-385, § 19, 106 Stat 1460, 1494 (1992) ("The purpose of this section is to promote the public interest, convenience, and necessity by increasing competition and diversity in the multichannel video programming market, to increase the availability of satellite cable programming and satellite broadcast programming to persons in rural and other areas not currently able to receive such programming, and to spur the development of communications technologies.").

<sup>8</sup> Video programming is defined as: "Programming provided by, or generally considered comparable to programming provided by, a television broadcast station that is distributed and is exhibited for residential use." 47 U.S.C. § 522(20); 47 C.F.R. § 79.1(a)(1).

<sup>9</sup> See Section 628(g) of the Communications Act of 1934, as amended, 47 U.S.C. § 548(g). The Commission's previous reports appear at: *Implementation of Section 19 of the 1992 Cable Act and Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, 9 FCC Rcd 7442 (1994) ("First Report"); 11 FCC Rcd 2060 (1995) ("Second Report"); 12 FCC Rcd 4358 (1997) ("Third Report"); 13 FCC Rcd 1034 (1998) ("Fourth Report"); 13 FCC Rcd 24284 (1998) ("Fifth Report"); 15 FCC Rcd 978 (2000) ("Sixth Report"); 16 FCC Rcd 6005 (2001) ("Seventh Report"); 17 FCC Rcd 1244 (2002) ("Eighth Report"); 17 FCC Rcd 26901 (2002) ("Ninth Report"); 19 FCC Rcd 1606 (2004) ("Tenth Report"); 20 FCC Rcd 2755 (2005) ("11<sup>th</sup> Report"); 21 FCC Rcd 2503 (2006) ("12<sup>th</sup> Report"); 24 FCC Rcd 542 (2009) ("13<sup>th</sup> Report"); 27 FCC Rcd 8610 (2012) ("14<sup>th</sup> Report"); 28 FCC Rcd 10496 (2013) ("15<sup>th</sup> Report").

## B. Analytic Framework

13. We first categorize entities that deliver video programming into one of three groups: MVPDs, broadcast television stations, and OVDs.<sup>10</sup> Second, we describe the providers of delivered video programming in each group, summarize their business models and competitive strategies, and present selected operating and financial statistics.<sup>11</sup> We consider such factors as:

- *Providers*: The number, size, and footprint of the entities in the group, horizontal and/or vertical concentration, regulatory and market conditions affecting entry, and any recent entry or exit from the group.
- *Business Models and Competitive Strategies*: The technologies entities employ to deliver programing, pricing plans, and product and service differences.
- *Selected Operating and Financial Statistics*: Statistics related to the number of subscribers or viewers, revenue, and other financial indicators.

Third, we discuss consumer premises equipment and mobile devices that consumers use for viewing video programming.<sup>12</sup>

## C. Data Sources

14. The information and data presented in this Report are based, in part, on comments we received from interested parties in response to the notice of inquiry in this proceeding.<sup>13</sup> In addition, we also rely on a variety of publicly available sources of industry information and data including: Securities and Exchange Commission filings; data from trade association and government entities; data from securities analysts and other research companies and consultants; company news releases and websites; newspaper and periodical articles; scholarly publications; vendor product releases; white papers; and various public Commission filings, decisions, reports, and data.

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<sup>10</sup> Our placement of entities into groups is an organizational tool to facilitate the presentation of information. This approach is useful for several reasons. First, the three categories reflect the historical evolution of video programming as initially delivered by over-the-air broadcast television stations, then also through MVPDs, and, more recently, via the Internet by OVDs. Second, to some degree the groupings reflect market participants' self-identification. Entities within each group tend to identify other entities in the same group as their foremost competitors in marketing materials and when describing their businesses to shareholders. Third, the business models of entities within a group share more similarities than the business models of entities across groups. Finally, this organization parallels available data sources; some focus on one group (e.g., BIA Kelsey, which focuses on broadcast) and others separately organize data in the same manner we propose (e.g., SNL Kagan).

<sup>11</sup> See Michael E. Porter, *COMPETITIVE STRATEGY: TECHNIQUES FOR ANALYZING INDUSTRIES AND COMPETITORS* 129-155 (Free Press) (1980) ("Porter"). Although the organization of the 16<sup>th</sup> Report is consistent with the 14<sup>th</sup> and 15<sup>th</sup> Reports, we have changed the section titles and terminology to help clarify the content of data and information contained in this report. See Dennis W. Carlton & Jeffrey M. Perloff, *MODERN INDUSTRIAL ORGANIZATION*, Chapter 1 (Addison, Wesley, Longman, Inc.) (4<sup>th</sup> ed. 2005) (describing modern price theory consistent with the content of the various sections of this report).

<sup>12</sup> In the 14<sup>th</sup> and 15<sup>th</sup> Reports, we included a separate section comparing competition in rural versus urban areas. 14<sup>th</sup> Report, 27 FCC Rcd at 8759-65, ¶¶ 343-58; 15<sup>th</sup> Report, 28 FCC Rcd at 10652-655, ¶¶ 322-28. In this Report, we include those comparisons in the sections covering the providers of delivered video programming. In the last two reports, we also included an overview of content creation and aggregation of video programming. Because the key input information included in those reports remains generally unchanged, we eliminate that section for this report. 14<sup>th</sup> Report, 27 FCC Rcd at 8765-84, ¶¶ 360-87; 15<sup>th</sup> Report, 28 FCC Rcd at 10655-671, ¶¶ 329-53.

<sup>13</sup> See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, MB Docket No. 14-16, Notice of Inquiry, 29 FCC Rcd 1597 (2014) ("Notice"). Appendix A contains a list of commenters and the abbreviations by which they are identified herein.

15. Unlike previous video competition reports, which reported data as of June 30, this Report focuses on year-end data. In the past we noted that a significant amount of data is available only as of year-end.<sup>14</sup> Thus, our Report focuses on data for year-end 2013, which we compare with data for year-end 2012. We make use of both individual company data and industry-wide data. In addition, to the extent we find more recent Commission decisions and industry developments relevant, we include this information.

### III. PROVIDERS OF DELIVERED VIDEO PROGRAMMING

#### A. Multichannel Video Programming Distributors

##### 1. Introduction

16. As discussed above, for purposes of this Report we have categorized entities that deliver video programming into one of three groups.<sup>15</sup> We focus in this section on the MVPD group. As defined by statute, an MVPD is an entity that makes available for purchase multiple channels of video programming.<sup>16</sup> Thus, the MVPD group includes cable operators,<sup>17</sup> DBS operators, and telephone companies that offer multiple channels of video programming.<sup>18</sup> Inclusion of an entity in the MVPD group is based on the similarity of the video service provided to the consumer, not on the technology used (e.g., coaxial cable, fiber, spectrum) or the identity of the parent company (e.g., cable operator, telephone company). In most cases, the entities we include in the MVPD group represent themselves publicly, in reports to their shareholders and press releases to the news media, as retailers of video packages that include a large number of channels. When available, this Report uses information and data provided directly by the cable, DBS, and telephone MVPDs as reported to the Commission, shareholders, or the Securities and Exchange Commission. For privately held companies we primarily rely on data from SNL Kagan.<sup>19</sup>

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<sup>14</sup> See *15th NOI*, 27 FCC Rcd at 8586, ¶ 10.

<sup>15</sup> See *supra*, ¶ 13 & n. 10.

<sup>16</sup> Specifically, Section 602(13) of the Act defines MVPD as “a person such as, but not limited to, a cable operator, a multichannel multipoint distribution service, a direct broadcast satellite service, or a television receive-only satellite program distributor, who makes available for purchase, by subscribers or customers, multiple channels of video programming.” 47 U.S.C § 522(13). This Report does not address the extent to which wireless providers of video programming other than DBS, wireless cable system operators, home satellite dishes, and private cable operators should be classified as MVPDs under the Act. As previously noted, the Media Bureau is currently seeking comment on the interpretation of the terms “MVPD.” See *supra*, n. 4.

<sup>17</sup> Cable companies that operate multiple cable systems are often referred to as multiple system operators (“MSOs”). See Techopedia, <http://www.techopedia.com/definition/26084/multiple-system-operators-mso> (visited Nov. 26, 2014).

<sup>18</sup> There is little or no publicly or commercially available data for large home satellite dish (or C-Band) service providers, open video systems, electric and gas utilities providing video services, wireless cable systems, private cable operators, commercial mobile radio services, or other wireless providers. Such entities did not file comments in response to the notice of inquiry in this proceeding. In addition, the combined market share of these MVPDs represents less than one percent of MVPD subscribers, so their relevance to competition in the market for the delivery of video programming is limited. Therefore such providers are not the focus of this Report. See SNL Kagan, *Cable TV Investor: Deals & Finance*, Sept. 30, 2011, at 2-3.

<sup>19</sup> The following companies were privately held cable MVPDs at the end of 2013: Cox Communications Inc., Bright House Networks, LLC, Cequel Communications Holdings I, LLC d/b/a Suddenlink Communications (“Suddenlink”), Mediacom Communications Corp., and Wide Open West Networks, LLC d/b/a WOW!. At the end of 2013, these companies represented five of the ten largest cable MVPDs. SNL Kagan, <http://www.snl.com/interactivex/TopCableMSOs.aspx> (visited March 24, 2014).

17. At the end of 2013, the MVPD group was primarily comprised of 36 cable MVPDs with over 20,000 basic video subscribers each and hundreds of cable MVPDs with less than 20,000 basic video subscribers each, two DBS MVPDs (DIRECTV and DISH Network), two large telephone company MVPDs (AT&T and Verizon) and numerous smaller telephone company MVPDs.<sup>20</sup>

18. In this Report, we discuss a broad range of video programming services offered by MVPDs. Today, the major MVPDs offer hundreds of linear television channels, which are streams of programming that offer video programs on a specific channel at a specific time of day.<sup>21</sup> Many MVPDs also offer thousands of non-linear VOD programs, which allow consumers to select and watch video programs whenever they request them, as well as pay-per-view (“PPV”) programs, some of which consumers may select for viewing “on demand” and others which are special events that are pre-scheduled, like championship boxing matches, etc. Although MVPDs have traditionally delivered video programming to television sets, many MVPDs are moving beyond the television and delivering video programming to computer screens, tablets, and smartphones. The expansion of MVPDs’ delivered video programming from television to other stationary and mobile devices – generally known as TV Everywhere<sup>22</sup> – represents a new opportunity for MVPDs that affects their business models and competitive strategies.<sup>23</sup>

19. MVPDs typically offer services other than delivered video services using the same network infrastructure or through cooperative arrangements with other companies, such as high-speed Internet access service and telephone service. Although the focus of this Report is delivered video services, non-video services, including Internet access and telephone services, have become increasingly important to the business models of MVPDs.

## 2. MVPD Providers

20. We begin our analysis of video competition with an examination of MVPD providers. In this section of the Report, we discuss the number of providers, the number of homes passed, the number of subscribers for delivered video programming, the number of linear channels, the amount of non-linear programming offered, the ability of subscribers to watch programming on multiple devices both inside and outside the home, and bundling of video services with broadband, voice and sometimes mobile wireless services. We then examine horizontal concentration and vertical integration in the MVPD group. Next, we describe conditions affecting entry, including an overview of existing regulations and market conditions that might influence entry decisions. Finally, we describe recent entry and exit in the MVPD group.

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<sup>20</sup> SNL Kagan, <http://www.snl.com/interactivex/TopCableMSOs.aspx> (visited March 24, 2014). This Report primarily addresses the status of competition in the video marketplace as of December 31, 2013. Since that date, proposed transactions involving Comcast, Time Warner Cable and Charter and the proposed merger of AT&T and DIRECTV have been announced. The Commission is currently considering the transfer of control of the licenses and authorizations involved in these proposed transactions. Comcast/Time Warner Cable Application (filed April 8, 2014), MB Docket No. 14-57; AT&T/DIRECTV Description of Transaction, Public Interest Showing, and Related Demonstrations (filed June 11, 2014), MB Docket 14-90. Issues related to the pending mergers and potential for combined entities are not part of this Report.

<sup>21</sup> See [http://itvdictionary.com/definitions/linear\\_tv\\_definition.html](http://itvdictionary.com/definitions/linear_tv_definition.html) (visited Nov. 26, 2014).

<sup>22</sup> TV Everywhere is an authentication system whereby certain movies and television shows are accessible online via a variety of display devices including personal computer, mobile, and television – but only if you can prove (or “authenticate”) that you have a subscription to an MVPD. Currently, TV Everywhere is more of a promise than a reality. See <http://blog.advaoptical.com/tv-is-not-really-everywhere-yet/> (visited Nov. 3, 2014).

<sup>23</sup> Different MVPDs use different terms to market or brand the video services they offer their customers for reception on devices capable of receiving streaming video, whether in-home or out-of-home. In this Report, we use the term “TV Everywhere” as a generic term for these types of video services.

**a. Cable, DBS, Telephone, and Other Providers**

21. The major MVPDs now offer hundreds of television channels as well as thousands of video programs through VOD services. Many of these channels and programs are offered in HD. The major MVPDs offer delivered video programming as a standalone service or in combination with Internet access and voice services. Cable MVPDs typically offer video, Internet access, and voice services using their own facilities. DBS MVPDs offer video services using their own facilities and typically enter into cooperative arrangements with other entities to offer Internet access and voice services.<sup>24</sup> Telephone MVPDs offer video, Internet access, and voice services using their own facilities where they have upgraded systems. Where they have not upgraded systems, telephone MVPDs usually offer video through cooperative arrangements with DBS MVPDs.<sup>25</sup>

22. *Cable MVPDs.* Historically, cable companies rarely competed with one another in the same geographic area. In some locations, cable operators built cable systems where cable MVPDs had already provided video service, but this was the exception, not the rule.<sup>26</sup> The introduction of DBS MVPDs with national footprints in the 1990s changed the competitive landscape and increased competition in the market for the delivery of video programming. In geographic areas that did not have access to cable MVPDs, the DBS companies competed with one another. In geographic areas with access to cable MVPDs, the DBS companies competed with one another and with the incumbent cable MVPDs. The level of competition increased again with the entry of Verizon in 2005 and AT&T in 2006, two large facilities-based telephone MVPDs that began offering video service in geographic areas already served by incumbent cable MVPDs.<sup>27</sup> Today, a small number of geographic areas have as many as five MVPDs (*i.e.*, two cable MVPDs, two DBS MVPDs, and a telephone MVPD) directly competing with one another in the delivery of video programming. At the other end of the spectrum, some geographic areas (*e.g.*, rural areas) have only two MVPDs (*i.e.*, the two DBS MVPDs) directly competing with one another.

23. Depending upon the number of homes and the size of the geographic area served, cable operators use one or more cable systems to provide video service. A cable system is a physical system integrated to a principal headend. Currently there are 4,833 cable systems.<sup>28</sup> This is a decline from the 5,127 cable systems reported in the *15<sup>th</sup> Report*.<sup>29</sup> Large cable MVPDs that serve millions of homes in multiple geographic areas operate many cable systems. These large cable MVPDs often cluster cable

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<sup>24</sup> For example, DIRECTV has cooperative arrangements with AT&T, CenturyLink, Exede, Cincinnati Bell, HughesNet, Windstream, Verizon, and Mediacom to offer a combination of video, Internet access, and telephone services. DIRECTV, <http://www.directv.com/DTVAPP/content/packages/internet> (visited April 18, 2014). DISH Network has cooperative arrangements with ViaSat and Hughes to provide satellite Internet and phone services marketed under the brand name dishNET. DISH Network, <http://www.dish.com/entertainment/internet-phone/?WT.svl=entertainment-subnav> (visited April 18, 2014).

<sup>25</sup> As noted, the Media Bureau is currently seeking comment on the interpretation of the term “MVPD.” *See supra*, n. 4.

<sup>26</sup> Charter explains that it does not consider other cable operators to be significant competitors in its overall market, as overbuilds are infrequent and geographically spotty. Charter, *SEC Form 10-K for the Year Ended December 31, 2013*, at 10 (“Charter 2013 Form 10-K”).

<sup>27</sup> AT&T U-verse service launched commercially in San Antonio, TX on June 26, 2006. AT&T, *AT&T U-verse Timeline*, <http://www.att.com/Common/merger/files/pdf/U-verse%20Timeline41907.pdf> (visited March 24, 2014). Verizon FiOS service launched in September 2005. Mari Sibley, *Timeline: The Evolution of FiOS TV*, MediaExperiences2Go, <http://connectedhome2go.com/2010/08/19/timeline-the-evolution-of-fios-tv> (visited March 24, 2014).

<sup>28</sup> The number of active, registered cable systems comes from the Commission’s Cable Operations and Licensing System (COALS) database on March 25, 2014. This number includes cable systems operated by Verizon.

<sup>29</sup> From COALS on Sept. 20, 2012. Some cable systems have been interconnected with other cable systems and some cable systems have been shut down. *See also infra*, ¶ 70.

systems together using some of the same infrastructure to provide cable service to a larger geographic area (e.g., metropolitan area). Small cable MVPDs that serve very few homes in one geographic area often operate only one cable system in that particular area, and may similarly operate other small cable systems in other geographic areas.

24. The geographic reach of cable MVPDs varies from company to company. No cable operator provides nationwide coverage or statewide coverage. There are always geographic areas or populations within a state not served by the cable operator. The largest MVPD, Comcast, passes more than 53 million homes and businesses.<sup>30</sup> Some cable MVPDs focus their provision of video programming on a regional basis. For example, Mediacom focuses on serving smaller cities, with a significant concentration in the Midwestern and Southeastern regions of the United States.<sup>31</sup> BendBroadband serves communities in Central Oregon.<sup>32</sup> Other cable MVPDs offer video programming to small towns and rural areas.<sup>33</sup>

25. Consistent with the information contained in the *15<sup>th</sup> Report*,<sup>34</sup> the five largest cable MVPDs at the end of 2013 were Comcast, Time Warner Cable, Charter Communications, Cox Communications, and Cablevision Systems.<sup>35</sup> These five companies accounted for approximately 81.8 percent of all cable MVPD subscribers.<sup>36</sup> The ten largest cable MVPDs at the end of 2013 included the top five and Bright House Networks, Suddenlink Communications, Mediacom, Wide Open West, and Cable One.<sup>37</sup> At the end of 2013, the ten largest cable MVPDs accounted for approximately 91.5 percent of all cable MVPD subscribers.<sup>38</sup> The combined shares of all cable MVPDs accounted for approximately 53.9 percent of MVPD subscribers at the end of 2013,<sup>39</sup> down from 55.8 percent at the end of 2012.<sup>40</sup>

26. *DBS MVPDs.* The two DBS MVPDs, DIRECTV and DISH Network, offer video service to most of the land area and population of the United States.<sup>41</sup> DIRECTV is the second largest MVPD in

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<sup>30</sup> Comcast Corp., *SEC Form 10-K for the Year Ended December 31, 2013*, at 46 (“Comcast 2013 Form 10-K”).

<sup>31</sup> Mediacom Communications Corp., *SEC Form 10-K for the Year Ended December 31, 2013*, at 4.

<sup>32</sup> <https://bendbroadband.com/about.asp> (visited March 28, 2014).

<sup>33</sup> For additional information regarding the characteristics of small and medium-sized cable MVPDs, see American Cable Association, [http://www.americancable.org/about\\_us/aca\\_overview\\_0](http://www.americancable.org/about_us/aca_overview_0) (visited Nov. 3, 2014).

<sup>34</sup> See *15<sup>th</sup> Report*, 28 FCC Rcd at 10506-507, ¶ 26.

<sup>35</sup> SNL Kagan, <http://www.snl.com/interactivex/TopCableMSOs.aspx> (visited March 28, 2014).

<sup>36</sup> At the end of 2013, there were approximately 54.4 million basic cable subscribers and the top five cable MVPDs accounted for approximately 44.5 million subscribers. SNL Kagan, <http://www.snl.com/interactivex/CableMSOOperatingMetrics.aspx> (visited March 28, 2014).

<sup>37</sup> SNL Kagan, <http://www.snl.com/interactivex/TopCableMSOs.aspx> (visited March 28, 2014).

<sup>38</sup> At the end of 2013, there were approximately 54.4 million basic cable subscribers and the top ten cable MVPDs accounted for approximately 49.8 million subscribers. SNL Kagan, <http://www.snl.com/interactivex/TopCableMSOs.aspx> (visited March 28, 2014).

<sup>39</sup> At the end of 2013, there were approximately 100.9 million MVPD subscribers and cable MVPDs accounted for approximately 54.4 million subscribers. SNL Kagan, <http://www.snl.com/interactivex/MultichannelIndustryBenchmarks.aspx> (visited March 28, 2014).

<sup>40</sup> At the end of 2012, there were approximately 101.0 million MVPD subscribers and cable MVPDs accounted for approximately 56.4 million subscribers. SNL Kagan, <http://www.snl.com/interactivex/MultichannelIndustryBenchmarks.aspx?startYear=2012&endYear=2012> (visited March 28, 2014).

<sup>41</sup> We recognize that some homes are not able to receive DBS signals and DBS does not provide coverage to some land areas in Alaska.

the United States with approximately 20.3 million subscribers at the end of 2013.<sup>42</sup> DISH Network is the third largest MVPD with approximately 14.1 million subscribers at the end of 2013.<sup>43</sup> The combined shares of the two DBS MVPDs accounted for approximately 33.9 percent of MVPD subscribers at the end of 2013,<sup>44</sup> up from 33.8 percent at the end of 2012.<sup>45</sup>

27. *Telephone MVPDs.* The two largest telephone MVPDs, AT&T and Verizon, have constructed systems for delivering video services in some of the areas where they offer traditional landline telephone services. It is almost always the case that the geographic footprints for AT&T U-verse and Verizon FiOS overlap areas already served by incumbent cable MVPDs.<sup>46</sup> AT&T U-verse is the fifth largest MVPD with approximately 5.5 million subscribers at the end of 2013.<sup>47</sup> Verizon FiOS is the sixth largest MVPD with approximately 5.3 million subscribers at the end of 2013.<sup>48</sup> The remaining telephone MVPDs are small by comparison to AT&T and Verizon. At the end of 2013, CenturyLink had 175,000 video subscribers, Consolidated Communications had 110,613 video subscribers, and Cincinnati Bell had 74,200 video subscribers.<sup>49</sup> Little data exist regarding other telephone MVPDs. A survey conducted by The National Telephone Cooperative Association – The Rural Broadband Association (“NTCA”),<sup>50</sup> shows that 76.9 percent of the survey respondents currently offer video services to customers.<sup>51</sup> Internet Protocol Television (“IPTV”) technology is the most common delivery technology.<sup>52</sup> IPTV is used by 80.3 percent of survey respondents.<sup>53</sup> Legacy coaxial cable technology is used by 55.1 percent of survey respondents.<sup>54</sup> Only 7.4 percent of survey respondents have cooperative arrangements with DBS

<sup>42</sup> DIRECTV, *SEC Form 10-K for the Year Ended December 31, 2013*, at 2 (“DIRECTV 2013 Form 10-K”).

<sup>43</sup> DISH Network, *SEC Form 10-K for the Year Ended December 31, 2013*, at 4 (“DISH Network 2013 Form 10-K”).

<sup>44</sup> At the end of 2013, there were approximately 100.9 million MVPD subscribers and DBS MVPDs accounted for approximately 34.2 million subscribers. SNL Kagan, <http://www.snl.com/interactivex/MultichannelIndustryBenchmarks.aspx> (visited March 28, 2014).

<sup>45</sup> At the end of 2012, there were approximately 101.0 million MVPD subscribers and DBS MVPDs accounted for approximately 34.1 million subscribers. SNL Kagan, <http://www.snl.com/interactivex/MultichannelIndustryBenchmarks.aspx?startYear=2012&endYear=2012> (visited March 28, 2014).

<sup>46</sup> Verizon notes that in all areas where it has deployed its FiOS video service it faces competition from incumbent cable MVPDs and DBS MVPDs. Verizon Comments at 4. See also, Chris Young, *Telco TV makes gains in MSO footprints amid strategy shifts*, MULTICHANNEL MARKET TRENDS, SNL KAGAN, Jan. 14, 2014, <https://www.snl.com/interactivex/article.aspx?id=26506351&KPLT=6> (visited Dec. 5, 2014).

<sup>47</sup> AT&T, *2013 Annual Report*, at 19.

<sup>48</sup> Verizon, *2013 Annual Report*, at 20. See also Verizon Comments at 4.

<sup>49</sup> CenturyLink, *CenturyLink Reports Strong Fourth Quarter 2013 Results* (press release), Feb. 12, 2014; Consolidated Communications, *SEC Form 10-K for the Year Ended December 31, 2013*, at 3 (“Consolidated 2013 Form 10-K”); Cincinnati Bell, *SEC Form 10-K for the Year Ended December 31, 2013*, at 8 (Cincinnati Bell 2013 10-K”).

<sup>50</sup> NTCA’s members vary in size and serve from less than 100 subscribers to more than 50,000 subscribers. NTCA, <http://www.ntca.org/about-ntca/about-our-members.html> (visited Dec. 5, 2014). NTCA’s members do not appear to include the AT&T, Verizon, and other large telephone companies that serve millions of subscribers.

<sup>51</sup> NTCA Comments at 1-2. The NTCA autumn 2013 survey received 171 responses, which is approximately 28 percent of NTCA’s membership. These are not all facilities-based MVPDs but include members that have cooperative arrangements with DBS MVPDs to provide video service.

<sup>52</sup> *Id.* at 2.

<sup>53</sup> *Id.*

<sup>54</sup> *Id.*

MVPDs.<sup>55</sup> We estimate that the combined shares of all telephone MVPDs accounted for approximately 11.2 percent of MVPD subscribers at the end of 2013, up from 9.8 percent at the end of 2012.<sup>56</sup>

28. Table 1 shows estimates of the number of homes passed by cable, DBS, and telephone MVPDs for year-end 2012 and 2013. At the end of 2013, cable MVPD service was available to 133.4 million homes (99.7 percent of the 133.8 million U.S. homes). We assume that DBS MVPDs are available to all homes, but recognize that this slightly overstates the actual availability of DBS.<sup>57</sup> At the end of 2013, facilities-based telephone MVPD service was available to 46.4 million homes (34.7 percent of the 133.8 million U.S. homes).<sup>58</sup>

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<sup>55</sup> *Id.* The figures total to more than 100 percent because some respondents use more than one technology.

<sup>56</sup> At the end of 2013, there were approximately 100.9 million MVPD subscribers and telephone MVPDs accounted for approximately 11.3 million subscribers. At the end of 2012, there were approximately 101.0 million MVPD subscribers and telephone MVPDs accounted for approximately 9.9 million subscribers. SNL Kagan, <http://www.snl.com/interactivex/MultichannelIndustryBenchmarks.aspx?startYear=2012&endYear=2013> (visited March 31, 2014).

<sup>57</sup> We recognize that physical features (*e.g.*, tall buildings, cliffs, trees) can prevent some homes from receiving DBS signals.

<sup>58</sup> Our estimates for homes passed by telephone MVPDs include only data from AT&T, Verizon, Consolidated Communications, and Cincinnati Bell. As such, we recognize that the number of homes passed by all telephone MVPDs included in this report is understated.

**Table 1: Homes Passed by MVPDs (in millions)**

	Year-End 2012	Year-End 2013
<b>Cable</b> <sup>59</sup>	<b>132.6</b>	<b>133.4</b>
Comcast	53.2	53.8
Time Warner	29.6	29.9
Charter	12.1	12.8
Cox	10.3	10.4
Cablevision	5.6	5.0
<b>DBS</b> <sup>60</sup>	<b>133.0</b>	<b>133.8</b>
DIRECTV	133.0	133.8
DISH Network	133.0	133.8
<b>Telephone</b> <sup>61</sup>	<b>42.8</b>	<b>46.4</b>
AT&T U-verse <sup>62</sup>	24.5	27.0
Verizon FiOS <sup>63</sup>	17.6	18.6
Consolidated Comm. <sup>64</sup>	0.5	0.5
Cincinnati Bell <sup>65</sup>	0.2	0.3

**b. Horizontal Concentration**

<sup>59</sup> Cable industry homes passed excludes overlap from overbuilders (defined as companies that build a new cable system “over” one that already exists and offer customers a competitive alternative). Data for the cable industry homes passed come from SNL Kagan, <http://www.snl.com/interactivex/MultichannelIndustryBenchmarks.aspx?startYear=2012&endYear=2013> (visited March 31, 2014). Data for the five largest cable companies come from SNL Kagan, <http://www.snl.com/InteractiveX/TopCableMSOs.aspx?period=2012Q4&sortcol=subscribersbasic&sortorder=desc> (visited March 31, 2014); <http://www.snl.com/InteractiveX/TopCableMSOs.aspx?period=2013Q4&sortcol=subscribersbasic&sortorder=desc> (visited March 31, 2014).

<sup>60</sup> For simplification, we assume that DBS is available to every housing unit. Data for the number of housing units come from SNL Kagan, <http://www.snl.com/interactivex/MultichannelIndustryBenchmarks.aspx?startYear=2012&endYear=2013> (visited March 31, 2014). A housing unit is a house, an apartment, a mobile home or trailer, a group of rooms, or a single room that is occupied, or, if vacant, is intended for occupancy as separate living quarters. Both occupied and vacant housing units are included in the housing unit inventory, except recreational vehicles, boats, vans, tents, railroad cars, etc. are included only if occupied as a usual place of residence. Vacant mobile homes are included if intended for occupancy on site. Vacant mobile homes on dealer sales lots, at the factory, or in storage yards are excluded from the housing unit inventory.

<sup>61</sup> For telephone, we simply add the estimates for AT&T, Verizon, Consolidated Communications, and Cincinnati Bell. We do not have reliable estimates for the number of homes passed by other telephone companies offering their own facilities-based video services. As such, we recognize that the number of homes passed by telephone MVPDs included in this report is understated.

<sup>62</sup> AT&T, *2012 Annual Report*, at 42; AT&T *2013 Annual Report*, at 22. In 2012 and 2013, AT&T reported the number of “customer locations” that were eligible to receive U-verse service. In earlier years, AT&T reported the number of “living units” passed by U-verse. See *15<sup>th</sup> Report* 28 FCC Rcd at 10509-11, ¶ 33 and Table 1. Not all living units passed by U-verse are eligible to receive U-verse service.

<sup>63</sup> Verizon, *Investor Quarterly Fourth Quarter 2012*, Jan. 22, 2013, at 6; Verizon, *Investor Quarterly Fourth Quarter 2013*, Jan. 21, 2014, at 6. See also Verizon Comments at 4.

<sup>64</sup> Consolidated 2013 Form 10-K at 8.

<sup>65</sup> Cincinnati Bell 2013 Form 10-K at 7 and 35.

29. A high degree of market concentration may suggest the potential for competitive concerns. However, an analysis of other factors, such as entry conditions and the degree of price and non-price rivalry, may evidence robust competition, even in a highly concentrated market. The Commission does not collect data for cable, DBS, and telephone MVPDs' video service on a uniform geographic basis and, therefore, cannot compare the availability of one type of MVPD with another in a particular geographic area. Instead, in this Report, we estimate the number of homes on a nationwide basis that have access to two, three, or four MVPDs.

30. Consumers can choose only among the MVPD alternatives available in the areas where they live. However, determining which MVPDs offer video service in which geographic areas is difficult as a result of the wide variation in the geographic footprints of MVPDs and the lack of available data that would allow comparison of the geographic coverage of one type of MVPD with another type of MVPD.<sup>66</sup> As a general rule, the geographic footprint of a cable MVPD rarely overlaps the geographic footprint of another cable MVPD.<sup>67</sup> As such, cable MVPDs rarely compete with one another for the same video subscriber.<sup>68</sup> The situation is similar for telephone MVPDs. The geographic footprint of one telephone MVPD rarely overlaps the geographic footprint of another telephone MVPD, so telephone MVPDs rarely compete with one another for the same video subscriber. In contrast, the geographic footprints of both DBS MVPDs are national as a result of the satellite delivery of their signals, and they almost always compete with one another for the same video subscriber. We also assume that a cable MVPD or a telephone MVPD almost always competes with both DBS MVPDs for the same subscriber. Finally, we assume that telephone MVPDs AT&T, Verizon, Consolidated Communications, and Cincinnati Bell offer video service in geographic areas already served by incumbent cable companies and, therefore, almost always compete with a cable MVPD for the same subscriber.<sup>69</sup> We have little data on additional telephone MVPDs, and we have no means of determining the geographic footprints of these entities and, therefore, no means of determining whether they do or do not compete with incumbent cable systems.<sup>70</sup> We do not include these additional telephone MVPDs in our estimates and recognize that their absence will somewhat understate access to these MVPDs.<sup>71</sup>

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<sup>66</sup> The Commission's Mobile Wireless Report collects data on a census block basis and the Commission's Broadband Report collects data on a census block basis. For video services, however, we do not collect data on a census block basis. *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, WT Docket No. 13-135, DA 14-1862, ¶ 45 (rel. Dec. 18, 2014) ("*17<sup>th</sup> Mobile Wireless Report*"); *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, Amended by the Broadband Data Improvement Act*, GN Docket No. 11-121, Eighth Broadband Progress Report and Order on Reconsideration, 27 FCC Rcd 10342, 10363-64, ¶ 28 (2012).

<sup>67</sup> A large cable MVPD will operate many cable systems of varying sizes. The geographic configuration of a cable system is determined by its physical system, which consists of a cable system technically integrated to a principal headend. The Commission collects cable system data in its Annual Reports of Cable Television Systems (FCC Form 325). Only a limited number of cable systems provide data to the Commission. All cable systems with more than 20,000 subscribers are subject to the reporting requirement. The Commission also collects information on a random sample of cable systems with between 5,000 and 20,000 subscribers and a random sample of cable systems with fewer than 5,000 subscribers.

<sup>68</sup> There are exceptions to this general rule and in some areas cable MVPDs, such as RCN, Knology, and SureWest have overbuilt incumbent cable systems. *See also* DIRECTV Comments at 1.

<sup>69</sup> Verizon states that "Verizon is a competitive MVPD in all areas where it has deployed its fiber-optic network to deliver its FiOS TV." Verizon Comments at 4.

<sup>70</sup> We do not have reliable data on homes passed by CenturyLink and other telephone MVPDs.

<sup>71</sup> In addition, there are geographic areas where the presence of a cable overbuilder provides some households with access to five MVPDs.

31. Using our assumptions and the data from Table 1 above, we estimate MVPD concentration nationwide – specifically, the number of homes that have access to at least two, three, or four MVPDs. Our estimates are shown in Table 2.

In 2012,

- o There were 133.0 million homes in the United States and we assume that all of them had access to at least the two DBS MVPDs.
- o Approximately 132.6 million homes had access to at least three MVPDs (*i.e.*, a cable MVPD and two DBS MVPDs, but not a telephone MVPD).
- o Approximately 42.8 million homes had access to at least four MVPDs (*i.e.*, a cable MVPD, two DBS MVPDs, and a telephone MVPD).<sup>72</sup>

In 2013,

- o There were 133.8 million homes in the United States and we assume that all of them had had access to at least the two DBS MVPDs.
- o Approximately 133.4 million homes had access to at least three MVPDs (*i.e.*, a cable MVPD and two DBS MVPDs, but not a telephone MVPD).
- o Approximately 46.4 million homes had access to at least four MVPDs (*i.e.*, a cable MVPD, two DBS MVPDs, and a telephone MVPD).<sup>73</sup>

These estimates are only approximations due to the limits of available data, but they highlight the fact that with the entry of large telephone MVPDs into the market for video services, more than 46.4 million homes have access to four MVPDs. We estimate that approximately 35 percent of U.S. homes have access to at least four MVPDs. Our estimates understate the actual number of homes with access to four MVPDs because we do not include homes that have access to CenturyLink and other telephone MVPDs.

**Table 2: Access to Multiple MVPDs**

	<b>Homes 2012</b>	<b>Percent of Homes 2012</b>	<b>Homes 2013</b>	<b>Percent of Homes 2013</b>
Access to at Least Two MVPDs	133.0 million	100%	133.8 million	100%
Access to at Least Three MVPDs	132.6 million	99%	133.4 million	99%
Access to at Least Four MVPDs	42.8 million	32%	46.4 million	35%

32. Although we do not calculate a Herfindahl-Hirschman Index (“HHI”), the traditional metric for measuring horizontal concentration,<sup>74</sup> we note that in geographic areas where homes have

<sup>72</sup> We assume that homes that have access to AT&T, Verizon, Consolidated Communications, and Cincinnati Bell also have access to a cable MVPD and the DBS MVPDs. Thus, our estimate is simply the number of homes that have access to these telephone MVPDs (42.8 million).

<sup>73</sup> We assume that homes that have access to AT&T, Verizon, Consolidated Communications, and Cincinnati Bell also have access to a cable MVPD and the DBS MVPDs. Thus, our estimate is simply the number of homes that have access to these telephone MVPDs (46.4 million).

<sup>74</sup> The HHI is calculated by summing the squares of the individual market shares of all the participants. For example, a market consisting of four firms with market shares of 30 percent, 30 percent, 20 percent and 20 percent

(continued....)

access to four MVPDs, the HHI is over 2500.<sup>75</sup> Likewise, in geographic areas where homes have access to three MVPDs, the HHI is over 3333, and in geographic areas where homes have access to two MVPDs, the HHI is over 5000. We also note that the launch of DBS in the 1990s and the expansion of telephone MVPD networks since 2005 have significantly reduced MVPD concentration since the Commission's *First Report* on the status of competition in the market for the delivery of video programming in 1995.

### c. Vertical Integration

33. Our examination of vertical integration in the MVPD industry focuses on common ownership of entities that deliver video programming and entities that supply video programming. Vertical relationships may have beneficial effects,<sup>76</sup> or they may deter competitive entry in the video marketplace or limit the diversity of video programming.<sup>77</sup> In 1992, Congress enacted various provisions related to vertical integration between cable operators and programming networks (*e.g.*, program access, channel occupancy limit).<sup>78</sup> In 1992, a large number of the most popular cable programming networks were owned by cable operators. Congress was concerned that cable operators had the ability and incentive to thwart the competitive development of additional programming networks by refusing to carry unaffiliated networks, by insisting on an ownership stake in return for carriage, or by withholding their most popular programming networks from competing MVPDs.<sup>79</sup>

(Continued from previous page)

has an HHI of 2600 ( $30^2 + 30^2 + 20^2 + 20^2 = 2600$ ). The HHI ranges from 10,000 (in the case of a pure monopoly) to a number approaching zero (in the case of an atomistic market). Lack of information about small firms is not critical to the calculation because such firms do not affect the HHI significantly. See Horizontal Merger Guidelines, U.S. Department of Justice and the Federal Trade Commission, August 19, 2010, <http://www.justice.gov/atr/public/guidelines/hmg-2010.pdf>, at § 5.3 (“Horizontal Merger Guidelines”).

The Commission has used an HHI in its analysis of transactions involving MVPDs. See, *e.g.*, *EchoStar-DIRECTV HDO*, 17 FCC Rcd at 20614-16, ¶¶ 133-39 (2002). See also *Applications for Consent to the Assignment and/or Transfer of Control of Licenses Adelphia Communications Corporation, (and subsidiaries, debtors-in-possession), Assignors, to Time Warner Cable Inc. (subsidiaries), Assignees; Adelphia Communications Corporation, (and subsidiaries, debtors-in-possession), Assignors and Transferors, to Comcast Corporation (subsidiaries), Assignees and Transferees; Comcast Corporation, Transferor, to Time Warner Inc., Transferee; Time Warner Inc., Transferor, to Comcast Corporation, Transferee*, MB Docket No. 05-192, Memorandum Opinion and Order, 21 FCC Rcd 8203, 8239-43, ¶¶ 75-83 (2006) (“2006 Adelphia, Comcast, Time Warner Cable MO&O”).

In addition, in some past reports, we have estimated a national MVPD HHI for purposes of analyzing concentration in the market for the purchase of video programming. See, *e.g.*, *13<sup>th</sup> Report*, 24 FCC Rcd at 627-28, ¶ 179; *id.* at 689, Table B-4. Our economic concern was one of monopsony power where few or large buyers could drive down the prices received by the owners of video programming. In this Report, and our *14<sup>th</sup> Report* and *15<sup>th</sup> Report*, our focus is the market for the delivery of video programming and our economic concern is one of market power where few sellers of MVPD video services could drive up the prices paid by subscribers.

<sup>75</sup> For a given number of firms, the value of the HHI increases as the inequality in subscriber shares increases. For example, if four firms are identified as participants in the relevant markets and each firm accounts for 25 percent of total sales, the value of HHI would be 2500 ( $25^2 \times 4$ ). If there are still only four firms but the top firm has a 40 percent subscriber share while each of the remaining three firms has 20 percent, the value of HHI increases from 2500 to 2800 ( $40^2 + (20^2 \times 3)$ ).

<sup>76</sup> Beneficial effects can include efficiencies in the production, distribution, and marketing of video programming, as well as the incentive to expand channel capacity and create new programming by lowering the risks associated with program production ventures. See, *e.g.*, H.R. REP. NO. 862, 102<sup>nd</sup> Congress, 2d Sess. (1992), at 41-43.

<sup>77</sup> Possible detrimental effects can include unfair methods of competition, discriminatory conduct, and exclusive contracts that are the result of coercive activity. See *Second Report*, 11 FCC Rcd at 2135, ¶ 157; *Implementation of Section 11(c) of the Cable Television Consumer Protection and Competition Act of 1992 Vertical Ownership Limits*, MB Docket No. 92-264, 10 FCC Rcd 7364, 7365, ¶ 4 (1995).

<sup>78</sup> See 47 U.S.C. §§ 533, 548.

<sup>79</sup> See 47 U.S.C. § 521(5).

34. The National Cable & Telecommunications Association (“NCTA”) states that “only a handful of networks are vertically integrated with cable operators” and “only three of the top 20 most viewed cable networks are controlled by cable operators.”<sup>80</sup> Data from SNL Kagan show that only one of the top 20 most viewed cable networks are owned by cable operators.<sup>81</sup> In the last report, we found that there were 99 national networks (47 were HD networks) affiliated with the top five cable MVPDs.<sup>82</sup> Data for June 2014 also show 98 national networks affiliated with the top five cable MVPDs (and 47 HD networks) and specifically that Comcast has ownership interests in 47 national networks (22 in HD), Time Warner Cable has ownership interests in four national networks (two in HD), Cox has ownership interests in six national networks (three in HD), Cablevision has ownership interests in eight national networks (four in HD), and Bright House has ownership interests in 27 national networks (13 in HD). In addition, we identified 62 national networks that were affiliated with a DBS MVPD (24 in HD).<sup>83</sup> A summary of MVPD ownership of programming networks is included in Appendix B, Table B-1; Appendix C, Table C-1; and Appendix D of this Report.<sup>84</sup>

#### d. Entry Conditions

35. MVPD entry decisions are determined primarily by regulatory and market conditions and expected profitability.<sup>85</sup> Entry conditions are important in understanding the degree to which incumbent firms may or may not possess market power.<sup>86</sup> Entry occurs in the context of underlying market and regulatory conditions that directly influence the total number of firms that can compete successfully in a market. Such conditions are relevant for determining if, and when, actual entry will occur. Both market conditions and regulatory conditions are important for facilitating competition in the marketplace. Because the Commission oversees the regulatory conditions potentially affecting entry, we discuss these first.<sup>87</sup> We then discuss some of the market (“non-regulatory”) conditions potentially affecting entry.

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<sup>80</sup> NCTA Comments at 10-11.

<sup>81</sup> SNL Kagan, *Basic Cable Networks by Average 24 Hour Rating*, [https://www.snl.com/interactivex/tv\\_NetworksSummary.aspx?networktype=4](https://www.snl.com/interactivex/tv_NetworksSummary.aspx?networktype=4) (visited Nov. 3, 2014).

<sup>82</sup> *15<sup>th</sup> Report*, 28 FCC Rcd at 10515-16, ¶ 39.

<sup>83</sup> For a list of the national networks owned by DBS MVPDs, see Appendix B, Table B-1. Most of these networks we list are affiliated with Liberty Media. Liberty owns 57 percent of the DIRECTV Group. See DIRECTV Group, *2013 Annual Report*, at 29-30.

<sup>84</sup> We also identify national cable networks affiliated with a broadcast television network, broadcast television licensee, or other media company (Appendix B, Table B-2) and regional networks affiliated with a broadcast television network, broadcast television licensee, or other media company (Appendix C, Table C-2).

<sup>85</sup> High economic profits encourage entry to the market; low economic profits discourage entry; and prolonged negative economic profits induce exit from the market. See Hal R. Varian, *INTERMEDIATE MICROECONOMICS: A MODERN APPROACH* 394-95, 503 (W. W. Norton and Company) (1999) (“*Intermediate Microeconomics*”); Dennis W. Carlton & Jeffrey M. Perloff, *MODERN INDUSTRIAL ORGANIZATION* 61-76 (Addison, Wesley, Longman, Inc.) (4<sup>th</sup> ed. 2005).

<sup>86</sup> Market power for a seller is the ability to profitably maintain prices above competitive levels for a significant period of time. Sellers with market power also may lessen competition on dimensions other than price, such as product quality, service, or innovation. For a discussion of market power, see *Horizontal Merger Guidelines*, *supra*, n. 74.

<sup>87</sup> The regulatory process, itself, may hinder entry if the process is characterized by unnecessary delay. One example of a regulatory delay would be the time a cable franchising authority may take to make a decision regarding an application. Economists argue that some operating licenses and other legal restrictions that serve to limit access to the market are barriers to entry, *i.e.*, they create positive economic profits for incumbents that are not bid away by new entry. See Jean Tirole, *THE THEORY OF INDUSTRIAL ORGANIZATION* 305 (MIT Press) (1988). See also *Intermediate Microeconomics* at 395.

**(i) Regulatory Conditions Influencing Entry**

36. *Franchising and Licensing.* Traditional MVPDs must obtain the proper regulatory authority before providing video services. Section 621(a)(1) of the Act gives local governments the authority to control the entry of cable operators into their respective markets through franchise agreements; but it prevents them from granting an exclusive franchise or from unreasonably refusing to award competitive franchises.<sup>88</sup> Each state determines which political jurisdiction (e.g., state, county, city, or town) has the authority to grant local franchises for cable service. In 2007, the Commission adopted rules under its Section 621(a)(1) authority eliminating unreasonable entry barriers placed on competitive franchises by local franchising authorities (“LFAs”) and encouraging investment in broadband facilities.<sup>89</sup> As of December 2013, 22 states have streamlined the franchising process further by adopting laws that place franchising authority with the state instead of local governments.<sup>90</sup> Cable operators also typically need licenses or authorizations from the Commission for facilities to deliver their programming to consumers.<sup>91</sup>

37. In contrast, satellite carriers must obtain Commission authority prior to operating satellites and earth stations to deliver video services.<sup>92</sup> Similarly, entities including telephone companies that provide video services through the open video system (“OVS”) framework must secure certification from the Commission before initiating service.<sup>93</sup> In addition, wireless cable systems and other wireless

<sup>88</sup> 47 U.S.C. §§ 522(10), 541(a)(1).

<sup>89</sup> *Implementation of Section 621(a)(1) of the Cable Communications Policy Act of 1984 as amended by the Cable Television Consumer Protection and Competition Act of 1992*, MB Docket No. 05-311, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 5101 (2007), *aff’d sub nom. Alliance for Community Media v. FCC*, 529 F.3d 763 (6th Cir. 2008). See also *Implementation of Section 621(a)(1) of the Cable Communications Policy Act of 1984 as amended by the Cable Television Consumer Protection and Competition Act of 1992*, MB Docket No. 05-311, Second Report and Order, 22 FCC Rcd 19633 (2007); Order on Reconsideration, FCC 15-3 (MB, rel. Jan. 21, 2015).

<sup>90</sup> The states that have adopted statewide video franchising laws are: Arkansas, California, Connecticut, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Michigan, Missouri, Nevada, New Jersey, North Carolina, Ohio, South Carolina, Tennessee, Texas, Virginia, and Wisconsin. See Arkansas State Legislature, *Senate Bill 101*, <http://www.arkleg.state.ar.us/assembly/2013/2013R/Pages/BillInformation.aspx?measure=SB101> (visited Apr. 22, 2014); *15<sup>th</sup> Report*, 28 FCC Rcd at 10517, ¶ 41 n. 100.

<sup>91</sup> For example, many cable operators hold licenses under Part 78 of the Commission’s rules for Cable Television Relay Service (“CARS”) stations, which enable them to distribute programming to microwave hubs where it is impossible and too expensive to run cables and cover live events. See *Amendment of Part 101 of the Commission’s Rules to Facilitate the Use of Microwave for Wireless Backhaul and Other Uses and to Provide Additional Flexibility to Broadcast Auxiliary Service and Operational Fixed Microwave Licenses*, WT Docket No. 10-153, Report and Order, Further Notice of Proposed Rulemaking, and Memorandum Opinion and Order, 26 FCC Rcd 11614, 11620, ¶ 10 (2011). See also *Revisions to Broadcast Auxiliary Service Rules in Part 74 and Conforming Technical Rules for Broadcast Auxiliary Service, Cable Television Relay Service and Fixed Services in Parts 74, 78 and 101 of the Commission’s Rules*, ET Docket No. 01-75, Report and Order, 17 FCC Rcd 22979, 22980, n. 1 (2002).

<sup>92</sup> 47 C.F.R. § 25.102(a).

<sup>93</sup> 47 U.S.C. § 573(a)(1); 47 C.F.R. § 76.1502. It is left to the discretion of the LFA whether to require an OVS operator to negotiate a franchise for the service area or to impose no franchise obligation on the OVS operator. See *City of Dallas Texas v. FCC*, 165 F.3d 341 (5th Cir. 1999). The OVS framework was designed to streamline the process of entering local MVPD markets by relieving OVS operators of certain regulatory requirements. Title VI regulations apply somewhat differently to OVS certified providers than they apply to cable operators. Among other things, an open video system’s carriage rates are entitled to a presumption that they are just and reasonable where one or more unaffiliated video programming providers occupy channel capacity on the system at least equal to that of the open video system operator and its affiliates. We are not aware of any OVS operator carrying programming offered by an unaffiliated program packager. Among the rules that apply to open video systems are the

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providers that use spectrum to transmit video programming must comply with the Commission's spectrum licensing policies as well as the appropriate interference and technical rules.<sup>94</sup> The Commission also has the authority to review any business arrangements involving the transfer and control of its licenses or authorizations.<sup>95</sup>

38. *Effective Competition.* LFAs that have certified to regulate rates are permitted to regulate cable operators' basic cable service rates until the Commission has granted a petition for effective competition.<sup>96</sup> A cable operator is subject to effective competition in a local community when one of four conditions is met: (1) fewer than 30 percent of the households subscribe to the operator's cable programming service; (2) the operator and at least one other unaffiliated MVPD provide comparable services to at least 50 percent of the households in the community and at least 15 percent of the community's households subscribe to an MVPD that is not the largest in the area; (3) a municipality offers MVPD service to at least 50 percent of its households; or (4) a local exchange carrier or its affiliate, or an entity using the facilities of a local exchange carrier or its affiliate, offers a comparable MVPD service by means other than DBS to an area that an unaffiliated cable operator also serves.<sup>97</sup> Section 111 of STELAR adds a new provision to Section 623 of the Communications Act requiring the Commission to establish a streamlined process for filing of an effective competition petition for small cable operators, particularly those who serve primarily rural areas.<sup>98</sup>

39. *Program Access.* New MVPD entrants cannot successfully compete in the video marketplace without access to programming. Sections 628(b) and 628(c)(1) of the Act give the Commission broad authority to prevent cable operators from engaging in unfair acts that have the purpose or effect of significantly hindering or preventing a competitive MVPD from providing cable-affiliated, satellite-delivered programming to consumers.<sup>99</sup> Section 628(c)(2) of the Act ensures that non-incumbent MVPDs obtain access to satellite programming affiliated with a cable operator by establishing the minimum requirements for the Commission's program access regulations.<sup>100</sup> In accordance with these statutory directives, the Commission's program access rules prevent a cable operator with an attributable interest in a satellite-delivered programming vendor from improperly influencing the vendor in the sale or delivery of its programming to a competing MVPD. In addition, a cable-affiliated satellite-programming vendor may not discriminate in the price, terms, and conditions of sale for its programming among competing MVPDs.<sup>101</sup> MVPDs may allege violations of the program access rules by initiating an

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Commission's rules governing must-carry, retransmission consent, program access, sports exclusivity, network nonduplication, syndicated exclusivity, and public, educational and governmental ("PEG") access channels. *Id.* When it authorized the OVS framework, Congress abolished the Commission's video dialtone ("VDT") framework under which local exchange carriers ("LECs") previously had offered video services. *See* 47 U.S.C. § 571(a)(3)-(4); *1996 Report*, 12 FCC Rcd at 4395-98 ¶¶ 68-71.

<sup>94</sup> *See 17<sup>th</sup> Mobile Wireless Report*, DA 14-1862.

<sup>95</sup> 47 U.S.C. § 310(d).

<sup>96</sup> 47 U.S.C. § 543(a)(2)(A); 47 C.F.R. §§ 76.905(a), 76.907. LFAs must obtain certification from the Commission prior to regulating the basic service tier. 47 U.S.C. § 543(a)(3)-(4); 47 C.F.R. § 76.910. At a minimum, the basic level of cable service for cable operators subject to rate regulation must include: (1) all commercial and noncommercial local broadcast stations entitled to carriage under the Act's must-carry provisions; (2) any public, educational, and governmental access channels the LFA requires; and (3) any other broadcast station provided to any subscriber. 47 U.S.C. § 543(b)(7)(A).

<sup>97</sup> 47 C.F.R. § 76.905(b).

<sup>98</sup> STELA Reauthorization Act of 2014, Pub. L. No. 113-200 ("STELAR"), § 111, 128 Stat. 2059, 2066 (2014).

<sup>99</sup> 47 U.S.C. §§ 548(b), (c)(1).

<sup>100</sup> 47 U.S.C. § 548(c)(2).

adjudicatory proceeding with the Commission through the filing of a program access complaint.<sup>102</sup> In 2010, the Commission adopted rules preventing cable operators from engaging in unfair acts with respect to terrestrially delivered cable-affiliated programming pursuant to Section 628(b).<sup>103</sup>

40. Pursuant to Section 628(c)(2)(D), the Commission, previously banned any cable operator from entering into an exclusive programming agreement with any cable-affiliated satellite-programming vendor in areas served by a cable operator.<sup>104</sup> Although that prohibition was originally scheduled by statute to expire on October 5, 2002, the Commission, pursuant to the terms of Section 628(c)(5), extended the ban on two separate occasions for five years each, until October 5, 2007 and October 5, 2012, respectively.<sup>105</sup> The Commission declined to extend the prohibition beyond its scheduled October 5, 2012 sunset date, finding a preemptive prohibition was no longer necessary to preserve and protect competition and diversity in the distribution of video programming in light of the fact that a case-by-case approach remained in place to evaluate the impact of individual exclusive contracts.<sup>106</sup>

41. *Program Carriage.* MVPDs must obtain carriage agreements with video programming vendors in order to provide a competitive video service. Section 616 of the Act directs the Commission to regulate the program carriage agreements and related practices between cable operators or other MVPDs and video programming vendors.<sup>107</sup> The Commission's rules prohibit cable operators or other MVPDs from requiring a financial interest in a video programming vendor or obtaining exclusive rights to programming as conditions for carriage.<sup>108</sup> MVPDs also are prevented from discriminating against video programming vendors on the basis of affiliation in the selection, terms, or conditions of carriage if (Continued from previous page)

<sup>101</sup> 47 C.F.R. §§ 76.1001-02. See also *Revision of the Commission's Program Access Rules*, MB Docket No. 12-68, Report and Order, in MB Docket Nos. 12-68, 07-18, 05-192, Further Notice of Proposed Rulemaking, MB Docket No. 12-68, Order on Reconsideration in MB Docket No. 07-29, 27 FCC Rcd 12605 (2012) ("2012 Program Access Order"); *Review of the Commission's Program Access Rules and Examination of Programming Tying Arrangements*, MB Docket No. 07-198, First Report and Order, 25 FCC Rcd 746 (2010) ("2010 Program Access Order"), *aff'd in part and vacated in part sub nom. Cablevision Systems Corp. et al. v. FCC*, 649 F.3d 695 (D.C. Cir. 2011). The Commission's program access rules also apply to common carriers and their affiliates. 47 C.F.R. § 76.1004.

<sup>102</sup> 47 C.F.R. § 76.1003. See also 47 U.S.C. § 548(d); *2012 Program Access Order*, 27 FCC Rcd at 12640-48, ¶¶ 52-64; *2010 Program Access Order*, 25 FCC Rcd at 777-87, ¶¶ 46-57.

<sup>103</sup> *Review of the Commission's Program Access Rules and Examination of Programming Tying Arrangements*, MB Docket No. 07-198, First Report and Order, 25 FCC Rcd 746, 777-78, ¶ 46 (2010) ("2010 Program Access Order"). The United States Court of Appeals for the District of Columbia ("D.C. Circuit") upheld substantially all of this order. *Cablevision Systems Corp. et al. v. FCC*, 649 F.3d 695, 699 (D.C. Cir. 2011). In 2011, the Commission found that MSG and Cablevision violated both Section 628(b) and the Commission's rules when they denied AT&T and Verizon access to the terrestrially delivered HD version of the MSG and MSG+ networks. See *Verizon Tel. Cos. et al.*, Order, 26 FCC Rcd 13145 (MB 2011), *aff'd Verizon Tel. Cos. et al.*, Memorandum Opinion and Order, 26 FCC Rcd 15849 (2011). See also *AT&T Servs. Inc. et al.*, Order, 26 FCC Rcd 13206 (MB 2011), *aff'd AT&T Servs. Inc. et al.*, Memorandum Opinion and Order, 26 FCC Rcd 15871 (2011).

<sup>104</sup> 47 U.S.C. § 548(c)(2)(D); *2012 Program Access Order*, 27 FCC Rcd at 12607-08, ¶ 1.

<sup>105</sup> 47 U.S.C. § 548(c)(5).

<sup>106</sup> *2012 Program Access Order*, 27 FCC Rcd at 12608-10, ¶¶ 2-4. Comcast is subject to heightened program access requirements after its acquisition of NBCU. Under the conditions adopted by the Commission in the *Comcast-NBCU Order*, an MVPD is permitted to seek commercial arbitration with Comcast if negotiations for a Comcast-NBCU programming network fail to produce a mutually acceptable set of price, terms, and conditions. *Comcast-NBCU Order*, 26 FCC Rcd at 4358, App. A, § II.

<sup>107</sup> 47 U.S.C. § 536. Congress enacted Section 616 after determining that some cable operators required non-affiliated programmers to give them exclusive rights to their programming or provide them with a financial interest as a condition for carriage. See *15<sup>th</sup> Report*, 28 FCC Rcd at 10520, ¶ 47 n. 123.

<sup>108</sup> 47 C.F.R. § 76.1301(a)-(b).

the effect of such conduct is to unreasonably restrain the ability of an unaffiliated video programming vendor to compete fairly.<sup>109</sup> An aggrieved MVPD or video programming vendor may file a complaint for alleged violations.<sup>110</sup>

42. The Commission released an order in 2011 streamlining the program carriage complaint process.<sup>111</sup> In particular, this order codified the requirements for establishing a *prima facie* program carriage violation; established deadlines for action by the Media Bureau and Administrative Law Judges in response to a complaint; extended the deadline for a defendant to respond to a complaint; and implemented a process for the Media Bureau to consider requests seeking a temporary standstill of an existing programming contract pending the resolution of a complaint.<sup>112</sup> The Commission also issued a

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<sup>109</sup> 47 C.F.R. § 76.1301(c).

<sup>110</sup> 47 C.F.R. § 76.1302(a). In July 2012, the Commission affirmed an Administrative Law Judge's conclusion that Comcast violated Section 616 of the Act and Section 76.1301(c) of its rules by discriminating against the Tennis Channel on the basis of affiliation. The Commission ordered Comcast to carry the Tennis Channel on the same distribution tier as its affiliated networks, the Golf Channel and Versus (now the NBC Sports Network). *Tennis Channel, Inc., Complainant v. Comcast Cable Communications, LLC, Defendant*, MB Docket No. 10-204, Memorandum Opinion and Order, 27 FCC Rcd 8508, 8519, 8543, ¶¶ 27, 92 (2012). Comcast appealed the Commission's decision to the D.C. Circuit. On May 28, 2013, the D.C. Circuit overturned the Commission's decision on evidentiary grounds, finding that the record evidence did not establish that affiliation had played a role in the level of carriage that Comcast had provided Tennis Channel. *See Comcast Cable Communications, LLC v. FCC*, 717 F.3d 982, 987 (D.C. Cir. 2013). The D.C. Circuit denied the Tennis Channel's request for an *en banc* review of the decision in September 2013. *See Comcast Cable Communications, LLC v. FCC*, No. 12-1337, 2013 WL 5610410 (D.C. Cir. 2013). Tennis Channel appealed the D.C. Circuit's decision to the Supreme Court, which declined to review the case in February 2014. *See Tennis Channel, Inc. v. Comcast Cable Communications, LLC*, 134 S. Ct. 1287 (2014). In March 2014, Tennis Channel asked the Commission to reopen the proceeding to permit additional briefing and the submission of additional evidence to allow Tennis Channel to attempt to demonstrate once again that Comcast's carriage decision was unlawfully discriminatory. *See Tennis Channel, Inc., Complainant v. Comcast Cable Communications, LLC, Defendant*, MB Docket No. 10-204, CSR-8258-P, Petition for Further Proceedings and Reaffirmation of Original Decision, (filed March 11, 2014). On January 27, 2015, the Commission denied the petition and the Tennis Channel's program carriage complaint. *See Tennis Channel, Inc., Complainant v. Comcast Cable Communications, LLC, Defendant*, MB Docket No. 10-204, CSR-8258-P, Order, FCC 15-7 (rel. Jan. 28, 2015).

In addition, in October 2011, the Game Show Network ("GSN") filed a program carriage complaint against Cablevision alleging that the cable operator violated the anti-discrimination provision of the program carriage rules when it repositioned GSN from the expanded basic tier to a sports tier. GSN argues that this move separates it from its primarily female audience and is advantageous for WE tv and Wedding Central, two networks affiliated with Cablevision. *Game Show Network, LLC v. Cablevision Systems Corp.*, Program Carriage Complaint, CSR-8529-P (filed Oct. 12, 2011). The Media Bureau issued a Hearing Designation Order for the complaint in May 2012. *Game Show Network, LLC v. Cablevision Systems Corp.*, MB Docket No. 12-122, Hearing Designation Order and Notice of Opportunity for Hearing for Forfeiture, 27 FCC Rcd 5113 (MB 2012). The parties are currently in the discovery phase of the case. *See Game Show Network, LLC v. Cablevision Systems Corp.*, MB Docket No. 12-122, Order, FCC 14M-13 (ALJ, rel. Apr. 17, 2014). On June 13, 2014, the parties submitted a joint status report informing the Commission that discovery for the case will likely end in early 2015. *See Game Show Network, LLC v. Cablevision Systems Corp.*, MB Docket No. 12-122, Joint Status Report (filed June 13, 2014). On February 10, 2015, procedural and trial dates were announced, with the trial set to start on June 1, 2015. *See Game Show Network, LLC v. Cablevision Systems Corp.*, MB Docket No. 12-122, Order, FCC 15M-6 (ALJ, rel. Feb. 10, 2015).

<sup>111</sup> *Revision of the Commission's Program Carriage Rules; Leased Commercial Access; Development of Competition and Diversity in Video Programming Distribution and Carriage*, MB Docket No. 11-131, MB Docket No. 07-42, Second Report and Order and Notice of Proposed Rulemaking, 26 FCC Rcd 11494 (2011) ("2011 Program Carriage Order and NPRM").

<sup>112</sup> *Id.* at 11495-96, 11500-01, ¶¶ 2, 8.

Notice of Proposed Rulemaking requesting comment on additional proposed revisions to the procedural and substantive program carriage rules to assist in the resolution of carriage disputes.<sup>113</sup>

43. Various parties appealed the Commission's 2011 *Program Carriage Order and NPRM* to the U.S. Court of Appeals for the Second Circuit ("Second Circuit"). In September 2013, the Second Circuit ruled that the program carriage regime the Commission adopted did not violate the First Amendment because it was narrowly tailored and serves important government interests, promoting competition and diversity in the industry.<sup>114</sup> Nevertheless, the court vacated the Commission's temporary standstill provision, finding that the Commission had not satisfied notice and comment requirements of the Administrative Procedure Act.<sup>115</sup>

44. *Retransmission Consent and Must Carry*. The ability of MVPDs to access local broadcast programming impacts their entry into the video services marketplace.<sup>116</sup> In 1992, Congress enacted Sections 325, 614, and 615 of the Act to facilitate cable operators' carriage of local broadcast television stations<sup>117</sup> and subsequently enacted a similar carriage regime for DBS providers in 1999.<sup>118</sup> Pursuant to Section 325 of the Act, MVPDs may not retransmit a local broadcaster's signal without the station's express permission.<sup>119</sup> Cable operators are required to carry local television stations in every market they serve unless a station elects retransmission consent. DBS operators need not carry any local television signals. But where a DBS operator chooses to carry any such station, it must carry all stations in that market ("carry one, carry all") except for those stations electing retransmission consent.<sup>120</sup> Under this regime, broadcasters maintain control over their signals. And commercial broadcasters electing retransmission consent may request compensation from MVPDs for the carriage of their signals.<sup>121</sup>

45. In local television markets, as defined by The Nielsen Company's ("Nielsen's") designated market areas ("DMAs"),<sup>122</sup> commercial television stations must select between the right to

<sup>113</sup> *Id.* at 11496-97, 11521-22, ¶¶ 3, 37.

<sup>114</sup> *Time Warner Cable Inc. v. FCC*, 729 F.3d 137, 171 (2d Cir. 2013).

<sup>115</sup> *Id.*

<sup>116</sup> For a complete description of the retransmission consent and must-carry provisions, see *In-State Broadcast Programming: Report to Congress Pursuant to Section 304 of the Satellite Television Extension and Localism Act of 2010*, MB Docket No. 10-238, Report, 26 FCC Rcd 11919 (MB 2011) ("STELA Report"); *Retransmission Consent and Exclusivity Rules: Report to Congress Pursuant to Section 208 of the Satellite Home Viewer Extension and Reauthorization Act of 2004*, MB Docket No. 05-28 (Sept. 8, 2005), [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-260936A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-260936A1.doc) ("SHVERA Report").

<sup>117</sup> 47 U.S.C. §§ 325(b), 534, 535.

<sup>118</sup> The Satellite Home Viewer Improvement Act of 1999, Pub. L. No. 106-113, 113 Stat. 1501, 1501A-526 to 1501A-545 (1999) ("SHVIA"). Section 101 of STELAR extended authority under Section 325(b) of the Communications Act to December 31, 2019. STELAR, § 101, 128 Stat. 2060.

<sup>119</sup> 47 U.S.C. § 325(b).

<sup>120</sup> 47 U.S.C. § 338(a)(1); 47 C.F.R. § 76.66.

<sup>121</sup> See *STELA Report*, 26 FCC Rcd at 11922-23, ¶ 7.

<sup>122</sup> A DMA is a Nielsen-defined television market consisting of a unique group of counties. The United States is divided into 210 DMA markets. Nielsen identifies television markets by placing each U.S. county (except for certain counties in Alaska) in a market based on measured viewing patterns and by MVPD distribution. Typically, each U.S. county is assigned to the one market whose stations receive the preponderance of the audience in that county. In a few cases where a county is large and viewing patterns differ significantly between parts of the county, a portion of the county is assigned to one television market and another portion of the county is assigned to another market. Several counties in Alaska, however, are not assigned to any DMA. See *STELA Report*, 26 FCC Rcd at 11921, ¶ 5 & n. 10.

grant retransmission consent or the right to mandatory carriage every three years.<sup>123</sup> If a station selects retransmission consent, the broadcaster and MVPD negotiate a carriage agreement; the carriage agreement may include monetary or other types of compensation in return for the right to carry the broadcast signal.<sup>124</sup> Where a station selects must carry, it is generally entitled to carriage but it is prohibited from receiving compensation.<sup>125</sup> Qualified local noncommercial educational (“NCE”) stations have a right to mandatory carriage within the same market, but do not have retransmission consent rights.<sup>126</sup> Cable operators also are permitted to negotiate for retransmission consent with any other broadcast station they seek to carry irrespective of the station’s television market.<sup>127</sup>

46. MVPDs and television broadcast stations are required by the Communications Act and the Commission’s rules to negotiate retransmission consent in good faith.<sup>128</sup> Simply put, this requires the parties to such negotiations to comply with eight objective negotiating standards, the violation of which constitutes a *per se* failure to negotiate in good faith.<sup>129</sup> Overlaying the *per se* standards is a totality of the circumstances test.<sup>130</sup> In March 2014, the Commission issued a Report and Order revising several provisions of its retransmission consent rules.<sup>131</sup> Specifically, the Commission determined that joint

<sup>123</sup> 47 U.S.C. § 325(b)(3)(B); 47 C.F.R. §§ 76.56(b), 76.64. Section 614(h)(1)(C), 47 U.S.C. § 534(h)(1)(C), provides that additional communities can be included or excluded from these markets for cable carriage. *See also* 47 C.F.R. § 76.59. Section 102 of STELAR adds a similar provision for the modification of television markets for application of must-carry and retransmission consent for satellite carriers to further consumer access to relevant television programming. STELAR, § 102, 128 Stat. 2060-62. In addition, Section 109 of STELAR requires the Commission to submit a Report to Congress on DMAs no later than 18 months after enactment of the STELAR that includes information on the extent to which consumers have access to broadcast stations located outside their local market and whether there are alternatives to the use of DMAs to define markets that would provide more programming options for consumers. STELAR, § 102, 128 Stat. 2060-62.

<sup>124</sup> 47 U.S.C. § 325(b)(3)(C); 47 C.F.R. § 76.64. *See also STELA Report*, 26 FCC Rcd at 11923, ¶ 8.

<sup>125</sup> 47 U.S.C. § 614(b)(1); 47 C.F.R. § 76.60.

<sup>126</sup> 47 U.S.C. § 325(b)(2)(A).

<sup>127</sup> 47 U.S.C. § 325(b); 47 C.F.R. § 76.64. These carriage arrangements might be limited though by other contractual restrictions, such as network affiliation arrangements, or by the Commission’s network non-duplication and syndicated exclusivity rules. *See infra*, ¶¶ 50, 54. *See also STELA Report*, 26 FCC Rcd at 11923, n. 22.

<sup>128</sup> 47 C.F.R. § 325(b)(3)(C)(ii) & (iii); 47 C.F.R. § 76.65.

<sup>129</sup> 47 C.F.R. § 76.65(b)(1). The following actions or practices violate a broadcast television station's or multichannel video programming distributor's (the “Negotiating Entity”) duty to negotiate retransmission consent agreements in good faith: (i) Refusal by a Negotiating Entity to negotiate retransmission consent; (ii) Refusal by a Negotiating Entity to designate a representative with authority to make binding representations on retransmission consent; (iii) Refusal by a Negotiating Entity to meet and negotiate retransmission consent at reasonable times and locations, or acting in a manner that unreasonably delays retransmission consent negotiations; (iv) Refusal by a Negotiating Entity to put forth more than a single, unilateral proposal; (v) Failure of a Negotiating Entity to respond to a retransmission consent proposal of the other party, including the reasons for the rejection of any such proposal; (vi) Execution by a Negotiating Entity of an agreement with any party, a term or condition of which, requires that such Negotiating Entity not enter into a retransmission consent agreement with any other television broadcast station or multichannel video programming distributor; (vii) Refusal by a Negotiating Entity to execute a written retransmission consent agreement that sets forth the full understanding of the television broadcast station and the multichannel video programming distributor; and (viii) Joint negotiation.

<sup>130</sup> 47 C.F.R. § 76.65(b)(2) (under this test, an MVPD or a television broadcast station may present facts to the Commission which, even though they do not violate the *per se* standards, constitute conduct so egregious as to violate a party’s duty to negotiate retransmission consent in good faith).

<sup>131</sup> *Amendment of the Commission’s Rules Related to Retransmission Consent*, MB Docket No. 10-71, Report and Order and Further Notice of Proposed Rulemaking, 29 FCC Rcd 3351 (2014) (“*Retransmission Consent Order & FNPRM*”). In May 2014, Sinclair petitioned the U.S. Court of Appeals for the District of Columbia to review this decision. But the passage of STELAR in December 2014 mooted this lawsuit, and Sinclair filed a motion in the

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negotiation by stations not commonly owned and ranked among the top four stations in a market is a violation of the stations' statutory duty to negotiate retransmission consent agreements in good faith.<sup>132</sup> The Commission also concluded that its rule barring joint negotiations was effective on the adoption date of the Report and Order regardless of whether applicable stations were subject to existing agreements obligating them to negotiate retransmission consent agreements jointly.<sup>133</sup> Section 103 of STELAR further extends the prohibition against joint retransmission consent negotiations to all broadcast stations in the same local market unless the stations are directly or indirectly under common control.<sup>134</sup>

47. Many non-incumbent MVPDs ask the Commission to further reform the retransmission consent framework. For instance, AT&T and Verizon request that the Commission initiate comprehensive reforms to provide balance to retransmission consent negotiations and promote competition in the broadcast programming market. Among other things, they advocate for strengthening the requirements of good faith negotiations and adopting procedures to mitigate the possibility of retransmission consent negotiations disrupting service to consumers.<sup>135</sup> Similarly, CenturyLink encourages the Commission to modify its retransmission consent regulations to promote competition and consumer choice in the video delivery market. CenturyLink argues that the current regime provides broadcasters with significantly more market power than MVPDs, which especially harms small competitive video providers.<sup>136</sup>

48. Rural video providers assert that they face consistent challenges operating under the existing retransmission consent rules. WTA indicates that rural video providers are forced to pay higher retransmission consent rates than competing national video distributors and that broadcasters are able to offer take-it-or-leave-it prices.<sup>137</sup> NTCA, WTA, and ITTA state further that broadcast networks engage in other anticompetitive practices, including tying and tiering, forcing rural video providers to sell larger video packages at higher prices to their subscribers than they would otherwise.<sup>138</sup> NTCA also notes that some programmers require rural providers to pay an additional fee based on the number of broadband subscribers they serve even if those customers do not subscribe to video services.<sup>139</sup> ITTA explains that broadcasters engaged in a retransmission consent dispute with a video provider have begun to employ a new tactic of blocking the video provider's broadband subscribers – including non-video subscribers – access to the broadcaster's online content.<sup>140</sup> Therefore, NTCA, WTA, and ITTA urge the Commission to eliminate what they characterize as regulatory advantages to broadcasters.<sup>141</sup> All three support

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same month to voluntarily withdrawal it. The court granted the motion on December 17, 2014. See *Sinclair Broadcast Group, Inc. v. FCC*, No. 14-1088 (D.C. Cir.).

<sup>132</sup> *Retransmission Consent Order & FNPRM*, 29 FCC Rcd at 3354-55, ¶ 6.

<sup>133</sup> *Id.*

<sup>134</sup> STELAR, § 103, 128 Stat. 2062.

<sup>135</sup> AT&T Comments at 3-7; Verizon Comments at 9-12; Verizon Reply at 7-8.

<sup>136</sup> CenturyLink Comments at 4-7.

<sup>137</sup> WTA Comments at 3-4.

<sup>138</sup> NTCA Comments at 12-13, 15; WTA Comments at 4; Letter from Micah M. Caldwell, V.P., Regulatory Affairs, Independent Telephone & Telecommunications Alliance, to Marlene H. Dortch, Secretary, FCC (filed June 9, 2014) ("ITTA ExParte") at 3.

<sup>139</sup> NTCA Comments at 13-14.

<sup>140</sup> ITTA Ex Parte at 3-4.

<sup>141</sup> NTCA Comments at 7-9; WTA Comments at 5; ITTA Ex Parte at 5-6.

strengthening the good faith requirements, adopting a standstill provision, and allowing rural video providers to carry broadcast stations from neighboring DMAs if programming rates are lower.<sup>142</sup>

49. NAB contends that retransmission consent compensation defrays the high costs associated with producing local news and other programming options and allows broadcasters to provide free locally oriented programming and services.<sup>143</sup> NAB believes that retransmission consent revenue will continue to play a critical role in preserving local television services, including news, given the importance of this revenue to stations' financial viability.<sup>144</sup> NAB also argues that retransmission consent fees are highly unlikely to be the primary factor driving consumer subscription fees given the increasing cost of regional sports programming and fees paid to basic cable networks.<sup>145</sup> NAB further argues that the Commission lacks statutory authority to regulate the prices, terms, and conditions of retransmission consent even as mandatory interim measures during disputes. NAB further contends that limiting the ability of television station owners to control the video content on their websites is similarly beyond the Commission's authority.<sup>146</sup> Finally, in its comments, WGAW advocates in favor of the maintaining the existing retransmission consent rules stating that the rules are a vital tool for addressing MVPD market power.<sup>147</sup>

50. *Exclusivity Rules.* MVPDs must abide by the Commission's rules protecting the exclusive distribution rights of local broadcast stations.<sup>148</sup> For cable operators, the Commission's network non-duplication rules permit a local broadcast station to request the blackout of duplicated programming in the local station's zone of protection when carried on another station imported by the operator.<sup>149</sup> Similarly, the Commission's syndicated exclusivity rules give a local broadcaster the right to request the blackout of its exclusive syndicated programming when that programming is carried on another station imported by a cable operator within its zone of protection.<sup>150</sup> Prior to September 2014, the Commission's sports blackout rules protected a sports team's or sports league's distribution rights to a live sporting event occurring in a local market. The rule prevented a cable operator from providing the live sporting event on a distant signal in a market where the game is blacked out on the local broadcast station.<sup>151</sup> As mandated by Congress, the Commission's network non-duplication and syndicated exclusivity apply to satellite carriers as did the sports blackout rule prior to its repeal.<sup>152</sup>

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<sup>142</sup> NTCA Comments at 9-11; WTA Comments at 6; ITTA Ex Parte at 5-6.

<sup>143</sup> NAB Comments at 26.

<sup>144</sup> *Id.* at 26-27.

<sup>145</sup> NAB Reply at 2-5.

<sup>146</sup> *Id.* at 5-8.

<sup>147</sup> WGAW Comments at 24.

<sup>148</sup> For a more detailed description of these rules, *see generally* SHVERA Report, *supra*, n. 116.

<sup>149</sup> 47 C.F.R. § 76.92. For purposes of this rule, a broadcast station's zone of protection is 35 miles (55 miles in smaller markets). 47 C.F.R. § 73.685(m).

<sup>150</sup> 47 C.F.R. § 76.101. For purposes of this rule, a broadcast station has a 35-mile geographic zone of protection. 47 C.F.R. § 73.685(m).

<sup>151</sup> 47 C.F.R. § 76.111.

<sup>152</sup> 47 U.S.C. § 339(b); 47 C.F.R. §§ 76.122-23, 76.127. In 1999, Congress directed the Commission to extend the network non-duplication and syndicated exclusivity rules to satellite carriers, but only with respect to the retransmission of nationally distributed superstations. It also required the Commission to extend the sports blackout rules to the satellite carriage of nationally distributed superstations and network stations. *See* SHVIA, Pub. L. No. 106-113, 113 Stat. 1501A-534.

51. In December 2013, the Commission released a Notice of Proposed Rulemaking seeking to eliminate the sports blackout rules.<sup>153</sup> The Commission explained that changes in the sports industry over the last four decades have raised questions about whether the sports blackout rules are still needed to ensure the availability of sports programming to the general public. The Commission requested comment on its proposal.<sup>154</sup>

52. In September 2014, the Commission adopted a Report and Order eliminating the sports blackout rules.<sup>155</sup> The Commission found that the sports industry has evolved dramatically over the last 40 years, and in light of these substantial changes, concluded that the sports blackout rules are no longer needed to ensure that sports programming is widely available to television viewers.<sup>156</sup> The Commission noted that the sports blackout rules have reinforced the sports leagues' private blackout policies since 1975, but today, the rules have little relevance for sports other than professional football. With respect to professional football, the Commission stated that television revenues have replaced gate receipts as the primary source of revenue for NFL teams.<sup>157</sup>

53. The Commission further concluded that elimination of the sports blackout rules serves the public interest by removing unnecessary regulation and also removing regulatory reinforcement of the NFL's blackout policy.<sup>158</sup> The Commission acknowledged that the NFL and any other sports league may choose to continue their private blackout policies, but they will no longer be entitled to additional protections under the Commission's rules. Instead, the sports league must rely on the same processes available to any other entities that wish to protect their distribution rights in the private marketplace.<sup>159</sup> The Commission also concluded that repeal of the sports blackout rules will not adversely impact broadcasters, consumers, or local businesses.<sup>160</sup>

54. The Commission has also sought comment on the elimination of the network non-duplication and syndicated exclusivity rules as they apply to cable.<sup>161</sup> In March 2014, the Commission requested comment on how the elimination of the exclusivity rules would impact all interested parties, including broadcasters, MVPDs, program suppliers, and consumers.<sup>162</sup> Many MVPDs support the Commission's proposal to eliminate the network non-duplication and syndicated exclusivity rules.<sup>163</sup> These commenters argue for the elimination of these rules, contending that they insulate broadcasters from market forces and lead to higher rates, less competition and diminished broadband investment.<sup>164</sup> In

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<sup>153</sup> See *Commission Seeks Comment on Petition for Rulemaking Seeking Elimination of the Sports Blackout Rule*, MB Docket No. 12-3, Public Notice, 27 FCC Rcd 260 (MB 2012).

<sup>154</sup> *Sports Blackout Rules*, MB Docket No. 12-3, Notice of Proposed Rulemaking, 28 FCC Rcd 17214, 17214-15, ¶ 1 (2013).

<sup>155</sup> *Sports Blackout Rules*, MB Docket No. 12-3, Report and Order, 29 FCC Rcd 12053 (2014). The elimination of the sports blackout rules is effective as of November 24, 2014. See *Sports Blackout Rules*, 79 Fed. Reg. 63,547, 63,547 (Oct. 24, 2014).

<sup>156</sup> *Id.* at ¶¶ 1, 6, 12.

<sup>157</sup> *Id.* at ¶¶ 1, 12-19.

<sup>158</sup> *Id.* at ¶¶ 2, 6, 27-30.

<sup>159</sup> *Id.* at ¶¶ 2, 6, 27-30.

<sup>160</sup> *Id.* at ¶¶ 39-44.

<sup>161</sup> See *Retransmission Consent NPRM*, 26 FCC Rcd at 2740-43, ¶¶ 42-45.

<sup>162</sup> *Retransmission Consent Order & FNPRM*, 28 FCC Rcd at 3390-96, ¶¶ 64-73.

<sup>163</sup> See e.g., NTCA Comments at 10-11; WTA Comments at 3; Century Link at 4-5; AT&T Comments at 5-6; Verizon Comments at 10-11; ITTA Ex Parte at 5.

<sup>164</sup> See, e.g., NTCA Comments at 10; Century Link at 4-5; AT&T Comments at 5-6; Verizon Comments at 11.

response, NAB claims that the network non-duplication and syndicated exclusivity rules are an essential component of a competitive television marketplace.<sup>165</sup> Among other things, NAB argues that the Commission does not have authority to eliminate the rules and that elimination of the rules would deter investment in broadcast content – especially local content – as well as skew the competitive marketplace for programming distribution rights.<sup>166</sup> In addition, several broadcast networks and their affiliates claim that repeal of the exclusivity rules would be inconsistent with the copyright and communications structure enacted by Congress and explain that the rules are needed to ensure that local television stations are able to compete fairly and maximize the value of their programming.<sup>167</sup>

55. *Ownership Limits.* Section 613(f) of the Act requires the Commission to establish reasonable limits on the number of subscribers a cable operator may serve nationwide (“horizontal” limit) and the number of channels a cable operator may dedicate to its affiliated programming networks (“vertical” limit).<sup>168</sup> Although the Commission adopted rules placing limitations on the horizontal and vertical ownership of cable operators,<sup>169</sup> the D.C. Circuit has repeatedly struck them down.<sup>170</sup>

56. *Public Interest Programming.* Local franchising authorities may, pursuant to Sections 611 and 621 of the Act, require cable operators to provide both channel capacity and certain types of financial support to public, educational, and governmental (“PEG”) channels.<sup>171</sup> Cable operators also are obligated to carry any PEG channels on their basic service tier.<sup>172</sup> Some state video franchising laws, however, have removed or reduced the PEG requirements typically found in local franchising agreements; this has led to a decline in PEG funding and support.<sup>173</sup>

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<sup>165</sup> NAB Comments at 1, MB Docket No. 10-71 (filed June 26, 2014).

<sup>166</sup> *Id.* at 6-13, 15-29.

<sup>167</sup> *See, e.g.*, NBC Television Affiliates Comments at 7-12, MB Docket No. 10-71 (filed June 26, 2014); ABC Television Affiliates Association Comments at 4-12, 14-18, MB Docket No. 10-71 (filed June 26, 2014); CBS Television Affiliates Association Comments at 4-12, 14-18, MB Docket No. 10-71 (filed June 26, 2014); CBS Corp. Comments at 2-4, 8-12, MB Docket No. 10-71 (filed June 26, 2014); NBCUniversal Comments at 2-4, MB Docket No. 10-71 (filed June 26, 2014).

<sup>168</sup> 47 U.S.C. § 533(f).

<sup>169</sup> *See Implementation of Sections 11 and 13 of the Cable Television Consumer Protection and Competition Act of 1992 Horizontal and Vertical Ownership Limits*, MM Docket No. 92-264, Second Report and Order, 8 FCC Rcd 8565, 8567, ¶¶ 3-4 (1993). *See also* 47 C.F.R. §§ 76.503(a), 76.504(a)-(b).

<sup>170</sup> *See Time Warner Entm’t Co. v. FCC*, 240 F.3d 1126, 1136, 1139 (D.C. Cir. 2001). The Commission’s third attempt in 2008 to implement a horizontal limit preventing an individual cable operator from serving more than 30 percent of MVPD subscribers nationwide was struck down by the D.C. Circuit. *See Comcast Corp. v. FCC*, 579 F.3d 1, 10 (D.C. Cir. 2009).

<sup>171</sup> 47 U.S.C. §§ 531(a)-(b), 541(a)(4)(B). Comcast is subject to heightened PEG requirements after its acquisition of NBCU. The Commission reaffirmed the importance of PEG programming in its *Comcast-NBCU Order* and imposed requirements on Comcast to protect the public interest as well as preserve diversity and localism in the video services marketplace. *Comcast-NBCU Order*, 26 FCC Rcd at 4326, ¶ 213. The conditions prohibit Comcast from migrating PEG channels to a digital tier until all channels are converted to a digital format. They require carriage of all PEG channels on Comcast’s digital starter tier. Comcast may not change the method by which it delivers PEG channels if the change would result in the material degradation of signal quality or impair viewer reception of PEG channels. *Id.* at 4326-27, 4376-77, ¶ 214 & App. A, § XIV. Comcast further agreed to develop a platform for hosting PEG content On Demand and On Demand Online within three years of closing the transaction. *Id.* at 4327, 4376-77, ¶ 215 & App. A, § XIV.

<sup>172</sup> 47 U.S.C. § 543(b)(7)(A)(ii); 47 C.F.R. § 76.901(a).

<sup>173</sup> *See 15<sup>th</sup> Report*, 28 FCC Rcd at 10525, ¶ 58.

57. With respect to DBS MVPDs, in 1992, Congress established a public interest programming requirement for DBS operators. The statute requires DBS operators to dedicate between four and seven percent of their capacity to public interest programming.<sup>174</sup> The Commission's rules implementing the statute require DBS operators to reserve four percent of their channel capacity to qualified programmers providing "noncommercial programming of an educational or informational nature."<sup>175</sup> DIRECTV reports carrying several channels of public interest programming.<sup>176</sup> DISH Network reports providing 18 channels of public interest programming.<sup>177</sup>

58. *Access to Multiple Dwelling Units.* The Commission's rules prevent cable operators from enforcing or entering into exclusive contracts for video service delivery with multiple dwelling units ("MDUs") and other centrally managed residential real estate developments.<sup>178</sup> The Commission determined that this type of exclusivity was a barrier to broadband deployment and entry into the MVPD marketplace, as well as an unfair act under Section 628(b).<sup>179</sup>

59. *Over-the-Air Reception Devices.* Pursuant to the Act, the Commission has adopted a rule preempting restrictions that impair viewers from receiving video services using over-the-air reception

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<sup>174</sup> 47 U.S.C. § 335(b)(1)(A). Qualified DBS providers may alter dedicated capacity to between 3.5 and 7 percent if they provide state public affairs networks to their subscribers in at least 15 states. 47 U.S.C. § 335(b)(1)(B).

<sup>175</sup> 47 C.F.R. § 25.701(f). In order to qualify, programmers need to be: (1) organized for a noncommercial, nonprofit purpose; (2) a national educational programming supplier; and (3) responsible for 50 percent of the direct costs the DBS provider occurs in making the programming available. *See id.* *See also 15<sup>th</sup> Report*, 28 FCC Rcd at 10526, ¶ 62 n. 185. In May 2014, Black Television News Channel filed a request for a three-year waiver of the rule requiring programming carried on DBS public interest channels to be commercial-free. The Media Bureau is currently seeking comment on this request. *See Request for Comment on Black Television News Channel's Request for Temporary Waiver of Ban on Advertising for DBS Public Interest Set-Aside Channels*, MB Docket No. 14-77, Public Notice, 29 FCC Rcd 5207 (MB 2014).

<sup>176</sup> Among others, DIRECTV offers the following channels: World Harvest Television, C-SPAN 2, Daystar, Trinity Broadcasting Network, BYU TV, LINK TV, NASA TV, TCT, EWTN, HITN, NRB, MHz, CTN, Gem Net, Hope Channel, JLTV, Enlace, Golden Eagle Broadcasting, Free Speech TV, GOD TV, BabyFirstTV, and numerous local PBS channels. DIRECTV Comments at 19.

<sup>177</sup> DISH Network carries the following public interest programming channels: 3ABN, Alma Vision, Baby First, BYU TV, C-SPAN, Christian Television Network, Classic Arts Showcase, Enlace, EWTN, Free Speech TV, HITN, Impact Network, Kids & Teens Television, LINK/KCET – Community Television, NASA Channel, Pentagon Channel, Trinity Broadcasting Network, and V-Me. DISH Network provided updated information to Media Bureau staff on June 30, 2014.

<sup>178</sup> 47 C.F.R. § 76.2000. The rule applies to cable operators, common carriers, and OVS. *Id.* *See also Lansdowne on the Potomac Homeowners Ass'n, Inc. v. OpenBand at Lansdowne, LLC*, 713 F.3d 187, 207-08 (4th Cir. 2013) (affirming the district court's judgment that OpenBand violated the Commission's rule banning cable operators from entering into exclusive agreements with MDUs); *Exclusive Service Contracts for Provision of Video Services in Multiple Dwelling Units and Other Real Estate Developments*, MB Docket No. 07-51, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 20235, 20235-36, 20238, 20251, ¶¶ 1-2, 7, 30 (2007) ("MDU Order and FNPRM"), *aff'd sub nom. Nat'l Cable & Television Ass'n v. FCC*, 567 F.3d 659 (2009). The Commission has determined though that MVPDs are permitted to use bulk billing arrangements – those arrangements in which one MVPD offers video service to every resident of an MVPD at a substantial discount than what each individual resident would pay if he or she contracted with the MVPD individually. *Exclusive Service Contracts for Provision of Video Services in Multiple Dwelling Units and Other Real Estate Developments*, MB Docket No. 07-51, Second Report and Order, 25 FCC Rcd 2460, 2463-71, ¶¶ 10-28 (2010). The Commission has also determined that MVPDs are allowed to enter exclusive marketing agreements with MDU owners. *Id.* at 2471-73, ¶¶ 29-37.

<sup>179</sup> *See MDU Order and FNPRM*, 22 FCC Rcd at 20248-49, ¶¶ 26-27. The pending Further Notice of Proposed Rulemaking seeks comment on extending the MDU exclusivity ban to DBS providers, PCOs, and other MVPDs not subject to Section 628. *See id.* at 20264, ¶¶ 61-62.

devices (“OTARD”).<sup>180</sup> The rule prohibits restrictions impairing the installation, maintenance, or use of antennas to receive video programming on property within the exclusive use or control of the antenna user.<sup>181</sup> Specifically, the rule bars restrictions that: (1) unreasonably delay or prevent installation, maintenance, or use; (2) unreasonably increase the cost of installation, maintenance, or use; or (3) preclude reception or transmission of an acceptable quality signal.<sup>182</sup>

**(ii) Market Conditions Influencing Entry**

60. A number of market conditions, in addition to regulatory conditions, may influence if and when entry occurs. Economies of scale, industry profit margins, capital requirements, first-mover advantages, and the reaction of competitors to new entrants all affect a firm’s ability and incentive to enter into a market. Economies of scale appear to produce cost advantages, especially with respect to the cost of acquiring programming and consumer premise equipment,<sup>183</sup> and thus may play a major role in profitability and the willingness to enter the MVPD industry. If current industry profit margins are high, this could entice entry by a firm with economies of scale, while lower profit margins may indicate an already highly competitive market with efficiently operating competitors, which would likely deter entry.<sup>184</sup> Capital requirements, especially large fixed costs, may also influence if and when MVPD entry takes place. The expected reaction from existing competitors, especially in terms of price competition, also influences entry.<sup>185</sup> Each of these elements is discussed in turn below.

61. *Economies of Scale.* The term “economies of scale” refers to the situation where there is a decline in unit costs as the total number of units produced per period increases. Economies of scale may deter entry if new MVPDs must enter the market at a large scale in order to obtain cost advantages similar to those enjoyed by incumbent MVPDs.<sup>186</sup> SNL Kagan maintains that greater scale gives MVPDs more negotiating clout to control programming costs.<sup>187</sup> According to SNL Kagan, the largest MVPDs have achieved lower programming costs.<sup>188</sup> Statements from MVPDs also suggest that scale economies affect the cost of acquiring programming and consumer premises equipment, such as set-top boxes. For example, DIRECTV explains that its large subscriber base provides the opportunity to obtain programming on favorable terms, secure unique and exclusive programming, and achieve economies of scale in equipment purchasing.<sup>189</sup> ACA claims that nearly all smaller and medium-sized MVPDs

<sup>180</sup> 47 U.S.C. § 303 note. See also Telecommunications Act of 1996, Pub. L. No. 104-04, § 207, 110 Stat. 56, 114 (1996) (“1996 Act”).

<sup>181</sup> 47 C.F.R. § 1.4000(a)(1). The rule applies to direct broadcast satellite antennas that are one meter or less in diameter, or any size in Alaska; antennas that are one meter or less in diameter or diagonal measurement and are designed to receive or transmit either video programming services through multipoint distribution services, including multichannel multipoint distribution services, instructional television fixed services, and local multipoint distribution services, or fixed wireless signals other than via satellite; and antennas designed to receive television broadcast signals. 47 C.F.R. § 1.4000(a)(1)(i)-(iii). The antenna user also must have a direct or indirect ownership interest, or leasehold interest, in the property. 47 C.F.R. § 1.4000(a)(1). DIRECTV points out the OTARD rules protect Alaskan customers’ right to larger receiver antenna sizes, but the rules do not cover Hawaiian customers, who are unable to receive reliable service due to the smaller dish sizes. It argues that the OTARD rules should be adjusted to include Hawaiian subscribers. DIRECTV Comments at 20-21.

<sup>182</sup> 47 C.F.R. § 1.4000(a)(3)(i)-(iii).

<sup>183</sup> For a discussion of market-based conditions that influence entry, see Porter at 7-17.

<sup>184</sup> See, e.g., *Horizontal Merger Guidelines*, § 9.2 (“Entry is more likely if it is profitable....”).

<sup>185</sup> Porter at 17-23.

<sup>186</sup> *Id.* at 7-9.

<sup>187</sup> SNL Kagan, *Cable TV Investor: Deals & Finance*, Dec. 27, 2013, at 1-6.

<sup>188</sup> *Id.*

<sup>189</sup> DIRECTV, *SEC Form 10-K for the Year Ended December 31, 2013*, at 3 (“DIRECTV 2013 Form 10-K”).

purchase national cable programming through a buying group called the National Cable Television Cooperative (“NCTC”).<sup>190</sup> ACA explains that by aggregating purchases, NCTC is able to obtain better prices, terms, and conditions for its members than they could achieve individually.<sup>191</sup> According to ACA, NCTC also plays a similar role negotiating for equipment, such as set-top boxes and cable modems.<sup>192</sup> ACA also maintains that consolidation among the larger providers is putting greater programming pricing pressure on the small providers and reducing their margins.<sup>193</sup> In October 2012, the Commission released a Further Notice of Proposed Rulemaking to address (1) the definition of a buying group, (2) participation of buying group members in master agreements, and (3) the standard of comparability for buying groups regarding volume discounts.<sup>194</sup>

62. *Capital Requirements.* The need to invest large financial resources in order to compete may also influence MVPD entry, especially in a mature market where most customers wanting MVPD service already subscribe to an MVPD. Large fixed costs and an entrant’s recognition that most of its subscribers would need to switch from incumbent MVPDs may delay the entrance of a new MVPD. Disincentives to enter may increase if current profit margins are low, which would suggest that the recovery of capital investment is risky or would be delayed. For example, Charter notes that constructing a competing cable system involves a capital intensive process with a high degree of risk.<sup>195</sup>

63. *First Mover Advantages.* First mover advantages that benefit incumbent providers may represent another condition influencing entry.<sup>196</sup> Years of advertising and customer relationships may provide incumbents with a degree of brand identification and customer loyalty.<sup>197</sup> Entrants must often spend heavily to win customers from incumbents, which often results in start-up losses.<sup>198</sup> Given the maturity of the MVPD market, new MVPDs recognize that they must win customers from incumbents.<sup>199</sup> If it costs more to induce a subscriber to switch than it costs the incumbent to win the customer initially, this constitutes a first-mover advantage that deters entry. According to Charter, to be successful, a competitor’s overbuild would need to be able to serve customers in the overbuilt area with equal or better service quality than that offered by the incumbent provider, on a more cost-effective basis.<sup>200</sup>

64. *Reaction from Existing Competitors.* A potential entrant’s expectations regarding the reaction from incumbent MVPDs may influence entry. For instance, the possibility of an incumbent

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<sup>190</sup> ACA Comments at 1-4.

<sup>191</sup> *Id.*

<sup>192</sup> *Id.*

<sup>193</sup> See Letter from Barbara S. Esbin, Cinnamon Mueller, Counsel for the American Cable Association, to Marlene H. Dortch, Secretary, FCC, MB Docket No. 12-68 (filed Oct. 7, 2014).

<sup>194</sup> *Revision of the Commission’s Program Access Rules*, MB Docket No. 12-68, Further Notice of Proposed Rule Making, 27 FCC Rcd, 12605, 12658-68 (2012).

<sup>195</sup> Charter 2013 Form 10-K at 12.

<sup>196</sup> For a discussion of first-mover advantages, see David Montgomery & Marvin Lieberman, *First-Mover Advantages*, STRATEGIC MANAGEMENT JOURNAL, Summer 1988, at 41-58.

<sup>197</sup> Porter at 9. See also DIRECTV 2013 Form 10-K at 3-4 (DIRECTV believes that the strength of its brand name is an important factor in its ability to attract new subscribers, retain existing subscribers, and secure strategic alliances with programmers).

<sup>198</sup> *Id.*

<sup>199</sup> DISH Network explains that MVPDs “increasingly must seek to attract a greater proportion of new subscribers from each other’s existing subscriber bases rather than from first-time purchasers of pay-TV services.” DISH Network 2013 Form 10-K at 22.

<sup>200</sup> Charter 2013 Form 10-K at 12.

lowering its price in an effort to discourage entry or drive an entrant from the market before it can establish itself, may inhibit market entry.

**e. Recent Entry and Exit**

65. Entry that increases competition requires bringing new capacity, upgraded capacity, or efficiencies into the market with a desire to gain market share.<sup>201</sup> Since 2005, the entry and expansion of video delivery systems by AT&T, Verizon, CenturyLink, and additional telephone company MVPDs may have had the most significant impact on competition. In addition to constructing high-capacity, fiber-based, all-digital systems, telephone MVPDs compete in areas already served by cable MVPDs.

66. Google Fiber is another facilities-based entrant in the MVPD group of the market for the delivery of video programming.<sup>202</sup> Google Fiber has been constructing and upgrading fiber-to-the-premises systems in Kansas City, Missouri; Kansas City, Kansas; and Provo, Utah and offers combined video and Internet service for \$120 per month.<sup>203</sup> Google Fiber is also constructing a network in Austin, Texas and began signing up subscribers in December 2014.<sup>204</sup> The company wants to bring more people access to Google Fiber and has started discussion with 34 additional cities in nine metro areas (Portland, Oregon; San Jose, California; Salt Lake City, Utah; Phoenix, Arizona; San Antonio, Texas; Nashville, Tennessee; Charlotte, North Carolina; Raleigh-Durham, North Carolina; and Atlanta, Georgia) to explore what it would take to bring a new fiber-optic network to their community.<sup>205</sup>

67. The acquisition of an existing video delivery system may strengthen competition if it includes system upgrades and new services. For example, after acquiring cable systems in Virginia, West Virginia, and western Maryland, Shentel upgraded the systems to provide digital television, HD channels, and VOD and DVR services.<sup>206</sup>

68. In 2013, cable MVPD transactions involved 1.1 million basic video subscribers and the total value of the transactions was \$5.1 billion.<sup>207</sup> This represents a decline from 2012, which involved 1.8 million subscribers with a total value of \$9.2 billion.<sup>208</sup> Charter's acquisition of Bresnan Communications and Liberty Media's acquisition of a 27.3 percent stake in Charter accounted for 83 percent of the total value of transactions in 2013.<sup>209</sup> BC Partnerships and DPP Investments' acquisition of Suddenlink represented 72 percent of the total value of transactions in 2012.<sup>210</sup> The average value per home passed and the average value per subscriber was \$1,702 and \$4,777 respectively in 2013.<sup>211</sup> This

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<sup>201</sup> Porter at 7. See also NCTA Comments at 4-6 (where NCTA explains that the declining share of cable MVPDs is directly attributable to the entry and growth of other facilities-based MVPDs).

<sup>202</sup> Although Google Fiber is not currently included in Table 1, the company may figure more prominently in future video competition reports.

<sup>203</sup> The video service is not available without the Gigabit plan. Google Fiber, <https://fiber.google.com/cities/> (visited May 2, 2014); Google Fiber, <https://fiber.google.com/cities/kansascity/plans/> (visited May 2, 2014); <https://fiber.google.com/cities/provo/plans/> (visited May 2, 2014).

<sup>204</sup> Google Fiber, <https://fiber.google.com/cities/austin/> (visited Mar. 10, 2015).

<sup>205</sup> Google Fiber, <https://fiber.google.com/newcities/> (visited Jan. 22, 2015).

<sup>206</sup> Shentel, *SEC Form 10-K for the Period Ending December 31, 2013*, at 35 and 43 ("Shentel 2013 Form 10-K").

<sup>207</sup> SNL Kagan, *Cable TV Investor: Deals & Finance*, Jan. 29, 2014, at 1.

<sup>208</sup> *Id.* at 1-2.

<sup>209</sup> *Id.* at 1.

<sup>210</sup> SNL Kagan, *Cable TV Investor: Deals & Finance*, Jan. 31, 2013, at 21.

<sup>211</sup> SNL Kagan, *Cable TV Investor: Deals & Finance*, Jan. 29, 2014, at 2.

compares with an average value per home passed and an average value per subscriber of \$2,054 and \$5,173 respectively in 2012.<sup>212</sup>

69. In 2013, the largest telephone company MVPD transaction involved Frontier Communications agreement to acquire AT&T's wireline business and fiber network in Connecticut for \$2.0 billion.<sup>213</sup> Frontier acquired 215,000 U-verse video and satellite TV customers, 415,000 broadband customers, and 875,000 voice customers.<sup>214</sup>

70. The total number of cable systems has been declining.<sup>215</sup> Some cable systems have been interconnected with other cable systems, providing continuity of video service to subscribers. However, some cable systems have been shut down, terminating video service to subscribers. ACA maintains that 133 member cable systems serving 4,050 subscribers shut down in 2013 and 129 member cable systems serving 8,060 subscribers shut down in 2012.<sup>216</sup> According to ACA, 1,078 small and rural cable systems serving approximately 50,000 subscribers have closed since 2008.<sup>217</sup> ACA contends that the vast majority of these closed systems ceased providing video service in their communities.<sup>218</sup> ACA believes that the primary causes of cable system closures in small and rural communities are increasing programming costs.<sup>219</sup>

### 3. MVPD Business Models and Competitive Strategies

71. The second element of our analysis of MVPD competition is an examination of the business models and competitive strategies of MVPDs. In particular, we consider what MVPDs have done or are doing to attract and retain subscribers and generate profits. In this section of the Report, we discuss MVPD competition in terms of both price and non-price rivalry. We then provide an overview of the current business models and competitive strategies of a sample of MVPDs.

#### a. Price Rivalry

72. Pricing represents one component of every MVPD's competitive strategy. Some MVPDs market themselves as offering "premium" services while others market themselves as providing "value" services. Over time, MVPDs have altered their pricing in response to changes in the competitive landscape. Some cable operators are highlighting or separately listing the costs of RSNs and broadcast station retransmission fees on the monthly billing statements sent to subscribers.<sup>220</sup> Going forward, SNL

<sup>212</sup> SNL Kagan, *Cable TV Investor: Deals & Finance*, Jan. 31, 2013, at 23.

<sup>213</sup> Frontier Communications, *Frontier Communications to Acquire AT&T's Wireline Residential and Business Services and Associated Assets in Connecticut* (press release), Dec. 17, 2013. The Commission approved the transaction on July 25, 2014. See *Applications Filed by Frontier Communications Corporation and AT&T Inc. for the Assignment and Transfer of Control of the Southern New England Telephone Company and SNET America, Inc.*, WC Docket No. 14-22, Memorandum Opinion and Order, 29 FCC Rcd 9203 (WCB 2014).

<sup>214</sup> The transaction was completed on October 24, 2014. See Frontier Communications, *Frontier Communications Completes Acquisition of AT&T Connecticut's Wireline, Broadband and Video Operations* (press release), Oct. 24, 2014.

<sup>215</sup> See *supra*, ¶ 23.

<sup>216</sup> ACA Comments at 6-8.

<sup>217</sup> *Id.* at 7.

<sup>218</sup> *Id.*

<sup>219</sup> *Id.*

<sup>220</sup> See Mike Farrell, *Comcast to Introduce \$1.50 Broadcast TV Fee*, MULTICHANNEL NEWS, Nov. 22, 2013, <http://multichannel.com/news/content/comcast-introduce-150-broadcast-tv-fee/356875> (visited June 27, 2014).

Kagan anticipates that more MVPDs may set up special fees for premium content such as sports packages and begin offering tiered video packages based on the number of users per subscription.<sup>221</sup>

73. Today, the largest and most mid-sized MVPDs offer one or more high-end pricing plans that include hundreds of channels and a complement of HD, DVR, VOD services, and some mix of premium channels. In addition, these MVPDs offer one or more mid-priced video service plans that include fewer channels and a smaller complement of video services. MVPDs offer, but are less likely to market, lower-priced video service plans with fewer channels and few, if any, additional video services.<sup>222</sup> An MVPD may charge different prices in the different cities and towns it serves. These differences may reflect system upgrades or differences in the number of channels or advanced video services offered from one city to the next. They also may reflect differences in the number of competitors or differences in the competitive strategies competitors use in different locations.

74. *Discounts for New Subscribers.* One of the most common pricing strategies among MVPDs takes the form of reduced introductory or promotional prices for new subscribers.<sup>223</sup> Typically, these new subscriber discounts are for a limited time (e.g., six months or a year) and often include additional video services (e.g., premium channels) or bundles of video, Internet access, and telephone service (referred to as triple or triple-play bundles). At the end of the introductory period, promotional materials usually indicate that prices will rise to the “normal” price. For example,<sup>224</sup> DIRECTV offers new customers six video packages ranging from \$24.99 per month to \$92.99 per month for 12 months with a 24-month agreement.<sup>225</sup> A promotion by Verizon offers new customers choices of triple-play bundles for \$79.99 or \$134.99 per month for 24 months with a two-year agreement.<sup>226</sup> Comcast offers new customers triple bundles ranging from \$79.99 to \$199.99 per month for 12 months with a 24-month agreement.<sup>227</sup> At the end of the promotional period prices rise to the regular rates.<sup>228</sup>

75. *Prices for Existing Subscribers.* Some existing subscribers may be paying less than regular prices by negotiating discounts with their current MVPD, although MVPDs do not advertise such

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<sup>221</sup> SNL Kagan, *Cable TV Investor: Deals and Finance*, Jan. 31, 2013, at 1; SNL Kagan, *Cable TV Investor: Deals and Finance*, March 25, 2014, at 2.

<sup>222</sup> Marketing includes the information prominently displayed on the MVPD’s website. Our review of the websites of a number of MVPDs suggests that it is often much easier to find the higher-priced video service plans than it is to find the lowest price video service plan offered by the MVPD.

<sup>223</sup> The websites of the largest MVPDs highlight deals for video, Internet, and telephone services. But the prices offered are available only to new residential customers or current customers adding a new service. See, e.g., Comcast, <http://www.comcast.com/> (visited Dec. 8, 2014); Time Warner Cable, [http://www.timewarnercable.com/en/plans-packages/cable-internet.html?iid=hphero\\_Generic\\_Default:1:1:learnmore](http://www.timewarnercable.com/en/plans-packages/cable-internet.html?iid=hphero_Generic_Default:1:1:learnmore) (visited Dec. 8, 2014); DIRECTV, <http://www.directv.com/> (visited Dec. 8, 2014); Verizon, <http://www.verizon.com/home/services/#Shop> (visited Dec. 8, 2014).

<sup>224</sup> The examples included here are snapshots of recent offerings and may not reflect current service offerings and prices available to new subscribers.

<sup>225</sup> DIRECTV, [http://www.directv.com/DTVAPP/new\\_customer/base\\_packages.jsp?footernavtype=-1](http://www.directv.com/DTVAPP/new_customer/base_packages.jsp?footernavtype=-1) (visited April 7, 2014).

<sup>226</sup> Verizon, <http://fios.verizon.com/fios-plans.html> (visited April 7, 2014).

<sup>227</sup> Comcast, <http://www.comcast.com/Corporate/Learn/Bundles/bundles.html> (visited April 7, 2014).

<sup>228</sup> For example, at the end of the promotional period the price for DIRECTV’s Premier package rises from \$92.99 a month to the regular rate of \$129.99 a month, <https://www.directv.com/DTVAPP/pepod/configure.jsp?requestid=124240#package-section> (visited June 27, 2014). At the end of the promotional period the price for Comcast’s HD Preferred triple-play bundle rises from \$129.99 a month to \$154.99 a month, <http://www.comcast.com/Corporate/Learn/Bundles/bundles.html> (visited June 27, 2014).

discounts for existing subscribers.<sup>229</sup> In this regard, DISH Network has communicated to its shareholders that the company has offered free programming and/or promotional pricing for limited periods for existing customers in exchange for a contractual commitment.<sup>230</sup>

**b. Non-Price Rivalry**

76. Central to every MVPD business model are decisions about where to offer services and which technology to use to deliver video programming. Each specific technology has its own set of advantages and disadvantages. Moreover, technologies change over time and the competitive advantages of one technology may fade as new technologies are introduced. Originally, coaxial cable defined the MVPD market. When DIRECTV and DISH Network began offering MVPD service in the 1990s, the digital DBS systems provided significantly greater channel capacity compared to existing analog cable systems. Cable MVPDs upgraded their cable systems in response to DBS's technology advantage.<sup>231</sup> These upgrades included incorporating more optic fiber into coaxial networks and transitioning from analog to digital technology. In addition, some telephone companies offer MVPD service using digital fiber-to-the-node and/or digital fiber-to-the-home systems.

77. The different technologies used by MVPDs also affect the quality of bundled services. In the market for delivered video programming, DBS operators stress that MVPDs with the ability to offer bundles have competitive advantages.<sup>232</sup> DIRECTV explains that it lacks facilities to offer its own triple bundle, so it has entered into cooperative arrangements with telephone companies in certain markets to provide bundles (*i.e.*, video programming from DIRECTV and telephone and Internet access using digital subscriber line ("DSL") technology from the telephone companies).<sup>233</sup> DIRECTV explains that it also partners with the satellite companies HughesNet and Exede to provide Internet to subscribers in locations where it does not have cooperative arrangements with telephone companies.<sup>234</sup> DIRECTV maintains that DSL and satellite Internet does not compare to those available from cable and telephone company MVPDs with DOCSIS and fiber-enabled systems.<sup>235</sup>

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<sup>229</sup> Charles Passy, *The FoolProof Way to Lower Your Cable Bill*, MARKETWATCH, Feb. 24, 2014, <http://www.marketwatch.com/story/the-foolproof-way-to-lower-your-cable-bill-2014-02-21> (visited April 7, 2014); Rob Pegoraro, *How Can I Lower My Cable, Internet, Phone Bills?*, USA TODAY, Feb. 2, 2014, <http://www.usatoday.com/story/tech/columnist/2014/02/02/phone-internet-cable-bill/5058419/> (visited April 7, 2014); Five Steps to Negotiating a Lower Cable Bill, CONSUMER REPORTS, March 28, 2014, <http://www.consumerreports.org/cro/news/2014/03/5-steps-to-negotiating-a-lower-cable-bill/index.htm> (visited April 7, 2014).

<sup>230</sup> DISH Network 2013 Form 10-K at 5. Data on DISH Network's free programming or promotional prices for existing customers is not available.

<sup>231</sup> See DIRECTV Comments at 1 (where DIRECTV maintains that DBS entry into the market for the delivery of video programming "forced cable operators to upgrade their own operations in a digital conversion that not only improved their video services but also introduced a new era of broadband Internet access").

<sup>232</sup> DIRECTV Comments at 2.

<sup>233</sup> *Id.* at 19-20. The DIRECTV and DISH Network cooperative arrangements are typically with telephone and broadband companies that do not offer video services in the same geographic area. For example, DIRECTV typically has cooperative arrangements with Verizon to provide Internet access and voice service where Verizon offers DSL and not in areas where Verizon offers FiOS TV. Verizon, <http://www22.verizon.com/home/directv/#packages> (visited April 9, 2014).

<sup>234</sup> *Id.* at 20.

<sup>235</sup> *Id.* AT&T maintains that the proposed AT&T/DIRECTV transaction would enable the combined company to offer new bundles that combine DIRECTV's video service with the faster Internet speeds offered by AT&T U-verse. AT&T, *AT&T to Acquire DIRECTV* (press release), May 18, 2014; AT&T/DIRECTV Description of Transaction, Public Interest Showing, and Related Demonstrations at 26-28 (filed June 11, 2014), MB Docket No. 14-90.

78. Many cable and telephone company MVPDs are upgrading their systems by transitioning their analog channels to digital, which frees up bandwidth for additional services (e.g., more digital channels, more HD channels, more VOD programming, and faster Internet speeds).<sup>236</sup> The transition requires deployment of additional set-top boxes and digital terminal adapters.<sup>237</sup> At the end of 2013, the all-digital transition had reached approximately 57 percent of the combined footprints of the top eight cable MVPDs.<sup>238</sup> Comcast and Cablevision lead the major cable MVPDs and have effectively completed their all-digital migrations.<sup>239</sup> In late 2013, Time Warner Cable was approximately 17 percent through its transition to all-digital, Charter was less than 20 percent through its transition, and Cox was just starting its transition.<sup>240</sup>

79. Cable MVPDs continue to transition from analog to all-digital systems. Using data from FCC Form 325 for years 2009, 2010, 2011, 2012, and 2013 Table 3 shows the growth in the number of all-digital cable systems for all cable systems with over 20,000 subscribers. For each year's FCC Form 325 sample of cable systems with 5,000 to 20,000 subscribers, Table 4 shows the sample size and the number of cable systems in that sample that are all-digital.<sup>241</sup> We define an all-digital cable system as a system that has no analog channels. Most cable systems with more than 20,000 subscribers remain hybrid systems (i.e., they have both digital channels and analog channels). No cable systems with more than 20,000 subscribers remain all analog.

**Table 3: All-Digital Cable Systems with more than 20,000 Subscribers**

Year	Number of Cable Systems with more than 20K Subs	Number of All-Digital Cable Systems	Annual Growth %
2009	596	18	
2010	570	24	33%
2011	576	50	108%
2012	557	151	202%
2013	556	231	53%

<sup>236</sup> One analog video program requires an entire 6 MHz channel. By converting analog signals to digital video signals, a 6 MHz channel can carry 10 to 12 standard definition programs or two or three HD programs.

<sup>237</sup> Subscribers with analog televisions use a digital terminal adapter to convert digital signals to analog signals.

<sup>238</sup> Ian Olgeirson, *Charter, Time Warner Cable Lag in All-Digital Push to Convert CapEx into Capacity*, MULTICHANNEL MARKET TRENDS, SNL KAGAN, Jan. 17, 2014, <http://www.snk.com/interactivex/article.aspx?id=26553484&KPLT=6> (visited April 9, 2014).

<sup>239</sup> *Id.*

<sup>240</sup> *Id.*

<sup>241</sup> We also collect FCC Form 325 data from a sample of cable systems with under 5,000 subscribers systems. Due to data limitations, cable systems with less than 5,000 subscribers are not included in the charts. See also *supra*, n. 67.

**Table 4: All-Digital Cable Systems with between 5,000 and 20,000 Subscribers**

Year	Number of Cable Systems with 5K - 20K Subs in Sample	Number of All-Digital Cable Systems	Annual Growth %
2009	242	8	
2010	252	15	88%
2011	326	28	87%
2012	282	63	125%
2013	311	78	24%

80. Switched digital video (“SDV”) represents another strategy for reclaiming bandwidth. SDV transmits only the most popular channels that are being watched within a given group of homes and then transmits all other programming as a customer tunes in to that channel, rather than transmitting all channels to all subscribers at the same time. In late 2013, approximately 45 percent of digital cable subscribers of the top eight cable MVPDs were served using SDV.<sup>242</sup> The choice between transitioning to all-digital systems and using SDV is not mutually exclusive. Both approaches free up bandwidth. Cablevision, Bright House, Time Warner Cable, and Charter have essentially completed their SDV deployments and Cox has transitioned about 46 percent of its footprint to SDV.<sup>243</sup>

81. MVPDs differentiate their services from their competitors’ services to compete, obtain new subscribers, and retain existing subscribers. Cable and telephone MVPDs differentiate their services from DBS MVPDs, in part, by highlighting bundles of video, Internet access, and voice services and emphasizing that bundles offer better prices for consumers, relative to individual service offerings.<sup>244</sup> In contrast, DBS MVPDs focus their marketing on video services, in part, because the satellite technology they use for delivering video programming limits their ability to provide Internet access and voice services.<sup>245</sup>

82. MVPD video services embody numerous characteristics (*e.g.*, number of channels, number of HD channels, VOD, DVR, exclusive programming, and TV Everywhere) and each characteristic may serve as a means for differentiating an MVPD’s services from its competitors. For example, DISH Network claims to offer the most advanced whole-home HD DVR, and DIRECTV claims to offer the most HD channels.<sup>246</sup> In addition to displaying their own services, MVPD websites often facilitate comparison of their services with other MVPDs. For example Comcast’s website facilitates comparison with DIRECTV, DISH Network, AT&T U-verse, Verizon FiOS, and CenturyLink Prism TV;

<sup>242</sup> Ian Olgeirson, *Switched Digital Footprints Make Slight Gains in 2013*, MULTICHANNEL MARKET TRENDS, SNL KAGAN, Jan. 17, 2014, <http://www.snl.com/interactivex/article.aspx?id=26564381&KPLT=6> (visited April 9, 2014).

<sup>243</sup> *Id.*

<sup>244</sup> See, *e.g.*, Comcast, <http://www.comcast.com/> (visited April 15, 2014); Time Warner Cable, <http://www.timewarnercable.com/en/residential.html> (visited April 15, 2014); Charter, <https://www.charter.com/> (visited April 15, 2014); Cablevision, <http://www.optimum.com/index.jsp> (visited April 15, 2014); AT&T, <http://www.att.com/shop/u-verse.html#fbid=a4otHiAhqFh> (visited April 15, 2014); and Verizon, <http://www.verizon.com/home/fios/> (visited April 15, 2014).

<sup>245</sup> See, *e.g.*, DIRECTV, <http://www.directv.com/> (visited April 15, 2014); and DISH Network, <http://www.dish.com/> (visited April 15, 2014).

<sup>246</sup> DISH Network, <http://www.dish.com/why-dish/?WT.svl=main-nav> (visited April 16, 2014); DIRECTV, [http://www.directv.com/DTVAPP/content/directv/what\\_is\\_directv?lpos=Header:1](http://www.directv.com/DTVAPP/content/directv/what_is_directv?lpos=Header:1) (visited April 16, 2014);

and DIRECTV's website compares its services with those of DISH Network, Comcast, and Time Warner Cable.<sup>247</sup>

83. Although MVPDs may consider other MVPDs their foremost rivals, MVPDs increasingly compete with OVDs for viewing time, subscription revenue, and advertising revenue. Individual consumers may perceive OVDs as a substitute, a supplement, and a complement to their MVPD video service. Some former MVPD video subscribers have cancelled their MVPD video subscriptions and rely solely on OVDs. These consumers are referred to as "cord cutters."<sup>248</sup> Other consumers, referred to as "cord nevers," have never subscribed to an MVPD video service. Although cord nevers may find that OVDs currently satisfy their viewing preferences, they might subscribe to an MVPD in the future. Cord cutters and cord nevers combined account for approximately five percent of all households.<sup>249</sup>

84. Although the number of cord cutters and cord nevers has been growing, the vast majority of consumers who watch video programming from OVDs also subscribe to an MVPD video service. The term "cord shavers" refers to consumers that have cut back on their MVPD video services and replaced them with OVDs. For example, some MVPD subscribers have cancelled their subscriptions to premium channels (e.g., Showtime, Starz, HBO, Cinemax, The Movie Channel) and in their place have substituted movies from OVDs. Some consumers supplement their MVPD video services with OVD programming that may not be currently available from the MVPD. For example television shows (e.g., *Desperate Housewives*, *24*, *Alias*) that may no longer be available from MVPDs may be viewed from OVDs. Finally, some consumers complement the current season of a television program (e.g., *Mad Men*, Season 6) on their MVPD video service by viewing previous seasons of the television program (e.g., *Mad Men*, Seasons 1-5) using an OVD.<sup>250</sup>

85. MVPDs have responded to cord cutters, cord nevers, cord shavers, and MVPD video subscribers' increased viewing of OVDs by creating and deploying video services similar to those offered by OVDs, referred to as TV Everywhere.<sup>251</sup> TV Everywhere allows MVPD subscribers to access both linear and VOD programs on a variety of in-home and mobile Internet-connected devices.<sup>252</sup> At the end of 2013, most live linear and some on-demand programming was limited to in-home viewing.<sup>253</sup> Recent initiatives include making more video content available, supporting more viewing devices, and offering more viewing of video programming outside the home.<sup>254</sup> Most of the video programming offered on TV

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<sup>247</sup> Comcast, <http://www.comcast.com/compare/comcast-xfinity-vs-verizon-fios.html> (visited April 16, 2014); DIRECTV, [http://www.directv.com/DTVAPP/content/directv/what\\_is\\_directv?lpos=Header:1](http://www.directv.com/DTVAPP/content/directv/what_is_directv?lpos=Header:1) (visited April 16, 2014).

<sup>248</sup> Some cord cutters may supplement their OVD video by using a television antenna to obtain over-the-air video from broadcast stations.

<sup>249</sup> SNL Kagan, *Broadband Technology*, Sept. 30, 2013, at 1.

<sup>250</sup> A fuller discussion of data related to cord cutters, cord shavers, and cord nevers is contained in the OVD section below, C.2.b.(ii).

<sup>251</sup> SNL Kagan says that "Since its inception, TV Everywhere has been touted as a solution to fend off the rise of OTT services." SNL Kagan, *Cable TV Investor: Deals & Finance*, Dec. 27, 2013, at 15. SNL Kagan says that "[t]he large cable operators have strengthened their TV Everywhere catalogues to stem the diversion of eyeballs to video services such as Netflix and Hulu." SNL Kagan, *Broadband Cable Financial Databook*, 2013 Edition, at 4.

<sup>252</sup> See NCTA Comments at 15-18 (where NCTA provides a summary of the TV Everywhere offerings of some cable MVPDs).

<sup>253</sup> SNL Kagan, *Cable TV Investor: Deals & Finance*, Dec. 27, 2013, at 16.

<sup>254</sup> Deana Myers, *US OTT Market Increasingly Crowded*, ECONOMICS OF INTERNET MEDIA, SNL KAGAN, Mar. 28, 2014, <http://www.snl.com/interactivex/article.aspx?id=27563290&KPLT=6> (visited April 15, 2014).

Everywhere is available only to MVPD subscribers.<sup>255</sup> Access to TV Everywhere video programming is restricted through the use of an authentication process that requires a subscriber to select their MVPD service provider and then provide a user ID and password.

86. SNL Kagan explains that although TV Everywhere program offerings are growing, there is not widespread usage and there is not a single business model clearly identified for TV Everywhere.<sup>256</sup> In November 2013, the U.S. Internet video audience was comprised of 189.2 million unique viewers, but only 2.5 million of these were TV Everywhere viewers.<sup>257</sup> SNL Kagan notes that not all cable MVPD programs are available on TV Everywhere and not all TV Everywhere programs can be watched everywhere.<sup>258</sup> According to SNL Kagan, low viewership of TV Everywhere stems, in part, from low but growing consumer awareness, consumer frustration with being redirected from the website of the MVPD to the websites of program owners, and consumer confusion regarding which video programs are available outside the home and which video programs are available only for in-house viewing.<sup>259</sup>

87. Some MVPDs have been expanding the number of public Wi-Fi hotspots to attract and retain subscribers. According to SNL Kagan, the hotspots represent an effort to increase the value of both the MVPDs' Internet service and video service.<sup>260</sup> These hotspots enable subscribers to access TV Everywhere content and OVD content on mobile devices outside their home without charge. Non-subscribers can access the hotspots for a fee. When marketing the Wi-Fi hotspots, some MVPDs note the potential savings on mobile wireless bills from reduced roaming and usage minutes.<sup>261</sup> Comcast, Time Warner Cable, Cablevision, Cox, and Bright House have joined a consortium called Cable WiFi, which allows a subscriber of any of these cable MVPDs to access the hotspots of the other cable MVPDs.<sup>262</sup> The consortium offered access to more than 200,000 hotspots at the end of 2013, doubling the number of hotspots from a year earlier.<sup>263</sup> Companies that provide both wireline and mobile wireless connectivity (e.g., AT&T and Verizon) recognize that providing Wi-Fi hotspots may take away potential revenue from their mobile wireless services. AT&T has more than 32,000 hotspots and has been marketing free Wi-Fi service since 2007.<sup>264</sup> According to SNL Kagan, Verizon's strategy is to utilize its 4G LTE Network.<sup>265</sup> The company provides Wi-Fi access to more than 5,000 locations.<sup>266</sup>

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<sup>255</sup> SNL Kagan, *Cable TV Investor: Deals & Finance*, Dec. 27, 2013, at 15.

<sup>256</sup> SNL Kagan, *Broadband Cable Financial Databook*, 2013 Edition, at 4.

<sup>257</sup> SNL Kagan, *Cable TV Investor: Deals & Finance*, Dec. 27, 2013, at 15.

<sup>258</sup> *Id.* at 15-16.

<sup>259</sup> *Id.*

<sup>260</sup> SNL Kagan, *Cable TV Investor: Deals & Finance*, Jan. 29, 2014, at 12-16. See also Ian Olgeirson, *Cable Looks to 2016/2017 for DOCSIS 3.1, Embraces Hotspots if Not Hot Business Model*, MULTICHANNEL MARKET TRENDS, SNL KAGAN, May 5, 2014, <http://www.snk.com/interactivex/article.aspx?id=28006311&KPLT=6> (visited May 22, 2014).

<sup>261</sup> *Id.* at 13.

<sup>262</sup> "Cable WiFi" is the wireless network name created as an extension of the Wi-Fi services offered by Internet service providers. Cable WiFi, <http://www.cablewifi.com/> (visited May 22, 2014).

<sup>263</sup> SNL Kagan, *Cable TV Investor: Deals & Finance*, Jan. 29, 2014, at 12.

<sup>264</sup> *Id.* at 16.

<sup>265</sup> *Id.*

<sup>266</sup> *Id.*

88. Although MVPDs have been increasing video revenue, in part, by raising the prices charged for video services, data suggest that programming expenses are rising faster than revenue.<sup>267</sup> SNL Kagan maintains that rate hikes are not keeping pace with programming expenses and this explains the decline in video margins in recent years.<sup>268</sup> SNL Kagan's data show that MVPD programming expenses as a percent of MVPD video revenue have risen from 34.6 percent in 2006, to 41.6 percent in 2012, and increased again to 44.6 percent in 2013.<sup>269</sup> MVPDs have responded to rising programming expenses with a variety of competitive strategies. SNL Kagan argues that rising programming expenses have been one factor pushing MVPDs to consolidate.<sup>270</sup> According to SNL Kagan, "consolidation and scale have long been touted by industry insiders as a means to control rapidly growing programming expenses."<sup>271</sup> Comcast's proposed transaction with Time Warner Cable and AT&T's proposed transaction with DIRECTV are cited as recent examples of mergers that have the potential to increase the bargaining power of those that deliver programming relative to those that own programming.<sup>272</sup> Another MVPD competitive strategy is to take an ownership stake in some video programming and turn a programming expense into a potential source of revenue. Comcast's acquisition of NBC Universal and Liberty Media's ownership interests in Charter are cited as examples of the vertical integration of content delivery with content ownership.<sup>273</sup> Comcast's and Time Warner Cable's ownership of regional sports networks is cited as another example of vertical integration.<sup>274</sup> A number of MVPDs participate in buying groups to obtain better prices for programming than they could achieve by themselves.<sup>275</sup> Some MVPDs have placed special fees on the monthly statements of video subscribers highlighting the costs of regional sports networks.<sup>276</sup> For example, Verizon FiOS includes a monthly \$2.42 regional sports network fee in some of its markets.<sup>277</sup> Another strategy used by some MVPDs involves lobbying for modification of the retransmission consent and program access rules governing negotiations between MVPDs and content owners with the objective of strengthening the bargaining power of MVPDs.<sup>278</sup>

<sup>267</sup> SNL Kagan, *Cable TV Investor: Deals & Finance*, April 30, 2014, at 1-3 and 12. See also SNL Kagan, *Cable TV Investor: Deals & Finance*, March 25, 2014, at 11.

<sup>268</sup> *Id.* at 12.

<sup>269</sup> *Id.* at 3.

<sup>270</sup> SNL Kagan, *Cable TV Investor: Deals & Finance*, Feb. 21, 2014, at 1.

<sup>271</sup> *Id.* at 2.

<sup>272</sup> *AT&T Buys DIRECTV: Bundles and Bulk*, THE ECONOMIST, May 24, 2014 Print Edition, <http://www.economist.com/news/business/21602756-big-merger-brings-telecoms-and-television-closer-together-bundles-and-bulk> (visited May 23, 2014). Joe Flint and Jim Puzanghera, *AT&T Deal for DIRECTV Driven by Desire to Pare Programming Costs*, LOS ANGELES TIMES, May 19, 2014, <http://www.latimes.com/business/la-fi-ct-att-directv-video-20140520-story.html#page=1> (visited May 23, 2014). See also AT&T/DIRECTV Description of Transactions, Public Interest Showing, and Related Demonstrations at 23-25 (filed June 11, 2014), MB Docket 14-90.

<sup>273</sup> ACA Comments at 5.

<sup>274</sup> DIRECTV Comments at 14.

<sup>275</sup> ACA Comments at 1-4.

<sup>276</sup> Rob Pegoraro, *How Sports Networks Inflate Your TV Bill*, USA TODAY, Feb. 4, 2013, <http://www.usatoday.com/story/tech/2013/02/03/verizon-subscribers-regional-sports-network-fee-time-warner-la-dodgers/1880595/> (visited May 23, 2014).

<sup>277</sup> *Id.*

<sup>278</sup> See e.g., CenturyLink Comments at 4-8, AT&T Comments at 3-11, Verizon Comments at 9-12, WTA Comments at 2, NTCA Comments at 6-20.

**c. Business Models and Competitive Strategies of Select MVPDs**

89. The MVPD group is comprised of 1,258 cable MVPDs, two DBS MVPDs, two large telephone MVPDs and many smaller telephone MVPDs.<sup>279</sup> Every MVPD has its own business model and competitive strategy but, as suggested above, there are some similarities within types of MVPDs. Below, we provide an overview of the business models and competitive strategies focusing on three large cable MVPDs (Comcast, Time Warner, and Charter) and a few selected mid-sized and smaller cable MVPDs (Atlantic Broadband, Service Electric, MetroCast, Longview Cable TV, and Alliance Communications Network). We also provide an overview of the business models and competitive strategies of the two DBS MVPDs (DIRECTV and DISH Network). Finally, we provide an overview of the business models and competitive strategies of five telephone MVPDs (*i.e.*, AT&T, Verizon, CenturyLink, Consolidated Communications, and Cincinnati Bell).

**(i) Cable MVPD Business Models and Competitive Strategies**

90. *Large Incumbent Cable MVPDs.* In this category, we focus primarily on the business models and competitive strategies of three of the largest cable MVPDs: Comcast, Time Warner Cable, and Charter. Comcast is the largest cable MVPD and the largest MVPD, with 21.7 million video subscribers.<sup>280</sup> Comcast refers to itself as a global media and technology company with two primary businesses, Comcast Cable and NBCUniversal.<sup>281</sup> Comcast is a vertically integrated MVPD. Through its NBC Universal segment, Comcast has increased its vertical integration to include ownership interests in cable networks, broadcast television, and filmed entertainment. Comcast's national cable networks include USA Network, Syfy, E!, NSNBC, CNBC, Bravo, Golf Channel, Oxygen, NBC Sports Network, Esquire Network, Sprout, Chiller, CNBC World, G4, Cloo, Universal HD.<sup>282</sup> Comcast's regional sports networks ("RSNs") and news networks provide programming in large markets including Atlanta, Baltimore/Washington, Boston, Chicago, Philadelphia, Portland, Sacramento, and San Francisco.<sup>283</sup> In broadcast television, Comcast has ownership interest in the NBC network and 10 owned and operated ("O&O") NBC affiliated local television stations, and the Telemundo network and 17 O&O Telemundo affiliated local television stations.<sup>284</sup> In filmed entertainment, Comcast produces films primarily under the Universal Pictures, Focus Features, and Illumination Entertainment names.<sup>285</sup> Comcast's NBCUniversal segment also includes theme parks in Orlando and Hollywood.<sup>286</sup>

91. Time Warner Cable is the second largest cable MVPD and the fourth largest MVPD, with 11.2 million video subscribers.<sup>287</sup> The company's clustered cable systems are located mainly in five

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<sup>279</sup> The estimate for the number of cable MVPDs (*i.e.*, the number of companies that offer cable service, or MSOs) was provided by SNL Kagan to FCC staff on March 25, 2014. SNL Kagan considers Google Fiber a telephone MVPD. *See e.g.*, Chris Young and Kamran Asaf, *MSOs Defend More of Their Footprints Against Telco Overbuilds*, MULTICHANNEL MARKET TRENDS, SNL KAGAN, Jan. 28, 2015, <https://www.snl.com/interactivex/article.aspx?id=30780639&KPLT=6> (visited Mar. 11, 2015); and Chris Young, *Telcos Extend Lead in 1 Gbps Race*, MULTICHANNEL MARKET TRENDS, SNL KAGAN, Sept. 2, 2014, <https://www.snl.com/interactivex/article.aspx?id=28980976&KPLT=6> (visited Mar. 11, 2015).

<sup>280</sup> Comcast 2013 Form 10-K at 1 and 3.

<sup>281</sup> *Id.* at 1.

<sup>282</sup> *Id.* at 8. For a list of Comcast's national programming interests, *see* Appendix B, Table B-1.

<sup>283</sup> *Id.* For a list of Comcast's regional programming interests, *see* Appendix C, Table C-1.

<sup>284</sup> *Id.* at 9-11.

<sup>285</sup> *Id.* at 11-12.

<sup>286</sup> *Id.* at 12.

<sup>287</sup> Time Warner Cable, *SEC Form 10-K for the Year Ended December 31, 2013*, at 1-2 ("Time Warner Cable 2013 Form 10-K").

geographic areas – New York State (including New York City), the Carolinas, the Midwest (including Ohio, Kentucky, and Wisconsin), Southern California (including Los Angeles), and Texas.<sup>288</sup> In 2012, Time Warner Cable launched two Los Angeles RSNs, one in English and one in Spanish, which carry the Los Angeles Lakers’ basketball games as well as other regional sports programming.<sup>289</sup> Time Warner Cable manages 26 local news channels, including Time Warner Cable News NY1, 16 local sports channels, and ten local lifestyle channels, and it has ownership interests in Sterling Entertainment Enterprises LLC (doing business as SportsNet New York), a New York City-based regional sports network that carries New York Mets’ baseball games as well as other regional sports programming.<sup>290</sup>

92. Charter is the third largest cable MVPD, with 4.2 million residential video subscribers.<sup>291</sup> Charter operates regional clusters in 12 market areas: California, Carolinas, Central States, Alabama/Georgia, Michigan, Minnesota/Nebraska, Mountain States, New England, Northwest, Tennessee/Louisiana, Texas, and Wisconsin.<sup>292</sup> In July 2013, Charter acquired cable systems from Bresnan, which was a wholly owned subsidiary of Cablevision.<sup>293</sup> The Bresnan cable systems served approximately 375,000 subscribers in Colorado, Montana, Wyoming and Utah.<sup>294</sup> Charter filed to reorganize under Chapter 11 of the Bankruptcy Code, in March 2009, and emerged from protection under Chapter 11 in November 2009.<sup>295</sup> The final decree closing the case was entered by the Bankruptcy Court in December 2013.<sup>296</sup>

93. *Technology.* Comcast, Time Warner Cable, and Charter all use hybrid fiber optic and coaxial cable networks that provide two-way transmissions.<sup>297</sup> The Comcast and Time Warner Cable systems provide at least 750 MHz capacity. The Charter systems provide at least 550 MHz capacity.<sup>298</sup> To recapture bandwidth and enhance its cable systems, Comcast has transitioned to all-digital systems and is using advanced video encoding and digital compression technologies including DOCSIS 3.0 and 3.1.<sup>299</sup> Comcast also extended its X1 platform, which uses IP technology and cloud network servers to deliver video, provide search capabilities, and allow access to apps accessible through televisions (e.g., Pandora and Facebook).<sup>300</sup> Comcast says that the X1 platform is now available in all of its markets in which it operates.<sup>301</sup> Although Time Warner Cable has historically used local headends in each of its

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<sup>288</sup> *Id.* at 1.

<sup>289</sup> *Id.* at 5.

<sup>290</sup> *Id.* For a list of Time Warner Cable’s programming interests, see Appendix B, Table B-1 and Appendix C, Table C-1.

<sup>291</sup> Charter 2013 Form 10-K at 4.

<sup>292</sup> *Id.* at 10. The proposed Comcast/Time Warner Cable transaction would increase Charter’s footprint. Charter plans to acquire 1.6 million divested Time Warner Cable. Charter also plans to acquire a 33 percent interest in a new cable provider (“SpinCo”) to be spun-off by Comcast serving approximately 2.5 million customers. Charter, *Comcast and Charter Reach Agreement on Divestitures* (press release), April 28, 2014.

<sup>293</sup> Charter 2013 Form 10-K at 33.

<sup>294</sup> *Id.*

<sup>295</sup> *Id.* at 1.

<sup>296</sup> *Id.*

<sup>297</sup> For a summary of the technology used by Comcast, Time Warner Cable, and Charter, see Comcast 2013 Form 10-K at 6; Time Warner Cable 2013 Form 10-K at 5; Charter 2011 Form 10-K at 7-8.

<sup>298</sup> Charter 2013 Form 10-K at 8.

<sup>299</sup> Comcast 2013 Form 10-K at 6.

<sup>300</sup> *Id.* at 5-6.

<sup>301</sup> *Id.* at 2.

systems to receive, transcode, and transmit video signals, the company is transitioning from the use of local headends to two national centers that use the company's nationwide fiber backbone to interconnect with the company's fiber regional and metro rings.<sup>302</sup> According to Time Warner Cable, this architecture will improve network efficiency and reliability.<sup>303</sup> Time Warner Cable also has its own content delivery network ("CDN") that delivers managed Internet Protocol ("IP") video service to its customers without reliance on third parties.<sup>304</sup> To free up capacity on its network, Time Warner Cable has deployed switched digital video in all of its service areas.<sup>305</sup> In addition, in 2013, Time Warner Cable ceased delivering analog signals (becoming all-digital) in New York City.<sup>306</sup> Its cable systems in Augusta, Maine, and parts of Kentucky and Indiana are also all-digital.<sup>307</sup> During 2014, Time Warner Cable planned to transition all of its Los Angeles systems to all-digital.<sup>308</sup> In 2013, Charter initiated a transition from analog to digital transmission.<sup>309</sup> The company completed 15 percent of its footprint in 2013 and expected to complete the transition to all-digital in 2014.<sup>310</sup>

94. *Programming Packages.* Like most cable MVPDs, Comcast, Time Warner Cable, and Charter offer various tiers of residential video programming. Pursuant to statutory requirements, all video subscribers receive the basic service tier, which provides 15 to 40 channels consisting of local broadcast stations, PEG channels, and a few additional non-broadcast channels.<sup>311</sup> At the top end, these three cable MVPDs offer digital video service with access to hundreds of channels. Comcast and Time Warner Cable offer over 300 channels.<sup>312</sup> The digital video service includes all the channels offered on the basic tier (15-40 channels), the expanded basic tier (40-60 channels), one or more digital packages, and the option to add specialty digital packages of genre-based programming.<sup>313</sup> Specialty channel packages often include a sports package, a movie package, and a family package. Digital video subscribers may also purchase premium channels, such as HBO, Showtime, Starz, and Cinemax, which generally offer, without commercial interruption, movies, original programming, live and taped sporting events, concerts, and other special features. Comcast tailors its video services in different markets based on programming preferences and demographics.<sup>314</sup> Time Warner Cable offers an extensive amount of foreign-language programming, some in packages and others on an à la carte basis.<sup>315</sup>

95. *HD, VOD, and DVR Services.* Time Warner Cable offers 180 HD channels.<sup>316</sup> Comcast and Charter offer approximately 100 HD channels.<sup>317</sup> Charter explains that its primary video competitors

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<sup>302</sup> Time Warner Cable 2013 Form 10-K at 5.

<sup>303</sup> *Id.*

<sup>304</sup> *Id.*

<sup>305</sup> *Id.* at 6.

<sup>306</sup> *Id.*

<sup>307</sup> *Id.*

<sup>308</sup> *Id.*

<sup>309</sup> Charter 2013 Form 10-K at 8.

<sup>310</sup> *Id.*

<sup>311</sup> 47 U.S.C. § 543(b)(7).

<sup>312</sup> Comcast and Time Warner Cable offer over 300 channels. Comcast 2013 Form 10-K at 4; Time Warner Cable 2013 Form 10-K at 1.

<sup>313</sup> The basic digital tier usually includes 30 to 40 music channels.

<sup>314</sup> Comcast 2013 Form 10-K at 4.

<sup>315</sup> Time Warner Cable 2013 Form 10-K at 1-2.

<sup>316</sup> Time Warner Cable 2013 Form 10-K at 1.

(i.e., DBS and telephone company MVPDs) have traditionally offered more HD channels and digital services with better picture quality compared to Charter's legacy analog video offerings.<sup>318</sup> When Charter's transition to all-digital is complete, Charter plans to offer 200 HD channels.<sup>319</sup> The HD channels offered by MVPDs usually include the major broadcast networks, leading national cable networks, premium channels, and RSNs. HD channels are generally provided at no additional charge. Additional charges generally apply only for packages of HD channels that do not have standard-definition counterparts. In addition to standard definition and HD channels, these three cable MVPDs offer thousands of standard definition and HD programs through their VOD services. For example, Comcast's VOD service provides digital video customers with more than 50,000 programming choices, with 15,000 in HD.<sup>320</sup> Time Warner Cable provides 18,000 hours of VOD programming but plans to significantly increase this to approximately 75,000 hours in 2014.<sup>321</sup> Charter's VOD service offers approximately 10,000 titles.<sup>322</sup> Many VOD programs are offered to digital video subscribers at no additional charge. In addition, digital video customers who subscribe to premium channels have access to the premium network's VOD content without additional fees. VOD service also offers a selection of movies and special events on a pay-per-view basis. The DVR service offered by these three cable MVPDs for an additional monthly fee allows digital video subscribers to select, record, and store programs on their set-top boxes, as well as pause and rewind "live" television. Time Warner Cable offers Whole House HD DVR, a multi-room DVR service, which allows a program recorded on a DVR to be watched through other compatible set-top boxes in a customer's home.<sup>323</sup> Time Warner Cable also offers Start Over, which enables digital video subscribers using a Time Warner Cable set-top box to restart some programs that are already in progress, and Look Back, which extends the window for viewing a program to 72 hours after it has aired.<sup>324</sup> All three cable MVPDs offer the ability to view television listings and to program DVRs online using a computer, smartphone, or tablet.

96. *TV Everywhere.* Comcast, Time Warner Cable, and Charter offer subscribers the ability to view video content online using Internet connected devices (e.g., computers, tablets and smartphones).<sup>325</sup> Although most TV Everywhere content is VOD, there is a growing amount of live video content. According to SNL Kagan, MVPDs attempt to compete with OVDs, in part, by offering exclusive video content (i.e., not available on Netflix and Hulu).<sup>326</sup> At the end of 2013, Comcast offered nearly 1,400 movies and over 2,000 television shows online.<sup>327</sup> Approximately 85 percent of Comcast's TV Everywhere movies were not available on Netflix and 62 percent were not available on Hulu.<sup>328</sup>

(Continued from previous page) \_\_\_\_\_

<sup>317</sup> Charter 2013 Form 10-K at 33. Comcast at <http://www.comcast.com/compare/fios.html?ex=False> (visited June 30, 2014).

<sup>318</sup> *Id.* at 34.

<sup>319</sup> *Id.* at 5.

<sup>320</sup> Comcast 2013 Form 10-K at 4.

<sup>321</sup> Time Warner Cable 2013 Form 10-K at 1-2.

<sup>322</sup> Charter 2013 Form 10-K at 5.

<sup>323</sup> Time Warner Cable 2013 Form 10-K at 2.

<sup>324</sup> *Id.*

<sup>325</sup> Comcast, <http://www.comcast.com/Corporate/Learn/DigitalCable/digitalcable.html> (visited April 21, 2014); Time Warner Cable, <http://www.timewarnercable.com/en/tv/features/twc-tv.html> (visited April 21, 2014); Charter, <https://www.charter.com/browse/tv-service/tv> (visited April 21, 2014).

<sup>326</sup> SNL Kagan, *Cable TV Investor: Deals & Finance*, Feb. 21, 2014, at 6-7.

<sup>327</sup> *Id.* at 6.

<sup>328</sup> *Id.*

Approximately 95 percent of Comcast's TV Everywhere television shows were not available on Netflix and 44 percent were not available on Hulu.<sup>329</sup>

97. In addition to offering free video programming online to video subscribers, TV Everywhere has expanded its service offerings. Some MVPDs are emulating the variety of services offered by OVDs. For example, some OVDs offer subscription services. In 2012, Comcast began offering Streampix for \$4.99 per month, which provides movies and past full seasons of television shows.<sup>330</sup> Some OVDs allow customers to purchase video programming online. In 2013, Comcast began offering subscribers the option to purchase select movies and television shows electronically.<sup>331</sup> Some OVDs enable binge viewing of television programs. In 2013, Comcast began offering "Watchathon Week," which enables Xfinity TV subscribers to binge view entire seasons of television shows.<sup>332</sup>

98. Consumer awareness of TV Everywhere significantly increased when Comcast provided online streaming of some live events during the London Olympics in 2012.<sup>333</sup> The events generated record online viewership.<sup>334</sup> During the Sochi Winter Olympics in February 2014, Comcast made every event available online, resulting in approximately 1,000 hours of live streaming.<sup>335</sup>

99. Through its TWC TV apps, Time Warner Cable enables in-home viewing of 300 channels of live programming and over 5,000 hours of VOD programming on Apple iOS and Android tablets and smartphones, Amazon Kindle Fire, Roku, Samsung Smart TVs and Xbox 360s.<sup>336</sup> The same programming can be viewed on PC and MAC computers.<sup>337</sup> The same TWC TV apps enable outside the home viewing of 24 live channels and 1,200 hours of VOD content from 40 networks.<sup>338</sup>

100. The Charter TV App enables video subscribers to watch over 100 channels of live programming in their homes using iPhone, iPad, and iPod Touch, as well as the most popular Android based tablets.<sup>339</sup> Charter's online offerings include many of its most popular networks.<sup>340</sup> Charter is currently testing a network based user interface similar to the Charter TV App to work with all of its existing and future set-top boxes.<sup>341</sup>

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<sup>329</sup> *Id.* Comcast has an ownership interest in Hulu. *See infra*, ¶¶ 160, 232. As a condition of the Comcast-NBC Universal transaction, Comcast is prohibited from exercising influence over the operation of Hulu, and Comcast is required to provide content to Hulu on the same basis as provided by the other content providers. *Comcast-NBCU Order*, 26 FCC Rcd at 4274, ¶ 90. *See also id.* at 4362, Appendix A, IV.C.4.

<sup>330</sup> Comcast, *Comcast Launches New Streaming Video Service: Xfinity Streampix* (press release), Feb. 21, 2012.

<sup>331</sup> Comcast 2013 Form 10-K at 4.

<sup>332</sup> Comcast, *The Biggest TV Binge Returns with Thousands of Free Episodes* (press release), March 20, 2014. *See also* Comcast, <http://xfinitytv.comcast.net/microsites/watchathon> (visited April 21, 2014). *See also* ¶ 289 (where we discuss binge viewing).

<sup>333</sup> SNL Kagan, *Cable TV Investor: Deals & Finance*, Feb. 21, 2014, at 7.

<sup>334</sup> *Id.*

<sup>335</sup> *Id.*

<sup>336</sup> Time Warner Cable 2013 Form 10-K at 2. *See also* Time Warner Cable, <http://www.timewarnercable.com/en/tv/features/twc-tv.html> (visited April 23, 2014).

<sup>337</sup> *Id.*

<sup>338</sup> *Id.*

<sup>339</sup> Charter 2013 Form 10-K at 5.

<sup>340</sup> *Id.*

<sup>341</sup> *Id.*

101. *Bundling.* Like most cable MVPDs, Comcast, Time Warner Cable, and Charter sell video services separately, but promote bundled packages of video, Internet access, and telephone services provided over their own two-way cable systems. The triple bundle was first offered in 2004 by Cablevision.<sup>342</sup> Ten years later, at the end of 2013, 43.3 percent of cable MVPD customers subscribed to a triple-play bundle.<sup>343</sup> Comcast and Time Warner Cable offer base-level triple-play bundles for approximately \$90 per month and Charter offers a base-level bundle for approximately \$110 per month, but the marketing emphasis is for bundles at \$140 to \$150 per month.<sup>344</sup> Cable MVPDs promote bundling as a way for subscribers to save money, relative to purchasing these services separately, but cable and telephone MVPDs also benefit from bundling. Charter says that its marketing strategy emphasizes bundled services and explains to shareholders the following benefits of the approach: (1) simplicity for both our customers in understanding our offers and our employees in service delivery; (2) the ability to package more services at the time of sale and include more product in each service, thus increasing revenue per customer; (3) higher product offering quality through more HD channels, improved pricing for HD and HD/DVR equipment and faster Internet speeds; (4) lower expected churn as a result of higher customer satisfaction; and (5) gradual price increases at the end of promotion periods.<sup>345</sup>

102. *Small and Midsized Incumbent Cable MVPDs.* In this category, we consider five cable MVPDs: Atlantic Broadband, Service Electric, MetroCast, Longview Cable TV, and Alliance Communications Network. Video services offered by cable MVPDs face direct competition from DBS MVPDs. As such, small and medium-sized cable MVPDs must either keep up with DBS video service offerings or risk losing subscribers. In past reports we have summarized the video offerings of a few small and midsized cable MVPDs.<sup>346</sup> Our sampling has been too small to draw any general conclusions but we have noted in previous reports that some of these cable MVPDs use technologies and offer video services similar to those the largest cable MVPDs offer.<sup>347</sup> In this Report, our sample again suggests that some small and medium sized cable MVPDs offer video services similar to the largest cable MVPDs, including all-digital transmission, fiber-to-the-home technology, HD channels, VOD offerings, whole-home DVRs, and TV Everywhere. Our sample also suggests, however, that there remain some small and medium sized cable MVPDs that continue to offer fewer channels, less HD, a smaller selection of VOD, DVRs with fewer features, and less TV Everywhere relative to the largest MVPDs. Cable MVPDs that do not yet offer everything DBS competitors offer sometimes offer lower prices to remain competitive.

103. Atlantic Broadband is a subsidiary of Cogeco Cable and the 13<sup>th</sup> largest cable MVPD with 230,000 video subscribers located in four regions: Western Pennsylvania; Southern Florida (Miami); Maryland/Delaware; and Aiken, South Carolina.<sup>348</sup> Atlantic Broadband offers analog and digital television channels, HD service, over 10,000 television shows and movies on its VOD service, whole-

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<sup>342</sup> Ian Olgeirson, *Triple Play Offers Celebrate 10-Year Anniversary with Rising Price Points*, MULTICHANNEL MARKET TRENDS, SNL KAGAN, April 2, 2015, <http://www.snk.com/interactivex/article.aspx?id=27327551&KPLT=6> (visited April 23, 2014).

<sup>343</sup> Tony Lenoir, *Stand-Alone Video Subs Plummet as Triple Play Continues Its Upward March*, MULTICHANNEL MARKET TRENDS, SNL KAGAN, March 25, 2014, <http://www.snk.com/interactivex/article.aspx?id=27395534&KPLT=6> (visited April 23, 2014).

<sup>344</sup> Ian Olgeirson, *Triple Play Offers Celebrate 10-Year Anniversary with Rising Price Points*, MULTICHANNEL MARKET TRENDS, SNL KAGAN, April 2, 2015, <http://www.snk.com/interactivex/article.aspx?id=27327551&KPLT=6> (visited April 23, 2014).

<sup>345</sup> Charter 2013 Form 10-K at 7-8.

<sup>346</sup> See 14<sup>th</sup> Report, 27 FCC Rcd at 8657-58, ¶¶ 112-117; 15<sup>th</sup> Report, 28 FCC Rcd at 10543-545, ¶¶ 104-109.

<sup>347</sup> *Id.*

<sup>348</sup> Atlantic Broadband, <http://atlanticbb.com/about> (visited May 14, 2014); Atlantic Broadband, *Atlantic Broadband Boosts Internet Speed and HD Channels in Aiken* (press release), Feb. 25, 2014.

home TiVo DVR service; and TV Everywhere. Services offered differ by community.<sup>349</sup> In April 2014, Atlantic Broadband entered a partnership with Netflix to enable subscribers to watch Netflix through an app integrated into the TiVo DVR service.<sup>350</sup>

104. Service Electric is the 15<sup>th</sup> largest cable MVPD with approximately 205,000 video subscribers in three areas: Lehigh Valley, Pennsylvania; Wilkes-Barre, Pennsylvania; and Hunterdon, New Jersey.<sup>351</sup> Service Electric offers a Lifeline television package with over 32 channels for \$19.99 per month and a Full Channel Lineup television package with 99 channels for \$73.99 per month.<sup>352</sup> The company offers HD, VOD, and DVR service, and TV Everywhere.<sup>353</sup> Service Electric also offers TV2, a channel which provides exclusive local sports and events.<sup>354</sup>

105. MetroCast is the 17<sup>th</sup> largest cable MVPD with approximately 155,000 video subscribers in over 135 communities in nine states: New Hampshire, Maine, Pennsylvania, Maryland, Virginia, Connecticut, South Carolina, Mississippi, and Alabama.<sup>355</sup> In July 2013, MetroCast announced that it was converting its basic and expanded basic channels to an all-digital format and expected all its markets to be converted by mid-year 2014.<sup>356</sup> MetroCast has deployed fiber-to-the-home technology in some of its communities in Mississippi, Maryland, and Virginia.<sup>357</sup> MetroCast offers over 200 digital channels, HD, VOD, and multi-room DVR service, and TV Everywhere, but the services offered differ by community.<sup>358</sup>

106. Longview Cable TV is the 43<sup>rd</sup> largest cable MVPD with approximately 12,000 video subscribers in Longview and Kilgore, Texas.<sup>359</sup> In October 2013, Longview announced that it was

<sup>349</sup> Atlantic Broadband, <http://atlanticbb.com/about/investor-relations> (visited May 14, 2014); <http://atlanticbb.com/for-home/tv> (visited May 14, 2014); <http://atlanticbb.com/support/tivo> (visited May 14, 2014).

<sup>350</sup> Atlantic Broadband, Atlantic Broadband, Grande Communications and RCN are First U.S. Cable Providers to Bring Netflix to Their Customers (press release), April 25, 2014.

<sup>351</sup> Service Electric, <http://www.sectv.com/> (visited May 14, 2014); and SNL Kagan, *Top Cable MSOs*, <http://www.snl.com/InteractiveX/TopCableMSOs.aspx?period=2013Q4&sortcol=subscribersbasic&sortorder=desc> (visited May 14, 2014).

<sup>352</sup> Service Electric, <http://www.sectv.com/Web/aspCableBasic.aspx?strSystem=WB> (visited May 14, 2014); <http://www.sectv.com/Web/aspCableFull.aspx?strSystem=WB> (visited May 14, 2014).

<sup>353</sup> Service Electric, <http://www.sectv.com/Web/aspCableHD.aspx?strSystem=WB> (visited May 14, 2014); <http://www.sectv.com/Web/aspCableVOD.aspx?strSystem=WB> (visited May 14, 2014); <http://www.sectv.com/Web/aspEquipDVR.aspx?strSystem=WB> (visited May 14, 2014); <http://www.sectv.com/Web/aspCableTVAnywhere.aspx?strSystem=WB> (visited May 14, 2014).

<sup>354</sup> Service Electric, <http://www.sectv.com/Web/aspTV2.aspx?strSystem=WB> (visited May 14, 2014).

<sup>355</sup> MetroCast, <http://www.metrocast.com/about.cfm> (visited May 14, 2014); <http://www.metrocast.com/coverage.cfm> (visited May 14, 2014); and SNL Kagan, *Top Cable MSOs*, <http://www.snl.com/InteractiveX/TopCableMSOs.aspx?period=2013Q4&sortcol=subscribersbasic&sortorder=desc> (visited May 14, 2014).

<sup>356</sup> MetroCast, *MetroCast Transitions to All-Digital Channel Lineups* (press release), July 28, 2013.

<sup>357</sup> MetroCast, *MetroCast Deploys Advanced Fiber to the Home (FTTH) Technology* (press release), March 24, 2014).

<sup>358</sup> MetroCast, [http://www.metrocast.com/digital\\_cable\\_tv.cfm](http://www.metrocast.com/digital_cable_tv.cfm) (visited May 14, 2014); <http://www.metrocast.com/hdtv.cfm> (visited May 14, 2014); [http://www.metrocast.com/on\\_demand.cfm](http://www.metrocast.com/on_demand.cfm) (visited May 14, 2014); <http://www.metrocast.com/dvr.cfm> (visited May 14, 2014); <http://www.metrocast.com/tveverywhere/> (visited May 14, 2014).

<sup>359</sup> Longview, <http://www.longviewcabletv.com/index.html> (visited May 14, 2014); and SNL Kagan, *Top Cable MSOs*, <http://www.snl.com/InteractiveX/TopCableMSOs.aspx?period=2013Q4&sortcol=subscribersbasic&sortorder=desc> (visited May 14, 2014).

nearing completion of its all-digital conversion.<sup>360</sup> Longview offers a Standard video package with approximately 160 channels for \$63.95 per month.<sup>361</sup> The company offers up to 267 digital channels, HD and DVR service, and TV Everywhere, but their website does not market a VOD service.<sup>362</sup>

107. Alliance Communications Network is the 58<sup>th</sup> largest cable MVPD with approximately 3,100 video subscribers in 45 communities in six states: Texas, Arkansas, Alabama, Oklahoma, Louisiana, and Mississippi.<sup>363</sup> Alliance offers video services from basic cable to digital HD and DVR service, but their website does not market VOD or TV Everywhere.<sup>364</sup>

108. In addition to offering video services that compete with the video services of DBS MVPDs, small and medium sized cable MVPDs must also make a profit to remain viable. To lower costs for programming, set-top boxes, and cable modems, many small and medium sized cable MVPDs rely on buying groups like the National Cable Television Cooperative (“NCTC”).<sup>365</sup> NCTC has 890 members. Approximately 90 members serve more than 10,000 subscribers but more than half of the members serve less than 1,000 subscribers.<sup>366</sup> According to the ACA, by aggregating purchases, NCTC is able to obtain better prices, terms, and conditions for its members than they could achieve by themselves.<sup>367</sup> ACA maintains that without buying groups, small and medium sized cable MVPDs would pay higher programming fees and higher prices for set-top boxes and cable modems, and there would be less competition between small and medium sized cable MVPDs and DBS MVPDs.<sup>368</sup> As noted above, the Commission adopted a Further Notice of Proposed Rulemaking addressing buying groups in October 2012.<sup>369</sup>

#### (ii) DBS MVPD Business Models and Competitive Strategies

109. DIRECTV is the second largest MVPD, with approximately 20.3 million subscribers in the United States.<sup>370</sup> The company is organized into two operating segments: DIRECTV U.S. and DIRECTV Latin America.<sup>371</sup> DIRECTV has ownership interests in two RSNs based in Denver, Colorado, and Pittsburgh, Pennsylvania.<sup>372</sup> DIRECTV also holds a minority ownership interest in ROOT SPORTS

<sup>360</sup> Longview, <http://www.longviewcabletv.com/assets/announce-conversion---letter-7-rev-10-1.pdf> (visited May 14, 2014).

<sup>361</sup> Longview, <http://www.longviewcabletv.com/cable-tv.html> (visited May 14, 2014).

<sup>362</sup> *Id.*; Longview, <https://www.watchtveverywhere.com/learnmore.php> (visited May 14, 2014).

<sup>363</sup> Alliance, <http://alliancecable.net/about-us.php> (visited May 14, 2014); and SNL Kagan, *Top Cable MSOs*, <http://www.snl.com/InteractiveX/TopCableMSOs.aspx?period=2013Q4&sortcol=subscribersbasic&sortorder=desc> (visited May 14, 2014).

<sup>364</sup> Alliance, <http://alliancecable.net/services.php> (visited May 14, 2014).

<sup>365</sup> ACA Comments at 1-4.

<sup>366</sup> *Id.* at 3.

<sup>367</sup> *Id.* at 2.

<sup>368</sup> *Id.* at 3-4.

<sup>369</sup> *See supra*, ¶ 61, n. 194.

<sup>370</sup> DIRECTV, *DIRECTV* 2013 Form 10-K at 2.

<sup>371</sup> In this Report, we focus only on the DIRECTV U.S. segment.

<sup>372</sup> DIRECTV 2013 Form 10-K at 2. In November 2014, DIRECTV and AT&T acquired Comcast SportsNet Houston and Comcast SportsNet Houston HD. The network is now named ROOT Sports Southwest. DIRECTV, *New Network Under DIRECTV and AT&T Ownership to Re-launch in Four Times as Many Households For 2014-15 Rockets Season and 2015 Astros Season* (press release), Nov. 17, 2014.

Northwest based in Seattle, Washington, and a 42 percent interest in Game Show Network, a cable television network dedicated to game-related programming and Internet interactive game playing.<sup>373</sup>

110. DISH Network is a holding company with a pay-television segment and a wireless segment.<sup>374</sup> DISH Network is the third largest MVPD, with approximately 14.1 million subscribers.<sup>375</sup> DISH Network acquired Blockbuster in 2011, and by the end of 2013, had closed all of the company-owned retail stores and discontinued by-mail DVD service.<sup>376</sup> The company, however, continues to provide Blockbuster@Home, which gives DISH subscribers access to more than 10,000 movies and television shows on their televisions and 25,000 movies and television shows on their computer.<sup>377</sup> The company does not have significant ownership interests in programming networks.

111. *Technology.* DIRECTV and DISH Network use geostationary satellites to deliver all-digital video programming to subscribers with small satellite dish antenna connected to one or more set-top receivers. DIRECTV uses 11 geosynchronous satellites, including ten owned satellites and one leased satellite.<sup>378</sup> DISH Network uses 14 satellites, including six owned satellites and eight leased satellites.<sup>379</sup> In contrast to upgraded cable systems, which have larger bandwidth and use two-way technology, DBS systems have less bandwidth and use one-way technology. DIRECTV maintains that its one-way technology DBS systems, however, have the advantage of providing a nationwide footprint.<sup>380</sup> DIRECTV explains that this footprint enables DBS systems to provide service to areas with low population density and add subscribers with minimal incremental infrastructure cost.<sup>381</sup>

112. *Programming Packages.* DIRECTV offers over 2,000 digital video and audio channels including approximately 200 basic entertainment channels, approximately 50 premium movie channels, over 60 regional and specialty sports networks, over 120 Spanish-language and other foreign language special interest channels, and over 195 HD channels.<sup>382</sup> DIRECTV and the National Football League recently extended DIRECTV's exclusive rights to carry NFL Sunday Ticket in a new multi-year agreement, which also includes expanded rights to stream games live on mobile devices and via broadband.<sup>383</sup> DIRECTV provides local broadcast channels in 197 markets, representing over 99 percent of U.S. homes, and local broadcast HD channels in 196 markets.<sup>384</sup>

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<sup>373</sup> *Id.*

<sup>374</sup> In this Report, we focus only on DISH Network's pay-television segment.

<sup>375</sup> DISH Network 2013 Form 10-K at 2.

<sup>376</sup> *Id.* at 1.

<sup>377</sup> *Id.*

<sup>378</sup> DIRECTV 2013 Form 10-K at 10.

<sup>379</sup> DISH Network 2013 Form 10-K at 8.

<sup>380</sup> In addition to the contiguous 48 states, DIRECTV states that it provides the same programming packages for the same prices to customers in Alaska and Hawaii. DIRECTV Comments at 20. DISH Network also appears to offer similar programming packages to the contiguous 48 states, Alaska, and Hawaii. *See* SatelliteSales.com, <http://www.satellitesales.com/ak-fairbanks-dish-network.html>; D&M Satellite Solutions, <http://www.dishtvhawaii.com/> (visited Nov. 9, 2012). Subscribers in Alaska and Hawaii require slightly larger (1.2 meter) receiving antennas than subscribers in the lower 48 states. DIRECTV Comments at 20.

<sup>381</sup> DIRECTV 2013 Form 10-K at 4-5.

<sup>382</sup> DIRECTV Comments at 16.

<sup>383</sup> DIRECTV, *NFL and DIRECTV Extend NFL Sunday Ticket in New Multi-Year Deal* (press release), Oct. 1, 2014.

<sup>384</sup> DIRECTV Comments at 3, 15. Section 108 of STELAR requires DBS MVPDs to submit annually to the Commission a report setting forth the broadcast channels retransmitted in each local market. STELAR, § 108, 128 Stat. at 2064-65.

113. DISH Network offers 3,100 standard definition and HD channels including more than 280 basic video channels (which include 25 regional sports channels and 70 channels of pay-per-view content), 70 Sirius Satellite Radio music channels, 30 premium movie channels, 10 specialty sports channels, and 300 Latino and international channels.<sup>385</sup> DISH Network provides local broadcast channels in standard definition to all 210 markets and local channels in HD in more than 190 markets.<sup>386</sup> DISH Network explains that it has historically been viewed as the low-cost provider in the pay-television industry that seeks to offer the lowest everyday prices available to consumers after introductory promotions expire.<sup>387</sup>

114. *HD, VOD, and DVR Services.* DIRECTV reports that it provides one of the most extensive HD offerings with over 195 national HD channels.<sup>388</sup> DIRECTV provides some VOD by “pushing” movies from its satellites to the subscriber’s DVR.<sup>389</sup> Most VOD, however, is delivered by connecting the subscriber’s set-top receiver to a broadband service.<sup>390</sup> DIRECTV says that connecting subscriber set-top receivers to broadband service is strategically important because it greatly enhances the video experience while facilitating access of DIRECTV programming services on mobile devices.<sup>391</sup> DIRECTV explains that a broadband connected receiver provides subscribers with the ability to (1) use tablets and smartphones as a remote control; (2) access over 12,000 additional VOD movies and television shows; (3) stream live authorized DIRECTV programming onto computers, tablets, and smartphones inside their home; (4) engage interactive TV apps; and (5) use the Pandora audio service.<sup>392</sup> In 2013, DIRECTV introduced the next generation DIRECTV Genie, a whole-home DVR service with a terabyte hard drive that can record five programs in HD simultaneously while viewing and controlling content from one DVR to four different locations in the house at the same time with the appropriate equipment.<sup>393</sup>

115. DISH Network maintains that it offers more national and local HD channels than most pay-television providers.<sup>394</sup> Subscribers access DISH Network’s VOD content by connecting their HD DVRs to broadband service.<sup>395</sup> To maintain and enhance its competitiveness over the long term, DISH Network introduced a whole-home HD DVR receiver capable of recording six shows at the same time called the Hopper in 2012 with “Primetime Anywhere” functionality, which automatically records primetime programming from the four major broadcast networks.<sup>396</sup> In the first quarter of 2013, the

<sup>385</sup> DISH Network 2013 Form 10-K at 2.

<sup>386</sup> *Id.*

<sup>387</sup> DISH Network 2013 Form 10-K at 2.

<sup>388</sup> DIRECTV 2013 Form 10-K at 3. *See also* DIRECTV Comments at 15.

<sup>389</sup> *Id.*

<sup>390</sup> *Id.*

<sup>391</sup> *Id.* at 7. *See also* DIRECTV Comments at 5-6.

<sup>392</sup> *Id.*

<sup>393</sup> DIRECTV 2013 Form 10-K at 4. *See also* DIRECTV Comments at 4.

<sup>394</sup> DISH Network 2013 Form 10-K at 2.

<sup>395</sup> DISH Network, <http://www.dish.com/entertainment/vod/> (visited April 28, 2014).

<sup>396</sup> DISH Network 2013 Form 10-K at 2. In 2012 several broadcast networks filed lawsuits alleging that DISH’s Hopper technology infringes on their copyrights and breaches their contracts with DISH. *See* Donald Jeffrey, *Dish Tells Judge Ad-Free TV Suits Should Be in New York*, Bloomberg, July 3, 2012, at <http://www.bloomberg.com/news/articles/2012-07-02/dish-tells-judge-tv-ad-skipping-case-should-be-heard-in-new-york> <http://www.businessweek.com/news/2012-07-02/dish-tells-judge-tv-ad-skipping-case-should-be-heard-in-new-york> (visited March 10, 2015). In 2014, ABC and CBS reached separate settlements with DISH. *See* Todd Spangler, *CBS, Dish Reach Carriage Deal After Brief Blackout*, Variety, Dec. 6, 2014, at

(continued....)

company introduced the Hopper with Sling, which provides the ability to watch live television and DVR recordings online or through the “DISH Anywhere” mobile app.<sup>397</sup> More recently, DISH Network introduced the Super Joey receiver, which connects additional televisions to the whole-home experience and expands the number of shows that can be recorded at the same time from six to eight.<sup>398</sup>

116. *TV Everywhere*. In 2013, DIRECTV introduced GenieGo, which enables subscribers with an HD-DVR and broadband connection to download and watch recorded shows on up to five different devices in their home, as well as remotely stream recorded content to Internet connected devices using any Wi-Fi network.<sup>399</sup> In 2013, DIRECTV also expanded its DIRECTV Everywhere offering to include over 100 live television channels for viewing inside the home and 30 live television channels for viewing outside the home.<sup>400</sup> During 2013, DIRECTV also implemented dynamic advertisement insertion for streamed VOD content.<sup>401</sup> DISH Network offers video subscribers more than 85,000 movies, television shows, clips and trailers online.<sup>402</sup> DISH Network also uses the Hopper set-top receiver with Sling placeshifting technology to enhance its TV Everywhere offerings.<sup>403</sup> According to SNL Kagan, both DIRECTV and DISH Network focus on exclusivity as a competitive strategy by offering a large number of online movies and television shows that are not available on Netflix and Hulu.<sup>404</sup> At the end of 2013, approximately 95 percent of the television shows offered by DIRECTV and DISH Network were not available on Netflix.<sup>405</sup> SNL Kagan explains that DBS operators also use exclusivity as a competitive strategy for differentiating their TV Everywhere services from those offered by wireline MVPDs.<sup>406</sup> Comcast, Cox, Verizon, and AT&T did not offer nearly 65 percent of DISH Network’s online movies and 42 percent of DIRECTV’s online movies.<sup>407</sup> SNL Kagan also notes that DISH Network offered more TV Everywhere movies than DIRECTV, Comcast, Cox, Verizon, and AT&T.<sup>408</sup>

117. *Bundles*. DIRECTV argues that the market for the delivery of video programming has become increasingly linked with Internet service for three reasons. First, video programming offered over the Internet is increasing. Second, MVPDs benefit from bundling video and Internet services. Third, the

(Continued from previous page)

<http://variety.com/2014/tv/news/cbs-dish-reach-carriage-deal-1201372651/> (visited March 10, 2015). While the Fox lawsuit is still pending, in January 2015 the district court granted the parties’ joint stipulation to stay the case until October 1, 2015. *Fox Broad. Co. v. DISH Network L.L.C.*, No. CV 12-4529-DMG (SHx) (C.D. Cal. Jan. 16, 2015); see also, Ted Johnson, *Fox, Dish Network Ask Court to Pause Ad Skipping Case*, Variety, Jan. 16, 2015, at <http://variety.com/2015/biz/news/fox-dish-network-ask-court-to-pause-ad-skipping-case-1201407117/> (visited March 10, 2015). The lawsuit filed by NBC is also currently stayed pending the outcome of the Fox lawsuit. See *NBC Studios, LLC v. DISH Network Corp.*, No. CV 12-4536-DMG (SHx) (C.D. Cal. Aug. 6, 2014) (granting the parties’ joint stipulation to stay the proceedings).

<sup>397</sup> *Id.*

<sup>398</sup> *Id.* See also DISH Network, <http://www.dish.com/technology/receivers-dvrs/?WT.svl=carousel-four-dish-technology-button> (visited April 28, 2014).

<sup>399</sup> DIRECTV 2013 Form 10-K at 7.

<sup>400</sup> DIRECTV Comments at 6.

<sup>401</sup> DIRECTV 2013 Form 10-K at 7.

<sup>402</sup> DISH Network 2013 Form 10-K at 3.

<sup>403</sup> *Id.* at 2.

<sup>404</sup> SNL Kagan, *Cable TV Investor: Deals & Finance*, Feb. 21, 2014, at 6-7.

<sup>405</sup> *Id.* at 7.

<sup>406</sup> *Id.*

<sup>407</sup> *Id.*

<sup>408</sup> *Id.*

technologies cable and telephone MVPDs use enable them to offer superior Internet service as compared to DBS MVPDs.<sup>409</sup> DIRECTV says that it “lacks the facilities necessary to offer its own bundle of video, broadband, and telephone services.”<sup>410</sup> During the period covered by this Report, in order for DIRECTV to provide a bundle, it had to negotiate commercial relationships with telephone companies in order to package their video programming service with DSL Internet and voice service from the telephone company.<sup>411</sup> In 2012, DIRECTV also partnered with HughesNet and Exede to provide satellite Internet, with maximum speeds of over 10 Mbps, to customers in locations where it was not possible to partner with telephone companies.<sup>412</sup> DIRECTV notes that neither DSL nor satellite Internet services compare with the Internet speeds available from cable and telephone MVPDs that utilize DOCSIS technology and fiber networks.<sup>413</sup> DIRECTV concludes that a “video-only provider that must rely on an inferior broadband product is clearly at a substantial disadvantage competing against a provider that not only controls both its own video and broadband facilities, but also offers a superior broadband product as well.”<sup>414</sup>

118. On September 27, 2012, DISH Network began marketing a satellite broadband service called dishNET using satellites from Hughes and ViaSat that provide broadband coverage nationwide.<sup>415</sup> DISH Network explains that the broadband service primarily targets approximately 15 million rural residents that are underserved, or unserved, by wireline broadband.<sup>416</sup> The dishNET satellite broadband service provides download speeds of up to 10 Mbps.<sup>417</sup> In addition, DISH Network offers wireline voice and broadband services to consumers in 14 states (Arizona, Colorado, Idaho, Iowa, Minnesota, Montana, Nebraska, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming) using cooperative arrangements with local telephone companies.<sup>418</sup> DISH Network also offers online movies and television shows through Blockbuster@Home.<sup>419</sup>

119. Some households in rural areas do not have access to the wireline video and Internet services of a cable or telephone MVPD. Some of these households may also lack access to the DSL Internet services of telephone companies. Today, DIRECTV and DISH Network offer both satellite video

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<sup>409</sup> DIRECTV Comments at 21-26.

<sup>410</sup> *Id.* at 19.

<sup>411</sup> *Id.* at 19-20. *See also* DIRECTV 2013 Form 10-K at 6.

<sup>412</sup> *Id.* at 20. *See also* DIRECTV, *DIRECTV Video & High-Speed Internet Bundles Available Soon throughout the Entire U.S.* (press release), May 16, 2012. HughesNet and Exede are providers of high-speed satellite Internet service. HughesNet provides download speeds ranging from 5 Mbps for \$49.99 per month to 15 Mbps for \$129.99 per month. New subscribers save \$10 per month for the first three months. HughesNet may slow a subscriber’s download speed if the subscriber exceeds the monthly data allowance, which ranges from 10 GB to 40 GB per month. HughesNet, <http://internet.hughesnet.com/about-hughesnet-gen4.html> (visited Nov. 4, 2014); Exede, provides download speeds up to 12 Mbps on all its plans. For \$49.99 a month, subscribers receive a 10 GB data allowance and for \$129.99 a month, subscribers receive a 25 GB data allowance. Subscribers have unmetered access to data from 12 midnight to 5 AM. Exede, <http://www.exede.com/what-is-exede> (visited Nov. 4, 2014).

<sup>413</sup> *Id.*

<sup>414</sup> *Id.* at 25. AT&T maintains that the proposed AT&T/DIRECTV transaction would overcome this disadvantage by offering new bundles that combine DIRECTV’s video service with AT&T’s U-verse Internet service. *See supra*, n. 235 & ¶ 77.

<sup>415</sup> DISH Network 2013 Form 10-K at 2.

<sup>416</sup> *Id.*

<sup>417</sup> *Id.*

<sup>418</sup> *Id.*

<sup>419</sup> *Id.*

services and satellite Internet services to these households through partnerships with HughesNet and Excede. Much of the VOD and TV Everywhere content DBS MVPDs offer, and all content OVDs deliver, require Internet access. Although satellite Internet service will support video streaming, DBS MVPDs explain that satellite Internet service is not a good solution for watching TV shows and movies online.<sup>420</sup> Online video uses a large amount of data, which quickly consumes the monthly data allowance limits satellite Internet service offer.<sup>421</sup>

**(iii) Telephone MVPD Business Models and Competitive Strategies**

120. Verizon and AT&T are large telecommunications holding companies operating both wireless and wireline networks. The FiOS and U-verse video services offered by Verizon and AT&T, respectively, are part of their Wireline segments, which also offer traditional landline voice and data services to consumers and businesses in the United States and in international markets.<sup>422</sup> Verizon began offering its own, facilities-based FiOS video service in 2005. At the end of 2013, Verizon FiOS passed 18.6 million homes and is now the sixth largest MVPD with 5.3 million FiOS video subscribers.<sup>423</sup> Verizon notes that in all areas where it has deployed its FiOS video service it faces competition from incumbent cable MVPDs and DBS MVPDs.<sup>424</sup> AT&T began offering its own, facilities-based U-verse video service in late 2006. At the end of 2013, AT&T U-verse passed approximately 27 million customer locations and is now the fifth largest MVPD with 5.5 million U-verse video subscribers.<sup>425</sup> In 2012, AT&T announced plans to expand its U-verse services to a total of 33 million customer locations within the 2015-2016 timeframe.<sup>426</sup> Neither Verizon nor AT&T has ownership interests in video programming networks.<sup>427</sup>

121. *Technology.* Verizon FiOS uses an all-digital fiber-to-the-premises network and a combination of QAM and IP technology to deliver its FiOS video services.<sup>428</sup> AT&T U-verse uses an all-digital fiber-to-the-home technology for some homes and fiber-to-the-node technology for other homes and uses only IP technology to deliver its U-verse video services.<sup>429</sup>

122. *Programming Packages.* Verizon FiOS TV offers five television plans ranging from FiOS TV Local with local channels, to Ultimate HD with 385 all-digital channels.<sup>430</sup> AT&T U-verse TV also offers five television plans ranging from U-basic with local channels, to U450 with 470 channels.<sup>431</sup>

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<sup>420</sup> DISH Network, <http://www.dish.com/entertainment/internet-phone/satellite-internet/> (visited May 20, 2014); Excede, <http://www.excede.com/internet-packages-pricing/directv-bundle-offer/faqs> (visited May 20, 2014).

<sup>421</sup> *Id.*

<sup>422</sup> Verizon, *2013 Annual Report*, at 10 and 20; AT&T, *2013 Annual Report*, at 11, 13.

<sup>423</sup> Verizon, *2013 Annual Report*, at 2, 20.

<sup>424</sup> Verizon Comments at 4.

<sup>425</sup> AT&T, *2013 Annual Report*, at 22.

<sup>426</sup> *Id.* at 22-23.

<sup>427</sup> AT&T's proposed transaction with DIRECTV would change this. *See supra*, n. 372.

<sup>428</sup> Verizon, <http://fios.verizon.com/why-fios.html> (visited April 30, 2014); Verizon, <http://www.verizon.com/investor/searchresult.htm?searchtxt=IP%20and%20QAM> (visited April 30, 2014).

<sup>429</sup> AT&T, <http://www.att-services.net/att-u-verse/how-uverse-works.html#U2EHZfk7tcY> (visited April 30, 2014).

<sup>430</sup> Verizon, <http://www.verizon.com/home/fiosv/> (visited April 30, 2014).

<sup>431</sup> AT&T, <http://www.att.com/shop/tv.html> (visited April 30, 2014).

Both Verizon FiOS and AT&T U-verse offer additional premium movie, sports, and international channel packages.<sup>432</sup>

123. *HD, VOD, and DVR Services.* Verizon offers over 120 HD channels and over 80,000 VOD titles each month.<sup>433</sup> AT&T U-verse offers 205 HD channels and VOD programming.<sup>434</sup> Verizon offers a Multi-Room HD DVR that enables recording of two video programs at the same time.<sup>435</sup> AT&T offers a Total Home HD DVR that can record up to four video programs at the same time and store up to 422 hours of standard-definition programming or 155 hours of HD programming.<sup>436</sup>

124. *TV Everywhere.* Verizon FiOS offers FlexView, which enables subscribers to watch over 55,000 VOD titles and select television channels on computers, tablets, and smartphones.<sup>437</sup> In 2013, FiOS subscribers could access on select devices (*i.e.*, LG and Samsung smart TVs, Smart Blu-ray players, and Xbox 360 game consoles) 75 live television channels and thousands of FlexView on-demand movies in their homes.<sup>438</sup> In 2013, Verizon made available FiOS Mobile, which enables subscribers to access 160 channels inside the home and 60 channels outside the home.<sup>439</sup> In early 2014, Verizon purchased the assets of Intel Media, which had been developing an Internet-based video service called OnCue.<sup>440</sup> Verizon plans to integrate OnCue with its FiOS video service.<sup>441</sup> This acquisition follows the acquisition in 2013 of EdgeCast Networks, a content delivery network, and upLynk, a digital media streaming technology that processes live, linear, and VOD content.<sup>442</sup> AT&T says it offers 300,000 free videos and live video content online.<sup>443</sup> With the U-verse app on a compatible tablet or smartphone, subscribers can watch a library of movies and thousands of television programs, including live television channels outside the home.<sup>444</sup> With the U-verse app, subscribers can access outside the home approximately 140 channels of live television and content from approximately 50 VOD channels.<sup>445</sup> SNL Kagan notes that few of Verizon's VOD movies were available on Netflix or Hulu but the greater part of AT&T's TV Everywhere movie catalog could be found on Netflix and nearly 53 percent were available on Hulu.<sup>446</sup>

125. *Bundling.* Although FiOS TV and U-verse TV can be purchased on a stand-alone basis, both Verizon and AT&T typically market video services in a bundle that includes video, Internet access,

<sup>432</sup> Verizon, <http://www.verizon.com/home/fios/v/> (visited April 30, 2014); AT&T, <http://www.att.com/shop/tv.html> (visited April 30, 2014).

<sup>433</sup> Verizon, <http://www.verizon.com/home/fios/v/> (visited April 30, 2014); Verizon, <http://fios.verizon.com/fios-on-demand.html> (visited April 30, 2014).

<sup>434</sup> AT&T, <http://www.att.com/shop/tv.html> (visited April 30, 2014).

<sup>435</sup> Verizon, <http://fios.verizon.com/fios-tv-equipment.html> (visited April 30, 2014).

<sup>436</sup> AT&T, <http://www.att.com/shop/tv.html#receivers> (visited April 30, 2014).

<sup>437</sup> Verizon, <http://fios.verizon.com/fios-on-demand.html> (visited April 30, 2014).

<sup>438</sup> Verizon Comments at 6.

<sup>439</sup> *Id.* at 7. Verizon, <http://www.verizon.com/about/news/fios-mobile-app-numbers/> (visited Nov. 6, 2014).

<sup>440</sup> Verizon, *2013 Annual Report*, at 4. *See also* SNL Kagan, *Cable TV Investor: Deal & Finance*, Feb. 21, 2014, at 6.

<sup>441</sup> *Id.*

<sup>442</sup> *Id.*

<sup>443</sup> AT&T, <http://www.att.com/shop/tv.html> (visited April 30, 2014).

<sup>444</sup> AT&T, <http://uverseonline.att.net/uverse/uverseapp> (visited April 30, 2014).

<sup>445</sup> AT&T, [http://uverse.com/uverse/uverseapp?utm\\_source=apps&utm\\_medium=tile&utm\\_campaign=uverse-mobile](http://uverse.com/uverse/uverseapp?utm_source=apps&utm_medium=tile&utm_campaign=uverse-mobile) (visited Nov. 6, 2014).

<sup>446</sup> SNL Kagan, *Cable TV Investor: Deals & Finance*, Feb. 21, 2014, at 6-7.

and voice service.<sup>447</sup> In addition, both Verizon and AT&T offer mobile wireless services, but their marketing for video bundles seldom includes their own wireless services.<sup>448</sup>

126. *Other Telephone MVPDs.* CenturyLink, Consolidated Communications, and Cincinnati Bell also provide facilities-based MVPD systems. CenturyLink is the third largest wireline telecommunications company in the U.S.<sup>449</sup> In addition to cooperative arrangements with DIRECTV, CenturyLink offers its own facilities-based video service.<sup>450</sup> Although CenturyLink uses a few different delivery technologies, its primary video offering, called Prism TV, uses a fiber-optic network and IP and SDV technology.<sup>451</sup> Prism TV is available in 14 markets including Las Vegas, Tallahassee, Phoenix and Colorado Springs.<sup>452</sup> At the end of 2013, Prism TV had 175,000 subscribers.<sup>453</sup> Prism TV is available in four video packages ranging from Prism Essential with 140 channels for \$54.99 per month to Prism Premium with 320 channels for \$119.99 per month.<sup>454</sup> CenturyLink offers a Whole-Home DVR that records four programs at the same time, more than 200 HD channels, and a wireless set-top box.<sup>455</sup> CenturyLink's TV Everywhere offering, called Prism on the Go, enables subscribers to watch video programming anywhere in the home on any device.<sup>456</sup> As part of a pilot program, CenturyLink plans to deploy its Prism TV app on OG Smart TVs and LG HDMI Sticks, giving Prism TV subscribers the ability to view some video programming without the use of a traditional set-top box.<sup>457</sup> CenturyLink also announced the launch of an upgraded TV app, which will allow Prism TV subscribers to access some live television channels and VOD content inside and outside the home on iOS, Android, and Kindle mobile devices.<sup>458</sup>

127. In 2012, Consolidated Communications merged with SureWest Communications.<sup>459</sup> At year-end 2013, Consolidated Communications offered video service to approximately 531,000 homes in six states: Illinois, Texas, Pennsylvania, California, Kansas, and Missouri, up from 524,000 homes in 2012.<sup>460</sup> Consolidated Communications explains that, in most cases, it has entered the cable television market as the operator of a second cable system and, therefore, faces the challenge of drawing customers away from the incumbent cable provider.<sup>461</sup> Consolidated uses fiber-to-the-home and fiber-to-the-node

<sup>447</sup> Verizon, <http://fios.verizon.com/> (visited April 30, 2014); AT&T, <http://www.att.com/shop/u-verse.html> (visited April 30, 2014).

<sup>448</sup> *Id.*

<sup>449</sup> CenturyLink, *SEC Form 10-K for the Year Ended December 31, 2013*, at 3 ("CenturyLink 2013 Form 10-K").

<sup>450</sup> CenturyLink 2013 Form 10-K at 7.

<sup>451</sup> *Id.* See also CenturyLink Comments at 1.

<sup>452</sup> *Id.* at 8; CenturyLink, *CenturyLink to Demonstrate Prism TV Applications on New LG Smart TV Products at the 2014 International Consumer Electronics Show* (press release), Jan 7, 2014. See also CenturyLink Comments at 1.

<sup>453</sup> CenturyLink, *CenturyLink Reports Strong Fourth Quarter 2013 Results* (press release), Feb. 12, 2014.

<sup>454</sup> CenturyLink, <https://www.centurylink.com/prismtv/#prism-tv-plans-and-prices.html> (visited May 2, 2014).

<sup>455</sup> CenturyLink, <https://www.centurylink.com/prismtv/#prism-tv-advanced-features.html> (visited May 2, 2014); CenturyLink, *CenturyLink to Demonstrate Prism TV Applications on New LG Smart TV Products at the 2014 International Consumer Electronics Show* (press release), Jan 7, 2014.

<sup>456</sup> CenturyLink, <https://www.centurylink.com/prismtv/#prism-tv-advanced-features.html> (visited May 2, 2014).

<sup>457</sup> CenturyLink, *CenturyLink to Demonstrate Prism TV Applications on New LG Smart TV Products at the 2014 International Consumer Electronics Show* (press release), Jan 7, 2014.

<sup>458</sup> *Id.*

<sup>459</sup> Consolidated 2013 Form 10-K at 2.

<sup>460</sup> *Id.* at 3, 6.

<sup>461</sup> *Id.* at 9.

networks to provide video service.<sup>462</sup> Consolidated explains that due to its advanced networks it does not anticipate having to make any material network upgrades to continue growing its video services.<sup>463</sup> The company had 110,613 video subscribers (approximately 21 percent of homes passed) at year-end 2013, up from 106,137 video subscribers at year-end 2012.<sup>464</sup> Depending on the geographic market, Consolidated's video services range from limited basic service to advanced digital television, which includes several plans each with hundreds of local, national, and music channels including premium and pay-per-view channels, as well as VOD service.<sup>465</sup> Certain subscribers may also subscribe to advanced video services, which consist of HD television and DVR service (including Whole Home DVR).<sup>466</sup> During 2013, the company launched TV Everywhere enabling video subscribers to watch programs at home or away on a computer, smartphone, or tablet.<sup>467</sup> Consolidated markets video, Internet, and voice service both individually and as bundled services.<sup>468</sup> The company explains that bundling both increases average revenue per household and increases customer loyalty and retention.<sup>469</sup>

128. At year-end 2013, Cincinnati Bell offered video service, called Fioptics TV, to approximately 276,000 customer locations in the greater Cincinnati area, up from 205,000 in 2012.<sup>470</sup> The company says that its goal is to transform itself into a fiber-based entertainment, communications and IT solutions company.<sup>471</sup> Cincinnati Bell uses a combination of fiber-to-the-home and fiber-to-the-node technology to provide Fioptics TV.<sup>472</sup> In 2014, the company plans to pass an additional 62,000 customer locations with Fioptics, with an emphasis on fiber directly to the home.<sup>473</sup> Cincinnati Bell currently offers Fioptics TV to approximately 35 percent of greater Cincinnati and its goal is to pass between 60 percent and 70 percent of greater Cincinnati with Fioptics.<sup>474</sup> The company had 74,200 Fioptics TV subscribers at year-end 2013, up from 55,100 video subscribers at year-end 2012.<sup>475</sup> Fioptics TV offers four video packages ranging from Fioptics Basic with 20 digital channels for \$14.99 per month to Fioptics Max with over 400 channels, which include 120 HD channels and 55 movie channels for \$109.99 per month.<sup>476</sup> In

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<sup>462</sup> *Id.* at 7-8.

<sup>463</sup> *Id.* at 8.

<sup>464</sup> *Id.* at 3.

<sup>465</sup> *Id.* at 5. See also Consolidated Communications, <http://www.consolidated.com/tv/> (visited May 9, 2014); <http://www.surewest.com/DigitalTV/> (visited May 9, 2014).

<sup>466</sup> *Id.* at 5.

<sup>467</sup> *Id.* at 3. See also Consolidated Communications, <http://www.consolidated.com/tv/video-on-demand/tv-everywhere/> (visited May 9, 2014); <http://www.surewest.com/tve/> (visited May 9, 2014).

<sup>468</sup> *Id.* at 7.

<sup>469</sup> *Id.*

<sup>470</sup> Cincinnati Bell 2013 Form 10-K at 7 and 35.

<sup>471</sup> *Id.* at 4.

<sup>472</sup> *Id.*

<sup>473</sup> *Id.* at 5.

<sup>474</sup> *Id.* at 5, 8.

<sup>475</sup> *Id.* at 35.

<sup>476</sup> The prices are for new subscribers, for 12 months, and require bundling with Fioptics Internet service. Cincinnati Bell, <http://www.cincinnati-bell.com/tv/packages/> (visited May 9, 2014).

addition to an HD DVR and VOD service, Cincinnati Bell recently rolled out a whole-home DVR and Fioptics TV Everywhere.<sup>477</sup>

129. NTCA, which represents nearly 900 rural telephone companies, maintains that the ability to offer quality video services is viewed as a key driver of broadband deployment and adoption in rural areas and is important to the long-term viability of most rural telecommunications providers.<sup>478</sup> NTCA explains that many of its members currently offer video services.<sup>479</sup> Most of the 171 carriers that responded to a recent NTCA survey use IPTV or coaxial cable technology, and respondents offer, on average, three tiers of video offerings with an average total of 175 linear channels.<sup>480</sup> Seventy seven percent of the respondents do not offer VOD service but about 41 percent provide the ability to watch programs on multiple devices, inside and outside the home.<sup>481</sup> Over 98 percent of respondents indicate that access to reasonably-priced programming is a significant barrier to the provision of video services and a major impediment to the ability of rural telephone MVPDs, which lack scale and scope, to compete with larger MVPDs (e.g., DBS MVPDs).<sup>482</sup>

#### 4. Selected MVPD Operating and Financial Statistics

130. The structural and behavioral characteristics of a competitive market are desirable not as ends in themselves, but rather as a means of bringing tangible benefits to consumers, such as lower prices, higher quality, and greater choice of video services. To determine if the market for the delivery of video programming is producing these kinds of positive outcomes, we look at video prices and provide current prices for a sample of video packages offered by some MVPDs. We also examine competition in the market for the delivery of video programming from an investor perspective, including how the various types of MVPDs are performing relative to one another. As such, we report on video subscribers, video penetration, video and bundle revenue, and average revenue per subscriber.

##### a. Video Programming Pricing

131. Section 623(k) of the Act, as amended by the Cable Television Consumer Protection and Competition Act of 1992 (“Cable Act”),<sup>483</sup> requires the Commission to publish annually a statistical report on the average rates that cable operators<sup>484</sup> charge for “basic cable service, other cable programming,” and

<sup>477</sup> *Id.* at 8. See also Cincinnati Bell, <http://www.cincinnati-bell.com/tv/packages/> (visited May 9, 2014); <http://www.cincinnati-bell.com/tv/features/> (visited May 9, 2014); <http://www.cincinnati-bell.com/tv/tv-everywhere.asp> (visited May 9, 2014).

<sup>478</sup> NTCA Comments at 3.

<sup>479</sup> *Id.* at 2.

<sup>480</sup> *Id.* at 2-3.

<sup>481</sup> *Id.* at 3.

<sup>482</sup> *Id.* at 2, 5-6.

<sup>483</sup> Section 623(k) was adopted as Section 3(k) of the Cable Act, Pub. L. No. 102-385, 106 Stat. 1460, codified at 47 U.S.C. § 543(k). Section 110 of STELAR adds a requirement that the Commission’s annual report on cable industry prices include the aggregate average total amount paid by cable systems in compensation for retransmission consent. STELAR, § 110, 128 Stat. 2065.

<sup>484</sup> See *Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992, Statistical Report on Average Rates for Basic Service, Cable Programming Service, and Equipment*, MM Docket No. 92-266, Report on Cable Industry Prices, 29 FCC Rcd 5280 (MB 2014) (“2014 Cable Price Report”). All averages in the *Cable Price Report* are weighted averages where the weight given to an individual cable operator depends on the number of subscribers to the operator in the reporting community. For the purpose of the Report, a cable operator (or operator) refers to an entity that operates a wireline system and is a multichannel video programming distributor (MVPD) that makes available for purchase, by subscribers or customers, multiple channels of video programming. See 47 C.F.R. § 76.905(d). In the Report, the term cable operator includes operators of traditional coaxial and fiber wireline cable systems, municipalities, and telephone companies, including Verizon

(continued....)

cable equipment.<sup>485</sup> The Cable Act also requires the Commission to compare the rates of cable operators subject to effective competition, as identified through specific adjudications, with those of cable operators without an adjudicated finding of effective competition.<sup>486</sup> Table 5 uses data from the Commission's most recent report on cable industry prices to show average prices for basic service, expanded basic service, the next most popular service, and the average price per channel for expanded basic service for the years 2012 and 2013.<sup>487</sup> Table 5 shows that average prices for these three services and the average price per channel increased over the period 2012 to 2013.

**Table 5: Average Monthly Prices**

Year	Basic Service Price	Expanded Basic Service Price	Next Most Popular Service	Price Per Channel – Expanded Basic Service
2012	\$21.25	\$61.27	\$73.92	\$0.47
2013	\$22.63	\$64.41	\$77.05	\$0.48
Annual Change	6.5%	5.1%	4.2%	2.1%

132. Table 6 provides representative examples of prominently displayed video packages from MVPD websites and includes the name of the video package, the advertised price, and the number of channels.<sup>488</sup> The advertised video packages are often promotional prices for new customers. At the end (Continued from previous page)

FiOS. It does not include MVPD operators of wireless systems, direct broadcast satellite (DBS), or AT&T U-verse, because these operators are not associated with any FCC Community Unit Identifiers (CUID). The Commission assigns a CUID code to each registered operator for each community that operator serves. *See* 47 C.F.R. § 76.1801.

<sup>485</sup> The Cable Act requires operators to offer an entry-level basic service, which must include, at a minimum, all commercial and noncommercial local broadcast stations entitled to carriage under the must-carry provisions of the Communications Act of 1934, 47 U.S.C. §§ 534-35. Basic service must also include public, educational, and governmental access channels that the local franchise authority (LFA) may require the operator to carry as well as any other local broadcast station provided to any subscriber, with certain exceptions. *See* 47 U.S.C. § 543(b)(7). The term “cable programming service” refers to a tier of video channels other than the basic service channels for which the operator charges a separate rate, and channels for which per-channel or per-program charges apply. *See* 47 U.S.C. § 543(k)(1)(2). Cable equipment refers to a converter box and other customer premises equipment used for accessing cable services. *See* 47 U.S.C. § 543(b)(3).

<sup>486</sup> *See* 47 U.S.C. § 543(k)(1) (cross-referencing 47 U.S.C. § 543(a)(2)). Under the Cable Act, if the Commission grants a finding of effective competition to an operator and the community it serves, that operator is not subject to rate regulation. Such a finding requires the operator to meet one of four tests: (1) fewer than 30 percent of households subscribe to the operator's cable service (low penetration test); (2) the operator and at least one other MVPD offer comparable service to at least 50 percent of households and at least 15 percent of those households subscribe to the service of an MVPD other than the largest MVPD (50/15 test); (3) a municipality offers MVPD service to at least 50 percent of households (municipal test); or (4) a local exchange carrier (LEC) or its affiliate offers a comparable video programming service in a franchise area also served by an unaffiliated MVPD (LEC test). *See* 47 C.F.R. § 76.905(b). As required by statute, the Commission does not take into consideration those communities that have not been formally adjudged as being subject to effective competition for purposes of the Cable Price Report. *See* 47 U.S.C. § 543(k)(1).

<sup>487</sup> *See* 2014 Cable Price Report, 29 FCC Rcd at 5287, 5299 & 5301, Table 1, Attachment 2 & Attachment 4. The next most popular service package generally includes all the programming channels included in the expanded basic service package and at least seven additional cable network channels. *Id.* at 5284, 85, ¶ 12. For additional information regarding cable industry prices, *see* 2014 Cable Price Report generally.

of the promotional time period, the price for services rises to the “normal” price. It is important to note that some of the video packages shown in Table 6 include advanced video services (*e.g.*, DVR service), some include equipment (*e.g.*, an HD/DVR set-top receiver), and some include premium channels (*e.g.*, HBO). Even where the number of channels is similar, each package typically contains a different mix of channels.<sup>489</sup> Because there is no standard video service and many of the services and features that affect the value of a video package are not shown in Table 6 this information provides only a starting point for comparing the pricing of various video packages. As a result of these limitations, Table 6 provides only a sample of advertised prices for prominently displayed video package offerings.

**Table 6: Examples of MVPD Video Package Prices**

<b>Cable</b>			
Comcast <sup>490</sup>	Digital Starter \$49.99 (80 channels)	Digital Preferred \$59.99 (160 channels)	Digital Premier \$69.99 (200 channels)
Time Warner Cable <sup>491</sup>	Starter TV \$19.99 (20 channels)	Standard TV \$39.99 (70 channels)	Preferred TV \$49.99 (200 channels)
Cox Communications <sup>492</sup>	Economy TV \$24.99 (130 channels)	Advanced TV \$49.99 (250 channels)	Advanced TV with Contour \$61.98 (250 channels)
<b>DBS</b>			
DIRECTV <sup>493</sup>	Select \$24.99 (130 channels)	Choice \$34.99 (150 channels)	Ultimate \$44.99 (225 channels)
DISH Network <sup>494</sup>	Smart Pack \$19.99 (55 channels)	America’s Top 120 \$29.99 (190 channels)	America’s Top 200 \$39.99 (240 channels)
<b>Telephone</b>			

(Continued from previous page) \_\_\_\_\_

<sup>488</sup> When MVPDs advertise the number of channels, they usually include both video channels and music channels. The video channels in Table 6 include those found on the basic and expanded basic service and a range of digital channels.

<sup>489</sup> For example, some MVPDs may include a different mix of cable programming networks, specific operator-branded local programming services, or a different number of premium movie channels.

<sup>490</sup> Comcast, <http://www.comcast.com/Corporate/Learn/DigitalCable/digitalcable.html> (visited April 18, 2014).

<sup>491</sup> Time Warner Cable, <http://www.timewarnercable.com/en/tv/digital-cable-tv.html> (visited April 18, 2014).

<sup>492</sup> Cox Communications, <http://ww2.cox.com/residential/tv.cox> (visited April 18, 2014).

<sup>493</sup> DIRECTV, [http://www.directv.com/DTVAPP/new\\_customer/base\\_packages.jsp](http://www.directv.com/DTVAPP/new_customer/base_packages.jsp) (visited April 18, 2014). See also DIRECTV Comments at 16-19.

<sup>494</sup> DISH Network, <http://www.dish.com/entertainment/packages/offers/value/> (visited April 18, 2014).

AT&T U-verse <sup>495</sup>	U-Family \$29.00 (140 channels)	U200 \$44.00 (300 channels)	U300 \$59.00 (390 channels)
Verizon FiOS <sup>496</sup>	Select HD \$49.99 (145 channels)	Prime HD \$64.99 (215 channels)	Extreme HD \$74.99 (290 channels)

**b. Video Subscribers and Penetration**

133. *Video Subscribers.* Table 7 shows the number of video subscribers for cable, DBS, and telephone MVPDs for year-end 2012 and year-end 2013. Between 2012 and 2013, the number of subscribers to MVPD video service posted its first full-year decline.<sup>497</sup> Cable MVPDs lost nearly 2.0 million video subscribers, DBS MVPDs gained over 100,000 video subscribers, and telephone company MVPDs gained approximately 1.5 million video subscribers.

<sup>495</sup> AT&T, [http://www.att.com/u-verse/shop/index.jsp?shopFilterId=100004&ref\\_from=shop&address\\_id=&referral\\_app\\_id=hardrock](http://www.att.com/u-verse/shop/index.jsp?shopFilterId=100004&ref_from=shop&address_id=&referral_app_id=hardrock) (visited April 18, 2014).

<sup>496</sup> Verizon, <http://www.verizon.com/home/fiostv/> (visited April 18, 2014).

<sup>497</sup> Ian Olgeirson, Tony Lenoir, Chris Young, *Multichannel Video Subscription Counts Drops in 2013*, MULTICHANNEL MARKET TRENDS, SNL KAGAN, Mar. 13, 2014.

**Table 7: MVPD Video Subscribers (in millions)**

Year	Year-End 2012	Year-End 2013
<b>MVPD Total</b> <sup>498</sup>	<b>101.0</b>	<b>100.9</b>
<b>Cable</b> <sup>499</sup>	<b>56.4</b>	<b>54.4</b>
Comcast	22.0	21.7
Time Warner Cable	12.2	11.4
Cox	4.5	4.3
Charter	4.2	4.3
Cablevision	3.2	2.8
All Other Cable <sup>500</sup>	10.3	9.9
<b>DBS</b> <sup>501</sup>	<b>34.1</b>	<b>34.2</b>
DIRECTV <sup>502</sup>	20.1	20.3
DISH Network <sup>503</sup>	14.1	14.1

**Table 7: MVPD Video Subscribers (in millions) (continued)**

Year	Year-End 2012	Year-End 2013
<b>Telephone</b> <sup>504</sup>	<b>9.9</b>	<b>11.3</b>
AT&T U-verse <sup>505</sup>	4.5	5.5
Verizon FiOS <sup>506</sup>	4.7	5.3
All Other Telephone <sup>507</sup>	0.7	0.5

<sup>498</sup> Table 7 does not include subscribers to PCO, HSD, OVS, and wireless cable MVPDs, which collectively have fewer than one million subscribers. Because some types of MVPDs are not included, the sum of the individual entries may not equal the MVPD totals.

<sup>499</sup> Cable MVPD total data come from SNL Kagan, *U.S. Multichannel Industry Benchmarks*, <http://www.snl.com/interactivex/MultichannelIndustryBenchmarks.aspx?startYear=2012&endYear=2013> (visited May 2, 2014). Individual cable MVPD data and estimates for all other cable MVPDs come from SNL Kagan, *U.S. Cable Subscriber Highlights*, <http://www.snl.com/interactivex/CableMSOOperatingMetrics.aspx?Defaults=0> (visited May 2, 2014).

<sup>500</sup> All other cable subscribers are estimated by subtracting the subscribers of the five largest cable MVPDs from total cable subscribers.

<sup>501</sup> DBS total data come from SNL Kagan, *U.S. Multichannel Industry Benchmarks*, <http://www.snl.com/interactivex/MultichannelIndustryBenchmarks.aspx?startYear=2012&endYear=2013> (visited May 2, 2014). Because the number of video subscribers for DIRECTV and DISH Network are rounded to the nearest 100,000, the sum of the individual entries may not equal the DBS totals.

<sup>502</sup> DIRECTV subscriber data come from DIRECTV 2013 Form 10-K at 51.

<sup>503</sup> DISH Network subscriber data come from DISH Network 2013 Form 10-K at 56.

<sup>504</sup> Telephone company MVPD total data come from SNL Kagan, *U.S. Multichannel Industry Benchmarks*, <http://www.snl.com/interactivex/MultichannelIndustryBenchmarks.aspx?startYear=2012&endYear=2013> (visited May 2, 2014).

<sup>505</sup> AT&T, *2013 Annual Report*, at 19.

<sup>506</sup> Verizon, *2013 Annual Report*, at 20.

<sup>507</sup> All other telephone company MVPD subscribers are estimated by subtracting AT&T U-verse and Verizon FiOS video subscribers from the total telephone company MVPD subscribers estimated by SNL Kagan.

134. *Video Penetration.* Because a large part of all MVPD video delivery systems represents fixed costs (costs that do not vary with the number of subscribers), higher levels of video penetration (the number of video subscribers divided by the number of homes passed by the MVPD) typically translate into lower costs per subscriber and increased profit.<sup>508</sup> Comparing the video penetration of one type of MVPD with the video penetration of another type of MVPD can be problematic, however, because the different types of MVPDs have different fixed costs.<sup>509</sup> For instance, the fixed costs of offering cable MVPD service to every home in the United States are much higher than the fixed costs of offering DBS MVPD service to every home in the United States.<sup>510</sup> As such, a DBS MVPD may be on solid financial footing with lower video penetration, relative to a cable MVPD with higher video penetration. Regardless of technology, however, every MVPD seeks to increase levels of video penetration. Table 8 shows video penetration for cable, DBS, and telephone MVPDs for year-end 2012 and year-end 2013. Table 8 shows that video penetration for cable MVPDs as a group, and for five of the largest cable MVPDs, declined over the period. This is consistent with our finding that cable MVPDs lost subscribers over the period. DBS MVPD video penetration showed little change over the period. Video penetration increased over the period for both AT&T U-verse and Verizon FiOS.

**Table 8: MVPD Video Penetration**

Year	Year-End 2012	Year-End 2013
<b>Cable</b> <sup>511</sup>	<b>42.5%</b>	<b>41.1%</b>
Comcast	41.4%	40.3%
Time Warner Cable	41.3%	38.1%
Cox	44.1%	41.4%
Charter	34.3%	33.9%
Cablevision	56.6%	55.9%
<b>DBS</b> <sup>512</sup>		
DIRECTV	15.1%	15.3%
DISH	10.6%	10.6%

<sup>508</sup> Harold L. Vogel, ENTERTAINMENT INDUSTRY ECONOMICS 339-43 (Cambridge University Press) (8<sup>th</sup> ed. 2011) (“Vogel”).

<sup>509</sup> *Id.* at 344-46.

<sup>510</sup> DIRECTV explains that its satellite-based service provides many advantages over ground-based cable television services including the ability to distribute video programming to millions of recipients nationwide with minimal incremental infrastructure cost per additional subscriber. Satellites also provide comprehensive coverage to areas with low population density. DIRECTV 2013 Form 10-K at 4-5.

<sup>511</sup> Total cable MVPD and individual cable MVPD data come from SNL Kagan, U.S. Cable Subscriber Highlights, [http://www.snk.com/interactivex/CableMSOOperatingMetrics.aspx?OpMetric=PenetrationBasicBest&Form\\_Name=UserInputs](http://www.snk.com/interactivex/CableMSOOperatingMetrics.aspx?OpMetric=PenetrationBasicBest&Form_Name=UserInputs) (visited May 5, 2014).

<sup>512</sup> Estimates for DIRECTV and DISH Network are derived by dividing each company’s subscribers (as reported in their annual reports) by the number of housing units (as reported by SNL Kagan). SNL Kagan, *U.S. Cable Industry Benchmarks*, <http://www.snk.com/interactivex/MultichannelIndustryBenchmarks.aspx?startYear=2012&endYear=2013> (visited May 7, 2014).

Network		
<b>Telephone</b>		
AT&T U-verse <sup>513</sup>	18.4%	20.4%
Verizon FiOS <sup>514</sup>	33.3%	35.0%

135. SNL Kagan finds that the plateauing of the number of MVPD subscribers, combined with growth in the number of households, has led to declining MVPD penetration of U.S. households.<sup>515</sup> It estimates that MVPD penetration of households, excluding households that have multiple subscriptions, declined from 83.5 percent in 2012 to 83.0 percent in 2013.<sup>516</sup> Research firm MoffettNathanson determined that MVPD penetration has declined very slightly, but during 2013 new household formation has barely grown, and estimates MVPD penetration was 86.0 percent as of the fourth quarter of 2012, compared with 85.6 percent as of the fourth quarter of 2013.<sup>517</sup> Nielsen estimates that about 86 percent of the 120.2 million U.S. households, or 89 percent of 115.8 U.S. television households, subscribe to an MVPD as of December 2013.<sup>518</sup>

136. *Bundle Subscribers and Penetration.* Although the number of cable MVPD video subscribers declined from year-end 2012 to year-end 2013, the remaining cable customers added subscriptions to digital video, Internet access, and voice services. Specifically, the number of cable customers who subscribe to digital video service grew from 46.8 million year-end 2012 to 46.9 million at year-end 2013, and digital video penetration rose from 83.0 percent to 86.2 percent (*i.e.*, the number of digital video subscribers divided by the number of basic cable subscribers).<sup>519</sup> In addition, the number of cable MVPD Internet access subscribers grew from 50.3 million at year-end 2012 to 52.7 million at year-end 2013, increasing Internet penetration (*i.e.*, the number of Internet subscribers divided by the number of cable homes passed) from 37.9 percent to 39.5 percent.<sup>520</sup> In addition, the number of voice subscribers

<sup>513</sup> We calculate AT&T's U-verse video penetration by dividing the number of subscribers by the number of customer locations eligible to receive U-verse service. AT&T, *2012 Annual Report*, at 42; AT&T, *2013 Annual Report*, at 22.

<sup>514</sup> Verizon, *2013 Annual Report*, at 20

<sup>515</sup> See Ian Olgeirson and Deana Myers, *Online Video Buffets, but Does Not Break Multichannel Model*, SNL KAGAN, Oct. 1, 2013.

<sup>516</sup> *Id.*

<sup>517</sup> Craig Moffett & Michael Nathanson, *U.S. Pay TV: The Steady Drip, Drip, Drip of Cord-Cutting*, MoffettNathanson Research, Feb. 21, 2014, at 4, 5, Exhibits 2, 5.

<sup>518</sup> The Nielsen Company, *National Universe Estimates* (Jan. 1, 2014), "HHs and Person," (Excel workbook); The Nielsen Company, *TV Audience Report (2013)* at 4-5.

<sup>519</sup> SNL Kagan, *U.S. Cable Subscriber Highlights*, [http://www.snl.com/interactivex/CableMSOOperatingMetrics.aspx?OpMetric=SubscribersDigitalVideo&Form\\_Name=UserInputs](http://www.snl.com/interactivex/CableMSOOperatingMetrics.aspx?OpMetric=SubscribersDigitalVideo&Form_Name=UserInputs) (visited May 7, 2014); SNL Kagan, *U.S. Subscriber Highlights*, [http://www.snl.com/interactivex/CableMSOOperatingMetrics.aspx?OpMetric=PenetrationBasicDigitalBest&Form\\_Name=UserInputs](http://www.snl.com/interactivex/CableMSOOperatingMetrics.aspx?OpMetric=PenetrationBasicDigitalBest&Form_Name=UserInputs) (visited May 7, 2014).

<sup>520</sup> SNL Kagan, *U.S. Cable Subscriber Highlights*, [http://www.snl.com/interactivex/CableMSOOperatingMetrics.aspx?OpMetric=SubscribersData&Form\\_Name=UserInputs](http://www.snl.com/interactivex/CableMSOOperatingMetrics.aspx?OpMetric=SubscribersData&Form_Name=UserInputs) (visited May 7, 2014); SNL Kagan, *U.S. Cable Subscriber Highlights*, [http://www.snl.com/interactivex/CableMSOOperatingMetrics.aspx?OpMetric=PenetrationDataHomesPassed&Form\\_Name=UserInputs](http://www.snl.com/interactivex/CableMSOOperatingMetrics.aspx?OpMetric=PenetrationDataHomesPassed&Form_Name=UserInputs) (visited May 7, 2014).

grew from 25.8 million at year-end 2012 to 27.6 million at year-end 2013, with telephone penetration (*i.e.*, the number of voice subscribers divided by the number of cable homes passed) increasing from 19.5 percent to 20.7 percent.<sup>521</sup> SNL Kagan estimates that at year-end 2013, 43.4 percent of cable MVPD video customers subscribed to the triple bundle.<sup>522</sup> In addition to the increase in the number of AT&T U-verse video subscribers from 4.5 million in 2012 to 5.5 million in 2013, AT&T's U-verse Internet subscribers increased from 7.7 million in 2012 to 10.4 million in 2013.<sup>523</sup> AT&T reports that about two-thirds of AT&T U-verse video subscribers take three or four services from AT&T.<sup>524</sup> In addition to the increase in the number of Verizon FiOS video subscribers from 4.7 million in 2012 to 5.3 million in 2013, Verizon FiOS Internet subscribers increased from 5.4 million in 2012 to 6.1 million in 2013, and FiOS voice subscribers increased from 3.2 million in 2012 to 4.2 million in 2013.<sup>525</sup>

### c. Revenue

137. Many MVPDs earn revenue from operations that are not directly related to video. For example, Comcast earns revenue from theme parks and Verizon and AT&T earn revenue from Internet and voice services provided over legacy copper wire. Because this Report is focused on the delivery of video programming, we report only revenues related directly to video services and revenues for bundles that include video services. Table 9 shows MVPD revenue for video services for 2012 and 2013. Cable MVPD video revenue increased from \$61.2 billion in 2012 to \$61.8 billion in 2013. Comcast's video revenue increased from \$20.0 billion to \$20.5 billion, Time Warner Cable's video revenue decreased from \$10.9 billion to \$10.5 billion, and Charter's video revenue increased from \$3.6 billion to \$4.0 billion. DIRECTV's video revenue increased from \$23.2 billion to \$24.7 billion, and DISH Network's video revenue increased from \$13.2 to \$13.9.<sup>526</sup> Table 9 does not show video revenue for AT&T and Verizon because the companies do not report video revenue separate from bundled revenue.

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<sup>521</sup> SNL Kagan, *U.S. Cable Subscriber Highlights*, [http://www.snl.com/interactivex/CableMSOOperatingMetrics.aspx?OpMetric=SubscribersVoice&Form\\_Name=UserInputs](http://www.snl.com/interactivex/CableMSOOperatingMetrics.aspx?OpMetric=SubscribersVoice&Form_Name=UserInputs) (visited May 7, 2014); SNL Kagan, *U.S. Cable Subscriber Highlights*, [http://www.snl.com/interactivex/CableMSOOperatingMetrics.aspx?OpMetric=PenetrationVoiceHP&Form\\_Name=UserInputs](http://www.snl.com/interactivex/CableMSOOperatingMetrics.aspx?OpMetric=PenetrationVoiceHP&Form_Name=UserInputs) (visited May 7, 2014).

<sup>522</sup> SNL Kagan, *Cable TV Investor: Deals & Finance*, April 30, 2014, at 8.

<sup>523</sup> AT&T, *Investor Briefing Fourth Quarter 2013*, Jan. 28, 2014, at 9.

<sup>524</sup> *Id.*

<sup>525</sup> Verizon, *Investor Quarterly Fourth Quarter 2013*, Jan. 21, 2014, at 14.

<sup>526</sup> We report total revenue for DIRECTV's U.S. Segment and DISH Network. Although both companies earn the bulk of their revenue from video services, total revenue overstates video revenue as both companies likely earn some revenue from non-video services.

**Table 9: MVPD Video Revenue (in billions)**

Year	2012	2013	Percentage Change
<b>Cable</b> <sup>527</sup>	<b>\$50.4</b>	<b>\$51.0</b>	<b>1.19%</b>
Comcast <sup>528</sup>	\$20.0	\$20.5	2.50%
Time Warner Cable <sup>529</sup>	\$10.9	\$10.5	-3.67%
Charter <sup>530</sup>	\$3.6	\$4.0	11.11%
<b>DBS</b>			
DIRECTV <sup>531</sup>	\$23.2	\$24.7	6.47%
DISH Network <sup>532</sup>	\$13.2	\$13.9	5.30%

138. Table 10 shows MVPD revenue from bundles for 2012 and 2013. Cable bundle revenue increased from \$83.6 billion in 2012 to \$85.9 billion in 2013. Comcast's bundle revenue increased from \$33.1 billion to \$34.5 billion, Time Warner Cable's bundle revenue increased from \$18.1 billion to \$18.3 billion, and Charter's bundle revenue increased from \$6.3 billion to \$6.9 billion. AT&T bundle revenue for U-verse increased from \$9.4 billion in 2012 to \$12.0 billion in 2013. Verizon bundle revenue for FiOS increased from \$9.7 billion in 2012 to \$11.2 billion in 2013. DIRECTV and DISH Network do not report bundle revenue so they are not included on Table 10, but we do include their reported revenue as video revenue (*see* Table 9) insofar as they earn the bulk of their revenue from video services.

<sup>527</sup> We calculated cable MVPD video revenue by subtracting Internet, voice, and miscellaneous revenue from total cable residential revenue. SNL Kagan, *U.S. Cable Industry Benchmarks*, <http://www.snk.com/interactivex/MultichannelIndustryBenchmarks.aspx?startYear=2012&endYear=2013> (visited May 7, 2014).

<sup>528</sup> Comcast 2013 Form 10-K at 53.

<sup>529</sup> Time Warner Cable 2013 Form 10-K at 39.

<sup>530</sup> Charter 2013 Form 10-K at 40.

<sup>531</sup> DIRECTV 2013 Form 10-K at 51.

<sup>532</sup> DISH Network 2013 Form 10-K at 55.

**Table 10: MVPD Bundle Revenue (in billions)**

Year	2012	2013	Percentage Change
<b>Cable</b> <sup>533</sup>	<b>\$83.6</b>	<b>\$85.9</b>	<b>2.75%</b>
Comcast <sup>534</sup>	\$33.1	\$34.5	4.23%
Time Warner Cable <sup>535</sup>	\$18.1	\$18.3	1.10%
Charter <sup>536</sup>	\$6.3	\$6.9	9.52%
<b>Telephone</b>			
AT&T <sup>537</sup>	\$9.4	\$12.0	27.66%
Verizon <sup>538</sup>	\$9.7	\$11.2	15.46%

139. *Average Revenue Per Unit (“ARPU”) for Video Services.*<sup>539</sup> Table 11 shows that Comcast’s monthly video APRU increased from \$75.59 in 2012 to \$78.90 in 2013, Time Warner Cable’s increased from \$75.62 to \$78.00, and Charter’s increased from \$76.02 to \$80.40. DIRECTV’s monthly video APRU increased from \$96.98 in 2012 to \$102.18 in 2013 and DISH Network’s increased from \$76.98 to \$80.37. AT&T and Verizon do not report video revenue separately, so we are unable to estimate monthly video ARPU for these companies.

<sup>533</sup> We calculate bundle revenue by subtracting miscellaneous revenue from total cable residential revenue. SNL Kagan, *U.S. Multichannel Industry Benchmarks*, <http://www.snl.com/interactivex/MultichannelIndustryBenchmarks.aspx?startYear=2012&endYear=2013> (visited May 7, 2014).

<sup>534</sup> Comcast 2013 Form 10-K at 53.

<sup>535</sup> Time Warner Cable 2013 Form 10-K at 39.

<sup>536</sup> Charter 2013 Form 10-K at 40.

<sup>537</sup> AT&T, *Investor Briefing Fourth Quarter 2013*, Jan. 28, 2014, at 9 (where AT&T reports U-verse revenue for each quarter in 2013); AT&T, *2013 Annual Report*, at 18 (where AT&T reports that 2013 U-verse revenue increased \$1,289 million for Internet, \$995 million for video, and \$282 million for voice.)

<sup>538</sup> Verizon, *Investor Quarterly Fourth Quarter 2013*, Jan. 21, 2014, at 14.

<sup>539</sup> We calculate monthly video APRU by dividing video revenue by the number of video subscribers and then dividing by 12.

**Table 11: Monthly Video ARPU**

Year	2012	2013	Percentage Change
<b>Cable</b>			
Comcast <sup>540</sup>	\$75.59	\$78.90	4.38%
Time Warner Cable <sup>541</sup>	\$75.62	\$78.00	3.15%
Charter <sup>542</sup>	\$76.02	\$80.40	5.76%
<b>DBS</b>			
DIRECTV <sup>543</sup>	\$96.98	\$102.18	5.36%
DISH Network <sup>544</sup>	\$76.98	\$80.37	4.40%

## B. Broadcast Television Stations

### 1. Introduction

140. We next consider the strategic group of broadcast television stations. Broadcast stations package video programming and deliver it directly over the air to those consumers who do not subscribe to an MVPD, as well as to MVPD subscribers who own television sets that are not connected to an MVPD service. Broadcast television stations' programming is also an input for MVPD services.

141. Commercial broadcast stations cater to two distinct sets of customers: audiences and advertisers.<sup>545</sup> They seek to provide desirable content to attract and maximize their audiences. In turn, they primarily derive revenues by selling time during their broadcasts to advertisers based on the size and demographic characteristics of the audiences they reach.<sup>546</sup> Individual commercial stations compete primarily with other commercial broadcast stations within their local markets (DMAs) for audiences and advertising revenue.<sup>547</sup> Noncommercial educational ("NCE") stations, while not relying on advertising revenues,<sup>548</sup> compete with commercial stations for viewers. Other media, including daily newspapers, local and national cable networks, and Internet sites, earn advertising revenues by attracting audiences

<sup>540</sup> Comcast 2013 Form 10-K at 53.

<sup>541</sup> Time Warner Cable 2013 Form 10-K at 38-39.

<sup>542</sup> Charter 2013 Form 10-K at 4 and 40.

<sup>543</sup> DIRECTV 2013 Form 10-K at 51.

<sup>544</sup> DISH Network 2013 Form 10-K at 56.

<sup>545</sup> Advertisers and audiences are mutually dependent. Television stations need to attract audiences in order to earn money from advertising. They need advertising revenues in order to make investments in programming that will attract audiences. See David S. Evans & Richard Schmalensee, *The Industrial Organization of Markets with Two-Sided Platforms*, COMPETITION POL'Y INT'L 151, 155-56 (2007) (discussing the economics of two-sided platforms and its application to competition policy issues, especially as it relates to advertising-supported media).

<sup>546</sup> "[B]roadcasting in any and all of its forms is an audience aggregation business." See Vogel at 288.

<sup>547</sup> See *supra*, n. 122.

<sup>548</sup> In light of their noncommercial nature, NCE stations are statutorily prohibited from airing commercial advertisements in exchange for consideration. See 47 U.S.C. § 399(B)(a)(1), 47 C.F.R. § 73.621(e).

within the geographic areas they serve.<sup>549</sup> A broadcast station's advertising revenues depends on viewership of its television programs, regardless of whether consumers receive the station's signal over the air or via an MVPD. Today, broadcast stations are turning increasingly to additional revenue sources, including retransmission consent fees from MVPDs, ancillary digital television revenues, and advertising sold on their web sites.<sup>550</sup> Noncommercial broadcast stations rely on underwriters, viewer donations, and government funding for their operations, and seek to attract audiences as a way to increase their revenues from these sources.

142. On June 12, 2009, full-power television stations completed the transition from analog to digital service pursuant to a statutory mandate.<sup>551</sup> The flexibility provided by digital broadcasting allows television stations to offer high definition ("HD") programming, provide multiple streams of programming and/or distribute programming to mobile devices. Utilizing multicasting,<sup>552</sup> stations can provide a more diverse array of locally oriented programming specifically designed to serve their audiences.<sup>553</sup> In addition, stations may affiliate their multicast streams with established networks to give viewers in smaller markets more over-the-air viewing options. Digital television stations also can use a portion of their spectrum to provide ancillary and supplementary services, such as subscription video, data transfer, and audio signals.

## 2. Broadcast Television Industry Providers

143. In this section of the Report, we describe critical elements of the broadcast television industry. We then explain horizontal concentration and vertical integration in the market. Next, we describe conditions affecting market entry during the relevant period, including an overview of existing regulations and market conditions that might influence entry decisions. Finally, we describe recent entry into and exit from the market.

144. The broadcast television station group consists of commercial and noncommercial, full-power, Class A, and low-power stations.<sup>554</sup> In this Report, however, we focus on commercial, full-power

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<sup>549</sup> See, e.g., Nexstar Broadcasting Group, Inc., *SEC Form 10-K for the Year Ended December 31, 2013*, at 8 ("Nexstar 2013 Form 10-K"); Sinclair Broadcast Group, Inc., *SEC Form 10-K for the Year Ended December 31, 2013*, at 24 ("Sinclair 2013 Form 10-K").

<sup>550</sup> Gray Television, Inc., *SEC Form 10-K for the Year Ended December 31, 2013*, at 2 ("Gray 2013 Form 10-K"); Sinclair 2013 Form 10-K at 5; LIN Television Corp., *SEC Form 10-K for the Year Ended December 31, 2013*, at 11 ("LIN 2013 Form 10-K"). See also *infra*, ¶¶ 204-207.

<sup>551</sup> 47 U.S.C. §309(j)(14)(A). Full-power analog television service has terminated, and full-power stations are now broadcasting in digital mode only. See *Amendment of Parts 73 and 74 of the Commission's Rules to Establish Rules for Digital Low Power Television, Television Translator, and Television Booster Stations and to Amend Rules for Digital Class A Television Stations*, MB Docket No. 03-185, Second Report and Order, 26 FCC Rcd 10732, 10733, ¶ 1 (2011). Low-power stations (including Class A TV stations and TV translators) must transition to digital by September 1, 2015. See *id.* at 10733, ¶ 2 and n. 1.

<sup>552</sup> Multicasting allows broadcast stations to offer digital streams or channels (i.e., digital multicast signals) of programming simultaneously, using the same amount of spectrum previously required for analog programming. See FCC, DTV.gov: What is DTV?, <http://www.dtv.gov/whatisdtv.html>.

<sup>553</sup> Under Commission rules, digital stations asserting must-carry rights are entitled to carriage only of a single programming stream and other programming-related content on that stream. See *Carriage of Digital Television Broadcast Signals*, CS Docket No. 98-120, First Report and Order and Further Notice of Proposed Rulemaking, 16 FCC Rcd 2598, 2622, ¶ 57 (2001).

<sup>554</sup> Not included in this group are television translator stations which rebroadcast the signal of a full-power television broadcast station. Television translator stations typically serve communities that cannot receive the signals of free over-the-air television stations because they are too far away from a full-power television station or because of geographic limitations. See, e.g., FCC Consumer Advisory: The DTV Transition and LPTV/Class A and Translator Stations, <http://www.fcc.gov/cgb/consumerfacts/DTVandLPTV.html>. In 2000, the Commission established the Class A television service to implement the Community Broadcasters Protection Act of 1999. See *Community*

(continued...)

broadcast stations because of their impact on competition in the market for the delivery of video programming and the limitations on available data for other types of stations. The Commission licenses broadcast television stations to both individual and group owners to serve local communities within DMAs.

145. Nationally, the number of broadcast stations has not fluctuated in recent years, as shown in Table 12. At the end of 2013, there were 1,030 commercial UHF stations and 358 commercial VHF stations; 289 UHF and 107 VHF noncommercial educational stations; and 6,460 television translators, Class A stations, and low power television stations.<sup>555</sup> The transition from analog to digital service has allowed broadcast television stations to offer more programming, including both HD signals and standard-definition (“SD”) multicast signals.<sup>556</sup> Between the end of 2012 and the beginning of 2014, the number of multicast channels grew from 4,552 to 5,511.<sup>557</sup>

**Table 12: Total Full Power Broadcast Television Stations by Year**<sup>558</sup>

Station Type	12/31/11	6/30/12	12/31/12	6/30/13	12/31/13
UHF Commercial	1,027	1,029	1,028	1,028	1,030
VHF Commercial	360	358	358	358	358
<b>Total</b>	<b>1,387</b>	<b>1,387</b>	<b>1,386</b>	<b>1,386</b>	<b>1,388</b>
UHF Noncommercial	289	289	288	289	289
VHF Noncommercial	107	107	107	107	107
<b>Total</b>	<b>396</b>	<b>396</b>	<b>395</b>	<b>396</b>	<b>396</b>
<b>Grand Total</b>	<b>1,783</b>	<b>1,783</b>	<b>1,781</b>	<b>1,782</b>	<b>1,784</b>

146. The number of television stations assigned to individual television markets varies, principally correlated with the size of the market. Television markets containing rural populations tend to have fewer local full-power stations than those comprised of urban areas. Consumers in smaller markets

(Continued from previous page)

Broadcasters Protection Act of 1999, Pub. L. No. 106-113, § 5008, 113 Stat. 1501, 1501A-594-98 (1999) (codified as amended at 47 U.S.C. § 336(f)). Thus, certain qualifying low-power television (LPTV) stations are accorded Class A status, which indicates that these stations have “primary” status as television broadcasters and have a measure of interference protection from full service television stations. *See id.* § 336(f)(1)(A)(ii). Pursuant to Commission rules, stations eligible for this status must provide locally originated programming, often to rural and certain urban communities that have little or no access to such programming. *See id.* § 336(f)(2)(A)(ii)(II); *Establishment of a Class A Television Service*, MM Docket No. 00-10, Report and Order, 15 FCC Rcd 6355, 6357, ¶ 1 (2000). Created by the Commission in 1982, low-power television service has been a secondary spectrum priority. *See Inquiry Into the Future Role of Low-power Television Broadcasting and Television Translators in the National Telecommunications System*, Report and Order, BC Docket No. 78-253, 51 Rad. Reg. 2d (P & F) 476, 486 (1982), *aff’d sub nom. Neighborhood TV Co. v. FCC*, 742 F.2d 629 (D.C. Cir. 1984).

<sup>555</sup> See FCC, *Licensed Broadcast Station Totals*, <http://transition.fcc.gov/mb/audio/BroadcastStationTotals.html> (“FCC Broadcast Station Totals”).

<sup>556</sup> See *15<sup>th</sup> Report*, 28 FCC Rcd 10573, ¶ 151.

<sup>557</sup> SNL Kagan, *TV Stations Multiplatform Analysis Update: Digital Multicast, Mobile Channels on the Rise; Huge Leaps in Social Media*, March 12, 2014; SNL Kagan, *TV Stations Multiplatform Analysis 2013 Update: Expansion of Digital Multicasting, Mobile, Social Media Content*, Feb. 21, 2013. The 2012 figures do not include digital class A and low-power TV stations.

<sup>558</sup> See FCC Broadcast Station Totals.

may also rely more on multicasting than those in large markets for the delivery of major network programming such as that of ABC, CBS, FOX, and NBC. In 2013, 20 of the 210 television markets had three or fewer full-power commercial broadcast stations assigned to them. All of these markets are ranked below 100.<sup>559</sup> Combined, all 20 markets with three or fewer stations represent about 1.4 million television households, or one percent of the estimated 115.8 television households nationwide as of the 2013-2014 television season.<sup>560</sup> Of the 20 markets, 13 receive at least one of the four major networks via a digital multicast signal.<sup>561</sup>

147. Programming is a critical input for broadcast television stations to compete effectively in the industry. Stations combine local programming, either produced in-house or acquired from independent sources, syndicated programming, and/or network programming. The mix of programming varies by station, and depends on whether the station is affiliated with a network or operates as an independent station.<sup>562</sup> Whether or not a station is affiliated with one of the four major networks (ABC, CBS, FOX, or NBC) has a significant impact on the composition of the station's revenues, expenses, and operations.<sup>563</sup>

148. Most full-power commercial stations (approximately 90 percent) get at least some of the programming aired over their primary programming streams from broadcast networks.<sup>564</sup> Commercial broadcast networks generally fall into five main categories: English-language (e.g., ABC, CBS, FOX, NBC, The CW, and MyNetworkTV); Spanish-language (e.g., Univision, Telemundo, and UniMás, formerly TeleFutura); shopping (e.g., HSN), religious (e.g., TBN and CTN), and regional specialty networks (e.g., Memorable Entertainment Television (MeTV)). Three of the major networks (ABC, CBS, and NBC) generally provide their affiliates with about 22 hours per week of primetime programming.<sup>565</sup> FOX, MyNetworkTV, and The CW supply affiliates with up to 15 hours per week of primetime programming.<sup>566</sup> In addition, these networks may supply affiliates with daytime programming (e.g., morning news programs, game shows, talk shows (including Sunday public affairs), and late night programs). Spanish language and religious networks provide nearly round-the-clock programming for affiliates.<sup>567</sup>

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<sup>559</sup> BIA, television station by market data, August 2014. DMA ranks and number of stations within each DMA are not directly correlated.

<sup>560</sup> Nielsen Company, *Local Television Market Universe Estimates*, used throughout the 2013-2014 television season.

<sup>561</sup> BIA, television station by market data, August 2014.

<sup>562</sup> The Commission defines a broadcast television network as “any person, entity, or corporation which offers an interconnected program service on a regular basis for 15 or more hours per week to at least 25 affiliated television licensees in 10 or more states; and/or any person, entity, or corporation controlling, controlled by, or under common control with such person, entity, or corporation.” 47 C.F.R. § 73.3613(a)(1). Stations affiliated with a network may be owned and operated by the network (O&Os) or owned by other entities that have agreements with a network for distribution of the network's programming.

<sup>563</sup> Nexstar 2013 Form 10-K at 8; Gray 2013 Form 10-K at 10. Station groups differ in the importance they ascribe to network affiliation contracts with respect to their broadcast licenses. *See infra*, n. 624.

<sup>564</sup> BIA/Kelsey, BIA Media Access Pro Television Database as of May 2014 (evaluation of network affiliation data for all Nielsen DMAs).

<sup>565</sup> Nexstar 2013 Form 10-K at 21.

<sup>566</sup> *Id.*

<sup>567</sup> *See, e.g.*, Entravision Communications Corp., *SEC Form 10-K for the Year Ended December 31, 2013*, at 6-7 (“Entravision 2013 Form 10-K”); Trinity Broadcasting Network, *Watch Us: Broadcast Schedule*, <http://www.tbn.org/watch-us/broadcast-schedule> (visited May 20, 2014).

149. Broadcast stations also acquire programming from television syndicators that distribute original (“first-run syndication”) programming, such as *Jeopardy!* and *Judge Judy*, or reruns of network television series (“off-net” syndication), such as reruns of *Seinfeld* and *The Simpsons*, to television stations.<sup>568</sup> In addition, local broadcast stations produce programming in-house, such as local newscasts, public affairs shows, and coverage of regional and local sporting events.<sup>569</sup>

a. **Horizontal Concentration**

150. *National Group Ownership.* The 2004 Consolidated Appropriations Act directed the Commission to change the cap that limits the percentage of television households that one television station group owner can serve from 35 percent to 39 percent of U.S. television households.<sup>570</sup> According to SNL Kagan, as of 2013, the largest group owners by coverage total of U.S. television households, include ION Media Networks (owned by Black Diamond Capital), Univision Communications (Broadcast Media Partners Inc.), Trinity Broadcasting Network (Trinity Broadcasting Network, Inc.), CBS Television Stations (CBS Corp.), FOX Television Stations (21<sup>st</sup> Century FOX),<sup>571</sup> NBC Universal Stations (Comcast Corp.), Tribune Broadcasting (owned by an Employee Stock Ownership Plan),<sup>572</sup> Sinclair Broadcast Group, Inc., NRJ TV, LLC and Daystar (Word of God Fellowship, Inc.). Analyzing the largest group owners in terms of revenue results in a slightly different list. The top station groups in 2013 in terms of revenue include FOX, CBS, Sinclair, Gannett, NBCUniversal, Tribune, ABC, Media General, Hearst, and Univision.<sup>573</sup>

151. *Local Duopolies.* Commission rules limit the number of broadcast television stations that a single entity can own within a DMA based on the number of independently owned stations in the market.<sup>574</sup> The local television ownership limit permits a single entity to own two television stations in the same local market if (1) the “Grade B” contours of the stations do not overlap; or (2) at least one of the stations in the combination is not ranked among the top four stations in terms of audience share, and (3) at least eight independently owned and operating commercial or noncommercial full-power broadcast television stations would remain in the market after the combination.

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<sup>568</sup> Some firms specialize in one type of syndication. Financial arrangements between syndicators and stations vary. Some syndication rights are acquired for a per episode or series fee, but others involve sharing advertising time or barter. Vogel at 212-15. Under a barter agreement, a national program distributor retains a fixed amount of advertising time within the program in exchange for the programming it supplies. *See, e.g.*, Gray 2013 Form 10-K at 12.

<sup>569</sup> *See, e.g.*, Nexstar 2013 Form 10-K at 12; Gray 2013 Form 10-K at 11.

<sup>570</sup> Consolidated Appropriations Act, 2004, Pub. L. No. 108-199, § 629, 118 Stat. 3, 99-100 (2004) (“2004 Consolidated Appropriations Act”). 47 C.F.R. §73.3555(e).

<sup>571</sup> *See News Corp, The New News Corp Launches as Global Media and Information Services Company* (press release), June 28, 2013.

<sup>572</sup> On July 1, 2013, Tribune and Local TV Holdings, LLC, announced that they had entered into an agreement for Tribune to acquire Local TV’s television stations. *See Tribune, Tribune to Acquire Local TV, Creating Content and Distribution Powerhouse* (press release), July, 1, 2013. The applications for consent to transfer control were filed on July 15, 2013.

<sup>573</sup> Mark K. Miller, *Big Deals=Big Changes in Station Groups*, TVNEWSCHECK, May 22, 2014, at <http://www.tvnewscheck.com/article/76469/big-deals--big-changes-in-station-groups/page/1> (visited May 22, 2014).

<sup>574</sup> *See* 47 C.F.R. §73.3555(b). In the context of the Media Ownership proceeding, the Commission is considering revising this rule. *See 2010 Quadrennial Regulatory Review – Review of the Commission’s Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996; Promoting Diversification of Ownership In the Broadcasting Services*, MB Docket Nos. 09-182, 07-294, Notice of Proposed Rulemaking, 26 FCC Rcd 17489, 17493, 17498-511, ¶¶ 8, 25-59 (2011) (“*Media Ownership NPRM*”).

152. Using BIA data and counting stations in the same market with a common parent, we estimate that, as of 2013, there are about 146 duopolies among commonly owned stations in the United States and approximately an additional 55 local marketing agreements (“LMAs”).<sup>575</sup> Broadcast stations owned-and-operated by parents of multiple broadcast networks are generally more likely than other stations to participate in duopolies.<sup>576</sup> The dual network rule effectively permits common ownership of multiple broadcast networks, but prohibits a merger of two out of the “top four” networks (*i.e.*, ABC, CBS, FOX, and NBC).<sup>577</sup> Univision Corporation, Inc., which owns the Univision and TeleFutura broadcast networks, operates 13 duopolies; CBS Corp., which has ownership interests in the CBS and The CW networks, has 10 duopolies; 21<sup>st</sup> Century FOX, which owns the FOX and MyNetwork TV networks, has 10 duopolies; Comcast/NBCUniversal (“Comcast/NBCU”), which owns the NBC and Telemundo broadcast networks, operate seven duopolies. In contrast, Disney Corp., whose sole broadcast network is ABC, does not operate any duopolies.

153. Large television group owners with major broadcast network affiliates are also more likely to operate duopolies. Sinclair, which owns 93 full-power stations as of the beginning of 2014, is involved in more duopolies than any other station group, with 19 duopolies and 18 LMAs. LIN TV Corp (“LIN”) operates nine duopolies and is involved in two LMAs. Belo Corp. operated one duopoly and had no LMAs, while Gannett operated five duopolies.<sup>578</sup> Hearst Television Inc. operates four duopolies and the Tribune Company operates nine duopolies.

154. There was at least one duopoly in 76 markets as of July 2013.<sup>579</sup> Five top ranked DMAs have four duopoly combinations: New York, Los Angeles, Dallas-Ft. Worth, San Francisco-Oakland-San Jose, and Seattle-Tacoma.<sup>580</sup> While larger DMAs tend to have a greater number of duopolies, smaller DMAs have duopolies as well. Smaller DMAs are more likely to have LMAs than co-owned stations. Nine DMAs ranked below 100 have duopolies, while 25 DMAs ranked below 100 have LMAs. The smallest DMA with a duopoly is Marquette, Michigan, ranked 180.

#### b. Vertical Integration

155. Some stations are vertically integrated upstream, with suppliers of programming, as well as downstream, with distributors of programming. For instance, the stations’ parent company may have ownership interests in television production studios, movie studios, sports teams, broadcast television networks, cable networks, or syndicators. Similarly, Comcast’s acquisition of NBC/Universal resulted in downstream vertical integration of NBC’s O&O stations with a cable MVPD.<sup>581</sup>

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<sup>575</sup> See BIA/Kelsey, BIA Media Access Pro Television Database as of July 2013 (“BIA Database July 2013”) (evaluation of station ownership information for all Nielsen DMAs). For purposes of this analysis, we count full-power stations within a DMA that have a common parent company (*i.e.*, co-owned) as a duopoly. We separately count LMAs whereby two stations are linked by agreement under which the programmer provides more than 15 percent of a station’s weekly broadcast programming. See 47 C.F.R. § 73.3555 note 2(j). For the purposes of this Report, the Commission has not verified the BIA data.

<sup>576</sup> 47 C.F.R. § 73.658(g).

<sup>577</sup> *Id.*

<sup>578</sup> See *Applications for Consent to Transfer of Control from Shareholders of Belo Corp. to Gannett Co., Inc.; Applications For Consent to Assignment of Licenses from Subsidiaries of Belo Corp. to Subsidiaries of Sander Media, LLC and Tucker Operating Co., LLC*, MB Docket No. 13-189, Memorandum Opinion and Order, 28 FCC Rcd 16867 (MB 2013).

<sup>579</sup> See BIA Database July 2013 (evaluation of station ownership information for all Nielsen DMAs). In addition, San Juan, Puerto Rico, which is not part of any DMA, has six television station combinations.

<sup>580</sup> These DMAs are ranked one, two, five, six, and twelve respectively as of the 2013-2014 television season. See Nielsen 2013-2014 Local Market Estimates.

<sup>581</sup> See *supra*, ¶ 90.

156. The parent companies of two of the top seven station groups – ION Media Networks and Univision Communications, Inc. – representing 101 O&Os, own all or part of at least one broadcast television network.<sup>582</sup> Broadcast networks typically own and operate their own stations in the largest television markets. Spanish-language broadcast networks, *e.g.*, Univision and Telemundo, own and operate television stations in the largest Spanish-speaking markets.

157. In addition to ownership of broadcast networks, a number of owners of local broadcast stations have affiliations with cable networks. Through its ownership of NBCUniversal, Comcast has ownership interests in 33 national cable networks and 27 full power stations.<sup>583</sup> Other broadcast station owners with affiliated cable networks are: The Walt Disney Company with interests in 23 cable networks; Univision with interests in 14 affiliated cable networks; and CBS Corporation with interests in seven cable networks.<sup>584</sup> News Corp. (cited as 21<sup>st</sup> Century FOX) has ownership interests in 35 national cable networks. Several broadcast television groups owners that are not vertically integrated with broadcast networks also have ownership interests in cable networks. These owners include Hearst Television Inc. (17 cable networks), InterMedia Partners (four cable networks), Tribune Company (three cable networks), Cox Communications Inc. (four cable networks), and Hubbard Broadcasting Corp. (two cable networks). Combined, Hearst, InterMedia, Tribune, Cox, and Hubbard, own 30 stations. Other broadcast station groups operate local and regional cable news channels.<sup>585</sup>

158. Both Viacom and E.W. Scripps hold their broadcast television station groups and cable network holdings in separate corporate entities. Because their station groups and cable networks have common corporate directors, however, we consider them to be affiliated. Counting Viacom's 26 cable networks and CBS's seven cable networks, these affiliated companies have interests in 33 cable networks. Including Scripps Networks Interactive, E.W. Scripps has interests in eight cable networks.<sup>586</sup>

159. Comcast is the only distributor of video programming with ownership interests in each mode of video distribution covered by this Report; it is an MVPD that owns and operates 27 full-power television stations (10 NBC O&Os and 17 Telemundo O&Os) and maintains an ownership interest in Hulu, an OVD.<sup>587</sup> 21<sup>st</sup> Century FOX (which holds 29 broadcast television stations) and Disney/ABC (which holds eight broadcast television stations) also have ownership interests in Hulu.<sup>588</sup> Other than

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<sup>582</sup> SNL Kagan, *TV Station Deals Databook 2014 Edition*, Sept. 8, 2014 at 7 (“2014 SNL Kagan TV Station Databook”).

<sup>583</sup> In this Report, we count SD and HD networks separately.

<sup>584</sup> SNL Kagan, *TV Networks by Owner: 2013*, SNLxI Template (“2013 TV Network Owners”). Comcast, Viacom, 21<sup>st</sup> Century FOX, and The Walt Disney Company also control production studios, which are the primary source of programming for their networks, and hold ultimate distribution rights for their programming, subject to contractual negotiations. *See infra*, Sec. V.B.

<sup>585</sup> *See 15<sup>th</sup> Report*, 28 FCC Rcd at 10577, ¶ 163.

<sup>586</sup> *See 2013 TV Network Owners*.

<sup>587</sup> *See 15<sup>th</sup> Report*, 28 FCC Rcd at 10577, ¶ 165. Comcast's cable systems overlap with NBCUniversal's stations in six markets: San Francisco, Philadelphia, Chicago, Miami, Hartford, and Washington, DC. *Comcast-NBCU Order*, 26 FCC Rcd at 4289, ¶ 126 n. 302. On July 1, 2013, NBCUniversal acquired Philadelphia Telemundo affiliate WSSI-TV from ZGS Communications. *See Telemundo, Telemundo Stations Group Acquires Philadelphia Affiliate WSSI-TV* (press release), July 2, 2013. *See also Application of Comcast corp. and Time Warner Cable Inc., For Consent To Transfer Control of Licenses and Authorizations*, Application and Public Interest Statement, MB Docket No. 14-57 at 12 (filed Apr. 8, 2014).

<sup>588</sup> *See infra*, ¶ 232.

Comcast, Cox Media Holdings is the only MVPD that owns broadcast stations serving a DMA where it also owns a cable system.<sup>589</sup>

**c. Entry and Exit Conditions**

160. Entry and exit in the broadcast television industry occurs subject to the broadcast television allocation and licensing regime: ownership of television station properties can change hands; licensees may go out of business and return broadcast licenses for the Commission to reissue; or the Commission may auction channels for new broadcast stations. The amount of spectrum the Commission has authorized exclusively for broadcast television use and the allocation of that spectrum across the United States limits the number of entities that can enter and exit the industry. In addition to spectrum, programming is another critical input for broadcast television stations. Stations also require access to capital in order to remain competitive and operational. Both regulatory and non-regulatory conditions affecting the availability of programming may impact stations' entry and exit decisions, and we discuss those conditions below. We then describe recent entry and exit from the marketplace.

**(i) Regulatory Conditions**

161. *Licensing of Broadcast Spectrum.* A broadcast station may not operate in the United States without first receiving Commission authorization.<sup>590</sup> The Commission therefore is responsible for licensing broadcast spectrum to respective applicants and ensuring that the spectrum is used to serve the public interest.<sup>591</sup> Courts have consistently held that the Commission retains significant discretion under its public interest standard in approving applications for broadcast spectrum licenses.<sup>592</sup> The Act also prohibits broadcast stations from assigning or transferring control of their licenses without obtaining Commission approval.<sup>593</sup> In addition, certain obligations are imposed on licensees during each license term, which is generally eight years.<sup>594</sup> Under the Act, in order to grant an application for renewal of a

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<sup>589</sup> In the Orlando-Daytona Beach-Melbourne DMA, Cox owns two television stations – WFTV, an ABC affiliate, and WRDQ, an independent station – as well as a cable system serving Ocala, Florida. See Cox Media Group, Orlando, <http://www.coxmediagroup.com/orlando/> (visited Aug. 20, 2014); Cox Communications, Inc., *Welcome*, <http://ww2.cox.com/> (visited Aug. 20, 2014).

<sup>590</sup> 47 U.S.C. § 301.

<sup>591</sup> 47 U.S.C. §§ 303(c), 308(a), 309(a).

<sup>592</sup> See, e.g., *FCC v. RCA Commc'ns, Inc.*, 346 U.S. 86, 90 (1953) (“In choosing among applicants, the Commission was to be guided by the ‘public interest, convenience, or necessity[.]’ . . . The statutory standard no doubt leaves wide discretion, and calls for imaginative interpretation.”); *FCC v. Pottsville Broad. Co.*, 309 U.S. 134, 137-38 (1940) (“In granting or withholding permits for the construction of stations, and in granting, denying modifying or revoking licenses for the operation of stations, . . . ‘public convenience, interest, or necessity’ was the touchstone for the exercise of the Commission’s authority. While this criterion is as concrete as the complicated factors for judgment in such a field of delegated authority permit, it serves as a supple instrument for the exercise of discretion by the expert body which Congress has charged to carry out its legislative policy.”).

<sup>593</sup> 47 U.S.C. § 310(d). Additionally, the Act restricts foreign ownership interests exceeding 25 percent of the capital stock in U.S.-organized entities that control broadcast licensees when the Commission finds this limitation is in the public interest. *Id.* § 310(b)(4). On November 14, 2013, the Commission issued a declaratory ruling clarifying that it will consider applications proposing foreign ownership interests that exceed the 25 percent limitation on a case-by-case basis. *Commission Policies and Procedures Under Section 310(b)(4) of the Communications Act, Foreign Investment in Broadcast Licensees*, MB Docket No. 13-50, Declaratory Ruling, 28 FCC Rcd 16244, 16244, ¶ 1 (2014).

<sup>594</sup> 47 U.S.C. § 307(c); 47 C.F.R. § 73.1020. Among other things, each licensee is required to maintain a main studio in or within a prescribed distance of its station’s community of license (47 C.F.R. § 73.1125(a)); establish and enforce an equal opportunity program (47 C.F.R. § 73.2080); and maintain an accessible public inspection file (47 C.F.R. §§ 73.3526-27). In 2012, the Commission began requiring each television broadcast station to place its public inspection file online in a central, Commission-hosted database instead of maintaining the file at the station’s main

(continued...)

broadcast license, the Commission must find that, during the previous license term, the station has served the public interest, convenience, and necessity; there have been no serious violations by the licensee of the Act or the Commission's rules and regulations; and there have been no other violations by the licensee of the Act or the Commission's rules and regulations which, taken together, would constitute a pattern of abuse.<sup>595</sup>

162. *Ownership Limits.* The Commission has adopted several rules limiting the ownership interests of broadcasters to further the Act's goals of competition, localism, and diversity.<sup>596</sup> Currently, the Commission's media ownership rules limit local television ownership, local radio ownership, national television ownership, newspaper/broadcast cross-ownership, radio/television cross-ownership, and dual network ownership.<sup>597</sup> The local television ownership rule permits a single entity to own up to two television stations in the same market only if certain conditions are met.<sup>598</sup> The national television multiple ownership rule prohibits a single entity from having an aggregate national audience reach that exceeds 39 percent of all the television households in the nation.<sup>599</sup> The newspaper/broadcast cross-ownership rule prevents the common ownership of a radio or television broadcast station and a daily newspaper where the station's broadcast signal encompasses the entire community where the newspaper is published.<sup>600</sup> The radio/television cross-ownership rule restricts the common ownership of radio and television broadcast stations in a single market after factoring in the size of the relevant market.<sup>601</sup> The dual network rule effectively prohibits a merger among the "top-four" networks (ABC, CBS, FOX, and NBC).<sup>602</sup>

163. Congress mandates that the Commission review its media ownership rules every four years to determine whether they "are necessary in the public interest as a result of competition."<sup>603</sup> On March 31, 2014, the Commission adopted a *Further Notice of Proposed Rulemaking* initiating the 2014 Quadrennial Review of its media ownership rules.<sup>604</sup> In the *2014 Quadrennial Review FNPRM*, the Commission proposes to retain the current local television, local radio, and dual network rules, and

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studio. See Standardized and Enhanced Disclosure Requirements for Television Broadcast Licensee Public Interest Obligations, MM Docket No. 00-168, Second Report and Order, 27 FCC Rcd 4535, 4536-37, ¶¶ 1-3 (2012).

<sup>595</sup> See 47 U.S.C. § 309(k)(1).

<sup>596</sup> See 47 C.F.R. § 73.3555.

<sup>597</sup> 47 C.F.R. §§ 73.3555, 73.658(g).

<sup>598</sup> 47 C.F.R. § 73.3555(b). See *supra*, ¶ 152.

<sup>599</sup> 47 C.F.R. § 73.3555(e)(1). The national television multiple ownership rule provides a discount, called the "UHF discount," to television stations broadcasting in the UHF spectrum, attributing them with only 50 percent of the television households in their DMAs. 47 C.F.R. § 73.3555(e)(2)(i). On September 26, 2013, the Commission issued a Notice of Proposed Rulemaking proposing to eliminate the UHF discount. *Amendment of Section 73.3555(e) of the Commission's Rules, National Television Multiple Ownership Rule*, MB Docket No. 13-236, Notice of Proposed Rulemaking, 28 FCC Rcd 14324, 14324-25, 14331, ¶¶ 1-2, 18 (2013).

<sup>600</sup> 47 C.F.R. § 73.3555(d).

<sup>601</sup> 47 C.F.R. § 73.3555(c).

<sup>602</sup> 47 C.F.R. § 73.658(g).

<sup>603</sup> 1996 Act, § 202(h). The national television multiple ownership rule is excluded from the Commission's quadrennial review of its ownership rules. See Consolidated Appropriations Act, 2004, Pub. L. No. 108-199, § 629, 118 Stat. 3, 99-100 (2004).

<sup>604</sup> *2014 Quadrennial Regulatory Review – Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996*, MB Docket No. 14-50, Further Notice of Proposed Rulemaking and Report and Order, 27 FCC Rcd 4371 (2014) ("*2014 Quadrennial Review FNPRM*" and "*JSA Report and Order*"). The *2014 Quadrennial Review FNPRM* consolidates the 2014 Quadrennial Review with the record of the pending 2010 Quadrennial Review.

tentatively concludes to retain the prohibition on newspaper/television cross-ownership.<sup>605</sup> The Commission also seeks comment on whether to eliminate ownership restrictions on newspaper/radio and radio/television combinations.<sup>606</sup> Additionally, the Commission seeks comment on how to define a category of broadcast sharing agreements, referred to as shared service agreements (“SSAs”), and whether to require the disclosure of such agreements.<sup>607</sup> In conjunction with the *2014 Quadrennial Review FNPRM*, the Commission also released a *Report and Order* adopting a rule that makes certain television joint sales agreements (“JSAs”) attributable for purposes of compliance with the broadcast ownership rules.<sup>608</sup> Section 104 of STELAR requires the delayed application of the JSA attribution rule.<sup>609</sup>

164. *Territorial Exclusivity.* The territorial exclusivity rules restrict the geographic area in which a television broadcast station may obtain exclusive rights to video programming. Under the network territorial exclusivity rule, a broadcast station may not have an agreement with a network preventing another station located in a different community from broadcasting any of the network’s programming, or preventing another station located in the same community from broadcasting the network’s programs not purchased by the broadcast station.<sup>610</sup> Under the rule governing territorial exclusivity for non-network (*i.e.*, syndicated programming) programming, a broadcast station may not enter into an agreement with a non-network programming distributor that prevents another station located in a community more than 35 miles away from broadcasting the same programming.<sup>611</sup>

165. *Incentive Spectrum Auctions.* On February 22, 2012, President Obama signed legislation providing the Commission with the authority to conduct a broadcast incentive auction by which full power and Class A television broadcast licensees can submit voluntarily bids to relinquish or modify their spectrum usage rights in exchange for a portion of the spectrum auction proceeds.<sup>612</sup> In May 2014, the Commission adopted rules to implement the first ever incentive auction of broadcast television spectrum.<sup>613</sup> The incentive auction of broadcast television spectrum will have three major pieces: (1) a “reverse auction” in which broadcast television licensees submit bids to voluntarily relinquish some or all of their spectrum usage rights in exchange for payments,<sup>614</sup> (2) a reorganization or “repacking” of the broadcast television bands in order to free up a portion of the UHF band for other uses,<sup>615</sup> and (3) a

<sup>605</sup> *2014 Quadrennial Review FNPRM*, 27 FCC Rcd at 4377-78, 4402, 4438-39, 4471, ¶¶ 15, 74, 152, 226. Additionally, the *2014 Quadrennial Review FNPRM* proposes to modify the local television rule by replacing the previous analog Grade B contour overlap test with a digital noise limited service contour (“NLSC”) test to reflect the digital transition. *Id.* at 4377-78, ¶¶ 15-16.

<sup>606</sup> *Id.* at 4435-36, 4460-61, ¶¶ 145, 200.

<sup>607</sup> *Id.* at 4518-19, ¶ 320.

<sup>608</sup> Under the new rule, television stations brokered under a same-market television JSA that encompasses more than 15 percent of the weekly advertising time for the brokered station will be cognizable interests and counted toward the brokering station’s permissible ownership totals. *JSA Report and Order*, 27 FCC Rcd at ¶¶ 340, 359-60.

<sup>609</sup> STELAR, § 104, 128 Stat. 2063.

<sup>610</sup> 47 C.F.R. § 73.658(b).

<sup>611</sup> 47 C.F.R. §§ 73.658(m), 76.53. An exception is made, however, for communities located in hyphenated markets, *i.e.*, television markets that include more than one city (*e.g.*, Dallas-Fort Worth, TX). 47 C.F.R. §§ 73.658(m), 76.51.

<sup>612</sup> See Middle Class Tax Relief and Job Creation Act of 2012 (“Spectrum Act”), Pub. L. No. 112-96, §§ 6401-05, 126 Stat. 156, 222-30 (2012).

<sup>613</sup> See *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Docket No. 12-268, Report and Order, 29 FCC Rcd 6567 (2014).

<sup>614</sup> See generally *id.* at 6715-58, ¶¶ 347-464 (§ IV.B, Reverse Auction).

<sup>615</sup> *Id.* at 6617-18, ¶¶ 109-112.

“forward auction” of initial licenses for flexible use of the newly available 600 MHz Band spectrum.”<sup>616</sup> Broadcasters interested in exiting the business may bid to entirely relinquish a station’s license in the reverse auction.<sup>617</sup> Such license relinquishment would reduce the overall number of broadcast television stations. Broadcasters that wish to remain in the business also have an opportunity to strengthen their finances through the cash infusion resulting from a winning reverse auction bid to channel share, to move from an UHF to a VHF channel or to move from a high-VHF to a low-VHF channel.<sup>618</sup> For each station reassigned a new channel in the repacking process, including reassigned stations that did not participate in the auction, or whose auction bid was not accepted, the Commission has stated that it will make all reasonable efforts to preserve its same coverage area and population served.<sup>619</sup>

**(ii) Non-regulatory Conditions**

166. The primary means of entering the television broadcast industry is to purchase broadcast properties from licensees who are already operating stations rather than constructing new broadcast station infrastructure and obtaining a new license. Once the Commission has approved the transaction and the new owner takes over the operations of an existing station, the new owner may decide to change programming by affiliating with a different network, purchasing new syndicated programming, or changing on-air talent for local programming, such as newscasts, subject to the terms of their contracts.

167. *Access to Capital.* Entities seeking to enter the broadcasting industry, either by purchasing properties or launching a new station, require access to capital, which may come in the form of debt or equity financing. In determining whether to lend money or invest in a licensee, banks or other firms look at expected revenues and expenses, especially whether new owners could increase profits by changing programming or reducing expenses. Structural changes in the media industry, combined with the strong correlation of their revenues and profits to economic cycles, indicate that financing media transactions with debt entails some risk.<sup>620</sup> In particular, high interest rates may lead station owners to file for bankruptcy and transfer control to lenders or sell their stations,<sup>621</sup> while reducing the number of potential station buyers who can obtain loans and service debt without strain.<sup>622</sup> We note that foreign

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<sup>616</sup> *Id.* at 6759, ¶ 465.

<sup>617</sup> *Id.* at 6578, 6724, ¶¶ 27, 367.

<sup>618</sup> *Id.* at 6578, 6723, ¶¶ 27, 365.

<sup>619</sup> *Id.* at 6621-51, ¶¶ 119-182. *See also* Spectrum Act, § 6403(b)(2) (requiring “all reasonable efforts to preserve, as of the date of the enactment of this Act, the coverage area and population served of each broadcast television licensee, as determined using the methodology described in OET Bulletin 69”); OET-69 (Feb. 6, 2004), [http://transition.fcc.gov/Bureaus/Engineering\\_Technology/Documents/bulletins/oet69/oet69.pdf](http://transition.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet69/oet69.pdf).

<sup>620</sup> Lenders impose restrictions (covenants) on the ratio of debt to equity and earnings before interest and taxes (EBIT) to interest. LIN 2013 Form 10-K at 22; Sinclair 2013 Form 10-K at 27-28; Nexstar 2013 Form 10-K at 18-19; Gray 2013 Form 10-K at 19-20. Some station groups have faced concerns about breaching such loan covenants. *See, e.g.,* Taigh Khan, *S&P Cuts Media General on Declining Revenue, Tightening Covenants*, SNL KAGAN (Oct. 28, 2012).

<sup>621</sup> LIN 2013 Form 10-K at 21-22; Sinclair 2012 Form 10-K at 27-28; Nexstar 2013 Form 10-K at 18-19; Gray 2013 Form 10-K at 19-20.

<sup>622</sup> “[W]hen credit markets froze in 2007, a big no-exit sign was hung over TV broadcasting. The gap between bid and ask is more like a gulf.” Price Colman, Hot Trend: Outsourcing Management, TVNEWSCHECK, Aug. 25, 2010, <http://www.tvnewscheck.com/article/2010/08/25/44718/hot-trend-outsourcing-station-management> (visited June 24, 2014). On August 31, 2012, the Coalition for Broadcast Investment (“CBI”) submitted a letter asking the Commission to clarify its policies and procedures under Section 310(b)(4) of the Communications Act, which restricts foreign ownership and voting interest in entities that control Commission licenses. *See Commission Policies and Procedures Under Section 310(b)(4) of the Communications Act, Foreign Investment in Broadcast*, MB Docket No. 13-50, Declaratory Ruling, 28 FCC Rcd 16244 (MB 2013). In response to the clarification order, CBI stated that the new ruling would help increase investment.

ownership restrictions set forth in section 310(b)(4) of the Communications Act may impact access to capital in the broadcast industry.<sup>623</sup>

168. *Programming.* Access to programming also affects the ability of licensees to enter and remain in the industry.<sup>624</sup> Network affiliation agreements and syndication contracts often last several years. For example, if a station loses its network affiliation, it may not be able to affiliate with an alternative network, because that alternative network is likely to already have a distribution agreement in place with another station in the market. The loss of this programming could require the station to obtain replacement programming at a higher cost, and that may be less attractive to its target audience, thereby causing it to lose advertising revenues while potentially increasing expenses. Similarly, popular syndicated programming may not be available for a new station due to exclusive distribution arrangements with competing stations or cable networks.<sup>625</sup> As an alternative to contracting for expensive third-party programming, stations may produce their own programming in-house or lease time to other parties (e.g., producers of infomercials) willing to pay stations.

### (iii) Recent Entry and Exit

169. Overall, between June 30, 2012, and December 31, 2013, the number of full-power commercial television stations on the air increased by one, going from 1,387 to 1,388.<sup>626</sup> During this period, the total number of full-power noncommercial television stations stayed at 396.<sup>627</sup> In 2012, 97 full-power stations were sold, for a total of \$1.9 billion, or \$19.7 million per station, with an average cash flow multiple of 9.0.<sup>628</sup> In 2013, 286 stations were purchased for a total \$11.1 billion, or an average of \$38.9 million per station, with an average cash flow multiple of 8.2.<sup>629</sup> These figures are consistent with the increase in station transaction volume since 2010, when just 24 full-power stations traded hands in deals totaling \$155 million.<sup>630</sup> Average cash flow multiples for 2013 are down from the 2011 and 2012 values.<sup>631</sup>

170. Since the last report, several broadcast station group owners have exited the television broadcast business by selling stations.<sup>632</sup> Examples of the major transactions include:

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<sup>623</sup> See *supra*, n. 593.

<sup>624</sup> Broadcasters differ in the value they place on programming with respect to a station's purchase price. For example, Gray and LIN believe that the value of a television station is derived primarily from the attributes of its broadcast license, rather than its type of programming, *i.e.*, whether or not it is an affiliate of one of the major four broadcast networks. Gray 2013 Form 10-K at 57-58; LIN 2013 Form 10-K at 39.

<sup>625</sup> Stations compete against in-market broadcast stations for exclusive access to syndicated programming within their markets. In addition, cable networks occasionally acquire programs that might otherwise be offered to stations, and some programs are available via OVDs. Nexstar 2013 Form 10-K at 12; LIN 2013 Form 10-K at 14. Stations usually purchase syndicated programming two to three years in advance, and sometimes must make multi-year commitments. Gray 2013 Form 10-K at 24; Sinclair 2013 Form 10-K at 30.

<sup>626</sup> See FCC, *Licensed Broadcast Stations Totals*, <http://transition.fcc.gov/mb/audio/BroadcastStationTotals.html>. See also *supra*, Table 12.

<sup>627</sup> *Id.*

<sup>628</sup> SNL Kagan, *B-Stats Data for Fourth Quarter and Full-Year 2013*, January 28, 2014 ("SNLKagan B-Stats 2013").

<sup>629</sup> *Id.*

<sup>630</sup> *Id.*

<sup>631</sup> *Id.*

<sup>632</sup> There does not appear to be any entry of new broadcast station owners since the 15<sup>th</sup> Report.

- In November 2013, Media General completed its merger with Young Broadcasting in an all-stock deal. Post-transaction, Media General owned 32 full-power stations and 17 low-power stations in 28 DMAs, including San Francisco, Tampa, and Raleigh.<sup>633</sup>
- On November 25, 2013, Sinclair Broadcasting announced the completion of Barrington Broadcasting Group's 18 television stations for \$370.0 million. The deal also included agreements to operate or service six additional stations. The 24 stations were located in 15 different DMAs and reach approximately 3.4 percent of television households.<sup>634</sup>
- In December 2013, Gannett Co. Inc. completed its acquisition of Belo Corp. for \$2.2 billion. The deal included 20 stations, allowing Gannett to now reach approximately one-third of U.S. television households in 33 DMAs. Gannett is now the number one affiliate group for both CBS and NBC.<sup>635</sup>
- In the fourth quarter of 2013, Grant Company Inc. sold its seven stations to Nexstar Broadcasting Group Inc. for \$87.5 million, a 6.9x forward cash flow.<sup>636</sup>
- On December 27, 2013, Tribune Co. acquired Local TV Holdings' 19 full power stations and 16 translators for \$2.7 billion, making it the biggest deal of 2013. The deal involved stations in 16 DMAs, including Denver, St. Louis, Salt Lake City, and Cleveland. The acquisition made Tribune the number one affiliate group of FOX Broadcasting.<sup>637</sup>

### 3. Broadcast Television Business Models and Competitive Strategies

171. A second key element of our analysis of broadcast television station competition is an examination of the business models and competitive strategies of industry participants. Broadcast stations derive most of their revenue from local and national advertising, selling on-air time to advertisers so they may reach viewers.<sup>638</sup> To differentiate themselves, stations primarily invest in the purchase and

<sup>633</sup> See *J. Stewart Bryan III & Media Gen. Comm'ns Holdings, LLC (Transferor), Shareholders of New Young Broadcasting Holding Company, Inc., and Its Subsidiaries (Transferor) and Post-Merger Shareholders of Media General, Inc. (Transferee) For Consent to Transfer Control of Licenses*, MB Docket No. 13-191, File No. BTCCDT-20130703ABQ et al., Memorandum Opinion and Order, 28 FCC Rcd 15509 (MB 2013); Media General, *Media General Completes Merger with Young Broadcasting* (press release), Nov. 12, 2013.

<sup>634</sup> Sinclair Broadcasting Group, *Sinclair Broadcasting Group Closes on Acquisition of Barrington Stations* (press release), Nov. 25, 2013.

<sup>635</sup> Volker Moerbitz, *B-Stats Q2'13: Record-breaking Deal Volume and Record-low Cash Flow Multiples*, SNLKAGAN, July 23, 2013, Attached Excel Supplement; Merrill Knoz, *Gannett Completes Belo Acquisition*, TV Spy, Dec. 23, 2013, [http://www.mediabistro.com/tvspy/gannett-completes-belo-acquisition\\_b111688](http://www.mediabistro.com/tvspy/gannett-completes-belo-acquisition_b111688) (visited June 24, 2014).

<sup>636</sup> SNLKagan B-Stats 2013. In April 2013, Nexstar and Mission Broadcasting announced definitive agreements to acquire the 19 television stations and seven associated digital sub-channels from Communications Corporation of America and White Knight Broadcasting. The Media Bureau approved this transaction on December 4, 2014. See Letter from Barbara A. Kreisman, Chief, Video Division, Media Bureau, FCC, to Elizabeth Ryder, Nexstar Broadcasting, Inc., and Robert J. Folliard, III, Communications Corporation of America (rel. Dec. 4, 2014), 29 FCC Rcd 14632 (MB 2014). The acquisition was completed on January 2, 2015. See Mikolo Ilas, *Nexstar Closes CCA Purchase*, SNL FINANCIAL, Jan. 8, 2015, <https://www.snl.com/interactivex/article.aspx?id=30531014&KPLT=6>.

<sup>637</sup> Meg James, *Tribune Co. Owns 39 TV Stations with Local TV Holdings Purchase*, Los Angeles Times, Dec. 27, 2013, <http://articles.latimes.com/2013/dec/27/entertainment/la-et-ct-tribune-co-owns-39-tv-stations-20131227> (visited June 24, 2014), <http://www.snl.com/InteractiveX/mnaoverview.aspx?ID=187921>. See *Applications for Consent to Transfer of Control from Shareholders of Belo Corp. to Gannett Co., Inc.; Applications For Consent to Assignment of Licenses from Subsidiaries of Belo Corp. to Subsidiaries of Sander Media, LLC and Tucker Operating Co., LLC*, MB Docket No. 13-189, Memorandum Opinion and Order, 28 FCC Rcd 16867 (MB 2013).

<sup>638</sup> We discuss additional sources of revenue further, *infra*, Sec. III.B.4.b.

production of programming. In this section of the Report, we discuss broadcast television station competition in terms of both price and non-price rivalry.

**a. Price Rivalry**

172. *Price to Consumers.* Broadcast television stations do not compete on price in the traditional sense because they do not charge consumers directly for the delivery of their signals. Broadcast television is free to consumers who receive it over-the-air. Nevertheless, since about 90 percent of all television households receive broadcast stations from an MVPD, most consumers indirectly pay for broadcast stations as part of their MVPD service fees, which are calculated, in part, to cover retransmission consent fees that the MVPD pays to local stations.<sup>639</sup> In the case of cable, broadcast television stations are part of the basic service package, which is generally the lowest price offering but is spread across the operator's entire subscriber base.<sup>640</sup> As of January 1, 2013, the average cable system charged \$22.63 per month for its basic service tier, which includes 54 channels on average.<sup>641</sup> As of June 2014, AT&T U-verse charges \$19 per month for a basic television service including only local channels.<sup>642</sup> As of 2014, Verizon offers 74 channels as part of its FiOS TV Local Digital plan for \$10.00 per month.<sup>643</sup> As of January 2014, DIRECTV generally offers local channels at no additional charge as part of its packages, but eligibility for this offer is based on whether DIRECTV offers local channels in a customer's service area.<sup>644</sup> As of January 2014, DISH includes local television station services as part of some packages at no additional charge, but charges an additional \$6.00 per month to subscribers opting for local television stations in other packages.<sup>645</sup>

173. *Price to Advertisers.* Television broadcast stations earn about 80 percent of their revenue through the sale of advertising time during their programs, a slight decline since the last report.<sup>646</sup> In the broadcasting industry, competition for advertising revenue occurs primarily within individual markets.<sup>647</sup> Generally, advertising rates are determined by a station's overall ability to attract viewers in its market area and a station's ability to attract viewers generally and among particular demographic groups that an advertiser may be targeting.<sup>648</sup> Specifically, advertising rates depend upon factors such as: (1) the size of a station's market; (2) a station's overall ratings; (3) a program's popularity among targeted viewers; (4) the number of advertisers competing for available time; (5) the demographic makeup of the station's market; (6) the availability of alternative advertising media in the market; (7) the presence of effective sales forces; (8) the development of projects, features and programs that tie advertiser messages to

<sup>639</sup> *National Universe Estimates -- Market Breaks*, Nielsen, Jan. 1, 2014. See also *infra*, Table 16.

<sup>640</sup> 47 U.S.C. § 543(b)(7), 47 C.F.R. § 76.901(a).

<sup>641</sup> See *2014 Cable Price Report*, 29 FCC Rcd at 5287, 5290, Tables 1, 4.

<sup>642</sup> Telephone call between FCC staff and AT&T representative, June 24, 2014.

<sup>643</sup> See Verizon Communications Inc., *FiOS TV, Find Your Perfect Plan and Channels* (using 22201 zip code in Arlington, VA), <http://www.verizon.com/home/fiosTV/#plans-channels> (visited Sept. 10, 2014). This plan includes 74 channels, including 13 in HD. In addition to the broadcast stations' primary signals, this package includes broadcast multicast signals and PEG channels, as well as WGN America. Additional national networks are available to households that bundle video services with broadband or voice service from Verizon.

<sup>644</sup> DIRECTV, *English Packages* (using 22314 zip code in Alexandria, VA), [http://www.directv.com/DTVAPP/new\\_customer/base\\_packages.jsp?footernavtype=-1&lpos=header](http://www.directv.com/DTVAPP/new_customer/base_packages.jsp?footernavtype=-1&lpos=header) (visited Jan. 2, 2014).

<sup>645</sup> DISH Network, *Entertainment: Channels, Washington, DC/Hagerstown* (using 22314 zip code in Alexandria, VA), <http://www.dishnetwork.com/packages/local/default.aspx> (visited Jan. 2, 2014).

<sup>646</sup> SNL Kagan, *Total TV Station Industry Revenue Projections*, Feb. 14, 2014 ("2014 SNL Kagan TV Revenues").

<sup>647</sup> Nexstar 2013 Form 10-K at 12; Gray 2013 Form 10-K at 12; Sinclair 2013 Form 10-K at 24-25.

<sup>648</sup> Nexstar 2013 Form 10-K at 9; Gray 2013 Form 10-K at 2; Sinclair 2013 Form 10-K at 25.

programming; and (9) the level of spending commitment made by the advertiser.<sup>649</sup> Within network shows, stations are generally permitted to sell a fixed amount of advertising time, about 2.5 to three minutes per hour. The network sells any remaining advertising time and includes such advertising in network programming. The network retains the associated revenue. In the alternative, stations can use their allotted 2.5 to three minutes of time during network shows to promote their own programming. In newscasts or during other non-network shows, stations may sell approximately nine minutes of advertising time per hour.<sup>650</sup>

174. Local advertisers purchase time directly from a station's local sales staff. Such advertisers typically include car dealerships, retail stores, and restaurants.<sup>651</sup> National advertisers that wish to reach a particular region or local audience buy advertising time through national advertising sales representative firms.<sup>652</sup> Such advertisers typically include automobile manufacturers and dealer groups, telecommunications companies, fast food franchisers, and national retailers.<sup>653</sup> Stations compete for advertising revenue with other stations in their respective markets; advertisers may also place advertisements with other media including newspapers, radio stations, magazines, outdoor advertising, transit advertising, yellow page directories, direct mail, local cable systems, DBS systems, and web sites online, as well as telephone and/or wireless companies.<sup>654</sup>

175. While individual stations do not make their advertising rates publicly available, prices for a composite group of television stations are available.<sup>655</sup> Local advertisers typically use the cost per rating point ("CPP") measure to value advertising time, which represents the percentage of households in a local market with television sets watching a station or show at a given time.<sup>656</sup> CPPs vary by the time of day, with prime time (8 p.m.-11 p.m., Eastern and Pacific Time; 7 p.m.-10 p.m., Central and Mountain Time), being the most expensive.<sup>657</sup> For the top 100 television markets, on average, a station's CPP for a 30-second advertisement during prime time was \$34,363 in 2013, up from \$32,019 in 2012. That is, on average, a station within the top 100 markets charged advertisers \$34,363 to reach one percent of the television households within its DMA with a 30-second commercial. During the late newscasts (11 p.m. Eastern and Pacific Time; 10 p.m., Central and Mountain Time), on average, stations charge lower prices. In 2012 and 2013, on average, the CPPs for a 30-second advertisement during this time slot were \$17,716 and \$17,950, respectively.<sup>658</sup> Advertisers assess the relative expense and efficiency of delivering a message via different media, *e.g.*, a broadcast network compared with a group of broadcast television

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<sup>649</sup> Nexstar 2013 Form 10-K at 9; LIN 2013 Form 10-K at 11; Sinclair 2013 Form 10-K at 25.

<sup>650</sup> Vogel at 317, n. 29.

<sup>651</sup> Nexstar 2013 Form 10-K at 9.

<sup>652</sup> Nexstar 2013 Form 10-K at 9; Entravision 2013 Form 10-K at 11.

<sup>653</sup> Nexstar 2013 Form 10-K at 9.

<sup>654</sup> Gray 2013 Form 10-K at 12; Belo 2012 Form 10-K at 5.

<sup>655</sup> See TVB, *Trends: TV Cost & CPM Trends*, <http://www.tvb.org/trends/4718> (visited June 23, 2014) ("TV Cost & CPM Trends").

<sup>656</sup> See The Museum of Broadcast Communications, *Cost-Per-Thousand (CPM) and Cost-Per-Point (CPP)*, <http://www.museum.tv/eotvsection.php?entrycode=cost-per-thou> (visited June 23, 2014); Vogel at 290-91, 574-75. For example, if 100,000 households in a DMA own television sets, and 20,000 of those households are tuned to a particular broadcast television station, then a station's rating is 20. If it charges \$25,000 per point during a particular program, then it can earn \$500,000.

<sup>657</sup> TV Cost & CPM Trends.

<sup>658</sup> Other non-advertising sources of revenue for broadcast television stations include retransmission consent fees, network compensation, DTV revenue, online revenue, and mobile revenue. These sources of revenue are discussed further, *infra*, Sec. III.B.4.b.

stations, on the basis of cost per thousand households (“CPM”).<sup>659</sup> Table 13 includes CPM figures to provide another basis for comparing prices charged to advertisers.

**Table 13: Top 100 Television Markets: Average Price of a 30-Second Commercial<sup>660</sup>**

Year	Prime Time		Late News	
	CPP	CPM	CPP	CPM
2012	\$32,019	\$32.08	\$17,716	\$17.75
2013	\$34,363	\$34.83	\$17,950	\$18.19

176. *Price to MVPDs.* As discussed above, broadcast television stations are entitled to carriage on MVPDs’ systems.<sup>661</sup> Commercial stations are entitled to decide whether to seek mandatory carriage or negotiate for compensation for their signals. Broadcasters claim that revenue from retransmission consent is necessary to support stations’ public service obligations, such as local news and information programming, and for stations to remain economically viable.<sup>662</sup> As noted above, on March 31, 2014, the Commission revised its rules concerning retransmission consent negotiations.<sup>663</sup> Under the new rules, two broadcast stations that are ranked among the top four stations (as measured by audience share) in the same DMA may not negotiate retransmission jointly unless those stations are commonly owned.<sup>664</sup> In support of this change, the Commission noted that joint negotiations by such stations eliminates price rivalry between the stations, ultimately leading to higher retransmission consent fees, and that the threat of losing the programming of two or more top four stations at the same time gives the stations undue bargaining leverage in negotiations with MVPDs.<sup>665</sup> Also, as noted above, Section 103 of STELAR adds new consumer protections in retransmission consent by expanding the Commission’s ban on joint negotiation by stations to all broadcasters, not just the top four stations.<sup>666</sup>

#### b. Non-Price Rivalry

177. Broadcast stations compete with each other for viewers and advertisers on two major non-price criteria: (1) programming<sup>667</sup> and (2) the type of viewing experience.<sup>668</sup> Each of these items is described below in turn.

178. *Programming.* The largest point of differentiation among broadcast stations is the type of programming they offer and when such programming is offered. Consumers watch multiple broadcast

<sup>659</sup> Vogel at 292.

<sup>660</sup> See TV Cost & CPM Trends (visited June 23, 2014) (citing SQAD Media Market Guide 1<sup>st</sup> Quarter Projections (Fall books)).

<sup>661</sup> See *supra*, ¶¶ 44-49, for further discussion of retransmission consent.

<sup>662</sup> See, e.g., NAB Comments at 24-25; ABC Affiliates Reply at 2-10 (arguing, *inter alia*, that that retransmission consent revenue is needed to replace the compensation previously paid by the broadcast networks to their affiliates, which no longer exists and in many cases has been replaced by license fees that stations are required to pay to the networks for network programming).

<sup>663</sup> See *supra*, ¶ 46; *Retransmission Consent Order and FNPRM*.

<sup>664</sup> See *id.* at 3352-46, ¶¶ 1, 6.

<sup>665</sup> See, e.g., *id.* at 3358-59, ¶13.

<sup>666</sup> STELAR, § 103, 128 Stat. 2062. See also *supra*, ¶ 46.

<sup>667</sup> Nexstar 2013 Form 10-K at 12; Gray 2013 Form 10-K at 12; Sinclair 2013 Form 10-K at 25.

<sup>668</sup> Signal coverage and MVPD carriage also impact a television station’s competitive position. Gray 2013 Form 10-K at 11.

stations and switch stations based on the type of programming carried. When choosing the type of programming to air, stations weigh the cost of acquiring programming, the number of viewers they can expect to attract, the amount of advertising they can sell, and the prices they can charge to advertisers.

179. Commercial stations also use multicast streams to offer consumers additional programming choices. For instance, multicast streams often carry newer networks such as This TV (with 125 digital multicast affiliates), Bounce TV (with 75 digital multicast affiliates), and Retro TV (with 68 digital multicasting affiliates).<sup>669</sup> In addition, multicasting enables stations in smaller markets to affiliate with multiple established networks. For example, The CW (with 115 digital multicast outlets) and My Network TV (86 outlets) are examples of more established networks that enhance their coverage with multicasting.<sup>670</sup>

180. Network affiliates typically market themselves based on their broadcast network affiliation and channel position (e.g., FOX 5) and their on-air news talent. Programming from broadcast networks can attract large audiences, and broadcast networks provide their affiliates with entertainment programming and sporting events, such as the Olympics, NFL games, Major League Baseball (“MLB”) games, and the Academy Awards, that are extremely popular with both viewers and advertisers.<sup>671</sup> Networks also tend to schedule their most popular programming during the months of the year when Nielsen measures television audiences for all 210 DMAs (February, May, July, and November) to determine local advertising rates.<sup>672</sup> Section 105 of STELAR removes the prohibition against deletion or repositioning of a local commercial television station during a period in which major television ratings services measure the size of audiences of local television stations.<sup>673</sup>

181. Local news programming is another source of product differentiation for broadcast television stations in their competition for both advertisers and viewers.<sup>674</sup> This programming, which stations produce, is typically the largest source of their revenue, accounting for on average 48.6 percent of their advertising base.<sup>675</sup> Some stations seek to increase their local advertising revenues in part by producing programming with local advertising appeal and sponsoring or co-promoting local events and activities.<sup>676</sup> To attract audiences, stations also strive to provide exclusive news stories, unique features

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<sup>669</sup> SNL Kagan, TV Station Database 2014 Edition (Quarter 1 2014).

<sup>670</sup> *Id.*

<sup>671</sup> Nexstar 2013 Form 10-K at 4; Sinclair 2013 Form 10-K at 15. The network affiliation agreements, generally exclusive for each of the 210 DMAs, provide affiliates with the right to air network programming first. The contracts may run from two to 10 or more years. The Commission’s right-to-reject rule grants an affiliate the right to (1) reject or refuse network programs which the station reasonably believes to be unsatisfactory, unsuitable, or contrary to the public interest and (2) substitute a program which, in the station’s opinion, is of greater local or national importance. 47 C.F.R. § 73.658(e). The financial arrangements between networks and their affiliated stations regarding payments for programming are evolving. *See infra*, Sec. III.B.4.b.

<sup>672</sup> While networks and stations consider May to be the most important measuring period of the year, they also compete intensely in February and November, when audiences are likely to stay at home. Vogel at 291. *See also* Nielsen Media Research, *Glossary of Media Terms, Sweeps*, <http://www.nielsenmedia.com/glossary/> (visited June 24, 2014). Nielsen refers to these months as “sweep months.” Nielsen excludes the Honolulu, Fairbanks, and Juneau DMAs from its July measurement period.

<sup>673</sup> STELAR, § 105, 128 Stat. 2063.

<sup>674</sup> LIN 2013 Form 10-K at 9; Sinclair 2013 Form 10-K at 13.

<sup>675</sup> Vogel at 304. *See also* Robert Papper, *Newsroom Staffing Stagnates: TV Staff Size Up but Number of Newsrooms Down*, RTDNA, July 15, 2013, [http://www.rtdna.org/article/newsroom\\_staffing\\_stagnates#\\_U\\_ZgAvldV8E](http://www.rtdna.org/article/newsroom_staffing_stagnates#_U_ZgAvldV8E).

<sup>676</sup> *See, e.g.*, Nexstar 2013 Form 10-K at 9; LIN 2013 Form 10-K at 11. Nexstar states that each of the stations it owns, operates, programs, or provides sales and other services to create a highly recognizable brand, primarily through the quality of news programming and community presence. Nexstar asserts that strong local news typically

(continued...)

such as investigative reporting, and coverage of community events, and to secure broadcast rights to regional and local sporting events.<sup>677</sup> In 2013, the average television station aired just under 5.5 hours of local news per weekday, a 6 minute decline from 2012.<sup>678</sup> NAB contends that broadcast stations are investing in local news, specifically through high-definition upgrades.<sup>679</sup>

182. Stations also air syndicated programming, including off-network programs (e.g., *The Andy Griffith Show* or *How I Met Your Mother*), first-run programs (e.g., *Jeopardy*, *Entertainment Tonight*, or *Wheel of Fortune*) and sporting events.<sup>680</sup> Competition for programming involves negotiating with national program distributors or syndicators that sell first-run and rerun packages of programming in their respective markets.<sup>681</sup> Stations compete against in-market broadcast stations for exclusive access to syndicated programming within their markets.<sup>682</sup> Syndicated programming can be expensive for stations and may represent a long-term financial commitment.<sup>683</sup> Stations usually purchase syndicated

(Continued from previous page)

generates higher ratings among attractive demographic groups and enhances audience loyalty, potentially resulting in higher ratings for programs preceding and following the newscasts. Nexstar claim that high ratings and strong community identities also makes stations attractive to advertisers. In 2013, Nexstar earned approximately 28 percent of its advertising revenues from spots aired during local news programming. Nexstar's stations produce between 15 to 25 hours per week of local news programming. Nexstar 2013 Form 10-K at 4.

<sup>677</sup> Nexstar 2013 Form 10-K at 12; Gray 2013 Form 10-K at 12.

<sup>678</sup> Robert Papper, *Survey Shows Near-record Year for Local News: Stations Produce Many Hours of Newscasts*, RTDNA, June 17, 2013, [http://www.rtdna.org/article/survey\\_shows\\_near\\_record\\_year\\_for\\_local\\_news#.U\\_WhileRTNDA/Hofstra](http://www.rtdna.org/article/survey_shows_near_record_year_for_local_news#.U_WhileRTNDA/Hofstra) released survey results in 2013, the survey was conducted during the fourth quarter of 2012. This survey presents the national average hours of news for all stations. A 2011 FCC staff analysis found, however, that 520 commercial and 262 noncommercial stations do no local news. See FCC, *The Information Needs of Communities*, July 2011, at 100, <http://www.fcc.gov/infoneedsreport>.

<sup>679</sup> See, e.g., NAB Comments at 8-11. "An estimated 80 percent of broadcasters in the top 100 markets are now airing local news in HD." Such arrangements include joint sales agreements, shared services agreements, and local marketing agreements. As stated above, our attribution rules currently make attributable certain LMAs, also referred to as time brokerage agreements ("TBAs"), in which a broker purchases discrete blocks of time from a licensee and supplies programming and sells advertising for the purchased time. According to commenters, a local news service ("LNS") agreement is as an agreement in which multiple local broadcast television stations contribute certain news staff and equipment to a joint news gathering effort coordinated by a single managing editor. According to commenters in the ownership proceeding, a shared service agreement ("SSA") is an agreement, or series of agreements, in which one in-market station provides operational support and programming for another in-market station. We are currently seeking comment on LNS agreements and SSAs in the Media Ownership proceeding. See *Media Ownership NPRM*, 26 FCC Rcd at 17564-70, ¶¶ 195-208.

<sup>680</sup> See, e.g., LIN 2013 Form 10-K at 11; Nexstar 2013 Form 10-K at 12, 10; Sinclair 2013 Form 10-K at 15; Gray 2013 Form 10-K 12; ESPN Inc., *WDCW-TV/DC50 Named SEC Network Affiliate in Washington DC – DC50 to Air Men's SEC Basketball and Football Through ESPN Regional Television's Syndicated Network* (press release), Jan. 4, 2012. ESPN, a cable network, has a division called ESPN Regional Television that syndicates collegiate sports programming. See The Walt Disney Company, *SEC Form 10-K for the Year Ended September 29, 2012*, at 3.

<sup>681</sup> Nexstar 2013 Form 10-K at 12.

<sup>682</sup> *Id.*; Gray 2013 Form 10-K 12. In addition, cable networks occasionally acquire programs that might otherwise be offered to stations. For example, Twentieth Century FOX TV and Twentieth TV negotiated the first cable syndication and VOD deal of *The Simpsons* to FXX for all past and future episodes, within the time period of the deal, for approximately \$750 million. Cynthia Littleton, *'The Simpsons' Lands \$750 Mil Cable Syndication, VOD Pact with FXX*, *Variety*, Nov. 15, 2013, <http://variety.com/2013/tv/news/the-simpsons-lands-750-mil-cable-vod-syndication-pact-with-fxx-1200837036/> (Aug. 27, 2014).

<sup>683</sup> Syndicated programming can impose financial risks on stations. Broadcast stations cannot predict whether a particular show will be sufficiently popular to enable it to sell enough related advertising time to cover the costs of the program. A station may have to replace a poorly performing program before it has recovered the costs of obtaining it. Sinclair 2013 Form 10-K at 30; Gray 2013 Form 10-K at 24; Belo 2012 Form 10-K at 11.

programming two to three years in advance and sometimes must make multi-year commitments.<sup>684</sup> An average broadcast station spends about 21.6 percent of its expenses on acquiring syndicated programming.<sup>685</sup>

183. Despite its price tag, a popular program may be a profitable investment for a station if it provides a lead-in audience for a station's local newscasts, differentiates the station from competing stations, and/or increases audience and revenues. Other factors may help to reduce the costs of syndicated programming for stations. For example, large group owners can use economies of scale to negotiate favorable contractual terms with program suppliers.<sup>686</sup>

184. *Viewing Experience.* Several factors affect consumers' viewing experiences, including the availability of HD programming, availability of content via a television station's website, and consumers' ability to view video on a time-shifted basis on television sets, personal computers, and/or mobile devices. As of 2013, 94.7 million U.S. television households, or 81.8 percent of such households, had sets capable of displaying and/or receiving digital signals, including HD television signals.<sup>687</sup> This figure is up from 85.9 million, or 75.2 percent of television households, in 2012.<sup>688</sup> Though broadcasters have provided increasing amounts of HD programming in response to the increasing number of HD televisions, as of the beginning of 2014, 1,517 (85.7 percent) of full-power stations were broadcasting in HD, down from 1,536 stations in 2013.<sup>689</sup>

185. Penetration of DVRs continues to rise as well. Approximately 54.2 million, or 46.8 percent of television households, had DVRs in 2013.<sup>690</sup> In 2012, DVRs were in 50.3 million or 44.1 percent of all television households.<sup>691</sup> The availability of DVRs coupled with other technological developments has spurred consumers' desire and ability to watch video on a time shifted basis. As digital video recorders have gained popularity, Nielsen began reporting "live-plus-same-day playback," ("LSD") viewing as the currency for buying and selling local television time, where such ratings are available.<sup>692</sup> In August 2010, it found that while the total effect of DVR playback on ratings was small, the audience composition changed.<sup>693</sup>

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<sup>684</sup> Gray 2013 Form 10-K at 24; Belo 2012 Form 10-K at 11.

<sup>685</sup> National Association of Broadcasters, *Television Financial Report: 2014 Industry Report Station Revenue, Expenses and Profit*, 2014, at 3 ("2014 NAB Television Financial Report").

<sup>686</sup> Nexstar 2013 Form 10-K at 4.

<sup>687</sup> Nielsen, *September 2013 National Media Related Universe Estimates*, Oct. 31, 2013. ("Nielsen Sept. 2013 Universe Estimates"). Figures apply to the television season at issue. MVPD households with HD television sets wishing to receive HD service must have HD service included in their subscriptions.

<sup>688</sup> Nielsen, *September 2012 National Media Related Universe Estimates*, Oct. 1, 2012. ("Nielsen Sept. 2012 Universe Estimates").

<sup>689</sup> 2014 SNL Kagan TV Station Databook at 11; SNL Kagan, *TV Station Deals Databook 2013 Edition*, July 2013, at 10 ("2013 SNL Kagan TV Stations Databook").

<sup>690</sup> Nielsen, *National Universe Estimates*, Aug. 26, 2013 ("Nielsen 2013 Universe Estimates").

<sup>691</sup> Nielsen, *National Universe Estimates*, Aug. 27, 2012 ("Nielsen 2012 Universe Estimates").

<sup>692</sup> Katy Bachman, *Nielsen Returns 'Live' to the Ratings*, ADWEEK, July 1, 2010, <http://www.adweek.com/news/advertising-branding/nielsen-returns-live-ratings-102743> (visited June 24, 2014). See also The Nielsen Company, *Measurement, Television Measurement, 2011-12 Sweeps Dates*, <http://www.nielsen.com/us/en/measurement/television-measurement.html> (visited June 24, 2014).

<sup>693</sup> Katy Bachman, *Nielsen Releases Analysis of LSD Data*, ADWEEK, Aug. 5, 2010, <http://www.adweek.com/news/advertising-branding/nielsen-releases-analysis-bsd-data-115873> (visited June 24, 2014). LSD viewers tended to be younger and higher-income than live viewers generally. As described in Section III.B.4, *infra*, advertisers buy time on broadcast and cable networks on the basis of viewership of commercials.

**Table 14: Television Households and Media Usage Estimates (in thousands)**<sup>694</sup>

	2012-2013	2013-2014
Total U.S. Households	119,210	120,160
U.S. TV HHs	114,200	115,800
Broadcast Only	11,190	11,390
MVPD	103,010	104,410
DVR Owner	50,340	54,210
HD TV Households	85,890	94,700

186. Television stations use their online and mobile platforms to address consumers' increasing desire to view video programming in more places and times and on more devices. Broadcasters use their websites as extensions of their local brands, and offer advertisers online promotions coordinated with the on-air advertisements. SNL Kagan estimates that at the beginning of 2014 there were 147 live mobile TV stations in 54 DMAs with 165 live mobile channels.<sup>695</sup> Television stations are also taking a "three-screen approach" – distributing news programming online and via mobile devices, as well as over-the-air." As noted in the last Report, the larger the news department, the more likely the station was to use the three-screen approach. While most stations with a three-screen approach were broadcast network affiliates, the size of their DMAs did not appear to impact their decision to utilize this approach.<sup>696</sup> NAB states that stations are taking this approach even further by "reaching their viewers directly through mobile applications and social media" (e.g., Facebook, Twitter, and Vine).<sup>697</sup>

187. In addition, since the last report, broadcasters increasingly are using mobile DTV to provide consumers with on-the-go access to local news and other video content. In 2013, 123 operating commercial mobile DTV stations broadcast more than 155 live mobile video channels by the Top 50 television station groups.<sup>698</sup> At the end of 2011, there were 105 live mobile DTV stations.<sup>699</sup> According to NAB, currently "[m]ore than 150 stations in 31 states have commenced providing mobile TV service, and are offering 165 channels of programming."<sup>700</sup> As noted in the last report, the Open Mobile Video Coalition ("OMVC") had a successful mobile DTV trial in September 2010.<sup>701</sup> As of August 2014,

<sup>694</sup> Nielsen 2013 Universe Estimates; Nielsen 2012 Universe Estimates; Nielsen Sept. 2013 Universe Estimates; Nielsen Sept. 2012 Universe Estimates. We note that Nielsen's estimate of MVPD households is different from the estimate presented in Table 7 *supra*, which is based on SNL Kagan data. However, Nielsen is the source of the other information reported in this table, thus we use its MVPD household figure here.

<sup>695</sup> 2014 SNL Kagan TV Stations Databook at 12.

<sup>696</sup> See *15th Report*, 28 FCC Rcd at 10576, ¶ 192.

<sup>697</sup> NAB Comments at 10 (citing Pew Research Center Project for Excellence in Journalism and TVNewsCheck).

<sup>698</sup> Kagan Multiplatform Analysis 2013.

<sup>699</sup> See *15th Report*, 28 FCC Rcd at 10577, ¶ 192.

<sup>700</sup> NAB Comments at 13 (citing Open Mobile Video Coalition station/market database (August 2013) and Kagan Multiplatform Analysis 2014.).

<sup>701</sup> See *15th Report*, 28 FCC Rcd at 10577, ¶ 192. Membership in OMVC is open to U.S.-based television broadcasters and related entities dedicated to advancing mobile digital television and currently includes over 900 TV stations, including public television stations, and sixteen out of the top 20 station groups. On January 1, 2013, OMVC's functions were integrated within NAB. See NAB, *Mobile TV Industry Pioneer OMVC to Integrate Functions Within NAB* (press release), Dec. 18, 2012.

Mobile Content Venture (“MCV”), a joint venture of 17 media groups,<sup>702</sup> launched the Dyle Mobile DTV service in 36 DMAs, reaching more than 55 percent of the U.S. population.<sup>703</sup> The Mobile 500 Alliance, a consortium of 46 member companies, including two public broadcasters, which hold licenses to 420 television stations, plans to launch 15 to 20 Mobile DTV channels in markets across the country.<sup>704</sup>

#### 4. Broadcast Television Station Operating and Financial Statistics

188. In this section of the Report, we examine broadcast stations’ operating and financial statistics, including audience, revenue, and profitability, as well as investment and innovation. We also review the interplay between the trends in broadcasters’ sources of revenues and expenses, their strategies for distributing video programming, and other factors influencing broadcasters’ performance. While the majority of broadcast television station licensees are part of parent companies that are involved in other industries, some group owners are only involved in broadcast television. To provide context to our discussion of the profitability of the broadcast television station industry as a whole, as well as investment and innovation by television broadcast stations, we examine a select group of these “pure play” television station-only group owners: Media General,<sup>705</sup> Gray Television Inc., LIN,<sup>706</sup> Nexstar Broadcasting Group, and Sinclair<sup>707</sup> (together, the “Pure Play Companies”).<sup>708</sup> As publicly traded pure play companies, they provide detailed information about their performance in the broadcast industry.

189. Because of its dependence on advertising revenue, which is highly correlated with overall economic conditions, broadcasting is a highly cyclical industry.<sup>709</sup> This is in part because marketers often

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<sup>702</sup> The 17 media groups are ABC, CBS, FOX, NBC (including the Telemundo stations), ION, Cox Media Group, E.W. Scripps, Gannett Broadcasting, Hearst, Media General, Meredith Corp., Post-Newsweek Stations, Inc., Univision, Sinclair Broadcasting Group, and Raycom Media – that separately formed Pearl Mobile DTV Company LLC, as a vehicle for their involvement in MCV. See <http://www.dyle.tv/about/participants/> (visited Aug. 27, 2014).

<sup>703</sup> The markets are Atlanta, GA; Austin, TX; Birmingham, AL; Boston, MA; Charlotte, NC; Chicago, IL; Cincinnati, OH; Cleveland, OH; Columbus, OH; Dallas, TX; Dayton, OH; Denver, CO; Detroit, MI; Greenville, SC; Houston, TX; Kansas City, MO; Knoxville, TN; Las Vegas, NV; Los Angeles, CA; Miami, FL; Minneapolis, MN; Montgomery, AL; New York, NY; Orlando, FL; Philadelphia, PA; Phoenix, AZ; Pittsburgh, PA; Portland, OR; Raleigh, NC; San Francisco, CA; Seattle, WA; St. Louis, MO; Tampa, FL; Tulsa, OK; Washington, DC; and West Palm Beach, FL. MVC, *About MVC*, <http://www.dyle.tv/about/about-us/> (visited Aug. 27, 2014).

<sup>704</sup> Mobile 500 Alliance, *About*, <http://mobile500alliance.com/about-2> (visited Sept. 10, 2014).

<sup>705</sup> Media General became a Pure Play company in October 2012 after selling its remaining newspapers in June 2012 and October 2012. See Media General, *Media General Completes Sale of Newspapers to Berkshire Hathaway* (press release), June 25, 2012; Media General, *Media General, Inc. Has Sold The Tampa Tribune to Tampa Media Group, Inc.* (press release), Oct. 8, 2012 (“Media General Pure Play”).

<sup>706</sup> On March 21, 2014, Media General announced the combination of Media General and LIN Media, [http://mediageneral.com/press/2014/mar21\\_14.html](http://mediageneral.com/press/2014/mar21_14.html). The Commission approved this transaction on December 12, 2014. See *Consent to Transfer Control of Licenses by Shareholders of Media General, Inc. and Shareholders of LIN Media, LLC to Post-Merger Shareholders of Media General, Inc.*, File Nos. BTCCDT-20140509AKR *et al*, Memorandum Opinion and Order, DA 14-1810, (rel. Dec. 12, 2014). The parties closed the transaction on December 19, 2014. Media General, *Media General Completes Merger with LIN Media* (press release), Dec. 19, 2014.

<sup>707</sup> While Sinclair has invested in non-broadcast businesses in order to diversify its risks, these only represent a small portion of its overall operating results. Sinclair 2013 Form 10-K at 15.

<sup>708</sup> Parent companies involved in a number of industries (or segments of an industry) may combine financial data from television stations with financial data from their other interests. By using Pure Play Companies, we can report operating and financial data related solely to broadcast stations.

<sup>709</sup> Vogel at 301-03; Gray 2013 Form 10-K at 21; LIN 2013 Form 10-K at 21; Sinclair 2013 Form 10-K at 27.

view advertising as a discretionary expense and cut back when the economy declines.<sup>710</sup> In addition, some categories of advertisers, especially the automobile sector, are responsible for a large proportion of stations' advertising revenues. Automobile dealers can account for 25 percent of a typical television station's revenues in good times.<sup>711</sup> While the automobile sector's share of station groups' advertising fell in recent years, these revenues appear to be rebounding somewhat.<sup>712</sup> Station revenues tend to be higher in even years, due to political advertising, which tends to peak immediately before elections.<sup>713</sup>

190. In the short run, most of a station's operating costs are fixed.<sup>714</sup> Regardless of the amount of advertising inventory it sells, a station must pay for the cost of operating its facilities as well as the costs of programming rights. Therefore, when economic conditions are favorable and a station is able to charge high prices for its commercial inventory, it can be profitable. Conversely, because stations remain highly dependent on advertising revenues, when they decline, aside from laying off employees and reducing sales commissions, stations usually are unable to reduce expenses, and thus profits can decline sharply. Other sources of station revenue include retransmission consent fees, ancillary DTV services, and online advertising.<sup>715</sup>

191. Broadcast television stations face changing technology. Industry participants note that information delivery and programming alternatives such as MVPDs, the Internet, mobile devices, DVRs, and home video entertainment systems have fractionalized television viewing and audiences, expanded the number of outlets for advertisers, and increased competition for the acquisition of programming.<sup>716</sup> Industry participants also note that video compression techniques enable MVPDs and competing television stations to carry more programming (e.g., via multicasting), potentially fractionalizing audiences and advertisers even further.<sup>717</sup>

#### a. Audiences

192. The industry relies on Nielsen data to measure broadcast television station audiences. Nielsen measures television ratings as a percentage of households with television sets who view a program.<sup>718</sup> Since the *15<sup>th</sup> Report*, both television penetration and the total number of television households have stabilized.<sup>719</sup> For the 2013-2014 season, Nielsen reports television penetration at 96 percent, or about 115.8 million U.S. television households.<sup>720</sup> Nielsen estimates these figures at approximately 96 percent and 114.2 million households for the 2012-2013 season.<sup>721</sup> The decline in

<sup>710</sup> See Nexstar 2013 Form 10-K at 26.

<sup>711</sup> Vogel at 309.

<sup>712</sup> See *15<sup>th</sup> Report*, 28 FCC Rcd at 10591, ¶ 194. See also, e.g., Gray 2013 Form 10-K at 5 ("For the years ended December 31, 2013 . . . , we derived approximately 25% . . . of our total broadcast advertising revenue from customers in the automotive industry").

<sup>713</sup> Nexstar 2013 Form 10-K at 9; Gray 2013 Form 10-K at 5. See *infra*, ¶ 201.

<sup>714</sup> Vogel at 304.

<sup>715</sup> See *infra*, Sec. III.B.4.b.

<sup>716</sup> Nexstar 2013 Form 10-K at 27; Gray 2013 Form 10-K at 26; Sinclair 2013 Form 10-K at 36-37; LIN 2013 Form 10-K at 23.

<sup>717</sup> Nexstar 2013 Form 10-K at 27; Sinclair 2013 Form 10-K at 36-37.

<sup>718</sup> Nielsen, *News & Insights: Top Tens & Trends, Television*, <http://www.nielsen.com/us/en/insights/top10s/television.html> (visited Nov. 13, 2012).

<sup>719</sup> See *15th Report*, 28 FCC Rcd at 10577, ¶ 197.

<sup>720</sup> Nielsen 2013 Universe Estimates. For the purposes of this Report, we use Nielsen's January 1 estimates for our December 31 estimates of the prior year.

<sup>721</sup> Nielsen 2012 Universe Estimates.

television penetration since the 2010-2011 season, when it was 99 percent of all households, is attributed to “cord-cutters” or viewers of Internet video only (*i.e.*, Netflix).<sup>722</sup>

193. The percentage of television households relying exclusively on over-the-air broadcast service (as opposed to accessing broadcast stations via an MVPD) remained relatively steady since the last report. According to Nielsen, in January 2014, approximately 9.8 percent of all U.S. television households, or about 11.4 million households, were broadcast only.<sup>723</sup> As of January 2013, there were also almost 11.2 million broadcast-only households, which represented 9.8 percent of all television households at that time.<sup>724</sup> NAB provides different figures that show a larger increase. According to NAB, the most recent data suggests that 19.3 percent U.S. television households, or 22.4 million households, rely solely on over-the-air television service.<sup>725</sup> This figure is up from 17.8 percent of households in the previous year.<sup>726</sup> NAB states that over-the-air reliance is higher among lower income households and racial/ethnic minorities, and homes headed by younger adults.<sup>727</sup>

194. Between the 2011-2012 and 2012-2013 television seasons, viewing shares of broadcast network affiliates declined slightly, non-commercial broadcast television stations held steady and viewing shares of independent stations, whose shares are relatively low, decreased in primetime during this period. In contrast, the combined viewing shares of advertising-supported cable networks increased in total day shares during this period. As shown in Table 15, the total day share of viewing for broadcast network affiliates decreased from 28 percent in the 2011-2012 television season to 27 percent in the 2012-2013 television season.<sup>728</sup> During prime time,<sup>729</sup> their share dropped from 33 percent in the 2011-2012 season to 31 percent in the 2012-2013 television seasons. Independent stations’ total share was three percent in both the 2011-2012 season and 2012-2013 season. During prime time, their share dropped from three percent in the 2011-2012 season to two percent in the 2012-2013 season. NCE stations’ total and prime time shares were two percent in the 2011-2012 and 2012-2013 seasons.<sup>730</sup>

<sup>722</sup> Jim Edwards, *These Charts Show That Netflix is Killing TV*, Business Insider, Dec. 12, 2013, <http://www.businessinsider.com/decline-in-us-tv-households-2013-12> (visited Aug. 26, 2014). Other studies indicate that college students are watching video content on computers and laptops in lieu of television sets. See *College-Age TV Watchers Have No Cords to Cut*, eMarketer, Dec. 15, 2011, <http://www.emarketer.com/Article.aspx?id=1008735&R=1008735> (visited Aug. 26, 2014). See also *15th Report*, 28 FCC Rcd at 10577, ¶ 197.

<sup>723</sup> Nielsen 2013 Universe Estimates.

<sup>724</sup> Nielsen 2012 Universe Estimates.

<sup>725</sup> NAB Comments at 2 (citing GfK, Home Technology Monitor 2013 Ownership Survey and Trend Report (Spring 2013-March 2013)).

<sup>726</sup> *Id.* at 2-3.

<sup>727</sup> *Id.* at 3-4.

<sup>728</sup> Nielsen 2012 Television Audience Report at 15 & Nielsen 2013 Television Audience Report at 15. Total day viewing includes viewing Monday-Sunday, 6 a.m.-6 p.m. A share is the percentage of television households watching television who are watching a particular programming source. Due to simultaneous multiple-set viewing, Nielsen reports audience shares that exceed 100 percent when totaled. We have normalized the audience shares by recalculating them on a base (or denominator) equaling 100 percent and adjusting the numerators accordingly.

<sup>729</sup> Monday-Saturday, 8-11 p.m. Eastern and Pacific Time (7-10 p.m. Central and Mountain Time), Sunday 7-11 p.m. Eastern and Pacific Time (6-10 p.m. Central and Mountain Time).

<sup>730</sup> For the 2009-2010 television season, Nielsen began releasing “C3” ratings data for television viewing, which measures the commercials watched both live and for three days via DVR playback. This is the metric under which much of broadcast and cable network advertising is bought and sold. See Nielsen, “C3” TV Ratings Show Impact of DVR Ad Viewing, Oct. 14, 2009, <http://nielsen.com/us/en/newswire/2009/c3-tv-ratings-show-impact-of-dvr-ad-viewing.html> (visited June 23, 2014). To include VOD, and online viewing in their ratings, networks must include the same set of commercials that appear in the initial live telecast. This measurement does not apply to local ratings.

Table 15: Audience Shares<sup>731</sup>

<b>Total Day</b>	<b>2010-2011</b>	<b>2011-2012</b>	<b>2012-2013</b>
<b>Viewing Source:</b>			
Network Affiliates	28	28	27
Independents	3	3	3
Non-Commercial Networks	2	2	2
Ad Supported Cable	53	52	54
Premium Pay Networks	4	4	4
All Other Cable Networks	5	6	5
All Other Tuning	5	5	5
<b>Total Day Total:</b>	<b>100</b>	<b>100</b>	<b>100</b>

<b>Prime Time</b>	<b>2010-2011</b>	<b>2011-2012</b>	<b>2012-2013</b>
<b>Viewing Source:</b>			
Network Affiliates	33	33	31
Independents	2	3	2
Non-Commercial Networks	2	2	2
Ad Supported Cable	51	51	52
Premium Pay Networks	4	3	3
All Other Cable Networks	4	4	4
All Other Tuning	4	4	5
<b>Prime Time Total:</b>	<b>100</b>	<b>100</b>	<b>100</b>

#### b. Revenue

195. This section of the Report describes broadcast television stations' revenue from advertising during the relevant period. It then considers other sources of broadcast television station revenue during the period, including network compensation, retransmission consent fees, revenues from non-broadcast ancillary services, online revenues, and other revenues.

196. Broadcast television station revenues reached a high of \$26.3 billion in 2000 and declined thereafter, although they showed some recovery starting in 2010.<sup>732</sup> Industry revenues were approximately \$24.6 billion in 2012, but were reported to decline by two percent to \$24.2 billion in 2013.<sup>733</sup>

<sup>731</sup> Nielsen 2013 Television Audience Report at 15. Figures apply to the television season at issue. Primetime Totals add up to 99 due to rounding.

<sup>732</sup> See *15th Report*, 28 FCC Rcd at 10577, ¶ 202. As noted above, revenues tend to be higher in even years.

<sup>733</sup> 2014 SNL Kagan TV Revenues.

**Table 16: Broadcast Television Station Industry Revenue Trends (in millions)**<sup>734</sup>

Revenue Sources	2011	2012	2013 (projected)
Advertising	\$18,639	\$20,838	\$19,379
Network Compensation	\$25	<\$1	<\$1
Retransmission Consent	\$1,757	\$2,387	\$3,305
Online	\$1,195	\$1,375	\$1,485
<b>Total</b>	<b>\$21,617</b>	<b>\$24,600</b>	<b>\$24,169</b>
<b>Percentage Change</b>	(3%)	14%	(2%)

197. *Advertising Revenue.* On-air advertising is by far the most significant source of revenue for television stations, although its share of overall broadcast television station industry revenues is declining. It represented about 85 percent of broadcast television station industry revenues in 2012 and estimated to represent 80 percent of industry revenues in 2013.<sup>735</sup>

198. Broadcast television stations sell two categories of advertising: local spot and national spot. Local advertisers purchase local spot advertising to reach viewers within a station's market. They may work with local advertising agencies or directly with a station's sales staff.<sup>736</sup> Local advertising is more sensitive to the economic climate of a station's geographic area. For example, even if a station is attracting large audiences, if the local economy is struggling, local businesses may choose not to advertise or to limit their advertising.<sup>737</sup> Using SNL Kagan data, we estimate that local advertising represented about 47 percent or \$11.7 billion of broadcast television station industry revenues in 2012 and represented about 45 percent or \$10.9 billion of industry revenues in 2013.<sup>738</sup> NAB estimates that, in 2013, on average, about 63.7 percent of a station's gross advertising revenues were from local advertising, an increase over the 54.7 percent of revenues in 2012.<sup>739</sup> The percentages may vary depending on the station and the DMA a station serves. Local advertisers may choose to advertise using local broadcast television or radio stations, newspapers, regional cable networks, geographically-targeted websites, or other local media. Between 2012 and 2013, broadcast stations' share of local advertising revenue decreased from 16.4 percent to 15.2 percent. However, total advertising spending across all local media rose from \$71.0 billion nationwide to \$71.3 billion, and broadcast television stations' collective local advertising revenues dropped from \$11.7 billion to \$10.9 billion.

<sup>734</sup> *Id.*

<sup>735</sup> *Id.*

<sup>736</sup> Nexstar 2013 Form 10-K at 42.

<sup>737</sup> Smaller local businesses generally feel a recession's impact more immediately than large national businesses, and would be more likely to curtail local television advertising spending. Vogel at 303.

<sup>738</sup> SNL Kagan, *U.S. Advertising Market Overview, 2002-2021*, Dec. 27, 2012. Some broadcast station groups cite lower percentages. Nexstar states that local advertising, excluding political, represented 47.8 percent of its stations' gross revenues (that is, revenues before subtracting agency commissions) in 2012 and 51.0 percent in 2013. Nexstar 2013 Form 10-K at 44. Gray's percentages were similar: 47.3 percent in 2012, and 58.6 percent in 2013. Gray 2013 Form 10-K at 40. See also *15<sup>th</sup> Report*, 28 FCC Rcd at 10596, ¶ 204.

<sup>739</sup> *2014 NAB Television Financial Report* at iv; National Association of Broadcasters, *2013 Television Financial Report*, 2013, at 2 ("2013 NAB Television Financial Report").

**Table 17: Local Advertising Revenue by Sector (in millions)**<sup>740</sup>

Revenue	2011	2012	2013 (projected)
Broadcast TV Stations	\$10,308	\$11,674	\$10,856
Cable TV	\$4,324	\$4,990	\$4,999
Radio	\$11,264	\$11,391	\$11,437
Internet	\$12,372	\$13,098	\$13,832
Daily Newspaper	\$16,915	\$15,610	\$14,909
Regional Sports Networks	\$842	\$933	\$1,051
Mobile	\$757	\$1,596	\$3,058
Telco	\$161	\$324	\$419
Other	\$12,559	\$11,386	\$10,704
<b>Total Local</b>	<b>\$69,503</b>	<b>\$71,002</b>	<b>\$71,264</b>

199. National advertising time is sold through national sales representative firms (“reps”) working with advertising agencies, whose clients typically include automobile manufacturers and dealer groups, telecommunications companies, fast food franchisers, and national retailers.<sup>741</sup> In exchange for representing the stations, the rep firms typically earn commissions of about seven to eight percent of net billings, defined as dollars paid for advertising minus ad agency commissions.<sup>742</sup> National advertising is generally bought through advertising agencies. The advertising agencies generally receive commissions of 15 percent of the gross advertising rates paid for advertising they place.<sup>743</sup> National spot advertising represented about 37.3 percent of total broadcast television station industry revenues, or \$9.2 billion, in 2012, and is projected to be about 35.3 percent, or \$8.5 billion, of industry revenues in 2013. In its television financial reports, NAB estimates that an average station’s revenue from national and regional advertising increased from 30.4 percent in 2012 to 34.6 in 2013.<sup>744</sup> National advertisers may choose to advertise on broadcast stations but are more likely to utilize arrangements with broadcast networks, cable networks, television syndicators, or DBS. National sales tend to represent a larger proportion of revenues for stations in larger markets.<sup>745</sup> Broadcast television stations’ share of the national advertising market was 6.1 percent in 2012 and was projected to be 5.7 percent in 2013. In the last report, we reported that cable networks and VOD surpassed broadcast television networks in their share of overall national advertising revenue in 2008. This trend continued in 2012 and 2013, with the gap between broadcast television networks and cable networks and VOD increasing slightly. In 2012, broadcast television networks accounted for 12.5 percent of national advertising revenues and cable networks and VOD

<sup>740</sup> SNL Kagan, *U.S. Advertising Market Overview, 2003-2022*, Dec. 18, 2013.

<sup>741</sup> Nexstar 2013 Form 10-K at 9.

<sup>742</sup> Vogel at 312-13, n. 7. Gross advertising revenues refer to the total amount spent by advertisers, while net revenues refer to amount of advertising revenues received by stations.

<sup>743</sup> Nexstar 2013 Form 10-K at 42.

<sup>744</sup> 2014 NAB Television Financial Report at iv; 2013 NAB Television Financial Report at 2.

<sup>745</sup> Vogel at 312-13, n. 7. Sinclair states that it has focused on decreasing its dependence on national advertising, as overall spending by national advertisers has declined, and other outlets have merged. Sinclair 2013 Form 10-K at 46.

accounted for 17.2 percent of national advertising revenues. In 2013, those figures were projected to be 12.0 percent and 18.5 percent, respectively.

**Table 18: National Advertising Revenue by Sector (in millions)**<sup>746</sup>

Revenue	2011	2012	2013 (projected)
Broadcast TV Stations	8,331	9,164	8,523
Broadcast Networks	17,590	18,563	17,862
Cable & VOD Networks	24,630	25,617	27,567
DBS	918	1,067	1,143
Internet	18,215	19,956	21,576
Radio	2,795	2,814	2,834
Satellite Radio	87	97	105
Radio Network	1,136	1,181	1,199
Daily Newspaper	3,777	3,335	3,118
Barter Syndication	2,960	3,022	3,085
Mobile	1,249	2,379	4,261
Other	\$62,187	\$63,044	\$62,019
<b>National Total</b>	<b>144,729</b>	<b>149,088</b>	<b>\$148,844</b>

200. Political advertising can be both local and national.<sup>747</sup> For example, a mayoral candidate may only need to purchase advertising in one DMA in order to reach potential voters, in which case the advertising is local.<sup>748</sup> Candidates running for statewide offices, however, or presidential candidates seeking to reach audiences in swing states, will frequently purchase time within multiple DMAs covering the particular state, in which case a national rep firm may purchase time on behalf of the candidates. In 2011, six TV station owners earned \$48.9 million in political advertising, representing about two percent of their revenues.<sup>749</sup> In 2013, these companies were expected to earn a combined \$37.5 million in political advertising revenues compared to \$476.0 million in 2012.<sup>750</sup> Political advertising revenue is

<sup>746</sup> SNL Kagan, *U.S. Advertising Market Overview, 2002-2021*, Dec. 27, 2012.

<sup>747</sup> See, e.g., Sinclair 2013 Form 10-K at 51-52.

<sup>748</sup> Kate Brady, *Political Ads: Final Tips From the Rep*, TVNEWSCHECK, Oct. 1, 2010, <http://www.tvnewscheck.com/article/2010/10/01/45773/political-ads-final-tips-from-the-rep> (visited June 17, 2014).

<sup>749</sup> Peter Leitzinger, *2013 TV Political Ad Revenue Down 23.3% Over Non-Election Year 2011*, SNL KAGAN, March 25, 2014 (“2014 Election Guide”). SNL Kagan identifies the TV station owners as Sinclair, LIN Media, Nexstar, Gray TV, E.W. Scripps, and Media General. Political advertising revenues are generally much smaller in years that do not have national and statewide (e.g., congressional elections).

<sup>750</sup> *Id.* Revenues are expected to be higher in presidential election years (i.e., 2012) compared to non-election years (i.e., 2011 and 2013). SNL Kagan compares 2011 and 2013 non-election year data in their analysis of political advertising revenue.

projected to reach \$2.5 billion in 2014.<sup>751</sup> NAB estimates that for an average station, political advertising decreased from 14.9 percent in 2012 to 1.7 percent of revenues in 2013.<sup>752</sup>

201. The ability of advertisers to switch among media depends on how they plan their media budgets. Broadcast television advertising can be purchased in several ways: by flight (*e.g.*, for a one-week period, such as for movie openings or sales) or monthly, quarterly, or annually, (*e.g.*, the entire advertising campaign at once).<sup>753</sup> Annual buys give media buyers leverage to negotiate the best rates. The closer the media buyer is to the beginning of the television season schedule when placing the buy, the higher the rates will likely be. If the media is sold out, the rates may need to be high enough to bump another advertiser's spots. At times, it may be so close to the flight that the station does not have any space available to sell. On the other hand, buyers who plan annually run the risk of unexpected scheduling changes. For example, a buyer may have purchased advertising time on an NBC affiliate on a Thursday evening, but reached fewer people than expected when a program turned out to be less popular than expected, or a competing network scheduled a more popular program during the same time period.

202. *Network Compensation.* Compensation from broadcast networks previously was the second largest revenue stream for network-affiliated broadcast stations. Traditionally networks have compensated affiliates with cash payments closely related to affiliates' local market ratings performances. Since the late 1990s, however, broadcast networks began to phase out these payments. As of 2011, NAB began reporting network programming as an expense rather than a revenue source.<sup>754</sup> SNL Kagan estimates that between 2011 and 2012, total network affiliate compensation dropped from about \$25 million, or 0.1 percent of the total \$21.6 billion in industry revenues, to less than one million dollars.<sup>755</sup> Network compensation was projected to stay under the one million dollar mark in 2013. Network compensation to television broadcast stations has all but disappeared, and today, television stations instead commonly pay compensation to networks in order to air their programming.<sup>756</sup>

203. *Retransmission Consent Fees.* As compensation from networks has disappeared, broadcast stations have increased their leverage with MVPDs, which continues to increase average retransmission fees.<sup>757</sup> Like cable networks, broadcast stations negotiate per subscriber fees from MVPDs in exchange for carriage rights. Since the last report, retransmission consent fees have increased in dollar terms and as a share of industry revenues. SNL Kagan data show that retransmission consent fees represented about 9.7 percent, or \$2.4 billion in broadcast television station industry revenues in 2012, and about 14.7 percent, or \$ 3.31 billion in 2013.<sup>758</sup> Local broadcasters, however, do not retain all of this

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<sup>751</sup> *Id.*

<sup>752</sup> 2014 NAB Television Financial Report at 2; 2013 NAB Television Financial Report at 2.

<sup>753</sup> Kerri Byrd, *What to Know About an Annual Media Buy*, Evok Advertising, Dec. 21, 2010, <http://www.evokad.com/2010/12/what-to-know-about-an-annual-media-buy/> (visited Dec. 3, 2012).

<sup>754</sup> See 2011 NAB Television Financial Report at ii.

<sup>755</sup> 2014 SNL Kagan TV Revenues.

<sup>756</sup> See 15th Report, 28 FCC Rcd at 10577, ¶ 208.

<sup>757</sup> 2013 SNL Kagan TV Stations Databook at 2. Numerous commenters in this proceeding have noted that retransmission consent fees continue to rise and have become a significant part of television station's overall revenue picture. See, *e.g.*, Verizon Reply at 7-8; AT&T Comments 4; DIRECTV Comments at 13; NAB Comments at 26.

<sup>758</sup> 2014 SNL Kagan TV Revenues. For Nexstar, retransmission consent revenues (consisting of a per-subscriber-based compensatory fee and excluding advertising revenue) represented 15.4 percent of net revenues in 2012 and 19.4 percent in 2013. Nexstar 2013 Form 10-K at 44. Nexstar explains that the increases are due to the incremental revenue new stations, net of station disposal, and contracts with higher rates per subscriber on their legacy stations. Similarly, Gray's retransmission consent revenues increased due to increased rates, representing 8.3 percent in 2012 and 11.5 percent in 2013. Gray 2013 Form 10-K at 40. Neither LIN nor Sinclair break out retransmission consent revenues separately. See LIN 2013 Form 10-K at 42; Sinclair 2013 Form 10-K at 42.

revenue. Instead, television stations typically share a portion of such fees with their networks partners; this is referred to as “reverse compensation”.<sup>759</sup> Station groups that are vertically integrated with broadcast networks or affiliated with cable networks may have more leverage than other station owners, since they can integrate retransmission consent negotiations with carriage of their networks. Group owners may be able to earn more than individual station owners because they have more experience and leverage with MVPDs. Stations in smaller markets may not earn as much in total dollars from retransmission consent fees because there are not as many subscribers, but they may earn the same per-subscriber fees as stations in larger markets.<sup>760</sup>

204. *Ancillary DTV Revenues.* DTV technology allows broadcasters to use part of their licensed digital spectrum to provide non-broadcast “ancillary or supplementary” services (*e.g.*, subscription video, data transfer, or audio signals), provided they pay the Commission a five percent fee of gross revenues received from such services.<sup>761</sup> Compared with other revenue sources, ancillary services remain a small portion of total revenue. Commercial and noncommercial educational DTV broadcast station licensees file FCC Form 317 on an annual basis, reporting whether they have provided ancillary services at any time during the 12-month period preceding September 30 of the filing year.<sup>762</sup> Licensees that earn revenues from such services are required to pay fees to the Commission. As shown in the following table of yearly ancillary DTV revenues since 1999, these revenues have declined substantially in the last three years.

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<sup>759</sup> 2013 SNL Kagan TV Stations Databook at 2.

<sup>760</sup> *See 15th Report*, 28 FCC Rcd at 10577, ¶ 209.

<sup>761</sup> *Filing of FCC Annual DTV Ancillary/ Supplementary Services Report*, Public Notice, 18 FCC Rcd 23972, 23973 (MB 2003). *See also* 47 U.S.C. § 336(a)(2), (e).

<sup>762</sup> Fees are reported in the year received, although they may be for services rendered in past years, in future years, or both. This occurs very few times and involves small sums of money. As broadcast stations decide to use DTV for broadcasting, *e.g.*, to launch a new network such as Bounce TV, rather than for ancillary services, fluctuations in the reported figures for non-broadcast ancillary services may occur.

Table 19: Ancillary DTV Revenues

Predominant Year	Number of DTV Licensees That Reported Feeable Services	Gross Revenues From Feeable Services	Fees Collected From Feeable Services
1999	0	\$0	\$0
2000	4	\$570,000	\$28,500
2001	2	\$390,000	\$19,500
2002	6	\$148,280	\$7,414
2003	3	\$45,000	\$2,250
2004	10	\$78,625	\$3,931
2005	11	\$176,777	\$8,839
2006	38	\$798,153	\$39,888
2007	35	\$417,649	\$20,868
2008	54	\$337,857	\$16,897
2009	57	\$2,044,454	\$102,223
2010	99	\$7,125,374	\$356,268
2011	85	\$841,177	\$42,059
2012	81	\$499,970	\$24,998
2013	40	\$126,502	\$6,325

205. *Online Revenues.* In addition to selling advertising time over the air, stations often sell advertising on their websites. SNL Kagan estimates that online revenues represented about \$1.4 billion, or 5.6 percent of \$24.6 billion in the total broadcast station industry revenues in 2012, and \$1.9 billion, or 6.1 percent of the \$24.2 billion in total broadcast television station industry revenues in 2013.<sup>763</sup> Other sources have slightly higher or lower estimates. NAB estimates that online revenue increased from \$544,210 in 2012 to \$606,626, or 3.1 percent of an average station's \$19.3 million in net revenues, in 2013.<sup>764</sup>

206. Borrell also estimated the total amount of money advertisers spent on local online advertising nationwide and the share represented by broadcast television station websites. Borrell considers broadcast television station sites to primarily compete with the websites of other local media, such as newspapers' websites, as well as online sites unaffiliated with a media entity, *e.g.*, Craigslist and Patch.<sup>765</sup> According to Borrell, between 2011 and 2012, broadcast television stations decreased their market share of local online advertising. Borrell estimates that television broadcasters accounted for 10.9 percent, or about \$2.7 billion of the \$24.7 billion spent on local online advertising in 2013, down from

<sup>763</sup> See Table 17.

<sup>764</sup> 2014 NAB Television Financial Report at 2; 2013 NAB Television Financial Report at 2. NAB calculates online revenue as a percentage of a broadcast station's net revenue (*i.e.*, the amount spent by advertisers on a station (gross advertising revenues) – advertising agency commission – national and regional sales rep firm commission = all other sources of station revenue).

<sup>765</sup> Borrell Associates Inc., *Benchmarking TV's Local Online Revenues*, May 2013, at 8, [http://www.tvb.org/media/file/Borrell2013\\_LocalTVStations\\_OnlineRevReport.pdf](http://www.tvb.org/media/file/Borrell2013_LocalTVStations_OnlineRevReport.pdf) ("Borrell Study 2013").

13.0 percent, or \$2.4 billion, in 2012.<sup>766</sup> It states that the average station's market share depended on market size, with the stations in the smallest markets averaging 1.1 percent of local online advertising and larger-market stations averaging 0.6 percent of local online advertising, due to a lack of competition from Internet pure play companies in the markets.<sup>767</sup> Borrell states that local television online revenues grew to \$2.7 billion in 2013, a 15 percent increase from 2012, and estimates continued but slower growth for 2014.<sup>768</sup> Borrell suggests that growth will continue due to new marketing opportunities (i.e., mobile and social media) and "selling competitors' digital inventory".<sup>769</sup> Average station's online revenues for 2012 differ based on DMA size, with stations in the smallest DMAs averaging \$0.5 million and the largest market stations averaging \$2.0 million.<sup>770</sup>

207. *Other Revenues.* Advertising revenues from mobile services and applications are still nascent for most stations. NAB estimates that mobile revenues increased from \$34,853 in 2012 to \$53,134, about 0.3 percent of an average station's total \$19.3 million in net revenues in 2013.<sup>771</sup> NAB estimates that in 2013 advertising revenues from multicast channels represented almost 0.8 percent of an average station's total net revenues, a 0.1 percent increase over 2012 figures.<sup>772</sup>

### c. Profitability

208. To assess profitability trends in the broadcast television station sector in 2013, we consider data on a station-level basis, using benchmarks in NAB's Television Financial Reports and, on a company-level basis, examining the Pure Play Companies. When entering the broadcast television station industry, companies often buy or sell individual stations or the portfolio of assets of a broadcast television station group owner based on a multiple of profitability.<sup>773</sup>

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<sup>766</sup> Borrell Associates Inc., *Benchmarking Local TV Stations' Online Revenues*, July 2014, at 6-7, [http://www.tvb.org/media/file/Borrell-TV-Online-Revenue-Benchmarking\\_2014.pdf](http://www.tvb.org/media/file/Borrell-TV-Online-Revenue-Benchmarking_2014.pdf) ("Borrell Study 2014"). For its calculations, Borrell relied on three sources: a database of Local Ad Spending Report (LASR) estimates for all Television Market Areas (TMAs), a database of ad revenue and expenses for 9,894 U.S. and Canadian online operations, and a survey of 122 television managers on digital operations. *Id.* at 4.

<sup>767</sup> *Id.* at 11.

<sup>768</sup> *Id.* at 7.

<sup>769</sup> *Id.* at 5-6.

<sup>770</sup> *Id.* at 10.

<sup>771</sup> *2014 NAB Television Financial Report* at 2; *2013 NAB Television Financial Report* at 2. NAB defines mobile revenue as any revenue derived directly from streaming to mobile devices. *Id.* at 164.

<sup>772</sup> *Id.* at 2. To calculate total net revenues, NAB subtracts agency and rep firm commission for gross advertising revenues, and adds all other forms of revenue.

<sup>773</sup> Vogel at 307-10. See also Price Colman, *For Sale: Young Broadcasting for Just \$350M*, TVNEWSCHECK, June 30, 2011, <http://www.tvnewscheck.com/article/2011/06/30/52237/for-sale-young-broadcasting-for-just-350m> (visited Dec. 5, 2012).

**Table 20: Broadcast Television Station Industry Profitability****a. Net Operating Revenue (in thousands)<sup>774</sup>**

	<b>2011</b>	<b>06/2012</b>	<b>2012</b>	<b>06/2013</b>	<b>2013</b>
Media General <sup>775</sup>				\$155,959	\$269,912
Nexstar	\$206,491	\$172,506	\$378,632	\$238,416	\$502,330
Gray	\$307,131	\$175,365	\$404,831	\$162,454	\$346,298
LIN	\$409,072	\$224,210	\$553,462	\$305,338	\$652,363
Sinclair	\$720,387	\$451,293	\$1,061,679	\$596,772	\$1,363,131
<b>Average NAB Station<sup>776</sup></b>	<b>\$17,440</b>	<b>N/A</b>	<b>\$19,939</b>	<b>N/A</b>	<b>\$19,298</b>

**b. (Recurring) EBITDA (in thousands)**

	<b>2011</b>	<b>06/2012</b>	<b>2012</b>	<b>06/2013</b>	<b>2013</b>
Media General				\$29,226	\$72,248
Nexstar	\$96,278	\$63,525	\$146,922	\$77,109	\$168,247
Gray	\$98,762	\$65,029	\$176,618	\$48,036	\$109,077
LIN	\$113,890	\$69,610	\$112,370	\$75,482	\$168,060
Sinclair	\$278,402	\$176,719	\$426,490	\$207,855	\$469,407
<b>Average NAB Station</b>	<b>\$5,669</b>	<b>N/A</b>	<b>\$7,798</b>	<b>N/A</b>	<b>\$6,894</b>

<sup>774</sup> Figures for June of each year represent estimates for the first half of each year (*i.e.*, the first and second quarter combined).

<sup>775</sup> Media General was designated Pure Play status in October 2012, so 2011 and 2012 data are not applicable. *See* Media General Pure Play.

<sup>776</sup> 2014 NAB Television Financial Report at 2.

c. Net Income before Taxes (in thousands)<sup>777</sup>

	2011	06/2012	2012	06/2013	2013
Media General				\$28,190	\$16,679
Nexstar	(\$6,166)	\$14,988	\$45,074	\$12,390	\$815
Gray	\$13,574	\$23,580	\$47,317	\$11,238	\$31,435
LIN	\$33,656	\$33,479	\$22,491	\$10,308	\$31,181
Sinclair	\$121,373	\$82,486	\$212,340	\$47,974	\$105,508
<b>Average NAB Station</b>	<b>\$4,228</b>	<b>N/A</b>	<b>\$6,434</b>	<b>N/A</b>	<b>\$5,448</b>

209. We use NAB average station financial statistics as an indicator of profitability: station EBITDA (which NAB calls “cash flow”) and station pre-tax profits.<sup>778</sup> NAB calculates an average broadcast television station’s cash flow by subtracting station operational expenses (expenses from all of the station’s departments: engineering, programming, production, news, sales, advertising and promotions, and general administrative expenses) from total net revenues, which are gross advertising revenues minus agency commissions and national and regional rep firm commissions. Similarly, we can examine the recurring EBITDA<sup>779</sup> of the Pure Play Companies. Recurring EBITDA excludes earnings or losses from nonrecurring events, such as the gain or sale of assets, early retirement of debt, restructuring, or asset write-downs, and facilitates consideration prior to widely varying debt-financing arrangements.<sup>780</sup> For the purpose of this Report, we believe recurring EBITDA and EBITDA are better indicators of profitability within the broadcast television industry than pre-tax income, which incorporates revenues and expenses from extraordinary events, as well as interest payments on debt.

210. To better compare trends among a single station and select station groups, we can calculate the profit margins, *i.e.*, EBITDA (or recurring EBITDA) divided by net operating revenues (*i.e.*, revenues earned by the station or station group, minus commissions from advertising agencies and rep firms).<sup>781</sup> As seen in Table 21, the profit margins for 2013 were generally lower than those for 2012. As noted above, broadcast station revenues generally tend to be higher in even-numbered years, primarily due to the influx of political advertising, and NBC affiliates also earn additional revenues from their coverage of the Olympics in those years.

<sup>777</sup> Information in this table is based on data from NAB Financial Reports and SNL Kagan.

<sup>778</sup> We report national average figures, but recognize that profitability varies by a number of station characteristics, including market size.

<sup>779</sup> SNL Kagan, Nexstar EBITDA and FCF (Free Cash Flow) Analysis. Free cash flow is a measure of financial performance calculated as operating cash flow minus capital expenditures. It represents the cash that a company is able to generate after laying out the money required to maintain or expand its asset base. Investopedia, *Dictionary: Free Cash Flow*, <http://www.investopedia.com/terms/f/freecashflow.asp#axzz1qAPFGRjM> (visited June 19, 2013).

<sup>780</sup> Vogel at 308-09.

<sup>781</sup> This Report compares year-end figures for 2011 and 2012. For 2013, profit margins for the Pure Play Companies ranged from 25.8 percent (LIN) to 34.4 percent (Sinclair).

**Table 21: Profit Margins**

	2011	06/2012	2012	06/2013	2013
Media General				0.187	0.268
Nexstar	0.466	0.368	0.388	0.323	0.335
Gray	0.322	0.371	0.436	0.296	0.315
LIN	0.278	0.310	0.203	0.247	0.258
Sinclair	0.386	0.392	0.402	0.348	0.344
<b>Average NAB Station</b>	<b>0.325</b>	<b>N/A</b>	<b>0.391</b>	<b>N/A</b>	<b>0.357</b>

**d. Investment and Innovation**

211. As in our analysis of profitability, we analyze broadcast station industry investment trends by examining (1) an average television station's average capital expenditures divided by net operating income and (2) capital expenditures divided by net income for the Pure Play Companies.

**Table 22: Broadcast Television Station Industry Investment<sup>782</sup>****a. Capital Expenditures (in thousands)**

	2011	06/2012	2012	06/2013	2013
Media General				\$7,377	\$15,166
Nexstar	\$13,349	\$7,198	\$17,260	\$12,519	\$18,955
Gray	\$24,274	\$11,561	\$24,523	\$12,488	\$24,053
LIN TV	\$20,069	\$13,716	\$28,230	\$14,170	\$29,374
Sinclair	\$35,835	\$18,473	\$43,986	\$17,166	\$43,388
<b>Average NAB Station</b>	<b>\$665</b>	<b>N/A</b>	<b>\$652</b>	<b>N/A</b>	<b>\$606</b>

**b. Net Operating Revenue (in thousands)**

	2011	06/2012	2012	06/2013	2013
Media General				\$155,959	\$269,912
Nexstar	\$206,491	\$172,506	\$378,632	\$238,416	\$502,330
Gray	\$307,131	\$175,365	\$404,831	\$162,454	\$346,298
LIN	\$409,072	\$224,210	\$553,462	\$305,338	\$652,363
Sinclair	\$720,387	\$451,293	\$1,061,679	\$596,772	\$1,363,131
<b>Average NAB Station</b>	<b>\$17,440</b>	<b>N/A</b>	<b>\$19,939</b>	<b>N/A</b>	<b>\$19,298</b>

<sup>782</sup> Information in this table is based on data from NAB Financial Reports and SNL Kagan.

212. To calculate the capital expenditure ratios for station groups we divide capital expenditures by net operating revenues. We then compare these ratios for different years to analyze investment trends in the industry.<sup>783</sup> The capital expenditure ratios for several Pure Play Companies generally decreased between 2012 and 2013, as seen in Table 23. Nexstar's 2013 capital expenditure was higher due to the capital expenditures of stations acquired in December 2012 and 2013.<sup>784</sup>

**Table 23: Capital Expenditure Ratios**

	2011	06/2012	2012	06/2013	2013
Media General				0.047	0.056
Nexstar	0.065	0.042	0.046	0.053	0.038
Gray	0.079	0.066	0.061	0.077	0.069
LIN	0.049	0.061	0.051	0.046	0.045
Sinclair	0.050	0.041	0.041	0.029	0.032
<b>Average NAB Station</b>	<b>0.038</b>	<b>N/A</b>	<b>0.033</b>	<b>N/A</b>	<b>0.031</b>

### C. Online Video Distributors

#### 1. Introduction

213. This section of the Report examines the providers, business models and competitive strategies, and operating and financial statistics of selected OVDs.<sup>785</sup> In contrast to a traditional MVPD, whose service area typically is tied to the provider's own facilities-based infrastructure,<sup>786</sup> or a broadcaster, whose service area typically is defined by the station's signal coverage area and DMA, an OVD's geographic service area generally covers all regions capable of receiving high-speed Internet service. Consumers can access online video via multiple Internet-enabled devices, including computers, smartphones, tablets, gaming consoles, television sets, and other equipment.

214. In this Report, we examine entities that offer video content akin to the professional programming traditionally offered by broadcast stations, or broadcast and cable networks, and which is usually created or produced by media and entertainment companies using professional-grade equipment, talent, and production crews that hold or maintain the rights for distribution. We distinguish professionally produced content from both (1) semi-professionally produced video, which refers to consumer or user-generated content that has professional or industrial qualities (*e.g.*, shot with professional-grade equipment, using professional talent), and which may be produced exclusively for online audiences; and (2) user-generated content that is publicly available, created or produced by end users, often with little to no brand equity or brand recognition.<sup>787</sup>

215. In the *Comcast-NBCU Order*, the Commission concluded that, regardless of whether online video currently is a complement to or a substitute for MVPD service, it is potentially a substitute

<sup>783</sup> This Report compares year-end figures for 2011 and 2012. For 2013, capital expenditure ratios for the Pure Play Companies ranged from 0.032 (Sinclair) to 0.069 (Gray).

<sup>784</sup> Nexstar 2013 Form 10-K at 51.

<sup>785</sup> See *supra*, n. 4.

<sup>786</sup> As noted, the Media Bureau is currently seeking comment on the interpretation of the term MVPD. See *supra*, n. 4.

<sup>787</sup> See, *e.g.*, *Comcast-NBCU Order*, 26 FCC Rcd at 4298-99, ¶¶ 144-46 & n. 365; Letter from William T. Lake, Chief, Media Bureau, to Michael H. Hammer, Counsel, Comcast Corporation, *et al.*, MB Docket No. 10-56, Attach. at 3-6, 8-9, 14 (May 21, 2010).

product.<sup>788</sup> As noted in the MVPD section of this Report, individual consumers seeking to view specific video programs, may perceive OVDs as a substitute, a supplement, and a complement to their MVPD video service.<sup>789</sup> When the same program is offered by both an OVD and an MVPD, an OVD may be perceived as a substitute. When a program is available from an OVD but not from an MVPD, the OVD may be perceived as supplement. When the current season of a television series is available only from an MVPD but past seasons are available from an OVD, the OVD may be perceived as a complement. Commenters differ about the extent to which OVDs contribute to competition in the delivery of video programming. Free State states that the rise of OVD alternatives has moved the video market toward “fully competitive” status.<sup>790</sup> NCTA states that although Internet video is still largely complementary to traditional multichannel video service, it does compete directly with certain services MVPDs offer (*e.g.*, VOD), as well as for consumers’ attention and entertainment dollars. TiVo states that while OVDs provide consumers with more options, there is still no substitute for the full range of content MVPDs offer, including sports, live news, and variety shows. TiVo adds that OVDs see themselves as complements to, rather than replacements for, MVPD services.<sup>791</sup> NAB states that research indicates that consumers are using the Internet and mobile devices both as a partial replacement, but also as a supplement, to their traditional media consumption.<sup>792</sup> WGAW states that OVDs “supplement rather than replace a cable package that includes hundreds of channels and costs approximately 10 times the cost of a Netflix subscription.”<sup>793</sup> Verizon asserts that increasing competition among broadcasters, MVPDs, and OVDs is motivating new sources of content and expansion of the available platforms for viewing video programming.<sup>794</sup>

## 2. OVD Providers

216. We begin our consideration of OVDs with an examination of the providers. We describe major players in today’s OVD marketplace.<sup>795</sup> We then consider horizontal concentration and vertical integration in the marketplace. Next, we describe conditions affecting market entry and rivalry, including an overview of existing regulations and market conditions that might influence entry decisions and rivalry. Finally, we describe recent entry into and exit from the OVD marketplace.

217. The discussion of providers is organized according to the types of services offered.<sup>796</sup> As NCTA notes, OVD business models range from “all-you-can-eat” video streaming options and subscriptions to more traditional single-item “a la carte” video rentals.<sup>797</sup> The types of services generally

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<sup>788</sup> See *Comcast-NBCU Order*, 26 FCC Rcd at 4256, ¶ 41. See also *14<sup>th</sup> Report*, 27 FCC Rcd at 8721, ¶ 240.

<sup>789</sup> See *supra*, ¶ 84.

<sup>790</sup> Free State Comments at 14.

<sup>791</sup> TiVo Comments at 12-13.

<sup>792</sup> NAB Comments at 10.

<sup>793</sup> WGAW Comments at 19.

<sup>794</sup> Verizon Comments at 1.

<sup>795</sup> Due to the large number of OVD players, a comprehensive review of all of them is beyond the scope of this Report. For example, for its *Q1 2014 Video Benchmark Report*, Adobe analyzed more than 1,300 media and entertainment sites, including those offered exclusively to MVPD subscribers and those available to non-MVPD subscribers. Adobe Systems Inc., *Adobe Report Shows Online TV Consumption at All-Time High, Up Nearly 250 Percent* (press release), June 4, 2014. As Free State notes, the OVD market segment has grown dramatically and evolved. Free State Comments at 5.

<sup>796</sup> Previously we organized our discussion of OVDs by type of ownership. See *e.g.*, *15<sup>th</sup> Report*, 28 FCC Rcd at 10607-17, ¶¶ 223-242. We describe the Business Models and Competitive Strategies corresponding to these groupings in detail, *infra*, III.C.3.

<sup>797</sup> NCTA Comments at 12.

correspond to the traditional movie and television distribution windows.<sup>798</sup> For feature movies, following their initial release in the theaters, subsequent distribution typically is on DVDs, on demand, pay television services (e.g., HBO and Showtime), broadcast networks, and cable television networks, with content owners determining the timing of release and the extent of exclusive distribution rights.<sup>799</sup> For television programming, production companies have traditionally adhered to prescribed time gaps between initial broadcast and cable distribution of a service, DVDs, and syndication.<sup>800</sup>

218. *Electronic Sell Through (“EST”) and Rental OVDs.* EST and rental OVDs are generally the same entities. EST services charge consumers a one-time fee to download a television show, movie, or other media to be stored locally on a hard drive or remotely via a cloud storage service.<sup>801</sup> The distribution window is similar to that of DVD and Blu-ray sales.<sup>802</sup> Rental OVD services charge consumers a one-time fee to view movies within a limited time period, usually within 30 days after consumers make a payment, and then allow consumers to watch the movie multiple times within a set time period (typically 24 to 48 hours) once viewing begins.<sup>803</sup> In contrast to other types of OVD services, which offer both television programs and movies, the rental OVD market is focused solely on films.<sup>804</sup> The distribution window is similar to MVPDs’ pay-per-view VOD window and the traditional retail DVD and Blu-ray rental window.<sup>805</sup> We describe the services in chronological order of their launch dates.

219. CinemaNow Inc., launched in August 1999 as a subsidiary of an independent film studio, Trimark Holdings, Inc.,<sup>806</sup> began its rental service in November 2000.<sup>807</sup> It was the first OVD rental service to offer securely streamed feature films from the library of a major, independent Hollywood production and distribution company on demand over the Internet on a pay-per-view basis.<sup>808</sup> Consumer electronics retailer Best Buy acquired the legal rights to the CinemaNow trademark and launched its own

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<sup>798</sup> The term “distribution windows” refers to the sequential release of movies and television programming via the various means of program delivery and the timing of such release. See, e.g., *15<sup>th</sup> Report*, 28 FCC Rcd at 10659-60, 10663, ¶¶ 334 & 337; *14<sup>th</sup> Report*, 27 FCC Rcd at 8769-70, 8773-75, ¶¶ 365, 368-370.

<sup>799</sup> *Id.* See also *Notice*, 29 FCC Rcd 1617 n. 98.

<sup>800</sup> *Id.*

<sup>801</sup> Home Media Magazine, *Digital Glossary*, <http://www.homemediamagazine.com/electronic-delivery/digital-glossary> (visited Nov. 27, 2012) (“Digital Glossary”). See also NCTA Comments at 12-13.

<sup>802</sup> Anytime Pte Ltd, *Media Centre: Glossary of Terms*, [http://www.anytimeondemand.com/glossary\\_of\\_terms.html#electronic](http://www.anytimeondemand.com/glossary_of_terms.html#electronic) (visited Nov. 8, 2012). Jeffrey C. Ulin, *The Business of Media Distribution, 2<sup>nd</sup> Edition (2014)*, at 36-43 (“Ulin”).

<sup>803</sup> Seth Shafer, *State of OTT Video Services: Rental*, SNL KAGAN, June 17, 2013.

<sup>804</sup> *Id.*

<sup>805</sup> Ulin at 36-43.

<sup>806</sup> TriMark Holdings, Inc., *Trimark Announces Creation of CinemaNow Online Subsidiary* (press release), Aug. 3, 1999. The site launched as a streaming movie service in December 1999. CinemaNow, Inc. *CinemaNow Launches Online Movie Studio; Website Showcases Strategic Partnerships and New Acquisitions* (press release), Dec. 16, 1999. The independent studio LionsGate acquired CinemaNow when it merged with TriMark in October 2000. Dana Harris, *Trimark’s Casualties Eye Web Site*, DAILY VARIETY, June 7, 2000. Sonic Solutions announced its acquisition of the service in November 2008. Wade Holden, *CinemaNow Sold for \$3 Million*, SNL KAGAN, Nov. 26, 2008.

<sup>807</sup> CinemaNow, Inc. *CinemaNow and Microsoft Announce Launch of CinemaNow’s Pay-Per-View Streaming Video Service Using Windows Media* (press release), Nov. 9, 2000.

<sup>808</sup> *Id.* In January 2004, it became the first EST service, offering movies. CinemaNow, Inc., *CinemaNow is First to Add Download-to-Own Video Option to Online Service* (press release), Jan. 15, 2004.

EST service in May 2010.<sup>809</sup> Users can access CinemaNow content via a variety of devices, some of which can be purchased at Best Buy, including computers, Internet-enabled television sets, and Blu-ray players.<sup>810</sup>

220. Vudu, Inc., founded in 2004, introduced an Internet-connected set-top box designed to enable consumers to watch movies purchased (or rented) through its service on their television sets in 2007.<sup>811</sup> In December 2007, Vudu began to offer television programs for sale electronically,<sup>812</sup> and in September 2009, it began to offer its EST and rental services on LG Electronics Blu-ray players.<sup>813</sup> In 2010, Vudu ceased manufacturing set-top boxes, and reached agreements with other consumer electronics manufacturers to offer its EST and rental services on their devices.<sup>814</sup> In February 2010, Wal-Mart purchased Vudu.<sup>815</sup> In October 2013, Vudu reached an agreement with Sony Pictures to add video sharing and other features, called “Vudu Extras+,” to enable customers to search for scenes and share them on social media sites, such as Facebook and Twitter, and access to extra features available on DVD and Blu-ray discs.<sup>816</sup> The features are designed to encourage consumers to purchase electronic copies of movies, rather than view them on subscription OVD services such as Netflix. In November 2013, the two companies reached an agreement to offer “virtual gift wrapping” of digital copies of movies with “eGift on Vudu” powered by Sony’s “Movie eWrap.”<sup>817</sup>

221. In October 2005, Apple’s iTunes became the first EST service to sell television programs after reaching a deal with Disney.<sup>818</sup> It added movies to its EST service in September 2006 and launched a movie rental service in 2008.<sup>819</sup> Its iCloud service, started in 2012, enables consumers to store movies

<sup>809</sup> See 15<sup>th</sup> Report, 28 FCC Rcd at 10615, ¶ 238. See also Best Buy Co. Inc., *Best Buy Provides Customers Same-Day Instant Access to New Release Movies and TV Show with Launch of CinemaNow; Digital Entertainment Platform Debuts on Devices This Month* (press release), May 18, 2010; Best Buy, *About Best Buy*, <http://www.bby.com/about-best-buy/> (visited May 30, 2014).

<sup>810</sup> See *id.*; Best Buy, *CinemaNow: About Us*, [www.cinemanow.com/aboutUS](http://www.cinemanow.com/aboutUS) (visited July 3, 2013).

<sup>811</sup> Brad Stone, *Vudu Casts Its Spell on Hollywood*, N.Y. TIMES, Apr. 27, 2007, Section 3 at 1. Vudu claimed that it was the only company to offer consumers instant access to more than 5,000 movie titles directly on their television, without the requirement of a personal computer or MVPD subscription. Vudu, Inc. *VUDU Brings Instant Access to Thousands of Movies Directly to the TV, Without Requiring a PC* (press release), April 20, 2007.

<sup>812</sup> Alexa Woodson, *TV Fare on Sale at Vudu*, THE HOLLYWOOD REPORTER.COM, Dec. 11, 2007.

<sup>813</sup> LG Electronics, USA, *LG Electronics Adds Vudu HD Movie Service to Wireless “NetCast” Network Blu-Ray Disc Player* (press release), Sept. 9, 2009.

<sup>814</sup> David Pogue, *Vudu Lives (Outside the Box)*, N.Y. TIMES, Feb. 11, 2010, Section B, Column 0, at 1.

<sup>815</sup> Wal-Mart Stores, Inc., *Walmart Announces Acquisition of Digital Entertainment Provider, VUDU; Company Takes Next Step to Enhance Home Entertainment and Information Delivery Options for Consumers* (press release), Feb. 22, 2010. Wal-Mart had previously attempted to create an in-house EST service in February 2007. Ryan Nakashima, *Wal-Mart to Buy Digital Movie Provider Vudu*, ASSOCIATED PRESS, Feb. 23, 2010. Alex Woodsen, *It’s a Download Jungle Out There*, THE HOLLYWOOD REPORTER.COM, Feb. 27, 2007.

<sup>816</sup> Dawn Chmielewski, *Sony, Wal-Mart Team up on Videos*, THE LOS ANGELES TIMES, Oct. 23, 2013. See also Sony Pictures Home Entertainment, *Sony Pictures Home Entertainment and Vudu Launch “Vudu Extras+,” a New Interactive Movie-Watching Experience* (press release), Oct. 23, 2013. Sony Pictures Home Entertainment President David Bishop stated that the company intended such extra features to become an industry standard, in order to encourage consumers to continue to purchase movies. *Id.*

<sup>817</sup> Sony Pictures Home Entertainment, *Sony Pictures Home Entertainment Wraps It Up This Gift-Giving Season with eGift on Vudu Powered by Movie eWrap* (press release), Nov. 26, 2013.

<sup>818</sup> Deana Myers, SNL KAGAN, *Profile: iTunes video Store*, May 13, 2013.

<sup>819</sup> Eric Benderoff, *Apple Adding Movies to iTunes Lineup; Although Offerings May be Limited, Move May Spur Budding Industry*, CHICAGO TRIBUNE, at 1. See also 14<sup>th</sup> Report, 27 FCC Rcd at 8725-26, ¶ 253 and 15<sup>th</sup> Report, 28 FCC Rcd at 10612-613, ¶ 234..

and television programs remotely and wirelessly connect their Apple TVs to iPhones, iPads, Macs, or PCs, as a means to facilitate viewing on any of these devices.<sup>820</sup> The iTunes video store carries movies and television programs from most studios,<sup>821</sup> but Apple prevents much of the content it sells from being viewed on non-Apple devices.<sup>822</sup>

222. Amazon.com (“Amazon”), through a service on its Amazon.com website, began to sell television programs and movies electronically, as well as offer movies on a rental basis in 2006. At the time, the service was called Amazon Unbox.<sup>823</sup> Today the service is called Amazon Instant Video and its available on a variety of devices. It includes television programs and movies in high definition.<sup>824</sup> Amazon’s cloud-based storage service, Cloud Drive, enables users to store five gigabytes (GB) of video or music remotely for free, and store 20 GB of data in exchange for an album purchase from Amazon or \$20 per year, with additional storage plans for an extra fee.<sup>825</sup> In January 2013, Amazon announced the launch of the Amazon Instant Video app on Nintendo’s Wii gaming console.<sup>826</sup>

223. Microsoft introduced the Xbox Live Marketplace in November 2005 as an online store enabling owners of the Xbox 360 game console to purchase games, music videos, and other content.<sup>827</sup> In May 2013, Microsoft unveiled the Xbox One console, available for retail sale in November 2013, marketing it as an all-in-one entertainment and gaming set-top box.<sup>828</sup> In April 2014, Microsoft

<sup>820</sup> Apple Inc., *Apple Brings 1080p High Definition to New Apple TV* (press release), March 7, 2012. Apple is reportedly purchasing cloud storage services from Microsoft and Amazon on a wholesale basis to avoid the cost and delay of building its own services that could run anywhere from \$100 million to \$1 billion. Gavin Clarke, *Apple’s iCloud Runs on Microsoft and Amazon Services*, THE REGISTER, Sept. 2, 2011, [http://www.theregister.co.uk/2011/09/02/icloud\\_runs\\_on\\_microsoft\\_azure\\_and\\_amazon/](http://www.theregister.co.uk/2011/09/02/icloud_runs_on_microsoft_azure_and_amazon/) (visited Dec. 12, 2012).

<sup>821</sup> Deana Myers, SNL KAGAN, *Profile: iTunes Video Store*, May 31, 2013.

<sup>822</sup> Apple 2013 10-K at 27; SNL Kagan, *The State of Online Video Delivery*, July 2013, at 9. During Fiscal year 2013, Apple earned \$91.3 billion from iPhone sales, compared with \$16.0 billion from iTunes sales.

<sup>823</sup> Elizabeth Gillespie, *Amazon.com Launches Long-Awaited TV, Movie Download Service*, ASSOCIATED PRESS, Sept. 6, 2006.

<sup>824</sup> See 15<sup>th</sup> Report, 28 FCC Rcd at 10611-12, ¶ 233; 14<sup>th</sup> Report, 27 FCC Rcd at 8726, ¶ 254. Amazon rebranded the service as “Amazon Video on Demand” in September 2008 and as “Amazon Instant Video” in February 2011. Amazon.com, Inc., *Amazon Customers Can Now Instantly Watch Ad-free Movies and TV Shows on Macs, PCs and Compatible Sony BRAVIA Televisions Starting Today on Amazon Video on Demand* (press release), Sept. 3, 2008. Cristina Warren, *Hands On: Amazon Prime Instant Video*, MASHABLE, Feb. 22, 2011.

<sup>825</sup> Amazon.com, *Introducing Amazon Cloud Drive, Amazon Cloud Player for Web, and Amazon Cloud Player for Android* (press release), March 29, 2011, <http://www.amazon.com/gp/dmusic/marketing/CloudPlayerLaunchPage>; see also Amazon Cloud Player, <http://amazon.com/gp/dmusic/marketing/CloudPlayerLaunchPage> (visited July 5, 2013).

<sup>826</sup> Amazon.com, Inc., *Amazon Instant Video Now Available on Nintendo’s Wii Console* (press release), Jan. 14, 2013.

<sup>827</sup> See 15<sup>th</sup> Report, 28 FCC Rcd at 10614, ¶ 236. *Xbox to Launch With Online Store*, United Press International, Nov. 15, 2005; Limelight Networks, *Limelight Networks Leveraged as Content Delivery Network for Xbox 360; Limelight’s High-Performance Network Providing Downloads of Trailers and Games Demos for Xbox Live* (press release), Dec. 7, 2005. In November 2006, Microsoft Corporation announced that the Xbox 360 would become the first game console to offer high definition movies for rental and television programs for sale via the Xbox Live Video Marketplace. Microsoft Corporation, *Xbox 360 Teams with CBS, MTV Networks, Paramount Pictures, Turner Broadcasting, UFC and Warner Bros. Home Entertainment to Digitally Deliver TV Shows and Movies to Gamers* (press release), Nov. 6, 2006. See also Todd Bishop, *Problems Plague Xbox Live video Microsoft Cites High Demand for Movie, TV Downloads*, THE SEATTLE POST-INTELLIGENCER, Nov. 25, 2006.

<sup>828</sup> Microsoft Corporation, *Microsoft Unveils Xbox One: the Ultimate All-in-One Entertainment System* (press release), May 21, 2013; Microsoft Corporation, *Xbox One Ignites a New Era of Games and Entertainment This*

(continued...)

announced that it would offer original interactive television programs, called “Xbox Originals,”<sup>829</sup> available exclusively on Microsoft devices, targeting the users of the Xbox games, generally males aged 18 to 34 years old.<sup>830</sup> In July 2014, however, Microsoft announced that it is shutting down Xbox Entertainment studios, the division that had commissioned the programs, and has moved away from positioning Xbox One as an all-in-one entertainment system, to focus on games.<sup>831</sup>

224. Sony began to offer movies and television programs for purchase and rental on its PlayStation 3 game consoles in 2008, through a service it called the PlayStation store, an online service with an app embedded in the consoles.<sup>832</sup> In 2010, Sony launched its “Video on Demand powered by Qriocity” purchase and rental service for all of its Internet-enabled devices in the United States,<sup>833</sup> subsequently rebranding this service as “Video Unlimited” in 2011.<sup>834</sup> In June 2013, Sony introduced the PlayStation 4 console, marketing it primarily as a device for playing video games.<sup>835</sup> In September 2013, Sony launched the Video Unlimited 4K EST/rental service, offering movies and television programs in 4K Ultra HD format on Sony’s 4K Ultra HD Media Player and televisions.<sup>836</sup> The format has four times pixels as standard HD and vastly improves the clarity of video on larger screens that measure 60 or more inches diagonally.<sup>837</sup>

225. Google offers Google TV, launched in 2010, as an app for Internet-enabled television sets, Blu-ray players, and set-top boxes designed to facilitate viewers’ access to online video.<sup>838</sup> Google

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November (press release), June 10, 2013. See also Molly Wood, *Two Game Consoles Battle for a Dubious Prize*, N.Y. TIMES, Feb. 13, 2014

<sup>829</sup> The program, a soccer-themed reality series, debuted in June 2014. Dawn Chmielewski, *Microsoft to Shutter Xbox Entertainment Studios*, Re/Code, July 17, 2014, <http://recode.net/2014/07/17/microsoft-to-shut-down-xbox-entertainment-studios/>

<sup>830</sup> Microsoft, *Microsoft Reveals Details on Xbox Originals, Including Two Halo Projects*, <http://www.comingsoon.net/news/tvnews.php?id=117593> (visited June 20, 2014). See also Marc Graser, *Microsoft to Launch First Original Shows on Xbox in Early 2014*, VARIETY, Dec. 13, 2013. Diana Bass and Cliff Edwards (Bloomberg News), *Xbox Going Hollywood*, THE STAR-LEDGER, April 8, 2014.

<sup>831</sup> *Id.* Some executives will remain to work on original programs already in production. *Id.*

<sup>832</sup> Sony Computer Entertainment America, *Playstation Network’s Video Delivery Service to Offer Movies and TV Shows for Purchase and Rental Through Playstation and PSP (Playstation Portable)* (press release), July 15, 2008. See also Sony Computer Entertainment America, *Sony Computer Entertainment America Unveils Revamped Playstation Store for Playstation 3* (press release), April 15, 2008.

<sup>833</sup> Sony Corporation, *Sony Announces “Video on Demand Powered by Qriocity” Extending Into Europe*, (press release), Aug. 31, 2010.

<sup>834</sup> Sony Corporation, *Uniquely Sony – A New Era in the Sony User Experience Showcased at the IFA 2011* (press release), Aug. 31, 2011. See also *Sony Dumps Qriocity*, INSIDE SATELLITE TV, Sept. 2, 2011. At that time, Sony created a new division, called “Sony Entertainment Network,” to consolidate the operations of its online video services.

<sup>835</sup> Vince Horiuchi, *Sony Takes Aim at Microsoft with PlayStation 4*, SALT LAKE TRIBUNE, June 13, 2013. In June 2014, Sony announced that it is developing its first original television series for the PlayStation console, with plans to debut the series in December 2014. Chris O’Brien, *Sony Hopes to Generate Buzz for “Powers”*, L.A. TIMES, June 14, 2014. This one series, produced by Sony’s Sony Pictures Entertainment subsidiary, is expected to appeal to its core customers, who are primarily interested in using the console to play games. *Id.* See also Janet Tu, *Almost TV Showtime for Microsoft Xbox*, SEATTLE TIMES, Apr. 28, 2014.

<sup>836</sup> Sony Corporation, *Sony Launches World’s First 4K Ultra HD Video Download Service and Expands 4K Ultra HD TV Line* (press release), Sept. 4, 2013.

<sup>837</sup> Ryan Nakashima, *Neflix App to Stream 4K on New TVs Immediately*, THE ASSOCIATED PRESS, Jan. 10, 2014.

<sup>838</sup> See 15<sup>th</sup> Report, 28 FCC Rcd at 10613-14, ¶ 235.

TV added movies and television programs rental and purchase services in October 2012.<sup>839</sup> Prior to that, in March 2012, Google introduced a cloud-based entertainment store, Google Play, which is compatible with smartphones and tablets using Google's Android operating system.<sup>840</sup> In June 2012, Google made television programs and movies available for electronic purchase on both YouTube and Google Play.<sup>841</sup> Google currently offers movies and thousands of episodes of cable and broadcast television programs from major studios, including NBCUniversal, ABC Studios, and Sony Pictures, Warner Brothers, Universal Pictures, Lionsgate, Paramount Pictures, and Twentieth Century FOX.<sup>842</sup> In June 2013, Google launched the Chromecast streaming device to enable viewers to project online video from smartphones, laptops, and tablets onto their television sets.<sup>843</sup> The device works with YouTube and Google Play as well as other OVDs.<sup>844</sup>

226. Verizon and Redbox operator, Coinstar, launched a joint venture called Redbox Instant by Verizon ("Redbox Instant") in March 2013.<sup>845</sup> Redbox Instant offered electronic sales and rentals of movies and DVDs, Blu-ray, and video game rentals through a network of 36,800 self-service kiosks nationwide.<sup>846</sup> The service did not offer television programs.<sup>847</sup> On October 7, 2014, the Redbox Instant streaming service was shut down.<sup>848</sup>

227. Additional studios and retailers have purchased or launched EST and online rental services over the years. For instance, in 2011 Warner Brothers Home Entertainment Group acquired Flixster, which launched in 2006 as a social networking site for movie fans.<sup>849</sup> Since September 2012, Flixster has offered movies for electronic sale and rental.<sup>850</sup> In addition, DreamWorks Animation SKG and Technicolor jointly launched the M-Go movie and TV EST and rental service in January 2013.<sup>851</sup>

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<sup>839</sup> *Id.*

<sup>840</sup> *Id.*

<sup>841</sup> Jonathan Zepp, Manager of TV/Film Content Partnerships., *Movies and TV Shows Now Available for Purchase on YouTube and Google Play*, Google Official Blog, June 28, 2012, <http://youtube-global.blogspot.com/2012/06/movies-and-tv-shows-now-available-for.html> (visited April 1, 2014).

<sup>842</sup> See, e.g., Google Inc., *Google Play Movies & TV*, [https://play.google.com/store/movies/collection/promotion\\_collections/movie\\_studios?hl=en](https://play.google.com/store/movies/collection/promotion_collections/movie_studios?hl=en) (visited Aug. 1, 2014). See also Comcast Comments at 29.

<sup>843</sup> Matt Burnes, *Google Launches the \$35 Chromecast Streaming Device to Bring Chrome to the Living Room*, TechCrunch, July 24, 2013, <http://techcrunch.com/2013/07/24/google-chromecast/>.

<sup>844</sup> Google Inc., *Chromecast*, <http://www.google.com/intl/en/chrome/devices/chromecast/apps.html> (visited June 20, 2014).

<sup>845</sup> *15<sup>th</sup> Report*, 28 FCC Rcd at 10616, ¶ 240.

<sup>846</sup> Redbox Instant by Verizon, *About Redbox Instant by Verizon* <http://about.redboxinstant.com/learn/about-redbox-instant-by-verizon/> (visited June 20, 2014). From March 2013 to October 2014, Redbox Instant also offered a subscription streaming service. See ¶ 277.

<sup>847</sup> Seth Shafer, *Profile: Redbox Instant*, SNL KAGAN, Apr. 29, 2013.

<sup>848</sup> See Redbox Instant by Verizon, *Important Shutdown Notice*, <http://about.redboxinstant.com/news> (visited October 10, 2014).

<sup>849</sup> Jessica Guynn, *The Web's Flick Freaks Find a Home at Flixster*, L.A. TIMES, Jan. 15, 2009 at C1; Warner Brothers Home Entertainment Group, *Warner Bros. Home Entertainment Group to Acquire Flixster* (press release), May 4, 2011.

<sup>850</sup> Tom Cheredar, *Flixster Spruces Up Its Web App With Better Discovery, UltraViolet Store, and More*, VENTUREBEAT, Sept. 4, 2012, <http://venturebeat.com/2012/09/04/flixster/> (visited April 2, 2014).

<sup>851</sup> Seth Shaver, *Profile: M-GO*, SNL KAGAN, May 15, 2013.

Disney Studios launched the Disney Movies Anywhere movie EST service in February 2014.<sup>852</sup> Also, Paramount Pictures operates a website where consumers can purchase or rent Paramount movies for viewing on several different devices.<sup>853</sup>

228. Further, Barnes & Noble offers an EST service marketed as Nook Video.<sup>854</sup> In March 2013, Barnes & Noble reached agreements with Lionsgate, MGM, Paramount Pictures, Relativity Media, and National Geographic to expand its offerings.<sup>855</sup> Target Corporation launched the “Target Ticket” EST and rental service in September 2013.<sup>856</sup> Target has partnered with Common Sense Media to enable parents to find content suitable for their children.

229. *Subscription.* Subscription services give consumers a right to watch a range of programs and movies in exchange for a monthly fee.<sup>857</sup> Netflix is a significant OVD provider of subscription services. Netflix continues to offer its DVD-by-mail service.<sup>858</sup> Its movie and television program subscription streaming service, originally launched as an add-on feature to its DVDs-by-mail service, has become the primary service offered.<sup>859</sup> To complement both its streaming and DVD-by-mail services, Netflix now offers original series to its subscribers. In February 2013, Netflix released all 13 episodes of the first season of its original series *House of Cards* to the public.<sup>860</sup> And in July 2013, *House of Cards* became the first original online video production to earn multiple Emmy nominations.<sup>861</sup> In addition, in July 2013, Netflix released the first season of its original series *Orange is the New Black* to the public. The company had previously announced in June 2013 that it was renewing this series for a second

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<sup>852</sup> The Walt Disney Studios, *Watch Disney, Pixar, and Marvel Movies with Disney Movies Anywhere* (press release), Feb. 25, 2014.

<sup>853</sup> *Selected OTT Aggregators* (table), SNL KAGAN, March 2014. The launch date of the website is not readily available. See also Paramount Pictures, *About ParamountMovies.com*, <http://www.paramountmovies.com/aboutus.html> (visited Aug. 1, 2014).

<sup>854</sup> Barnes & Noble, Inc., *Barnes & Noble Launches Nook HD and Nook HD, Lightest and Highest-Resolution 7-Inch HD Tablet and World's Lightest Full HD Tablet* (press release), Sept. 26, 2012. The bookstore faces competition from electronic retailer Amazon as consumers shift from traditional to electronic books, and from DVDs and Blu-ray discs to digital copies of movies and television programs. *Barnes & Noble to Introduce Nook Video Service*, THE ASSOCIATED PRESS, Sept. 25, 2012.

<sup>855</sup> Barnes & Noble, Inc., *Barnes & Noble Announces New Nook Video Partnerships with Major Studios Lionsgate, MGM, Paramount Pictures, Relativity Media and Content Providers National Geographic, Little Pim, and Film Buff* (press release), Mar. 7, 2013.

<sup>856</sup> Target Corporation, *Target Introduces Target Ticket, A Family-Friendly Digital Video Service* (press release), Sept. 25, 2013. See also NCTA Comments at 13-14.

<sup>857</sup> Robert Lloyd, *Choice is Everything as TV Enters the Age of the Cloud*, L.A. TIMES, Mar. 6, 2011.

<sup>858</sup> Gina Keating, *Netflixed: The Epic Battle for America's Eyeballs*, Penguin (2012), at 32.

<sup>859</sup> Netflix Inc., *SEC Form 10-K for the Year Ended December 31, 2013*, at 1 (“Netflix 2013 Form 10K”). See also *15<sup>th</sup> Report*, 28 FCC Rcd at 10610, ¶ 231.

<sup>860</sup> Brian Stelter, *Release of 13 Episodes Redefines Spoiler Alert*, N.Y. TIMES, Feb. 6, 2013. Netflix first aired multiple episodes simultaneously when it debuted *Lilyhammer* in January 2012, a drama it acquired from a Norwegian production company and that had originally aired on Norwegian television. Netflix, Inc., *A Netflix Original Series “Lilyhammer”* (press release), Jan. 3, 2012. Jake Coyle, *Netflix Shuffles the TV Deck with “House of Cards”*, THE ASSOCIATED PRESS, Jan. 24, 2013.

<sup>861</sup> Marisa Guthrie, *Emmys: Cable, Netflix Shut Out Broadcast Nets for Drama Series*, THE HOLLYWOOD REPORTER, July 18, 2013. Netflix’s three original series *House of Cards*, *Arrested Development*, and *Hemlock Grove* received a total of nine Emmy nominations. Dawn Chmielewski, *Netflix Rewrites Script*, L.A. TIMES, Aug. 25, 2013.

season.<sup>862</sup> Netflix also offers a “Netflix for Kids” section, for children to browse television program and movies tailored for them.<sup>863</sup> In February 2013, Netflix announced that it had commissioned an original cartoon series for children from DreamWorks Animation studio and ordered additional series in July 2013.<sup>864</sup> Netflix released this series in batches of five episodes during the 2013 holiday season.<sup>865</sup>

230. Further, in April 2014, Netflix signed agreements with RCN Telecom Services, Atlantic Broadband, and Grande Communications, to offer Netflix on set-top boxes manufactured by TiVo.<sup>866</sup> In May 2014, Netflix announced that it would increase its price to \$8.99 for new members, allow current members to keep their \$7.99 monthly rate for two years, and offer a new \$7.99 plan with standard-definition quality viewing on any one screen at a time.<sup>867</sup>

231. Hulu is an online video service that offers both an advertising-supported service (Hulu.com) and a subscription service (Hulu Plus), which also includes advertisements, but less than the free Hulu service.<sup>868</sup> Hulu Plus costs \$7.99 per month.<sup>869</sup> It is a joint venture co-owned by NBCUniversal, 21st Century FOX, and the Walt Disney Company.<sup>870</sup> Hulu Plus is available on multiple devices, allows access to entire seasons of television series, and offers HD programming.<sup>871</sup> Programming is available on Hulu Plus the day after they originally air on broadcast or cable networks, similar to MVPDs’ video on demand services. While Hulu Plus offers some children’s programming, it primarily focuses on broadcast and cable network prime time television programs.<sup>872</sup> In 2013, Hulu launched more than 20 original programs.<sup>873</sup> In February 2014, Hulu Plus reached expanded non-exclusive, multiyear agreements with BCC Worldwide North America and CBS that will allow Hulu Plus to offer more than 2,000 episodes of their new and older, popular programs.<sup>874</sup> In April 2014, Hulu Plus

<sup>862</sup> Netflix Inc., *Netflix Renews Original Series “Orange is the New Black” for Second Season* (press release), June 27, 2013.

<sup>863</sup> Jim Rossman, *Netflix, Hulu, or Amazon: Which Service is Right for You?*, THE DALLAS MORNING NEWS, Oct. 25, 2013 at D2.

<sup>864</sup> Brooks Barnes, *Netflix Teams with DreamWorks on Cartoon Series for Children*, N.Y. TIMES, Feb. 13, 2013. Jeremy C. Owens, *Big Break: Netflix Movies from SpongeBob to Shrek, Gets a Big Boost on Wall Street*, SAN JOSE MERCURY NEWS, June 17, 2013. The June 2013 agreement includes more than 300 hours of new programming. *Netflix Unveils Dreamworks Deal*, DAILY POST, June 18, 2013.

<sup>865</sup> Brian Stelter, *Netflix Won’t Release “Turbo: FAST” for Binge Viewing*, CNN Wire, Dec. 3, 2013.

<sup>866</sup> Shalini Rmachandran, *Netflix Reaches Set-Top Box Deal*, WALL ST. J., Apr. 25, 2014.

<sup>867</sup> Netflix, Inc., U.S. & Canada Blog, *A Quick Update on Our Streaming Plans and Prices*, May 8, 2014, <http://blog.netflix.com/> (visited June 24, 2014).

<sup>868</sup> Hulu, *About Us*, <http://www.hulu.com/about> (visited Aug. 6, 2014).

<sup>869</sup> *Id.* See also *infra* ¶ 239 regarding Hulu’s advertiser supported service.

<sup>870</sup> See 15<sup>th</sup> Report, 28 FCC Red at 10608, ¶ 226. As a condition of the Comcast-NBC Universal transaction, however, the NBC’s parent company, Comcast-NBCUniversal, is prohibited from exercising any right to influence the conduct or operation of Hulu. *Comcast-NBCU Order*, 26 FCC Red at 4274, ¶ 90.

<sup>871</sup> Hulu, *About Us*, <http://www.hulu.com/about> (visited Aug. 6, 2014).

<sup>872</sup> Jim Rossman, *Netflix, Hulu, or Amazon: Which Service is Right for You?*, THE DALLAS MORNING NEWS, Oct. 25, 2013 at D2.

<sup>873</sup> Brian Stelter, *Hulu to Pass the Billion-Dollar Mark*, CNN Wire, Dec. 18, 2013. Hulu first offered original programming in 2011.

<sup>874</sup> Hulu, *Hulu and BCC Worldwide North America Sign Major Multi-Year U.S. Content Deal* (press release), Sept. 18, 2013. Hulu, *CBS Corporation and Hulu Plus Expand Licensing Deal for Library Content on Hulu Plus* (press release), Feb. 10, 2014. CBS and Hulu Plus first reached a non-exclusive distribution agreement in November 2012 for Hulu Plus to stream past seasons of CBS television programs. Hulu, *CBS and Hulu Announce Licensing*

(continued...)

reached an exclusive agreement with NBCUniversal Television and New Media Distribution to stream prior seasons of NBCUniversal's television programs.<sup>875</sup>

232. Amazon provides its customers who pay for the company's Amazon Prime service with free access to commercial-free, instant streaming of thousands of movies and television shows.<sup>876</sup> In January 2013, Amazon revealed that it was commissioning five original children's pilots.<sup>877</sup> Amazon planned to develop some of these pilots into series based on consumer feedback.<sup>878</sup> In February 2013, Amazon reached agreements with PBS Distribution, CBS, and Viacom for program distribution on its Amazon Instant Video EST/rental service and Prime Instant Video subscription service.<sup>879</sup> In March 2013, Amazon reached a syndication agreement with CBS to become the first distribution outlet to offer streamed versions of *The Good Wife*, marking the first time CBS streamed one of its prime time shows while it is still in its first-run.<sup>880</sup> In May 2013, Amazon commissioned five original television series based on the votes of viewers who watched pilot episodes of the series.<sup>881</sup> The series *Alpha House* and *Betas* debuted in November 2013.<sup>882</sup> Amazon initiated its second season of original programming in January 2014, posting 10 pilots online in an effort to get viewer feedback before selecting which series to

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Agreement for Library Content on the Hulu Plus Subscription Service (press release), Nov. 5, 2012. With the exception of *The Good Wife*, Hulu does not have access to CBS shows airing during the 2013-2014 television season. Hulu, *Help Main, Post Popular, CBS Shows on Hulu*, <http://www.hulu.com/support/article/22330147> (visited July 2, 2014).

<sup>875</sup> Hulu, *Hulu Plus and NBCUniversal Television and New Media Distribution Announce Exclusive Multi-year Subscription Video on Demand Library Deal* (press release), April 2, 2014. Some of the programs, including *The Mindy Project* and *Brooklyn Nine-Nine* air on the FOX broadcast network. FOX Broadcasting Company, "More FOX Shows," <http://www.FOX.com/shows> (visited May 12, 2014).

<sup>876</sup> See 15<sup>th</sup> Report, 28 FCC Rcd at 10611-12, ¶ 233. Amazon introduced the service in August 2011 and rebranded its EST/Rental service as "Amazon Prime Instant." Cristina Warren, *Hands On: Amazon Prime Instant Video*, MASHABLE, Feb. 22, 2011. Currently, Amazon Prime is priced at \$99 a year. Amazon.com, Inc., *Amazon Prime*, <http://www.amazon.com/Amazon-Prime-One-Year-Membership/dp/B00DBYBNEE> (visited Aug. 6, 2014). Amazon Prime increased its price to \$99 per year for new members as of March 2014 and renewing members as of April 2014. Tiffany Hsu, *Amazon Prime Annual Price to Increase to \$99*, L.A. TIMES, Mar. 14, 2014.

<sup>877</sup> Amazon.com, Inc., *Prime Instant Video Commissions Its First Children's Pilots for Production* (press release), Jan. 31, 2013. For more information on Amazon's selection process, see Business Models below.

<sup>878</sup> *Id.*

<sup>879</sup> Amazon.com, Inc., *Prime Instant Video to be the Exclusive Subscription Streaming Home for Carnival/Masterpiece Co-Production "Downton Abbey," on PBS* (press release), Feb. 1, 2013; Amazon.com Inc., *Amazon and CBS Announce Content Licensing Agreement for Prime Instant Video to be Exclusive Online Subscription Home for CBS's Under the Dome* (press release), Feb. 11, 2013; Amazon.com Inc., *Amazon and CBS Announce Extension of Content Licensing Agreement* (press release), Jan. 29, 2014; Dawn Chimielewski, *Amazon in Deal for Kids' Shows; the Retailer Licenses 4,000 Episodes from Viacom to Stream via Prime Instant Video*, L.A. TIMES, June 5, 2013.

<sup>880</sup> CBS Corp., *CBS Corporation Announces Multi-Platform Syndication Rollout for "The Good Wife;" Amazon Prime Instant Will Lead the Off-Network Launch with Previous-Season Episodes Available for Streaming March 14* (press release), Mar. 13, 2013. See also Fitch Ratings, *Fitch: CBS Licensing Signals Move Toward Digital Distribution* (press release), Mar. 20, 2013.

<sup>881</sup> Ben Miller, *Amazon Greenlights Five TV Series*, THE PUGET SOUND BUSINESS JOURNAL, May 29, 2013.

<sup>882</sup> Amazon.com, Inc. *Amazon Original Series Alpha House and Betas to Premier This Month*, (press release), Nov. 4, 2013. Following its debut on a Friday, *Alpha House* was the most-watched show on Amazon throughout the weekend. Amazon.com, Inc. *Amazon Customers Make Alpha House the Most-Watched Show Over the Weekend* (press release), Nov. 19, 2013.

commission.<sup>883</sup> In April 2014, Amazon reached a multi-year agreement with HBO to become the exclusive subscription OVD service distributing select HBO programs and movies, marking the first time that HBO programming has been licensed to online-only subscription streaming service.<sup>884</sup> All programming will remain available on the HBO website for authenticated MVPD subscribers. To minimize potential cannibalization of its own network, HBO is delaying the availability of current programs, such as *Girls* and *Veep*, until three years after they air on HBO.<sup>885</sup>

233. In September 2013, Amazon launched the Kindle Fire HDX tablet, which enables consumers to download television programs and movies from the Prime Instant Video service.<sup>886</sup> Amazon claims that Prime Instant Video is the only subscription streaming online video service that enables subscribers to download content for later viewing without a Wi-Fi or Internet connection. In April 2014, Amazon launched the Kindle Fire TV, a streaming media box, for \$99, which includes apps for Prime Instant Video, Netflix, Hulu Plus, and Crackle.<sup>887</sup> One feature of this device allows viewers to find the least expensive app from which to watch a television program or movie – even if it is not the Prime Instant Video app.<sup>888</sup> In June 2014, Amazon unveiled the Fire smartphone, which includes a built-in app for Amazon Instant Video.<sup>889</sup>

234. In May 2013, Google's YouTube launched paid channels for children's programming, movies, music, and other genres.<sup>890</sup> While most of the videos on YouTube remain free to consumers and supported by advertising, the subscription option gives the creators of popular video content, such as major media companies and start-ups, an additional source of revenue.<sup>891</sup> YouTube provides its content creators with two paid channel options; content creators have the option of offering ad-free paid channels

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<sup>883</sup> Jane Green, *Amazon Studios Unveils Latest Group of TV Pilots*, THE SEATTLE TIMES, Feb. 6, 2014. Amazon studios launched in 2011 with the idea that any aspiring writer or producer could upload an idea to the website and allow fans to refine it. *Id.* In 2014, Amazon reviewed what its customers were already watching to help focus its development plans. Gary Levin, *Amazon Lets Viewers Vote for New TV Series*, VISALIA TIMES DELTA, Feb. 14, 2014.

<sup>884</sup> Amazon.com, Inc., *Amazon and HBO Ink Exclusive Multi-Year Deal to Bring Award-Winning HBO Programming to Prime Members* (press release), April 23, 2014. As cable networks, which have traditionally paid for syndication rights for HBO programs, focus more on their own original programming, their demand for reruns of HBO programming is fading. Joe Flint, *HBO Reruns to Stream on Amazon*, THE LOS ANGELES TIMES, April 24, 2014, at B3. While terms of the deal were not disclosed, reports indicate that Amazon paid at least \$300 million. Ravi Smaiya, *Amazon Strikes Deal to Stream HBO Shows*, THE NEW YORK TIMES, April 14, 2014, at B1.

<sup>885</sup> Joe Flint, *HBO Reruns to Stream on Amazon*, L.A. TIMES, April 24, 2014, at B3.

<sup>886</sup> Amazon.com, Inc., *Introducing Kindle Fire HDX-Powerhouse Tablets built for Work and Play; . . . Prime Instant Video Movies and TV Shows Now Available for Downloading – Watch Anywhere, Even When Offline-Available Exclusively on Kindle Fire HDX* (press release), Sept. 25, 2013.

<sup>887</sup> Molly Wood, *Where the Amazon Fire TV Fits Into the Living Room*, N.Y. TIMES, April 2, 2014. With a separate \$40 controller, consumers can use Fire TV to play games. David Streitfeld, *with Fire TV, Amazon Seeks a Beachhead in the Living Room*, N.Y. TIMES, April 2, 2014.

<sup>888</sup> 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* (press release), Apr. 2, 2014.

<sup>889</sup> Robert Pisikoff, *Amazon Fire Phone Gets Great Reception*, FORBES, June 18, 2014, <http://www.forbes.com/sites/robertpassikoff/2014/06/18/amazon-fire-phone-gets-great-reception/print/>. See also Amazon.com, Inc., *Fire Phone* [http://www.amazon.com/dp/product/B00EOE0WKQ/ref=km\\_2q6K6yW2yI6Z3bndMty1pA==?tag=googhydr-20&kw=%2Bfire%20%2Bphone](http://www.amazon.com/dp/product/B00EOE0WKQ/ref=km_2q6K6yW2yI6Z3bndMty1pA==?tag=googhydr-20&kw=%2Bfire%20%2Bphone) (visited June 20, 2014).

<sup>890</sup> Brian Stelter, *YouTube Is Said to Plan a Subscription Option*, N.Y. TIMES, May 7, 2013. See also Brian Deagon, *A Road Map of Internet Revenue*, INVESTOR'S BUSINESS DAILY, May 20, 2013.

<sup>891</sup> Brian Stelter, *YouTube Is Said to Plan a Subscription Option*, N.Y. TIMES, May 7, 2013.

or paid channels with some advertising.<sup>892</sup> The channel subscriptions provide libraries of videos on demand, functioning similarly to the free channels on YouTube.<sup>893</sup> In October 2013, YouTube announced that content creators with at least 10,000 subscribers to their free YouTube channels and accounts in good standing could launch paid channels.<sup>894</sup> As of April 2014, monthly prices range from \$.99 to \$29.99 per month.<sup>895</sup>

235. Warner Brothers Studios launched the Warner Archive Instant subscription service in April 2013 costing \$9.99 a month.<sup>896</sup> The site offers classic Warner Brothers films, dating back to the 1920s, as well as older television programs many of which are unavailable on other online video subscription services. The service offers the programming, much of which is unavailable on Blu-ray, in full 1080p HD for those consumers with a Roku streaming player.<sup>897</sup>

236. *Advertising-Supported.* Advertising-supported websites do not charge viewers directly but include advertising along with the programming. Advertising-supported OVDs are generally owned and operated by studios, broadcast networks, and cable networks. As described below, a few sites are aggregators, but most are stand-alone sites.

237. Sony Pictures Entertainment's Crackle offers original programming as well as full-length movies and television programs from Sony's library to target males aged 18 to 34 years old.<sup>898</sup> In 2011, Crackle began to commission long-form original series, and struck distribution agreements to enable this programming's distribution on a range of devices, including Google TV, and Apple's iPad, in addition to Sony's own Internet-connected Playstation game consoles and Bravia television sets.<sup>899</sup> In March 2013, Crackle and comScore announced an initiative to measure Crackle's audiences across all devices, including tablets, game consoles, and Internet-connected television sets.<sup>900</sup> In September 2013, Crackle premiered an original 90-minute martial art film called *Extraction*.<sup>901</sup> Crackle refreshes its selection of programming monthly. As of 2014, it offers movies from MGM and Lionsgate in addition to Sony.<sup>902</sup>

238. As discussed above, Hulu offers an advertising-supported service featuring television programs and movies.<sup>903</sup> In July 2011, after reaching a TV Everywhere agreement with the DISH Network, FOX Broadcast Company announced that it would impose an eight-day delay on television

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<sup>892</sup> *Id.*

<sup>893</sup> *Id.*

<sup>894</sup> Alex Dalenberg, *YouTube Expands Paid Subscriptions, but Will Viewers Pony Up Cash?*, UPSTART BUSINESS JOURNAL, Oct. 23, 2013.

<sup>895</sup> Ali Chaukeir and Seth Shafer, *Profile: YouTube*, SNL KAGAN, April 7, 2014.

<sup>896</sup> David Kehr, *A New Stream for the Thirsty*, N.Y. TIMES, May 26, 2013.

<sup>897</sup> *Id.* However, more popular titles, such as *Casablanca* and *Gone With the Wind*, are not available on this service as they licensed to Amazon. *Id.*

<sup>898</sup> Crackle, *About Us*, <http://www.crackle.com/about/> (visited Aug. 11, 2014). See also *Sony's Berger: 30% of Crackle Users Don't Pay for TV*, FIERCEONLINEVIDEO, Apr. 10, 2013, at <http://www.fierceonlinevideo.com/special-reports/sonys-berger-30-crackle-users-dont-pay-tv> (visited Aug. 11, 2014).

<sup>899</sup> *Crackle Eyes Series: Vid Site Develops Original Half-Hours*, DAILY VARIETY, May 6, 2011.

<sup>900</sup> Crackle, Inc., *Crackle Partners with comScore for Ground Breaking Multi-Platform "Video Everywhere" Audience Measurement Initiative*, (press release), Mar. 19, 2013.

<sup>901</sup> David Hurwitz, *TV on the Web*, USA TODAY, Sept. 5, 2013.

<sup>902</sup> Rob Nelson, *Free-Video Network Crackle Won't Tax Your Budget*, STAR TRIBUNE, April 13, 2014.

<sup>903</sup> *The State of Online Video Delivery*, SNL KAGAN, 2013, at 10. See *supra*, ¶ 232 (where we discuss Hulu Plus); see also *15<sup>th</sup> Report*, 28 FCC Rcd at 10608, ¶ 226. The selection for Hulu's advertising-supported service is more limited than the Hulu Plus subscription service.

episodes it previously made available 24 hours after airing on the network's website and Hulu.com, unless the viewers is a Hulu Plus or a subscriber to an MVPD that has a TV Everywhere agreement with FOX.<sup>904</sup> ABC followed suit in January 2014.<sup>905</sup> NBC still releases its shows for free on Hulu and its own website the day after the shows air.<sup>906</sup> In November 2012, as part of the agreement CBS reached with Hulu Plus, CBS agreed to make a select number of television series no longer airing on the CBS broadcast network's prime time lineup available to Hulu on a rotating basis.<sup>907</sup> In addition, a select rotation of BBC Worldwide programs is available on Hulu.<sup>908</sup>

239. The TV.com website, originally launched by CNET Networks in 2005 and acquired by CBS in 2008,<sup>909</sup> distributes primarily recent television programs that originally aired on the CBS broadcast network.<sup>910</sup> The site also directs consumers to other OVDs where they may obtain their desired television programming.<sup>911</sup>

240. *Broadcast and Cable Networks.* The online video strategies of broadcast and cable networks continue to evolve.<sup>912</sup> As they focus more on generating advertising revenues from online video, individual broadcast and cable networks have taken different approaches while also protecting the revenues they earn from their traditional advertising and MVPDs as well as guarding against piracy.<sup>913</sup> Some networks allow access to programs on advertising-supported sites, some make them available only to authenticated MVPD subscribers, and some impose delays. For example, CBS and Comedy Central make full-length recent episodes available for viewing on their websites.<sup>914</sup> USA Networks delays the availability of episodes of its series until 30 days after their original airdates; FOX and ABC delay the availability of programs on their websites until eight days after their original airdates.<sup>915</sup> TBS only makes

<sup>904</sup> *FOX Dishes Up a Delay*, Daily Variety, July 27, 2011. According to one press report, the decision "was widely expected given the pressure that broadcasters . . . have been under to erect higher barriers to watching TV programs given the retransmission consent fees they have begun to collect from [MVPDs]." *Id.*

<sup>905</sup> Janko Roettgers, *Bad News for Cord Cutters: ABC Starts Restricting Access to Full TV Show Episodes*, GIGAOM, Dec. 31, 2013, at <http://gigaom.com/2013/12/31/bad-news-for-cord-cutters-abc-starts-restricting-access-to-full-tv-show-episodes/> (visited Aug. 11, 2014).

<sup>906</sup> Todd Spangler, *Why Hulu Doesn't Have an Ad-Free Service Like Netflix – Yet*, VARIETY, Sept. 25, 2013, at <http://variety.com/2013/digital/news/why-hulu-doesnt-have-an-ad-free-service-like-netflix-yet-1200668184/> (visited Aug. 11, 2014).

<sup>907</sup> Hulu, *CBS and Hulu Announce Licensing Agreement for Library Content on the Hulu Plus Subscription Service* (press release), Nov. 5, 2012. CBS expanded its agreement with Hulu Plus in 2014 and continues to make a select rotation of older television series available on Hulu. Hulu, *CBS Corporation and Hulu Plus Expand Licensing Deal for Library Content on Hulu Plus* (press release), Feb. 10, 2014.

<sup>908</sup> Hulu, *Hulu and BCC Worldwide North America Sign Major Multi-Year U.S. Content Deal* (press release), Sept. 18, 2013.

<sup>909</sup> CBS Corporation, *CBS Corporation to Acquire CNET Networks, Inc.* (press release), May 15, 2008. In January 2009.

<sup>910</sup> Brian Stelter, *CBS Pumps Up TV.com to Create a Destination*, N.Y. TIMES, Jan. 12, 2009. See also TV.com, *Videos, Full Length Episodes*, <http://www.tv.com/video/> (visited June 18, 2014).

<sup>911</sup> See, e.g., TV.com, <http://www.tv.com/shows/law-order-special-victims-unit/watch/> (visited Aug. 11, 2014) (directing visitors to watch the full-length episodes of the NBC television series *Law & Order: Special Victims Unit* on Netflix, Hulu, Amazon, etc.).

<sup>912</sup> *15<sup>th</sup> Report*, 28 FCC Rcd at 10607-08, ¶ 224.

<sup>913</sup> Dawn Chmielewski and Meg James, *Internet's Role in Cable TV Debated*, L.A. TIMES, Apr. 3, 2009.

<sup>914</sup> CBS.com, *Watch, Latest Full Episodes*, <http://www.cbs.com/watch/> (visited June 18, 2014).

<sup>915</sup> *FOX Dishes Up a Delay*, Daily Variety, July 27, 2011. Janko Roettgers, *Bad News for Cord Cutters: ABC Starts Restricting Access to Full TV Show Episodes*, GIGAOM, Dec. 31, 2013, available at

(continued....)

programs available on its website to authenticated MVPD subscribers.<sup>916</sup> In June 2014, ABC News announced that viewers could access its broadcast network news as well as live and on-demand content from its eight owned-and-operated television stations without an MVPD subscription via Apple TV.<sup>917</sup>

241. *Sports.* Sports leagues make some content available for free, but other content, in particular live streaming of games, is only available to subscribers of the league's online subscription service and authenticated MVPD subscribers in some cases.<sup>918</sup> Major U.S. professional sports leagues, such as Major League Baseball ("MLB"), the National Basketball Association ("NBA"), the National Hockey League ("NHL"), and Major League Soccer ("MLS"), participate in the OVD marketplace by offering subscription streaming services for live viewing of full-length out-of-market games on their respective portals.<sup>919</sup> The NFL Sunday Ticket, which was previously only available on DIRECTV's MVPD service, offers online access to games via DIRECTV.<sup>920</sup> Consumers may also access NFL content via Verizon Wireless<sup>921</sup> and via the Xbox One.<sup>922</sup> In January 2014, the World Wrestling Entertainment ("WWE") launched a subscription OVD service that includes access to WWE's pay-per-view events as well as older WWE programming.<sup>923</sup>

#### a. Horizontal Concentration and Vertical Integration

242. *Horizontal Concentration.* As we discussed in the 15<sup>th</sup> Report, it is difficult to measure market shares in the OVD marketplace and determine the extent of horizontal concentration in the OVD marketplace.<sup>924</sup> Players continue to enter and exit and business models, including those for advertising-based, subscription, and rental OVDs, are diverse and evolving. Even if it were possible to define or categorize all of the players in the OVD marketplace, an analysis of horizontal concentration would still be difficult because ratings/viewing information is not standardized. Many OVDs are integrated with subsidiaries or divisions of companies with multiple non-OVD business lines, and several other OVDs, such as Hulu, are privately owned. Of the major players, only Netflix publicly reports subscriber and revenue figures for its online streaming service. Moreover, due to the lack of standardized metrics for measuring viewership,<sup>925</sup> measuring online video viewership raises unique challenges. In addition, services that measure online video viewership generally do not report professional and non-professional video content ratings separately on a systematic basis.

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<http://gigaom.com/2013/12/31/bad-news-for-cord-cutters-abc-starts-restricting-access-to-full-tv-show-episodes/>; USA Network, *Videos*, <http://www.usanetwork.com/videos> (visited June 18, 2014).

<sup>916</sup> TBS, *Video, Full Episodes*, <http://www.tbs.com/video/> (visited June 18, 2014).

<sup>917</sup> Todd Spangler, *ABC Launches Apple TV News Channel, with Live Broadcasts and Some Local News*, VARIETY, June 24, 2014. ABC News, *ABC News Launches on Apple TV* (press release), June 24, 2014. Lews Lazare, *WLS-Channel 7 News Content Gets New Berth on Apple TV*, CHICAGO BUSINESS JOURNAL, June 27, 2014. ABC, <http://abclocal.go.com/mediakit/index.html> (visited July 1, 2014).

<sup>918</sup> See [mlb.com](http://mlb.com), [nba.com](http://nba.com), [nhl.com](http://nhl.com) (visited March 11, 2015). See also Vince Horiuchi, *Oh My Tech!: Cutting the TV Cord Could be Tough for Sports Fans*, THE SALT LAKE TRIBUNE, Jan. 23, 2014.

<sup>919</sup> SNL Kagan, *The State of Online Video Delivery*, 2013 Edition, at 11. See also National Basketball Association, *League Pass*, <http://www.nba.com/leaguepass/?ls=iref:nba:gnav:lp> (visited June 18, 2014).

<sup>920</sup> DIRECTV, *Sports: NFL Sunday Ticket*, <http://www.directv.com/DTVAPP/content/sports/nfl> (visited Aug. 12, 2014).

<sup>921</sup> Verizon Wireless, *NFL Mobile Kicks Off With Verizon Wireless in April* (press release), March 9, 2010.

<sup>922</sup> National Football League, *Watch NFL Network & NFL Redzone*, <http://nflonline.nfl.com/> (visited June 24, 2014).

<sup>923</sup> Joe Flint, *WWE's Online Network Gets Off to a Strong Start*, L.A. TIMES, April 8, 2014.

<sup>924</sup> See 15<sup>th</sup> Report, 28 FCC Rcd at 10617, ¶ 243.

<sup>925</sup> See also *infra*, ¶ 298.

*Vertical Integration.* OVDs create or procure content, store it, transport it over the Internet, and enable consumers to watch it on their devices.<sup>926</sup> OVDs may also be involved in providing video storage and delivery services, content creation or aggregation (*i.e.*, networks, studios, and sports leagues), or device manufacturing. Several technology companies, notably Amazon, Apple, Google, and Microsoft, also serve as OVDs. Each company takes a slightly different approach to integrating their online video services with storage services, apps, and devices to attract and retain customers.<sup>927</sup> Some OVDs are vertically integrated with technology companies that also store and deliver computer services over the Internet, that is, they store the OVDs' content.<sup>928</sup> Such companies include Amazon (which provides Amazon Web Services), Microsoft (which offers Azure), Google, and Verizon (which provides Verizon Terremark).<sup>929</sup> Several OVDs also own and operate content delivery networks ("CDNs").<sup>930</sup> Major OVDs that provide CDN services to third parties include Amazon (through its Amazon CloudFront service), Microsoft (through its Azure service), and Verizon (after it acquired EdgeCast).<sup>931</sup> Google, Netflix, and Microsoft operate their own proprietary CDNs.<sup>932</sup> In August 2014, it was reported that Apple had begun operating its own CDN in the US and Europe.<sup>933</sup>

243. Several OVDs are also device manufacturers. Apple, Google, and Amazon sell set-top boxes that enable users to watch online video on their television sets – AppleTV, Google TV, Google Chromecast, and Amazon Fire TV. Both Amazon and Apple manufacture tablets and smartphones.<sup>934</sup> Microsoft and Sony manufacture game consoles, the Xbox and PlayStation, respectively. Comcast delivers online video to its subscribers through its Internet access services, and also its interest in OVD service Hulu.

<sup>926</sup> David Krauss (Principal Network Architect at Arion Systems), *Crashing the Tier I Party*, CED MAGAZINE, Feb. 28, 2011, <http://www.cedmagazine.com/articles/2011/02/crashing-the-tier-1-party>.

<sup>927</sup> Avinash Celestine, *Tech Wars Take Microsoft, Apple and Amazon Out of the Their Comfort Zones*, THE ECONOMIC TIMES, Nov. 4, 2012, [http://articles.economictimes.indiatimes.com/2012-11-04/news/34893363\\_1\\_surface-tablet-windows-rt-kindle-fire](http://articles.economictimes.indiatimes.com/2012-11-04/news/34893363_1_surface-tablet-windows-rt-kindle-fire) (visited Aug. 13, 2014).

<sup>928</sup> See definitions of "cloud computing" and "cloud storage" in Newton's Telecom Dictionary (26<sup>th</sup> edition) (June 2011) at 292-293. See also Brandon Butler, *Why Netflix is One of the Most Important Cloud Computing Companies*, NETWORK WORLD, July 24, 2013 and Derrick Harris, *Netflix Open Sources Tool for Making Cloud Services Play Nice*, GIGAOM, Nov. 26, 2012, <http://gigaom.com/2012/11/26/netflix-open-sources-tool-for-making-cloud-services-play-nice/>. Netflix relies completely on Amazon's cloud services.

<sup>929</sup> Brandon Butler, *CSC: the Cloud's Quiet Whiz Kid*, NETWORK WORLD, Oct. 3, 2013.

<sup>930</sup> A "content delivery network" or "CDN" is an entity that distributes web objects and networks services (*e.g.*, online video) to caches as close as possible to the Internet access network customers. William H. Norton, *The Internet Peering Playbook* (2014) at 135. See also *15<sup>th</sup> Report*, 28 FCC Rcd at 10647-48, ¶ 308.

<sup>931</sup> Dan Rayburn, *Here's What the Current CDN Landscape Looks like, with List of Vendors*, StreamingMedia Blog, Dec. 10, 2013, <http://blog.streamingmedia.com/2013/12/heres-current-cdn-landscape-looks-like-list-vendors.html> (visited June 24, 2014); Amazon, Inc., *Amazon Web Services: Amazon Cloud Front*, <http://aws.amazon.com/cloudfront/?tag=viglink129940-20> (visited June 24, 2014).

<sup>932</sup> Dan Rayburn, *Here's What the Current CDN Landscape Looks like, with List of Vendors*, StreamingMedia Blog, Dec. 10, 2013, <http://blog.streamingmedia.com/2013/12/heres-current-cdn-landscape-looks-like-list-vendors.html> (visited June 24, 2014); Dan Rayburn, *Inside the Netflix/Comcast Deal and What the Media is Getting Very Wrong*, STREAMINGMEDIABLOG, Feb. 23, 2014, Wade Holden, *Netflix Aiming to Cut Costs with Its Own Content Delivery Network*, SNL KAGAN, June 21, 2012; Alex Sherman, Edmond Lee (Bloomberg News), *Netflix, Comcast Agree to Broadband Pact*, THE HOUSTON CHRONICLE, Feb. 24, 2014. See also Netflix, Inc., *Open Connect* <https://www.netflix.com/openconnect> (visited June 24, 2014).

<sup>933</sup> Jon Brodtkin, *Apple's Multi-Terabit, \$100M CDN is Live – with paid connection to Comcast*, ARSTECHNICA, July 31, 2014, at <http://arstechnica.com/information-technology/2014/07/apples-multi-terabit-100m-cdn-is-live-with-paid-connection-to-comcast/> (visited Aug. 13, 2014).

<sup>934</sup> Robert Passikoff, *Amazon Fire Phone Gets Great Reception*, FORBES, June 18, 2014.

244. As described above, most major studios offer OVD EST/rental services. These include Sony's PlayStation store, Warner Brothers's Flixster, Dreamworks SKG's M-go, Disney Movies Anywhere, and the Paramount Movies site. Sony also owns and operates the advertising-supported Crackle service. In addition, networks and sports leagues make their programming available online on their websites, sometimes referred to as "verticals" or "portals."<sup>935</sup> The websites may be brand extensions of existing media properties and/or contain content unique to the Internet.

### b. Conditions Affecting Entry and Exit

245. In this section, we discuss the regulatory conditions potentially affecting the entry of OVDs and competition in this marketplace. We also describe the marketplace, or non-regulatory, conditions that may influence entry decisions and competition, including the need for OVDs to acquire rights to content and to secure sufficient, reasonably priced Internet access for transmission of OVD content. We then describe recent entry and exit from the marketplace.

#### (i) Regulatory Conditions

246. *Definition of an MVPD.* In 2012, the Media Bureau issued a public notice seeking comment on the most appropriate interpretation of the terms "multichannel video programming distributor" and "channel" as defined in the Act in response to the growing number of business models that use the Internet to deliver video programming.<sup>936</sup> On December 19, 2014, the Commission released a Notice of Proposed Rulemaking seeking comment on revisions to the definition an MVPD.<sup>937</sup> Specifically, the Commission proposed to change the interpretation of the term "multichannel video programming distributor" by including within its scope services that make available for purchase, by subscribers or customers, multiple linear streams of video programming, regardless of the technology used to distribute the programming.<sup>938</sup>

247. *Open Internet.* OVDs require broadband Internet speeds and capacity to transmit video content to customers. In December 2010, the Commission adopted an order seeking to maintain an open Internet.<sup>939</sup> The Commission's Open Internet rules required transparency from fixed and mobile broadband providers.<sup>940</sup> In addition, fixed broadband providers were prohibited from blocking access to

<sup>935</sup> PC Magazine defines a "portal" as a web "'supersite' that provides a variety of services." It notes that television networks provide general purpose portals, but not e-mail. PC Magazine, *Encyclopedia, Definition of: Portal*, <http://www.pcmag.com/encyclopedia/term/49528/portal> (visited July 3, 2013). See, e.g., ABC, <http://watchabc.go.com/> (visited July 3, 2013) ("ABC Network Portal"); NBC, <http://www.nbc.com/> (visited Dec. 2, 2012) ("NBC Network Portal"); CBS, <http://www.cbs.com/> (visited Dec. 2, 2012) ("CBS Network Portal"). In addition, local television stations often act as OVDs by making video content available online. See, e.g., KSTP-TV, *Twin Cities Live*, <http://twincitieslive.com/> (visited July. 2, 2013); WPIX-TV, <http://www.wpix.com/> (visited Dec 2, 2012). See also NAB Comments at 9-10 (noting that most local stations report that they have a three screen approach to news distribution: on-air, online, and mobile).

<sup>936</sup> *Media Bureau Seeks Comment on Interpretation of the Terms "Multichannel Video Programming Distributor" and "Channel" as Raised in Pending Program Access Complaint Proceeding*, MB Docket No. 12-83, Public Notice, 27 FCC Rcd 3079 (MB 2012). See also *VDC Corp. v. Turner Network Sales, Inc., et al.*, Program Access Complaint (Jan. 18, 2007); *Sky Angel U.S., LLC v. Discovery Communications LLC, et al.*, Program Access Complaint, MB Docket No. 12-80, CSR-8605-P (Mar. 24, 2010). The Bureau held the Sky Angel complaint in abeyance and terminated the Public Notice proceeding when the Commission released the *MVPD NPRM*. *Sky Angel U.S., LLC v. Discovery Communications, LLC and Animal Planet, L.L.C.*, MB Docket Nos. 12-80, 12-83, CSR Docket No. 8605-P, Order, DA 14-1874 (MB rel. Dec. 19, 2014).

<sup>937</sup> *MVPD NPRM*, 29 FCC Rcd 15995.

<sup>938</sup> *Id.* at 15996, ¶ 1.

<sup>939</sup> See *Preserving the Open Internet; Broadband Industry Practices*, GN Docket No. 09-191, WC Docket No. 07-52, Report and Order, 25 FCC Rcd 17905, 17906, ¶ 1 (2010) ("*Open Internet Order*").

<sup>940</sup> See *Open Internet Order*, 25 FCC Rcd at 17906, ¶ 1.

lawful content, applications, and services. They also had to allow access to non-harmful devices and could not unreasonably discriminate in transmitting lawful network traffic.<sup>941</sup> Mobile broadband providers were prohibited from blocking access to lawful websites and applications competing with the providers' voice or video telephony services.<sup>942</sup> The 2010 Open Internet rules were not intended "to affect existing arrangements for network interconnection, including existing paid peering arrangements."<sup>943</sup>

248. On January 14, 2014, the D.C. Circuit ruled on Verizon's challenge to the *Open Internet Order*.<sup>944</sup> The court rejected Verizon's challenge to the transparency rule.<sup>945</sup> However, the court struck down "anti-blocking" and "anti-discrimination" elements of the open Internet rules. Specifically, the court held that the Commission had imposed *per se* common carriage requirements on providers of Internet access services but classified fixed broadband Internet access service as an information service, not a telecommunications service, and classified mobile broadband Internet access service as a private mobile service rather than a commercial mobile service. The court determined that this violated section 3(51) of the Communications Act, which only permits common carrier regulation of telecommunications carriers insofar as they are providing "telecommunications services," and section 332(c)(2), which prohibits common carrier treatment of private mobile services.<sup>946</sup> The court remanded the case to the Commission for further proceedings consistent with its opinion.<sup>947</sup>

249. Following the *Verizon* decision, in May 2014, the Commission issued a Notice of Proposed Rulemaking regarding Open Internet issues.<sup>948</sup> After receiving comment on that Notice, in February 2015 the Commission adopted a Report and Order on Remand, Declaratory Ruling and Order (the *2015 Open Internet Order*).<sup>949</sup> The *2015 Open Internet Order* adopts rules prohibiting broadband Internet access service providers from blocking or throttling lawful content, services, applications, or non-harmful devices, subject to reasonable network management, and from favoring some traffic over other traffic in exchange for consideration or to benefit an affiliated entity. In addition, the *Order* adopts a standard for case-by-case adjudication based on whether a broadband Internet access service provider "unreasonably interferes with or unreasonably disadvantages" the ability of end users and edge providers to reach one another using broadband Internet access service, subject to reasonable network management. The *Order* also adopts certain enhancements to the 2010 transparency rule. With respect to the exchange of traffic between retail ISPs and other networks and services (such as transit providers and content delivery networks), the *Order* asserts authority to address complaints pursuant to Sections 201 and 202 of the Communications Act.

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<sup>941</sup> *See id.*

<sup>942</sup> *See id.*

<sup>943</sup> *Id.* at 17944, n. 209.

<sup>944</sup> *Verizon v. FCC*, 740 F.3d 623 (D.C. Cir. 2014).

<sup>945</sup> *Id.* at 659.

<sup>946</sup> *Id.* at 650-59.

<sup>947</sup> As a condition of the Comcast-NBCUniversal transaction, Comcast agreed to abide by the 2010 Open Internet rules. *See Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. For Consent to Assign Licenses and Transfer Control of Licensees*, MB Docket No. 10-56, Memorandum Opinion and Order, 26 FCC Rcd 4238, 4275, ¶ 94 (2011) ("[N]either Comcast nor Comcast-NBCU shall prioritize affiliated Internet content over unaffiliated Internet content.").

<sup>948</sup> *Protecting and Promoting the Open Internet*, GN Docket No. 14-28, Notice of Proposed Rulemaking, 29 FCC Rcd 5561 (2014).

<sup>949</sup> *See Protecting and Promoting the Open Internet*, GN Docket No. 14-28, Report and Order on Remand, Declaratory Ruling, and Order, FCC 15-24 (rel. March 12, 2015).

250. The *Order* classifies both fixed and mobile broadband Internet access service as a telecommunications service under Title II of the Communications Act and finds that mobile broadband access service is a commercial mobile service or its functional equivalent under Section 332 of the Act. As legal authority for adoption of the new Open Internet rules the *Order* relies on certain provisions of Titles II and III of the Act and Section 706 of the Telecommunications Act of 1996. The *Order* grants forbearance from applying many other provisions of the Act and Commission rules to the extent that they otherwise newly would apply by virtue of the classification of broadband Internet access service in the *Order*.

251. *Closed Captioning.* In January 2012, the Commission adopted rules placing closed captioning obligations on the owners, providers, and distributors of video programming delivered using Internet protocol (IP).<sup>950</sup> The rules were adopted pursuant to the Twenty-First Century Communications and Video Accessibility Act of 2010 (“CVAA”), which directed the Commission to require closed captioning of IP-delivered video programming that is published or exhibited on television with captions.<sup>951</sup> All distributors of IP-delivered programming (including OVDs) must comply with these requirements.<sup>952</sup> In July 2014, the Commission extended its IP closed captioning requirements to online video clips after concluding that Congress intended that the IP closed captioning requirements extend to all covered video programming, including clips.<sup>953</sup>

#### (ii) Marketplace Conditions

252. An OVD entrant can face several non-regulatory costs and challenges that influence its decision to enter the marketplace, including content acquisition and ability to access sufficient Internet capacity to provide customers with a high-quality OVD viewing experience.

253. *Access to Content.* The entry of new OVDs and the growth of the OVD marketplace are dependent on the ability of OVDs to acquire or create compelling programming that will attract viewers and subscribers.<sup>954</sup> Content owners’ windowing strategies play a key role in determining which type of OVDs are able to access content, and when they are able to do it.<sup>955</sup> Major movie studios typically make their movies available to all EST and rental services simultaneously.<sup>956</sup> Studios are more reluctant to make movies and television programs available to subscription OVDs for fear of cannibalizing DVD revenues.<sup>957</sup> Studios are also concerned about security and piracy of online content.<sup>958</sup> In addition,

<sup>950</sup> See *Closed Captioning of Internet Protocol-Delivered Video Programming: Implementation of the Twenty-First Century Communications and Video Accessibility Act of 2010*, MB Docket No. 11-154, Report and Order, 27 FCC Rcd 787 (2012).

<sup>951</sup> 47 U.S.C. § 613(c)(2).

<sup>952</sup> See *Closed Captioning of Internet Protocol-Delivered Video Programming: Implementation of the Twenty-First Century Communications and Video Accessibility Act of 2010*, 27 FCC Rcd at 802.

<sup>953</sup> *Closed Captioning of Internet Protocol-Delivered Video Programming: Implementation of the Twenty-First Century Communications and Video Accessibility Act of 2010*, MB Docket No. 11-154, Second Order on Reconsideration and Second Further Notice of Proposed Rulemaking, 29 FCC Rcd 8687 (2014).

<sup>954</sup> See Public Knowledge Comments at 2 (OVDs need to be able to reach distribution agreements for programming comparable to that of MVPDs).

<sup>955</sup> *Studios Jiggle Release Windows to Maximize Revenue*, THE ONLINE REPORTER, June 15, 2012.

<sup>956</sup> *State of Online Video Delivery* (2013), SNL KAGAN, at 9.

<sup>957</sup> *Id.* at 6.

<sup>958</sup> See Michiel Willems, *Content Security Chief Technology Officer: Piracy Data Can Help the Industry*, SNL KAGAN, Mar. 17, 2015, <https://www.snk.com/interactivex/article.aspx?id=31650697&KPLT=6> (visited Mar. 17, 2015). Andrew Wajs, chief technology officer of Irdeto, stated that “The complexity of the OTT and TV Everywhere ecosystem clearly raises security issues for premium content over new platforms.” Wajs also noted that

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networks and studios factor in the possibility that MVPDs may be less willing to pay them if the MVPDs cannot obtain exclusive TV Everywhere rights.<sup>959</sup> FOX and ABC have delayed the availability of their network shows on their advertising-supported sites for eight days.<sup>960</sup> Moreover, some television studios opt for traditional syndication rather than distribution via subscription online video services.<sup>961</sup> WGAW states that a significant amount of must-watch programming, including live sports and recent television episodes, is unavailable online or only accessible if a consumer subscribes to a traditional MVPD that has negotiated online use.<sup>962</sup> As noted above, however, more live sports are being made available online that do not require an MVPD subscription.<sup>963</sup> Moreover, in addition to new services like Sling TV, which stream live TV, several OVDs offer recent episodes of television programs.<sup>964</sup>

254. Another potential barrier to content acquisition can be cost, particularly for subscription services.<sup>965</sup> As of December 31, 2013, Netflix was obligated to pay a total of \$7.3 billion for content for its online video streaming services.<sup>966</sup> In 2013, Netflix's domestic cost of its streaming service increased to roughly \$1.8 billion, of which the content licensing expenses increased by \$226.3 million as a result of investing in more exclusive and original programming.<sup>967</sup> Other companies' decisions to enter the OVD marketplace can depend in part on whether they can obtain content distribution rights and at what cost. For example, Intel, which in February 2013 had announced that it planned to offer an online video service called OnCue, abandoned the effort by December 2013, in large part due to the costs of obtaining programming.<sup>968</sup> According to one analyst, content owners require content distributors to guarantee a minimum number of subscribers during a multi-year agreement, obligating the distributors to incur large

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“pay TV platforms cannot identify and shut down illegal streams in real time are more vulnerable” and “implanting a complete antipiracy program is essential to reduce the theft of content.”

<sup>959</sup> *Economics of Broadcast TV Retransmission Revenue* (2014), SNL KAGAN, at 2.

<sup>960</sup> *FOX Dishes Up a Delay*, DAILY VARIETY, July 27, 2011. Janko Roettgers, *Bad News for Cord Cutters: ABC Starts Restricting Access to Full TV Show Episodes*, GIGAOM, Dec. 31, 2013, available at <http://gigaom.com/2013/12/31/bad-news-for-cord-cutters-abc-starts-restricting-access-to-full-tv-show-episodes/>; USA Network, *Videos*, <http://www.usanetwork.com/videos> (visited June 18, 2014).

<sup>961</sup> Michael Nathanson, Robert Fishman, Andrew Izaguirre, *The Syndication Pipeline: Self-Cooking and Loving It?*, MoffettNathanson Research, May 22, 2014, at 7.

<sup>962</sup> WGAW Comments at 19.

<sup>963</sup> *See supra*, ¶ 242.

<sup>964</sup> *See* Sling TV, <https://www.sling.com/> (visited Mar. 18, 2015). *See also supra*, ¶¶ 232, 240.

<sup>965</sup> Reports indicate that competition OVDs may be driving up the contents costs for MVPDs as well. Sarah Barry James, *Digital Rights Gain Importance in Time Warner Cable-CBS Dispute*, SNL KAGAN, Aug. 9, 2013.

<sup>966</sup> Netflix 2013 Form 10K at 28. In connection with obtaining streaming content, Netflix typically enters into multi-year licenses with studios and other content providers, the payment terms of which are not tied to member usage or the size of its member base (“fixed cost”) but which may be tied to such factors as titles licensed and/or theatrical exhibition receipts. *Id.* at 3. Netflix incurs a streaming content obligation at the time it signs a license agreement to obtain future movie and television program titles. Once a title becomes available, Netflix records a content liability on its Consolidated Balance Sheet. Certain agreements include the obligation to license rights for unknown future titles, the ultimate quantity and / or fees for which are not yet determinable as of the reporting date. Netflix expects the unknown obligations to be significant. *Id.* at 28, n. 1.

<sup>967</sup> *Id.* at 19-20.

<sup>968</sup> Joel Paczkowski, *Yes, Intel is Building a Web TV Service (A Box, Too)*, ALLTHINGS.D, Feb. 12, 2013, <http://allthingsd.com/20130212/yes-intel-is-building-a-web-tv-service/> (visited June 25, 2014). Ina Fried, *Brian Krzanich on Why He Pulled the Plug on Intel's TV Dreams*, ReCode, Jan. 2, 2014, <http://recode.net/2014/01/02/brian-krzanich-on-why-he-pulled-the-plug-on-intels-tv-dreams/> (visited June 25, 2014).

fixed costs for content up front.<sup>969</sup> Intel's CEO Brian Krzanich concurred that while Intel had good technology, as a start-up it lacked the scale to acquire content.<sup>970</sup> WGAW states that it is concerned that only large incumbents have the power to negotiate content deals.<sup>971</sup>

255. OVDs' entry also may be affected by pre-existing business relationships. Specifically, vertical integration or exclusivity arrangements between content producers/owners and cable networks, broadcast networks, or MVPDs may hinder unaffiliated OVDs.<sup>972</sup> For example, in January 2014, after WWE announced its subscription OVD service, DIRECTV stated that it would consider dropping WWE programming from its pay-per-view lineup.<sup>973</sup> Likewise, NBCUniversal's cable networks reportedly dropped the price they paid for WWE's programming by 50 percent after the OVD's launch.<sup>974</sup> OVD content acquisition also can be challenging when content owners are vertically integrated with, or enjoy exclusive relationships with, other OVDs.<sup>975</sup>

256. *Access to Devices.* OVDs rely on partnerships with manufacturers of Internet-enabled devices in order to make their programming available. Such devices include television sets, DVD and Blu-ray players, game consoles, and mobile devices.<sup>976</sup> As the marketplace has matured, some content owners have shifted their strategies from making their movies and television programs available on as many platforms as possible to focusing on manufacturers that command a larger market share.<sup>977</sup> Netflix indicates that its agreements with consumer electronics manufacturers are typically between one and three years in duration, and that the degree of accessibility and prominence of its service is among the terms of its agreements.<sup>978</sup> It notes that as it makes technological changes to its streaming capabilities, the consumer electronics manufacturers may need to update their devices in order to maintain the quality of

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<sup>969</sup> Joan E. Solsman, *How Intel TV Failed – Pay Attention, Google and Apple*, CNET, Dec. 5, 2013, <http://www.cnet.com/news/how-intel-tv-failed-pay-attention-google-and-apple/> (visited June 25, 2014), quoting Erik Bannon, analyst at HIS: "Out the door, you're paying for a million subs, whether you have zero or a hundred thousand."

<sup>970</sup> Ina Fried, *Brian Krzanich on Why He Pulled the Plug on Intel's TV Dreams*, RECODE, Jan. 2, 2014, <http://recode.net/2014/01/02/brian-krzanich-on-why-he-pulled-the-plug-on-intels-tv-dreams/> (visited June 25, 2014). Krzanich stated that "When you go and play with the content guys, it's all about volume. . . . We were ramping from virtually zero and so what we've said is we are out looking for a partner that can help us scale that volume at a much quicker rate." *Id.* In January 2014, Intel reached an agreement to sell its OnCue service to Verizon. Dawn Chmielewski, *Verizon to Buy Intel's OnCue*, L.A. TIMES, Jan. 22, 2014.

<sup>971</sup> WGAW Comments at 26.

<sup>972</sup> See *15<sup>th</sup> Report*, 28 FCC Rcd at 10620, ¶ 253.

<sup>973</sup> Joe Flint, *DirecTV May Sever Ties with WWE Over New Online Network*, L.A. TIMES, Jan. 9, 2014. Reports indicate that DIRECTV may have followed through on its threat. *Thanks to Comcast, South Florida-Davie Ale House Showing WWE Money in the Bank PPV*, THE MIAMI HERALD, June 28, 2014.

<sup>974</sup> Deana Myers, *WWE and the Danger of Going OTT*, SNL KAGAN, May 22, 2014.

<sup>975</sup> See *15<sup>th</sup> Report*, 28 FCC Rcd at 10620, ¶ 253. Comcast is subject to certain OVD programming requirements after its acquisition of NBCU. The conditions require Comcast to provide a qualified OVD with online programming under the economic equivalent of the price, terms, and conditions as a similarly situated MVPD. In addition, pursuant to the Benchmark Condition, Comcast must provide qualified OVDs with online programming that is comparable to online programming the OVD has received from another unaffiliated programmer. *Comcast-NBCU Order*, 26 FCC Rcd at 4359-60, App. A, § IV.

<sup>976</sup> Free State Comments at 5, 7; NCTA Comments at 12-14; NCTA Reply at 13; Verizon Reply at 1.

<sup>977</sup> Perkin di Grazia, *The Future According to Roku*, SNL KAGAN, March 28, 2012.

<sup>978</sup> Netflix, Inc., SEC Form 10-K at 5.

service for Netflix's subscribers.<sup>979</sup> Roku provides its streaming players with software updates every two months and adds new apps weekly.<sup>980</sup>

257. Some device manufacturers, such as Apple, require OVDs to split their revenues with Apple through its iTunes billing systems.<sup>981</sup> In addition, device manufacturers that are vertically integrated with OVDs may design the equipment specifically for their own OVD services. For example, Apple allows movies and TV shows purchased via iTunes to be accessed by any compatible Apple devices.<sup>982</sup> Similarly, Amazon's Fire TV directs users to the Amazon's Instant EST/rental video service for access to television programs and movies for purchase or rental.<sup>983</sup> The fragmentation caused by the variety of platforms and devices presents challenges though because it is complex and costly to convert videos into the appropriate formats and ensure quality streaming on every screen.<sup>984</sup>

258. *Internet Capacity, Usage, and Cost.* Access to high-speed data pipelines capable of delivering a high quality video signal is critical for OVD entrants.<sup>985</sup> In some offerings, OVDs require sufficient Internet capacity to transmit their programming, and consumers need sufficient broadband service to access OVDs' content. For EST/rental services, broadband speeds impact the amount of time required to download television programs and movies. For example, iTunes states that for users with a 5 Mbps downstream connection, a 45-minute television program in standard definition will require about 3-5 minutes to download, while a 45-minute television program in high definition will require about 10-15 minutes to download; a two hour high definition movie will require 54-72 minutes.<sup>986</sup> For OVDs that stream content, broadband speeds impact the quality of the video viewers are able to watch. For example, Netflix recommends that subscribers have a speed of at least 3.0 Mbps to watch programs in standard definition quality; 5.0 Mbps to watch content in high definition quality; and 25 Mbps to watch programs in Ultra HD quality.<sup>987</sup>

259. As of December 31, 2013, the Commission's Wireline Competition Bureau estimates that for fixed connections, 18.6 percent of reportable connections (or 17.9 million connections) were slower than 3 Mbps in the downstream direction, 27.5 percent (or 26.4 million connections) were at least 3 Mbps in the downstream direction but slower than 6 Mbps, and 53.9 percent (or 51.7 million connections) were at least 6 Mbps in the downstream direction.<sup>988</sup> SNL Kagan estimates that at the end of 2013, there were

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<sup>979</sup> *Id.*

<sup>980</sup> Perkin di Grazia, *The Future According to Roku*, SNL KAGAN, March 28, 2012.

<sup>981</sup> Perkin di Grazia, *Hulu Gives in to Apple TV Demands*, SNL KAGAN, Aug. 13, 2012.

<sup>982</sup> Ali Choukeir, *Profile: Apple TV*, SNL KAGAN, Aug. 29, 2013.

<sup>983</sup> Ali Choukeir, *Profile: Amazon Fire TV*, SNL KAGAN, May 29, 2014.

<sup>984</sup> Erik J. Martin, *State of Online Video*, ECONTENT, Feb. 14, 2014, at <http://www.econtentmag.com/Articles/Editorial/Feature/The-State-of-Online-Video-94235.htm> (visited Aug. 15, 2014).

<sup>985</sup> Ian Olgeirson and Deana Myers, *Service Providers Lessen OTT Substitution, but Challenges Persist*, SNL KAGAN, Sept. 11, 2012. WGAW also urges the Commission to use its authority to promote broadband adoption by addressing state laws that prohibit competition from municipal broadband deployment initiatives. WGAW Comments at 27-28.

<sup>986</sup> Apple, Inc., Support, *iTunes Store: Download Times Will Vary*, <http://support.apple.com/kb/ht1577> (visited June 26, 2014).

<sup>987</sup> Netflix, Inc., *Help Center: Internet Connection Speed Recommendations*, <https://help.netflix.com/en/node/306> (visited June 26, 2014).

<sup>988</sup> *Internet Access Services: Status as of Dec. 31, 2013* (IATD, WCB Oct. 2014), at 2, 3, <http://www.fcc.gov/document/fcc-releases-new-data-internet-access-services-2> (visited Dec. 24, 2014). For mobile wireless connections, 32.6 percent of reportable connections (or 64.3 million connections) were slower than 3 Mbps in the downstream direction, about 32.9 percent (or 65.0 million connections) were at least 3 Mbps in the

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87.0 million residential high speed data subscribers, including 50.9 million cable subscribers, 32.8 million telephone company subscribers, 2.0 million wireless-only subscribers, and 1.3 million satellite subscribers.<sup>989</sup> At the end of 2012, SNL Kagan estimated there were 84.1 million residential high-speed data subscribers, with cable operators serving 48.7 million, telephone companies serving 32.3 million, and satellite companies serving 1.1 million.<sup>990</sup> The remaining 2.0 million households relied exclusively on wireless high speed data services.

260. According to Sandvine, in recent years, consumers' OVD viewing patterns have shifted from a "download now, use later" pattern of viewing for EST/rental OVDs to streaming video from subscription and advertising-supported OVDs, requiring real-time delivery of data over the Internet.<sup>991</sup> This shift to on-demand consumption of online video has caused the peak period, generally 9:00 p.m. to 11:00 p.m., for wireline traffic to get busier and the off-hours to be less busy.<sup>992</sup> Sandvine reports real-time entertainment was the dominant category in March 2014, comprising 63.87 percent of downstream traffic of North American fixed access networks.<sup>993</sup> Sandvine states that Netflix accounted for 34.2 percent of peak period downstream traffic in March 2014, compared with 31.6 percent during the second half of 2013.<sup>994</sup> YouTube's peak period downstream traffic share was 13.19 percent, Hulu's share was 1.74 percent, iTunes' share was 3.64 percent, and Amazon Video's share was 1.90 percent.<sup>995</sup>

261. Similarly, peak mobile wireless network demand is concentrated between 7:00 pm and 9:00 pm.<sup>996</sup> In April 2014, real-time entertainment represented 39.55 percent of mobile downstream (Continued from previous page) \_\_\_\_\_  
downstream direction but slower than 6 Mbps, and 34.4 percent (or 68.0 million connections) were at least 6 Mbps in the downstream direction. *Id.* The Commission has benchmarked broadband as a transmission service that enables an end user to download Internet content at four Mbps and to upload Internet content at one Mbps over the service provider's network. *See Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, GN Docket Nos. 09-137, 09-51, Sixth Broadband Deployment Report, 25 FCC Rcd 9556, 9563-64, ¶ 11 (2010) ("Sixth Broadband Deployment Report"). In August 2014, the Commission issued its Tenth Broadband Progress Notice of Inquiry, which seeks comment on whether the Commission should adopt a ten Mbps Internet download speed benchmark and the sufficiency of the one Mbps upload speed benchmark. *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, GN Docket No. 14-126, Tenth Broadband Progress Notice of Inquiry, 29 FCC Rcd 9747, 9755-57, ¶¶ 14-17 (2014).

<sup>989</sup> Ian Olgerson and Chris Young, *Slowing HSD Subscriber Gains a Harbinger of Things to Come*, SNL KAGAN, Apr. 29, 2014.

<sup>990</sup> SNL Kagan, *Media Trends (2013 edition)* at 102-108. SNL Kagan's estimates of subscribers to telephone companies' high-speed data services include subscribers served by DSL and fiber-to-the-home connections. Its estimates of wireless only residential subscribers include fixed and mobile high speed data connections used for the primary Internet access.

<sup>991</sup> Sandvine, *Adoption Trends of Over-the-Top Video from a Cable Network Perspective* (July 2011) ("Sandvine Over-the-Top Video White Paper"), at 3. *See also 15<sup>th</sup> Report*, 28 FCC Rcd at 10621-22, ¶ 256.

<sup>992</sup> Sandvine, *Global Internet Phenomena Report*, 1H 2012, at 7; *see also id.*, Figure 3 "Illustration of Peak Hour, Peak Period and Prime Time."

<sup>993</sup> Sandvine, *Global Internet Phenomena Report*, 1H 2014, at 5, Figure 1 "Peak Period Aggregate Traffic Composition, Fixed Access." Sandvine categorizes traffic from subscription and advertising-supported OVDs, including Netflix, Hulu, and YouTube, as "real time entertainment" – defined as applications and protocols that allow on-demand entertainment to be viewed as it arrives. *Id.* at 33.

<sup>994</sup> *Id.* at 5.

<sup>995</sup> William H. Norton, *Internet Peering Playbook* (2014) at 50-51.

<sup>996</sup> Sandvine, *Global Internet Phenomena Report*, Fall 2011, at 10.

traffic in North America.<sup>997</sup> During the first half of 2014, Netflix represented 5.05 percent of mobile data in North America, compared with a 17.61 percent for YouTube, and a 3.10 percent share for iTunes.<sup>998</sup> While Netflix's share is about same as it was at the end of 2013 (5.1 percent), it has more than doubled since the first half of 2013 (2.2 percent).<sup>999</sup>

262. The increase in video traffic has impacted the way OVDs transmit their video programming and the cost of transmission.<sup>1000</sup> The increasing amount of traffic has also resulted in more stress on the Internet networks (including the last mile, middle mile, and core network infrastructure), causing network congestion and longer times required to download and view content.<sup>1001</sup> To improve the quality of users' experience, and to minimize costs, OVDs that generate a large amount of traffic may interconnect with ISPs, either directly or via a third party that charges a fixed rate.<sup>1002</sup> As Internet traffic has evolved, several entities have bought or created divisions that enable them to play multiple roles.<sup>1003</sup>

263. In 2014, there were public disputes concerning the exchange of traffic between certain ISPs, on the one hand, and Netflix and certain third-party transit providers, on the other hand.<sup>1004</sup> A number of these parties submitted comments concerning these disputes into the record of the proceeding that led to the *2015 Open Internet Order*. That record reflected competing narratives, including as to the circumstances in which it is appropriate for an ISP to request or receive compensation for Internet traffic exchange arrangements with content delivery networks ("CDNs") and/or transit providers.<sup>1005</sup>

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<sup>997</sup> Sandvine, *Global Internet Phenomena Report*, 1H 2014, at 8.

<sup>998</sup> *Id.* at 9.

<sup>999</sup> Sandvine, *Global Internet Phenomena Report*, 1H 2014, at 8.

<sup>1000</sup> Norton, *Internet Peering Playbook* (2014) at 134. "Internet traffic volume is a key determinant as to whether peering.

<sup>1001</sup> Gary Southwell (Chief Technology Officer of BTI Systems), *With the OTT Challenge, Say Goodbye to the Pinwheel*, CED MAGAZINE, Apr. 30, 2011. In the last quarter of 2010, Level 3 spent \$14 million in capital expenditures on its network, solely to add capacity for Netflix. Dan Rayburn, *The Video CDN Business is Flawed; YouTube Subsidizes Video Bandwidth on the Internet*, STREAMINGMEDIABLOG.COM, May 6, 2013, <http://blog.streamingmedia.com/2013/03/the-cdn-business-is-flawed-youtube-subsidizes-video-delivery-bandwidth-on-the-net.html>.

<sup>1002</sup> David Krauss (Principal Network Architect at Arion systems, *Crashing the Tier 1 Party*, CED MAGAZINE, Feb. 28, 2011, <http://www.cedmagazine.com/articles/2011/02/crashing-the-tier-1-party>.

<sup>1003</sup> Matthew S. Schwartz, Erin Mershon, *Paid Internet Peering on the Rise, Disputes Possible*, Communications Daily, July 1, 2013. See also Sandvine, *Exposing the Technical and Commercial Factors Underlying the Internet Quality of Experience*, Sept. 2013, at 6, <https://www.sandvine.com/trends/global-internet-phenomena/spotlight-quality.html> and David Krauss (Principal Network Architect at Arion systems, *Crashing the Tier 1 Party*, CED MAGAZINE, Feb. 28, 2011, <http://www.cedmagazine.com/articles/2011/02/crashing-the-tier-1-party>.

<sup>1004</sup> See, e.g., Netflix, *The Case Against ISP Tolls* (Apr. 24, 2014), <http://blog.netflix.com/2014/04/the-case-against-isp-tolls.html>; Comcast, *Comcast Response to Netflix* (Apr. 24, 2014), <http://corporate.comcast.com/comcast-voices/comcast-response-to-netflix>; Paresh Dave, Netflix, *Time Warner Cable reach deal on streaming quality*, L.A. Times (Aug. 20, 2014), <http://www.latimes.com/business/technology/la-fi-tn-netflix-time-warner-cable-20140820-story.html>; AT&T Public Policy Blog, *Who Should Pay for Netflix?* (Mar. 21, 2014), <http://www.attpublicpolicy.com/consumers-2/who-should-pay-for-netflix/>; Verizon Policy Blog, *Level 3's Selective Amnesia on Peering* (July 21, 2014), <http://publicpolicy.verizon.com/blog/entry/level-3s-selective-amnesia-on-peering>; Level 3 Communications Blog, *Verizon's Accidental Mea Culpa* (July 17, 2014), <http://blog.level3.com/open-internet/verizons-accidental-mea-culpa/>.

<sup>1005</sup> See, e.g., Letter from Markham C. Erickson, Counsel to Netflix, Inc. to Marlene H. Dortch, Secretary, FCC, GN Docket No. 14-28, Attach. at 2 (filed Aug. 1, 2014) (Netflix Aug. 1, 2014 *Ex Parte* Letter) (asserting that "[i]n the case of Comcast, Netflix purchased all available transit to reach Comcast's network. Every single one of those transit links to Comcast was congested (even though the transit providers requested extra capacity). The only other

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264. The total amount of data needed per month to watch an OVD service depends on the amount of time spent watching and the quality of the video, with higher quality video using more bandwidth than lower-quality video.<sup>1006</sup> SNL Kagan estimates that a household watching four hours of video per day would need 105 GB per month to watch all of the video in standard definition, or 422 GB per month to watch all of the video in high definition.<sup>1007</sup> Alternatively, someone watching 5 hours/day using 2GB/hour (high quality video) over 30 days, would require 300 GB/month.<sup>1008</sup> Sandvine estimates that the top 15 percent of users who stream video account for 53.9 percent of total traffic, streaming an average of 100 hours per month, and consuming about 153 GB per month in real-time entertainment.<sup>1009</sup> Sandvine also estimates that the 15-85 percentile of subscribers who regularly stream video account for 45.7 percent of total traffic, streaming an average of nine hours per month, and consuming 13 GB per month in real time entertainment.<sup>1010</sup> The lowest 15 percent of users who stream traffic account for a 0.5 percent share of total traffic, streaming an average of less than one hour per month, consuming about 40 MB per month in real time entertainment.<sup>1011</sup>

265. Several ISPs, including wireline and wireless providers, have initiated bandwidth caps or usage-based price tiers, using a variety of business models.<sup>1012</sup> Generally, ISP base usage-based pricing (“UBP”) on the amount of time a subscriber spends online and/or the volume of traffic transmitted to/from the subscriber.<sup>1013</sup> Data caps generally define a limit on the amount of data per month per household (expressed in gigabytes). Exceeding the cap could subject a household to alterations in its Internet service, possibly after one or more warnings, such as reduced access speed, additional charges, suspension of services, or termination of service.<sup>1014</sup> Netflix notes that how ISPs implement usage-based pricing including bandwidth caps could impact its acquisition and retention of subscribers.<sup>1015</sup> NCTA indicates, however, that tiered pricing enables consumers to choose Internet services that best meet their

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available routes into Comcast’s network were those where Comcast required an access fee.” *But see* Letter from Kathryn A. Zachem, Senior Vice President, Regulatory and State Legislative Affairs, Comcast, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 14-28, 10-127, at 2 (filed Nov. 10, 2014) (Comcast Nov. 10, 2014 *Ex Parte* Letter) (“Certainly Netflix would not have entered into direct agreements with Comcast, Verizon, Time Warner Cable, and AT&T unless doing so provided economic advantages over paying middlemen to reach these same companies—and of course, these arrangements have in turn reduced Netflix’s need for Cogent’s and other transit providers’ services, not only reducing Netflix’s costs but freeing up transit capacity for other entities.”).

<sup>1006</sup> Netflix, Inc., *Help Center: Internet Connection Speed Recommendations*, <https://help.netflix.com/en/node/306> (visited June 26, 2014).

<sup>1007</sup> Ian Olgeirson and Deana Myers, *Service Providers Lessen OTT Substitution, but Challenges Persist*, SNL KAGAN, Sept. 11, 2012. One gigabyte is equal to two raised to the 30<sup>th</sup> power, *i.e.*, 1,073,741,824 bytes. Harry Newton and Steve Schoen, *NEWTON’S TELECOM DICTIONARY* 551 (Flatiron Publishing) (27<sup>th</sup> ed. 2013).

<sup>1008</sup> Open Internet Advisory Committee, Economic Impacts of Open Internet Frameworks Working Group, Federal Communications Commission, *Policy Issues in Data Caps and Usage-Based Pricing*, released Aug. 20, 2013 at 10.

<sup>1009</sup> Sandvine, *Global Internet Phenomena Report* (1H 2014), at 7.

<sup>1010</sup> *Id.*

<sup>1011</sup> *Id.*

<sup>1012</sup> Usage based pricing includes all forms of pricing that incorporates volume. Data caps are one form of UBPs. *See* Open Internet Advisory Committee, Economic Impacts of Open Internet Frameworks Working Group, Federal Communications Commission, *Policy Issues in Data Caps and Usage-Based Pricing*, released Aug. 20, 2013 at 6-7. For a list of ISPs’ policies as of 2013, see App. A.

<sup>1013</sup> Open Internet Advisory Committee, Economic Impacts of Open Internet Frameworks Working Group, Federal Communications Commission, *Policy Issues in Data Caps and Usage-Based Pricing*, released Aug. 20, 2013, at 2.

<sup>1014</sup> *Id.* at 2-3.

<sup>1015</sup> Netflix 2013 Form 10K at 7.

needs and promotes fairness by asking high capacity Internet users to shoulder a greater proportionate share of network costs.<sup>1016</sup>

266. Most major MSOs had implemented usage caps or usage-based/metered pricing by 2012.<sup>1017</sup> They generally adopted thresholds that exceed typical traffic and chose either to cap usage or to implement overage charges for customers who exceed the limits. Some ISPs correlate speed tiers with usage thresholds.<sup>1018</sup> Comcast has launched multiple trial approaches in different markets.<sup>1019</sup> For example, in Nashville, Tennessee, Comcast offers a monthly data usage plan of 300 GB per month for all XFINITY Internet tiers. Comcast subscribers can purchase additional 50 gigabyte blocks for \$10. In Tucson, Arizona, Comcast offers a monthly data usage plan of 300 GB per month for Economy Plus through Performance XFINITY Internet tiers. Those customers subscribed to Comcast's Blast! Internet tier receive 350 GB per month; Extreme 50 customers receive 450 GB per month, and Extreme 105 customers receive 600 GB per month. Additional 50 GB blocks are available for \$10. In contrast to ISP's that have implemented data usage caps, Verizon FiOS does not impose data usage caps.<sup>1020</sup> With respect to Internet access from mobile wireless providers, both Verizon Wireless and AT&T impose data allowances,<sup>1021</sup> while Sprint offers both unlimited data plans and shared data plans with data allowances,<sup>1022</sup> and T-Mobile offers unlimited data plans.<sup>1023</sup>

267. OVDs and ISPs differ about the impact of UBP on users and competition. From an ISP's perspective, light users should not be forced to subsidize the cost of serving the heavy users, and the high thresholds for their UBP policies impact a relatively low percentage of subscribers.<sup>1024</sup> They view pricing and product choices as consumer options, and argue that the availability of low-priced broadband service plans may encourage light user adoption. Likewise, ISPs argue that UBP could encourage OVDs to more efficiently deliver their services through technological innovation rather than act as a potential barrier to OVD entry.<sup>1025</sup> From an OVDs' perspective, data caps may reduce demand and inhibit the entry of

<sup>1016</sup> NCTA, <https://www.ncta.com/positions/fair-broadband-pricing> (visited Mar. 18, 2015); and NCTA, [http://i.ncta.com/ncta\\_com/issuebriefs/NCTA-TieredPricingWinningModel.pdf](http://i.ncta.com/ncta_com/issuebriefs/NCTA-TieredPricingWinningModel.pdf) (visited Mar. 18, 2015). See also Kamran Asaf, *Survey of MSO HSD Data Caps as Higher Usage Looms*, MULTICHANNEL MARKET TRENDS, SNL KAGAN, July 25, 2014, <https://www.snl.com/InteractiveX/article.aspx?ID=28715683> (visited Mar. 17, 2015).

<sup>1017</sup> *15<sup>th</sup> Report*, 28 FCC Rcd at 10623-24, ¶ 260.

<sup>1018</sup> Open Internet Advisory Committee, Economic Impacts of Open Internet Frameworks Working Group, Federal Communications Commission, *Policy Issues in Data Caps and Usage-Based Pricing*, released Aug. 20, 2013, at 14-15.

<sup>1019</sup> Comcast, <http://customer.comcast.com/help-and-support/internet/data-usage-what-are-the-different-plans-launching> (visited Dec. 5, 2014).

<sup>1020</sup> Verizon, *Verizon Policy Blog: Yes, You Can Use FiOS as Much as You Want . . . Really!*, Feb. 27, 2014, <http://publicpolicy.verizon.com/blog/entry/yes-you-can-use-fios-as-much-as-you-want-really>.

<sup>1021</sup> Brad Reed, *It's Official: Verizon Gests Dragged Kicking and Screaming Into Mobile Price War*, BGR, Feb. 13, 2013, <http://bgr.com/2014/02/13/verizon-more-everything-plans/>.

<sup>1022</sup> See Sprint Corp., *The Best Value in Wireless*, <http://www.sprint.com/landings/datashare/index.html?INTNAV=ATG:HE:UnlimitedPlan&view=unlimitedtalk> (visited Nov. 4, 2014). Sprint's terms note that they may limit or reduce throughput due to network congestion. *Id.*

<sup>1023</sup> See T-Mobile US Inc., *Simple Choice Plan*, <http://www.t-mobile.com/cell-phone-plans/family.html#tab-navigation> (visited Nov. 4, 2014). Under T-Mobile's terms, once the user exceeds a certain specified data allotment, data speeds are reduced. *Id.*

<sup>1024</sup> Alina Selyukh, *Internet Users Often Unclear about Their Data Use: U.S. WatchDog*, REUTERS, July 29, 2014, at <http://www.reuters.com/article/2014/07/29/us-usa-internet-data-idUSKBN0FY1FI20140729> (visited Aug. 18, 2014).

<sup>1025</sup> Open Internet Advisory Committee, Economic Impacts of Open Internet Frameworks Working Group, Federal Communications Commission, *Policy Issues in Data Caps and Usage-Based Pricing*, released Aug. 20, 2013, at 14-16.

particularly data-intensive firms. For example, in 2012, a Sony executive suggested that the company was not introducing a subscription OVD service until there was more clarity on Comcast's bandwidth cap policies.<sup>1026</sup> In addition, the same number of heavy users who may comprise a small fraction of an ISP's subscribers may comprise a relatively high fraction of an OVD's subscribers.<sup>1027</sup> OVDs state that any improvements they make in more efficiently and effectively delivering their services have little to do with UBP. They also claim that OVDs provide value to Internet service subscribers but that ISPs who are also MVPDs may discriminate against OVD applications they view as a threat to their core business.<sup>1028</sup> According to SNL Kagan, many ISPs that are also MVPDs increasingly view Internet service as their core business and have responded to OVDs by increasing Internet speeds.<sup>1029</sup>

### c. Recent Entry and Exit

268. The OVD marketplace continues to expand and change. Entrants often use new technologies and experiment with a variety of business models.<sup>1030</sup> OVDs are constantly entering and exiting the marketplace and changing the services and programming they offer, in response to viewer demand as well as external factors, such as the ability to access content and reach consumers.<sup>1031</sup>

269. *Entry.* Several OVDs launched during 2013 and the first half of 2014. DreamWorks Animation SKG and Technicolor jointly launched the M-Go movie and TV EST and rental service in January 2013.<sup>1032</sup> In April 2013, Warner Brothers Studios launched the Warner Archive Instant subscription service.<sup>1033</sup> Retailer Target Corporation launched the "Target Ticket" EST and rental service in September 2013.<sup>1034</sup> In January 2014, the World Wrestling Federation launched a subscription OVD service that includes access to WWE's pay-per-view events as well as older WWE programming.<sup>1035</sup> Disney Studios launched the Disney Movies Anywhere movie EST service in February 2014.<sup>1036</sup> In June

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<sup>1026</sup> Mario Aguilar, *Sony Stalls Its Streaming TV Service Because Cable Controls Data*, GIZMODO, May 2, 2012, <http://gizmodo.com/5906769/sonys-stalls-its-streaming-tv-service-because-cable-controls-data>. In January 2014, however, the CEO of Sony Computer Equipment announced that the company would introduce a "virtual cable" OVD. David Cohen, *Sony to Introduce Cloud-Based TV, Streaming Game Services*, VARIETY, Jan. 7, 2014. See *infra*, ¶¶ 271-72.

<sup>1027</sup> Open Internet Advisory Committee, Economic Impacts of Open Internet Frameworks Working Group, Federal Communications Commission, *Policy Issues in Data Caps and Usage-Based Pricing*, released Aug. 20, 2013, at 14, 17-18.

<sup>1028</sup> Open Internet Advisory Committee, Economic Impacts of Open Internet Frameworks Working Group, Federal Communications Commission, *Policy Issues in Data Caps and Usage-Based Pricing*, released Aug. 20, 2013, at 18.

<sup>1029</sup> SNL Kagan, *Cable TV Investor: Deals and Finance*, July 31, 2014, at 1-5; and Ian Olgeirson and Chris Young, *2014 Broadband Speed Forecast Looks Beyond 1 Gbps, Tiering Estimates Tilt Toward Premium*, MULTICHANNEL MARKET TRENDS, SNL KAGAN, July 24, 2014.

<sup>1030</sup> Comcast Comments at 3; Google Reply at 1.

<sup>1031</sup> Public Knowledge Comments at 4.

<sup>1032</sup> Seth Shaver, *Profile: M-GO*, SNL KAGAN, May 15, 2013.

<sup>1033</sup> David Kehr, *A New Stream for the Thirsty*, N.Y. TIMES, May 26, 2013.

<sup>1034</sup> Target Corporation, *Target Introduces Target Ticket, A Family-Friendly Digital Video Service* (press release), Sept. 25, 2013.

<sup>1035</sup> Joe Flint, *WWE's Online Network Gets Off to a Strong Start*, L.A. TIMES, Apr. 8, 2014.

<sup>1036</sup> The Walt Disney Studios, *Watch Disney, Pixar, and Marvel Movies with Disney Movies Anywhere* (press release), Feb. 25, 2014.

2014, ABC News reached an agreement with Apple TV to launch a live and on demand OVD service from the ABC broadcast network that does not require an MVPD subscription.<sup>1037</sup>

270. In addition, several firms have announced plans to enter the OVD marketplace. In January 2014, the CEO of Sony Computer Equipment announced that the company would introduce a “virtual cable” OVD, after Sony had reportedly reached an agreement with Viacom to carry its programming networks on the proposed service.<sup>1038</sup> Another Sony executive stated that he believed Sony’s relationships with studios through its EST/rental and advertising-supported OVDs (PlayStation 4 store and Crackle), coupled with its installed base of Internet-enabled devices, would help it succeed.<sup>1039</sup> In November 2014, Sony announced a cloud-based TV service, called PlayStation Vue, that enables viewing of approximately 75 channels.<sup>1040</sup> In March 2014, The Walt Disney Company and DISH Network reached an agreement giving DISH Network the rights to stream live and video on demand Disney content as part of a subscription OVD service.<sup>1041</sup> In April 2014, the Chernin Group, founded by former president of News Corporation Peter Chernin, formed a joint venture with AT&T Inc. to invest in subscription and advertising-supported OVD services.<sup>1042</sup> AT&T states that since the last report, competition in the market for the delivery of video programming has continued to grow, providing new opportunities for OVDs, greater diversity in the delivery of video programming, expanded investment in broadband, and more competitor prices and packages.<sup>1043</sup> In October 2014, CBS announced the launch of *CBS All Access*, a new digital subscription service for \$5.99 per month. The service offers subscribers episodes from the current season, previous seasons, and classic shows on demand, as well as the ability to stream local CBS television stations live in 14 of the largest U.S. markets. *CBS All Access* is available on mobile devices through the CBS App or iOS and Android.<sup>1044</sup> Also in October 2014, HBO announced a stand-alone HBO streaming service in 2015.<sup>1045</sup> On February 9, 2015, DISH Network launched Sling TV, a live online video service, offering networks including ESPN, ESPN2, TNT, TBS, Food Network,

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<sup>1037</sup> Todd Spangler, *ABC Launches Apple TV News Channel, with Live Broadcasts and Some Local News*, VARIETY, June 24, 2014. ABC News, *ABC News Launches on Apple TV* (press release), June 24, 2014.

<sup>1038</sup> David Cohen, *Sony to Introduce Cloud-Based TV, Streaming Game Services*, VARIETY, Jan. 7, 2014. Brian Stelter, *Sony and Viacom Reach Tentative Deal to Stream Cable Channels*, N.Y. TIMES, Aug. 15, 2013. See also NCTA Comments at 13.

<sup>1039</sup> Tim Bradshaw and Paul Taylor, *CES 2014: Sony Plans to Launch a “Cloud” TV Service in the U.S.*, FINANCIAL TIMES, Jan. 8, 2014.

<sup>1040</sup> In November 2014, PlayStation Vue will begin an invite-only beta for select PlayStation 4 and PlayStation 3 owners, with a phased rollout starting in New York followed later by Chicago, Philadelphia, and Los Angeles. The service will also become available on iPad and later on more Sony and non-Sony devices. Sony announced that PlayStation Vue will launch commercially during the first quarter of 2015. Pricing and packaging details will be revealed at the commercial launch. Sony Corp. of America, *Sony Network Entertainment International And Sony Computer Entertainment Unveil PlayStation™Vue, A New Cloud-Based TV Service That Pioneers The Future Of Television* (press release), Nov. 13, 2014.

<sup>1041</sup> Dish Network Corporation, *The Walt Disney Company and Dish Network Sign Groundbreaking Long-Term, Wide-Ranging Agreement* (press release), March 3, 2014. See also Todd Spangler, *Disney and Dish Ink Long-Term Deal, Giving Satcaster Internet-Streaming Rights to Live TV*, L.A. TIMES, Mar. 3, 2014. WGAW finds this news encouraging. WGAW Comments at 26.

<sup>1042</sup> AT&T Inc., *The Chernin Group and AT&T Create New Venture to Acquire, Invest in and Launch Online Video Businesses* (press release), Apr. 22, 2014.

<sup>1043</sup> AT&T Comments at 1.

<sup>1044</sup> CBS Corp., *CBS Brings Programming Direct to Consumers with New Multi-Platform Digital Subscription Service* (press release), Oct. 16, 2014.

<sup>1045</sup> Time Warner Inc., *HBO Chairman and CEO Richard Piepler Announces HBO to Offer a Stand-Alone HBO Streaming Service in 2015* (press release), Oct. 15, 2014.

HGTV, Cartoon Network, and the Disney Channel, for \$20 a month.<sup>1046</sup> Sling TV is available on Amazon Fire TV, Amazon Fire TV Stick, Roku, Xbox One, iOS, Android, Mac, PC, Google Nexus Player, and select LG and Samsung Smart TVs.

271. *Exit.* Few existing OVDs have officially exited since our last report. Toys R Us discontinued its movie EST and rental service in February 2014.<sup>1047</sup> Intel, which in February 2013 announced that it planned to offer an online video service called OnCue, abandoned the effort in December 2013.<sup>1048</sup> In January 2014, Intel reached an agreement to sell its OnCue service to Verizon.<sup>1049</sup>

272. Aereo, an Internet television service that streamed live and recorded broadcast television to smartphones, tablets, and Internet-connected TVs<sup>1050</sup> suspended its service in mid-2014 after it lost its legal battle with the broadcasting industry.<sup>1051</sup> In 2012, broadcasters sued Aereo for violating the 1976 Copyright Act and the 1992 Cable Act, by failing to negotiate with them for carriage of their signals.<sup>1052</sup> The case was ultimately appealed to the Supreme Court, and in June 2014, the Court held that Aereo was in violation of the 1976 Copyright Act.<sup>1053</sup> The Court found that Aereo performed broadcasters' works publicly within the meaning of the Transmit Clause of the Copyright Act, and therefore infringed on the

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<sup>1046</sup> See DISH Network, *Sling TV to Launch Live, Over-the-Top Service for \$20 Per Month; Watch on TVs, Tablets, Computers, Smartphones, Game Consoles* (press release), Jan. 5, 2015, <http://about.dish.com/press-release/products-and-services/sling-tv-launch-live-over-top-service-20-month-watch-tvs-tablets>. See also Tim Moynihan, *Sling TV Launches Today, Streaming Tons of Shows at Basic-Cable Prices*, Feb. 9, 2015, <http://www.wired.com/2015/02/sling-tv-launches-today-streaming-expanded-cable-shows-basic-cable-prices/> (visited March 12, 2015).

<sup>1047</sup> Toys R Us, Inc., *Toys R Us Movies, We're Sorry, Toys "R" Us Movies Has Been Discontinued*, <http://www.toysrus.com/shop/index.jsp?categoryId=13311917> (visited April 22, 2014).

<sup>1048</sup> Joel Paczkowski, *Yes, Intel is Building a Web TV Service (A Box, Too)*, ALLTHINGS.D, Feb. 12, 2013, <http://allthingsd.com/20130212/yes-intel-is-building-a-web-tv-service/> (visited June 25, 2014). Ina Fried, *Brian Krzanich on Why He Pulled the Plug on Intel's TV Dreams*, RECODE, Jan. 2, 2014, <http://recode.net/2014/01/02/brian-krzanich-on-why-he-pulled-the-plug-on-intels-tv-dreams/> (visited June 25, 2014).

<sup>1049</sup> Dawn Chmielewski, *Verizon to Buy Intel's OnCue*, L.A. TIMES, Jan. 22, 2014. See also WGAW Comments at 26.

<sup>1050</sup> *15<sup>th</sup> Report*, 28 FCC Rcd at 10625-26, ¶ 266.

<sup>1051</sup> Aereo, Inc., *A Letter to Our Consumers*, <https://www.aereo.com/> (visited June 30, 2014).

<sup>1052</sup> In March 2012, ABC and WNET, both broadcast television station owners in New York City, as well as other content and broadcast operators, sought an injunction barring Aereo from transmitting broadcast television programs to its subscribers while programs were airing on broadcast television. Complaint, *Am. Broad. Cos., Inc. v. Aereo, Inc.*, No. 12 Civ. 1540 (filed Mar. 1, 2012, S.D.N.Y.); Complaint, *WNET v. Aereo, Inc.*, No. 12 Civ. 1543 (filed Mar. 1, 2012, S.D.N.Y.). On July 11, 2012, the United States District Court for the Southern District of New York denied the plaintiffs' motion for a preliminary injunction. *Am. Broad Cos, Inc. v. Aereo, Inc.*, 874 F. Supp. 2d 373 (S.D.N.Y. 2012). The plaintiffs appealed to the Second Circuit. On April 1, 2013, the Second Circuit upheld the district court's decision. *WNET v. Aereo, Inc.*, 712 F.3d 676 (2d Cir. 2013). On April 15, 2013, the plaintiffs responded by asking the Second Circuit for a rehearing *en banc*, and on July 16, 2013 the Second Circuit denied the plaintiffs' request for rehearing. *WNET v Aereo, Inc.*, 722 F.3d 500 (2nd Cir. 2013). At the time of the Supreme Court decision, Aereo was facing broadcaster lawsuits in several jurisdictions, including Massachusetts and Utah. See Jordan Crook, *Aereo Loses in Supreme Court, Deemed Illegal*, TechCrunch, June 25, 2014, at <http://techcrunch.com/2014/06/25/aereo-loses-in-supreme-court-deemed-illegal/> (visited Aug. 18, 2014). With the Supreme Court's *Aereo* decision, FilmOn, which was providing a similar service as Aereo, faces an uncertain legal future. Content owners, including FOX and NBCUniversal, among others sued and received a preliminary injunction against FilmOn in all jurisdictions – except the Second Circuit – prior to the Supreme Court's ruling. See Michael D. Berg, *The Two Court Rulings Rocking Aereo, FilmOn*, TVNEWSCHECK, Sept. 27, 2013, at <http://www.tvnewscheck.com/article/70776/the-two-court-rulings-rocking-aereo-filmon> (visited Aug. 18, 2014).

<sup>1053</sup> *Am. Broad. Cos., Inc. v. Aereo, Inc.*, No. 13-461, slip op. 1, 1 (U.S. June 25, 2014).

rights of broadcasters under that statute.<sup>1054</sup> The Supreme Court rejected Aereo's assertion that it is an equipment provider, finding instead that Aereo provides a service analogous to that provided by cable companies – the same service that Congress amended the Copyright Act in 1976 to reach.<sup>1055</sup> Aereo picked up over-the-air signals using a collection of dime-sized antennas and offered a cloud-based DVR service. Prior to suspending service, Aereo operated in 11 cities across the United States,<sup>1056</sup> charging subscribers \$8 or \$12 per month.<sup>1057</sup> NAB argues that broadcasters must continue to have the right to negotiate for compensation from OVDs, thus enabling local stations to make the substantial investments needed to maintain high-quality, costly programming, including news, and to enhance their HD, multicast, and other current and future service offerings that will benefit consumers.<sup>1058</sup> On November 21, 2014, Aereo filed for Chapter 11 bankruptcy reorganization in the Bankruptcy Court for the Southern District of New York.<sup>1059</sup>

273. Redbox Instant, an EST and rental service, launched a subscription service in March 2013 for \$6 a month. It is primarily focused on movies.<sup>1060</sup> For an extra \$2 per month, subscribers can rent four DVDs from Redbox's kiosks.<sup>1061</sup> Throughout 2013, Redbox Instant service announced that its service had become available on a number of devices, including the Roku streaming media player (June 2013), the Sony PlayStation 3 game console (October 2013)<sup>1062</sup> and the Sony Playstation 4, Microsoft Xbox One game consoles, and Nokia Lumia Windows Phone 8 (November 2013).<sup>1063</sup> However, the Redbox Instant by Verizon streaming service was shut down on October 7, 2014.<sup>1064</sup>

### 3. Business Models and Competitive Strategies

274. Another element of our analysis of OVD competition is an examination of the business models and competitive strategies of these entities. The OVD industry is evolving, and no single business

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<sup>1054</sup> *Id.* at 11-15, 17-18.

<sup>1055</sup> *Id.* at 7-10.

<sup>1056</sup> Anick Jesdanun, *What's Next for Aereo After Supreme Court Ruling?*, ASSOCIATED PRESS, June 25, 2014.

<sup>1057</sup> Sarah Barry James, *A More Broadcaster-Friendly Boxee*, SNL KAGAN, Oct. 18, 2012. In May 2013, Aereo announced a new pricing structure that starts with a base plan of \$8 a month, giving consumers access to its cloud-based antenna/DVR technology and 20 hours of DVR storage. For an additional \$4 a month, consumers could receive 60 hours of DVR storage. See Aereo, *Aereo Unveils a New, Simpler Pricing Structure for Consumers* (press release), May 13, 2013.

<sup>1058</sup> NAB Comments at 6-7.

<sup>1059</sup> *In re Aereo, Inc.*, No. 14-13200, U.S. Bankruptcy Court, Southern District of New York (Manhattan).

<sup>1060</sup> Jim Rossman, *Netflix, Hulu, or Amazon: Which Service is Right for You?*, THE DALLAS MORNING NEWS, Oct. 25, 2013 at D2.

<sup>1061</sup> Redbox Instant by Verizon, *Redbox Instant by Verizon Arrives on Roku* (press release), Aug. 5, 2013 ("Redbox Instant Roku Press Release").

<sup>1062</sup> Redbox Instant by Verizon, *Redbox Instant by Verizon to Launch on Roku This Summer* (press release), June 6, 2013. To access the service, Roku users need to visit the Roku channel store. Redbox Instant Roku Press Release. See also Redbox Instant by Verizon, *Redbox Instant by Verizon Arrives on PlayStation 3* (press release), Oct. 29, 2013.

<sup>1063</sup> Redbox Instant by Verizon, *Redbox Instant by Verizon Coming to the Playstation 4 System at Launch* (press release), Nov. 7, 2013; Redbox Instant by Verizon, *Redbox Instant by Verizon Announces Availability on Xbox One* (press release), Nov. 8, 2013; Redbox Instant by Verizon, *Redbox Instant by Verizon Arrives on Nokia Lumia Windows Phone 8 Devices* (press release), Nov. 22, 2013.

<sup>1064</sup> See Redbox Instant by Verizon, *Important Shutdown Notice*, <http://about.redboxinstant.com/news> (visited October 10, 2014).

strategy has emerged as the dominant model.<sup>1065</sup> In this section, we provide an overview of the current business models, and competitive strategies of a sample of OVDs, comparing prices and non-price product features. We then discuss OVD competition generally in terms of non-price rivalry.

**a. Price Rivalry**

275. Unlike the MVPD or broadcasting industries, the OVD industry does not have a single revenue model. Also, unlike MVPDs, which generally compete to be the sole provider for a consumer, a single customer often uses or subscribes to multiple OVDs based on the content offered and the prices charged. Depending on the OVD, consumers access programming in several ways, including: (1) via electronic sell-through; (2) through an on-demand rental service; (3) through a subscription service, with or without advertising; or (4) for free, usually with advertising. Several OVDs offer multiple options.

276. *Electronic Sell-Through.* Studios encourage sales by routinely making movies available for digital purchase two weeks before they are available on DVD and Blu-ray discs because selling a movie is three times more profitable than renting one.<sup>1066</sup> EST services face issues resulting from the lack of interoperability among devices.<sup>1067</sup> Movies purchased from one OVD are not necessarily viewable on all of a consumer's devices. For example, movies purchased from Apple's iTunes will not play on non-Apple devices, and movies purchased from Amazon or CinemaNow will not play on Apple devices.<sup>1068</sup> On the other hand, Apple's vertical integration of its iTunes service, its iOS operating system, and Apple devices enable users to seamlessly share videos with iPhones, iPads, and Apple TVs.<sup>1069</sup>

277. To address the lack of interoperability, in 2010, OVDs, studios, retailers, and other entities formed the Digital Entertainment Content Ecosystem ("DECE") to develop UltraViolet, a cloud-based storage system that enables consumers to watch movies and television programs across multiple devices.<sup>1070</sup> Before the advent of cloud-based storage, the hard drives of consumers' devices limited their purchases.<sup>1071</sup> Warner Brothers' Flixster, and Sony Picture's and Universal's dedicated UltraViolet websites allow UltraViolet users to access titles on a range of Android/iOS devices, as well as PCs and Macs.<sup>1072</sup> UltraViolet has partnerships with several EST services, including Best Buy's CinemaNow and Walmart's Vudu, but lacks ties to iTunes.<sup>1073</sup> Neither Walt Disney Studios nor Apple participated in UltraViolet.<sup>1074</sup> Through the Disney Movies Anywhere OVD, which Disney launched in February 2014, consumers can purchase copies of movies from the Disney Studio using their iTunes account.<sup>1075</sup> Purchasing digital copies of movies and television programs, unlike DVDs and Blu-ray discs, does not necessarily mean that buyers will always be able to view the programs.<sup>1076</sup> In November 2013, when

<sup>1065</sup> See 14<sup>th</sup> Report, 27 FCC Rcd at 8738-39, ¶¶ 286-89.

<sup>1066</sup> Brooks Barnes, *Disney Throws Open the Gates to Its Own Digital Movie Service*, THE NEW YORK TIMES, Feb. 26, 2014.

<sup>1067</sup> SNL Kagan, *The State of Online Video Delivery*, 2013 Edition, at 9.

<sup>1068</sup> SNL Kagan, *The State of Online Video Delivery*, 2012 Edition, at 9.

<sup>1069</sup> *Id.* at 9.

<sup>1070</sup> Digital Entertainment Content Ecosystem LLC, *Digital Entertainment Content Ecosystem Unveils UltraViolet Brand* (press release), July 20, 2010.

<sup>1071</sup> Deanna Myers, *Cloud Technology, Early Windows Boost Digital Sales*, SNL KAGAN, Jan. 10, 2014.

<sup>1072</sup> Digital Entertainment Content Ecosystem LLC, *UltraViolet Attracts More Than 750,000 Households in First Three Months* (press release), Jan. 10, 2012.

<sup>1073</sup> Brooke Barnes, *Disney Throws Open the Gates to Its Own Digital Movie Service*, N.Y. TIMES, Feb. 26, 2014.

<sup>1074</sup> Debra Kaufman, *UltraViolet: Turf War Puts Bucks in Flux*, DAILY VARIETY, Jan. 11, 2012.

<sup>1075</sup> Brooke Barnes, *Disney Throws Open the Gates to Its Own Digital Movie Service*, N.Y. TIMES, Feb. 26, 2014.

<sup>1076</sup> Vince Horiuchi, *What You Buy from iTunes Isn't Really Yours*, THE SALT LAKE TRIBUNE, Nov. 11, 2013.

Disney was renegotiating its licensing agreements with Apple and Amazon, the parties removed copies of some Disney movies from the services' cloud storage and customers who previously purchased these movies no longer had access to them.

278. Apple's iTunes, Amazon's Prime Instant Video, and Wal-Mart's Vudu offer the largest EST catalogs, but most major providers offer the most recent and popular movies and television series that are in high demand from consumers.<sup>1077</sup> Prices are roughly the same across services, with newer HD releases the most expensive. However, studios may tailor different features in different formats for different retailers.<sup>1078</sup> For example, in October 2013, Vudu announced a partnership with Sony Pictures Entertainment to offer extra features on movies, similar to those available on DVDs and Blu-ray discs. Similarly, Amazon uses its IMDb movie database to make movie trivia and actors' biographies available to consumers, and Apple Inc. includes iTunes extras for computers.

**Table 24: Select OVD EST Services<sup>1079</sup>**

	CinemaNow (Best Buy)	Vudu (Wal-Mart)	iTunes (Apple)	Amazon Instant Video	Xbox Live Marketplace (Microsoft)	PlayStation Store (Sony)	Sony Video Unlimited (Sony)	YouTube (Google)	Google Play	Redbox Instant (Verizon)
Price per Movie Purchase	\$9.99-\$19.99	\$9.99-\$14.99	\$4.99-\$19.99	\$4.99-\$14.99	\$17.00-\$20.00	\$9.99-\$17.99	\$12.99-\$14.99	\$9.99-\$19.99	\$9.99-\$14.99	\$9.99-\$19.99
Price Per TV Purchase	\$1.99-\$2.99	\$1.99-\$3.99	\$1.99-\$2.99	\$0.99-\$2.99	\$2.00-\$3.00	\$1.99-\$2.99	\$1.99-\$2.99	\$1.99-\$2.99	\$1.99-\$2.99	N/A
No. of TV Seasons	355	3,172	N/A	13,397	N/A	1,603	N/A	N/A	N/A	N/A
No. of Movies	7,917	18,259	20,000	56,618	N/A	7,237	N/A	N/A	N/A	N/A
HD Service	Yes (720p)	Yes (1080p)	Yes (720p)	Yes (720p)	Yes (1080p)	Yes (1080p)	Yes (1080p)	Yes (720p)	Yes (720p and 1080p)	Yes (720p)
Devices on Which OVD Can Be Accessed	Devices with Android (Google) operating system, game consoles, Smart TVs, Blu-Ray players, streaming media players	Devices with iOS (Apple) operating system, game consoles, Smart TVs, Blu-Ray players, streaming media players	Devices with iOS (Apple) operating system, Apple TV streaming player	Devices with iOS (Apple) and Android (Google) operating systems, game consoles, Smart TVs, Blu-Ray players, streaming media players	Devices with Windows 8 operating systems (Microsoft), Windows Phone 8, Xbox One, Xbox 360	PlayStation game consoles (Sony)	PlayStation game consoles (Sony), PCs, Sony tablets, Xperia smartphones (Sony)	Devices with iOS (Apple) and Android (Google) operating systems, consoles, Smart TVs, Blu-Ray players, streaming media players	Devices with Android (Google) operating system, Google TV streaming player	Devices with iOS (Apple) and Android (Google) operating systems, game consoles, Smart TVs, Blu-Ray players, streaming media players
Launch Year (of OVD EST service)	1999	2004	2005	2006	2006	2008	2010	2010	2012	2013

279. *Rental.* Rental, or online VOD services, allow consumers to stream or download content from a central source to a PC, set-top box, or other device. Viewers can then view the content as often as they wish within a defined period, for instance 24 hours. People tend to watch less content on a rental

<sup>1077</sup> SNL Kagan, *The State of Online Video Delivery*, 2013 Edition, at 9. Seth Shafer, *State of OTT Video Services: Electronic Sell-Through*, SNL KAGAN, Oct. 21, 2013.

<sup>1078</sup> Ryan Nakashima, *Sony Hopes Sharable Clips, Extras Aid Movie Buying*, THE ASSOCIATED PRESS, Oct. 23, 2103.

<sup>1079</sup> SNL Kagan, *The State of Online Video Delivery*, 2013 Edition, at 10 (estimates as of June 2013); SNL Kagan, *Selected OTT Aggregators* (chart), March 24, 2014; Google, Inc., *Google Play Store*, <https://play.google.com/store?hl=en> (visited Aug. 20, 2014). See also *supra*, Sec. III.C.2. For this chart, the number of TV seasons equals the total number of television shows multiplied by the number of seasons per television series offered. Redbox Instant by Verizon does not sell television programs. iTunes does not provide its television programming by seasons but its catalog contains 90,000 television episodes as of July 2013. See SNL Kagan, *The State of Online Video Delivery*, 2013 Edition, at 10 (estimates as of June 2013).

basis than on a subscription basis, given the requirement to pay for each title. Prices for rentals are generally consistent among OVDs, ranging from free for promotional videos or older titles to \$6.00 for new releases. As of 2014, no major OVD offers television programs for rent but instead focus exclusively on movies.<sup>1080</sup> In contrast to streaming subscription services, major studios and distributors typically make their movies available to all rental OVD services, so there is little difference among rental OVDs in this respect.<sup>1081</sup> In addition, the total library size for rental OVDs is less important than it is for subscription OVDs, because customers must pay for each movie watched.

**Table 25: Select Rental OVD Services<sup>1082</sup>**

	CinemaNow (Best Buy)	Vudu (Wal-Mart)	iTunes (Apple)	Amazon Instant Video	Xbox Live Marketplace (Microsoft)	PlayStation Store (Sony)	Sony Video Unlimited (Sony)	YouTube (Google)	Google Play	Redbox Instant (Verizon)
Price per Movie Purchase	\$2.99-\$4.99	\$2.99-\$5.99	\$1.99-\$4.99	\$1.99-\$4.99	\$3.00-\$6.00	\$0.99-\$5.99	\$0.99-\$5.99	\$1.99-\$4.99	\$2.99-\$4.99	\$2.99-\$4.99
No. of Movies	2,767	18,259	20,000	53,907	N/A	4,096	N/A	N/A	N/A	N/A
HD Service	Yes (720p)	Yes (1080p)	Yes (720p)	Yes (720p)	Yes (1080p)	Yes (1080p)	Yes (1080p)	Yes (720p)	Yes (720p and 1080p)	Yes (720p)
Devices on Which OVD Can Be Accessed	Devices with Android (Google) operating system, game consoles, Smart TVs, Blu-Ray players, streaming media players	Devices with iOS (Apple) operating system, game consoles, Smart TVs, Blu-Ray players, streaming media players	Devices with iOS (Apple) operating system, Apple TV streaming player	Devices with iOS (Apple) and Android (Google) operating systems, game consoles, Smart TVs, Blu-Ray players, streaming media players	Devices with Windows 8 operating system (Microsoft), Windows Phone 8 (Microsoft), Xbox One, Xbox 360 (Microsoft)	PlayStation game consoles (Sony)	PlayStation game consoles (Sony), PCs, Sony tablets, Xperia smartphones (Sony)	Devices with iOS (Apple) and Android (Google) operating systems, consoles, Smart TVs, Blu-Ray players, streaming media players	Devices with Android (Google) operating system, Google TV streaming player	Devices with iOS (Apple) and Android (Google) operating systems, game consoles, Smart TVs, Blu-Ray players, streaming media players
Launch Year (of OVD Rental service)	1999	2004	2005	2006	2006	2008	2010	2010	2012	2013

280. *Subscription.* Subscription OVDs charge users monthly or annual fees for the right to stream content. The general entertainment subscription OVDs negotiate with studios, cable networks, and broadcast networks to license distribution rights for movies and television series. Among these subscription services shown in Table 26, only Hulu Plus includes advertising. Subscription OVDs

<sup>1080</sup> In August 2011, Apple suspended rentals of television episodes. Brian Stelter, *Apple Ends Its TV Episode Rental Service*, N.Y. TIMES, Aug. 26, 2011, <http://www.nytimes.com/2011/08/27/technology/apple-ends-its-tv-episode-rental-service.html> (visited Nov. 8, 2012). See also Seth Shafer, *State of OTT Video Services: Rental*, SNL KAGAN, June 17, 2013. In contrast, MVPDs are making an increasing amount of television episodes available via video on demand at no additional charge to subscribers. For example, in May 2014, Comcast and Time Warner Inc.'s Turner Broadcasting reached an agreement to make complete current and past seasons of some series, *i.e.*, "stacking rights" available on Comcast's video services, including video on demand service. Deanna Myers, *Stacking Deal for TVE/VOD at Turner-Comcast*, SNL KAGAN, May 29, 2014. NCTA states that increasingly, OVDs and MVPDs are competing for content. NCTA Comments at 12.

<sup>1081</sup> SNL Kagan, *The State of Online Video Delivery*, 2014 Edition, at 8.

<sup>1082</sup> SNL Kagan, *The State of Online Video Delivery*, 2013 Edition, at 10 (estimates as of June 2013); SNL Kagan, *Selected OTT Aggregators* (chart), March 24, 2014; Google, Inc., *Google Play Store*, <https://play.google.com/store?hl=en> (visited Aug. 20, 2014). See also *supra*, Section III.C.2.

negotiate for older television series and the rights to movie studios' entire film libraries.<sup>1083</sup> Some, particularly Hulu Plus, also provide in-season next-day access to some television series (similar to MVPDs' VOD services).<sup>1084</sup> Licensing agreements may be exclusive to OVDs or non-exclusive, depending on the distribution window.<sup>1085</sup> Movie and television studios are cautious in licensing content to subscription services, for fear of cannibalizing revenues from DVD and Blu-ray sales.<sup>1086</sup> Thus, many new movie releases are not available via subscription OVDs, or are subject to 28 to 90 day delay windows.<sup>1087</sup>

**Table 26: Select Subscription OVD Services: General<sup>1088</sup>**

	<b>Netflix</b>	<b>Hulu Plus (ABC, FOX, NBC)</b>	<b>Amazon Prime Instant Video</b>	<b>YouTube (Google)</b>
Price per Month	\$7.99 (current members) \$8.99 (new members) - \$11.99 <sup>1089</sup>	\$7.99	N/A	\$0.99 - \$19.99 per channel

<sup>1083</sup> Seth Shafer, *State of OTT Video Services: Subscription*, SNL KAGAN, June 6, 2013. MVPDs are doing this as well. For example in May 2014 Comcast and Time Warner Inc.'s Turner Broadcasting reached an agreement to make complete current and past seasons of some series, i.e., "stacking rights" available on Comcast's video services, including video on demand service. Deanna Myers, *Stacking Deal for TVE/VOD at Turner-Comcast*, SNL KAGAN, May 29, 2014. Netflix has threatened to pay content owners who make such deals with MVPDs substantially less for stacking rights, claiming that the availability of past seasons of programs on MVPDs diminishes their value to OVDs. Nonetheless, the Turner Network division may be willing to risk earning less from VODs, if providing stacking rights enables MVPDs to retain subscribers, since it earn more revenue overall from MVPDs. *Id.*

<sup>1084</sup> Sergio Martinez, *Online TV: Netflix, Amazon Prime and Hulu Plus Compete*, THE STATE PRESS: ARIZONA STATE UNIVERSITY, Jan. 23, 2014.

<sup>1085</sup> For example, in December 2012, Netflix and the Walt Disney Company announced a new multi-year agreement making Netflix the exclusive U.S. subscription television service for first-run live-action and animated movies from the Walt Disney Studios. Netflix Inc., *Netflix and the Walt Disney Studios Announce Multi-Year Premium Pay TV Window Agreement in the United States* (press release), Dec. 4, 2012. The new releases will be available beginning 2016, when Disney's agreement with the premium cable network Starz ends. Netflix is currently allowed to stream Disney's library titles and direct-to-video new releases.

<sup>1086</sup> Seth Shafer, *State of the OTT Video Services: Subscription*, SNL KAGAN, June 6, 2013. Similarly, as subscription, advertising, and licensing revenues for streaming music services have increased, sales of digital albums and songs have decreased. Ananth Baliga, *Sources: Apple Mulling Spotify-like Streaming Service*, UPI, March 24, 2014.

<sup>1087</sup> Seth Shafer, *State of the OTT Video Services: Subscription*, SNL KAGAN, June 6, 2013.

<sup>1088</sup> SNL Kagan, *The State of Online Video Delivery*, 2013 Edition, at 10 (estimates as of June 2013); SNL Kagan, *Selected OTT Aggregators* (chart), March 24, 2014. *See also supra*, Sec. III.C.2.

<sup>1089</sup> Netflix has two plans: \$7.99 - \$8.99/month for up to two simultaneous users, and an \$11.99/month family plan that allows four simultaneous users. Netflix, Inc., U.S. & Canada Blog, *A Quick Update on Our Streaming Plans and Prices*, May 8, 2014, <http://blog.netflix.com/> (visited June 24, 2014).

Price Per Year	\$107.88	\$95.88	\$99.00 <sup>1090</sup>	Varies
No. of TV Seasons	4,571	2,470	2,484	54 video channels
No. of Movies	8,839	4,082	4,695	54 video channels
Advertisements	No	Yes	No	No <sup>1091</sup>
HD Service	Yes (1080p)	Yes (720p)	Yes (720p)	Varies
Devices on Which OVD Can Be Accessed	devices with iOS (Apple) and Android (Google) operating systems, game consoles, smart TVs, Blu-ray players, streaming media players	devices with iOS (Apple) and Android (Google) operating systems, game consoles, smart TVs, Blu-ray players, streaming media players	devices with iOS (Apple) and Android (Google) operating systems, game consoles, smart TVs, Blu-ray players, streaming media players	devices with iOS (Apple) and Android (Google) operating systems, game consoles, smart TVs, streaming media players
Launch Year (of OVD subscription service)	2007	2010	2011	2013

281. Several major professional sports leagues also offer subscription OVD services for live-viewing of full-length games outside of a game's local television market at various prices.<sup>1092</sup> The games are available for viewing on several devices at various prices. Most include access to regular-season games only. MLB.TV offers a regular service for \$19.99 per month (\$84.99 per baseball season) allowing PC-access to all regular-season games. For \$24.99 per month (\$114.99 per season) viewers can watch baseball games on a variety of devices. For NHL games, subscribers can pay \$9.99 a day or \$169 a season to watch games on a variety of devices. For NBA games, subscribers can pay \$39.99 per season to watch games only on mobile devices, or \$29.95 per month (\$169 per season) to watch games on a variety of devices, including mobile devices, PCs, and Internet-enabled television sets. MLS Live offers access to soccer games for \$14.99 per month (\$59.99 per season) on mobile devices, PCs, and Roku boxes.

<sup>1090</sup> Amazon Prime Instant Video service is included with the Amazon Prime yearly membership. An Amazon Prime membership includes, among other things, free two-day shipping, Prime Music, Prime Photo, Prime Pantry, Kindle Owners Lending Library, and Kindle First. Amazon.com, *Amazon Prime*, [http://www.amazon.com/gp/help/customer/display.html/ref=hp\\_left\\_v4\\_sib?ie=UTF8&nodeId=200444160](http://www.amazon.com/gp/help/customer/display.html/ref=hp_left_v4_sib?ie=UTF8&nodeId=200444160) (visited March 10, 2015). Student memberships cost \$49 per year. Amazon.com, *Help & Customer Service: Amazon Prime and Amazon Student Prime Membership Fee Charges*, <http://www.amazon.com/gp/help/customer/display.html?nodeId=201482600> (visited March 10, 2015).

<sup>1091</sup> YouTube channels currently do not contain advertisements, but channel creators can choose to enable advertisements.

<sup>1092</sup> SNL Kagan, *The State of Online Video Delivery*, 2013 Edition, at 10.

Table 27: Subscription OVD Services: Sports<sup>1093</sup>

	MLB.TV	NHL GameCenterLive	NBA League Pass	MLS Live
Price	\$19.99/month - \$24.99/month or \$84.99/year - \$99.99/year	\$9.99/day or \$169/season	\$39.99/season (mobile only); \$29.95/month or \$169/season (TV, PC, mobile)	\$14.99/month or \$59.99/season
Months in Season	8	9	9	9
HD Service	Yes (MLB Premium only)	No	No	Yes
Devices on Which OVD Can Be Accessed	MLB.TV: personal computers; MLB.TV Premium: over 400 supported devices <sup>1094</sup>	devices with iOS (Apple) and Android (Google) operating systems, PlayStation 4 game console (Sony), Xbox 1 game console (Microsoft), Sony smart TVs and Blu-ray players, Roku and Apple TV streaming media players, Blackberry devices <sup>1095</sup>	Mobile app: devices with iOS (Apple) and Android (Google) operating systems;  Otherwise: devices with iOS (Apple) and Android (Google) operating systems, PlayStation game consoles (Sony), Xbox game consoles (Microsoft), Roku and Apple TV streaming media players,	Personal computers, devices with iOS (Apple) operating systems, Panasonic SmartTVs, Roku streaming media players <sup>1096</sup>

282. *Advertiser-Supported.* Advertising-supported OVDs make their content available by streaming, and incorporate video commercials within the programming. The free advertiser-supported Hulu and TV.com are only available on PCs. Sony's Crackle is available on several devices. The number of movies and TV series available on purely advertising-supported sites is much smaller than the number available on OVDs that directly charge consumers. Portal sites from ABC, CBS, FOX, and NBC, as well as Viacom's cable networks (e.g., Comedy Central and MTV) are also advertiser supported.

<sup>1093</sup> *Id.* at 11 (estimates as of June 2013); SNL Kagan, *The Cord Cutters Guide to Sports Apps*, Internet Media Investor, June 11, 2014. See also *supra*, Sec. III.C.2. Edgar Alvarez, *All Screens Welcome: Watching Sports is Now Easier Than It's Ever Been*, ENGADGET HD, April 2, 2014.

<sup>1094</sup> Major League Baseball, *MLB.TV*, [http://mlb.mlb.com/mlb/subscriptions/index.jsp?c\\_id=mlb](http://mlb.mlb.com/mlb/subscriptions/index.jsp?c_id=mlb) (visited July 2, 2014).

<sup>1095</sup> National Hockey League, *NHL Gamecenter Live: Watch Out-of-Market Games on Your Favorite Devices*, <http://gamecenter.nhl.com/nhlgc/cdsignup.jsp?cmpid=gcl-devices-van-url> (visited July 2, 2014).

<sup>1096</sup> Major League Soccer, *MLS Live: Frequently Asked Video Player Questions*, <http://live.mlssoccer.com/mlsmdl/help.jsp> (July 2, 2014).

**Table 28: Advertiser-Supported OVD Services<sup>1097</sup>**

	<b>Crackle (Sony)</b>	<b>Hulu (ABC, FOX, NBC)</b>	<b>TV.com (CBS)</b>
No. of TV Seasons	100	2,470 <sup>1098</sup>	100
No. of Movies	300	4,082	0
Advertisements	yes	yes	yes
HD Service	no <sup>1099</sup>	no <sup>1100</sup>	no <sup>1101</sup>
Devices on Which OVD Can Be Accessed	devices with iOS (Apple) and Android (Google) operating systems, Kindle Fire (Amazon), PlayStation 4 game console (Sony), Xbox 1 game console (Microsoft), smart TVs, Roku and Apple TV streaming media players	desktop and laptop computers (including Apple)	desktop and laptop computers (including Apple) <sup>1102</sup>
Launch Year (of ad-supported OVD service)	2006 (rebranded as Crackle in 2007)	2008	2008

#### b. Non-Price Rivalry

283. OVDs compete with, and differentiate themselves from one another based on several non-price factors. For consumers, key points of non-price rivalry include the depth of the content library, release dates of content, the availability of original programming, picture quality, the ability to discover available content, and the ability to watch OVDs on a variety of devices. OVDs also differentiate themselves in terms of the amount of advertising the viewer sees. Some OVDs (e.g., Netflix) charge subscription fees and allow subscribers to view programming without advertisements. Other OVD's (e.g., Crackle) charge no subscription fees but intersperse advertisements in programs. An emerging feature is the availability of family-friendly movies. For advertisers, key aspects of non-price rivalry include the quality of the programming (whether association with the programming could enhance or harm a brand), the ability to measure viewership, the size of OVDs' audiences, and the ability to target audiences with relevant advertising.

284. *Consumers.* The on-demand libraries of Netflix, Amazon, Hulu, and other OVDs that license content from studios and networks offer consumers a range of choices from the latest hits to older

<sup>1097</sup> SNL Kagan, *The State of Online Video Delivery*, 2013 Edition, at 10 (estimates as of June 2013); SNL Kagan, *Selected OTT Aggregators* (chart), March 24, 2014.

<sup>1098</sup> The number of TV seasons and movies available listed includes those for Hulu Plus. The purely advertising-supported Hulu site has far viewer television series and movies in its catalog. Ali Choukeir, *The State of Online Video: Ad-Supported*, SNL KAGAN, Sept. 19, 2013.

<sup>1099</sup> Crackle offers programming in 360p and 480p resolution. Sony, Crackle, *FAQ: Video Questions*, [http://www.crackle.com/outreach/faq#video\\_issues](http://www.crackle.com/outreach/faq#video_issues) (visited July 2, 2014).

<sup>1100</sup> HD quality video is available only to Hulu Plus subscribers. Hulu, *Help: Finding Hulu Plus and HD Videos on Hulu.com*, <http://www.hulu.com/support/article/203238> (visited July 2, 2014).

<sup>1101</sup> The TV.com website does not specify whether any programs are available in HD. CBS Interactive, *TV.COM, Video*, <http://www.tv.com/video/> (visited July 2, 3014).

<sup>1102</sup> CBS Interactive, *TV.COM, Video, Watch on Your Computer*, <http://www.tv.com/video/> (visited July 2, 3014).

movies and television programs. WGAW notes that cable and broadcast shows are available through ESTs, subscription OVDs, or network-owned sites, making OVD programming begin to resemble traditional television programming.<sup>1103</sup> Studios, looking to maximize their home video revenues, tend to negotiate non-exclusive EST/rental agreements, similar to their practice for DVD and Blu-ray distribution in retail stores.<sup>1104</sup> Studios are increasingly distributing movies via EST services several weeks before for sale on DVD and Blu-ray discs.<sup>1105</sup> As of 2014, studios make movies available two-four weeks ahead of DVD and Blu-ray discs.<sup>1106</sup> Independent studios may make movies available for electronic sale a month after appearing in theaters.<sup>1107</sup>

285. Subscription OVDs, such as Netflix, make programming available during the same distribution window as the premium cable network (HBO, Showtime, Starz).<sup>1108</sup> Subscription OVDs are differentiated by the depth of their libraries as well as exclusive rights for the subscription window.<sup>1109</sup> They also are making multiple episodes of a television series available, which has led to the phenomenon of “binge viewing.”<sup>1110</sup> A 2013, Netflix-commissioned survey found that among the group of U.S. adults who stream television programs at least once a week, 61 percent watch between two to six episodes in one sitting.<sup>1111</sup> Netflix’s viewing data indicates that the majority of its viewers prefer to have a whole television season available to watch at their own pace.<sup>1112</sup>

286. A number of OVDs are investing in original programming to distinguish themselves from their competition.<sup>1113</sup> Analysts suggest this strategy is a response to the increasing scarcity of exclusive

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<sup>1103</sup> WGAW Comments at 18.

<sup>1104</sup> Marc Graser and Susanne Ault, *Bringing Any to the Many*, VARIETY, March 21, 2010. Warner Brothers, however, experimented with giving iTunes a two-week period of exclusivity to sell the movie *42* in 86 countries where the movie did not appear in theaters. Susanne Ault, *Early Electronic Sell-Through (EST) is a Digital Window Where Top Films are Finding Traction*, VARIETY, Sept. 8, 2013.

<sup>1105</sup> Susanne Ault, *Early Electronic Sell-Through (EST) is a Digital Window Where Top Films are Finding Traction*, VARIETY, Sept. 8, 2013. The integration of studios’ departments responsible for electronic and physical sales has also facilitated the process. *Id.*

<sup>1106</sup> Deanna Myers, *Cloud Technology, Early Windows Boost Digital Sales*, SNL KAGAN, Jan. 10, 2014.

<sup>1107</sup> *Id.*

<sup>1108</sup> Marc Graser and Susanne Ault, *Bringing Any to the Many*, VARIETY, Mar. 21, 2010.

<sup>1109</sup> SNL Kagan, *The State of Online Video Delivery*, 2013 Edition, at 4. WGAW states that Hulu, Netflix and Amazon offer movie and television studios lucrative SVOD (subscription video on demand) licensing deals. Writers now have new outlets to sell to, and many of the original series commissioned by Netflix come from independent producers. WGAW Comments at 3, 7-8.

<sup>1110</sup> Syracuse University professor Robert Thompson coined the term to refer to college students “plow[ing] through” multiple episodes of a television series online in a single episode. See Scott Eidler, *Kids These Days: Few TVs, but Lots of Binge Watching*, WASH. POST, Apr. 10, 2011 (quoting Professor Robert Thompson).

<sup>1111</sup> Netflix, *Netflix Declares Binge Watching is the New Normal* (press release), Dec. 13, 2013. Similarly, a 2014 Comcast survey found that 82 percent of U.S. adults watch two or more television episodes in one sitting, and 55 percent of those binge watchers prefer to watch current season episodes. Given the data, many MVPDs have launched “watchathon” weeks to enable subscribers for “binge” watching of television series and movies via video on demand. See, e.g., Comcast Corp., *Buckle Up TV Fans: Comcast’s Xfinity Watchathon Week is Back and Bigger than Ever; The Biggest TV Binge of the Season’s Hottest TV Shows Kicks off March 31* (press release), Mar. 20, 2014; Verizon FiOS, *Verizon FiOS ON Demand Spring Marathon Features the Industry’s Biggest TV Binge Event to Date; Customers Can #FiOSBinge and Choose From More Than 2,300 Movies, Over 90 Full TV Seasons* (press release), Mar. 25, 2014.

<sup>1112</sup> Netflix, *Netflix Declares Binge Watching is the New Normal* (press release), Dec. 13, 2013.

<sup>1113</sup> *Id.* See also WGAW Comments at 18-19.

content and an attempt to build OVDs' brands.<sup>1114</sup> OVDs use different methods to commission original programming. Amazon commissions pilot episodes of original series, and bases its orders for full series on viewer feedback.<sup>1115</sup> Likewise, Microsoft is experimenting with a variety of programming genres to learn what its core audience of gamers might prefer, but is also seeking to reach consumers interested in using its Xbox gaming console as a device for general entertainment.<sup>1116</sup> Sony, rather than developing a range of shows, is releasing one series to appeal to its core customers, who are primarily interested in using the console to play games.<sup>1117</sup> Netflix also uses data to determine which programs to license.<sup>1118</sup> In developing *House of Cards*, Netflix determined that its subscribers enjoyed the genre, director, and lead actor associated with show.<sup>1119</sup> In addition to commissioning programming through the traditional development process, Hulu pitches ideas for "brand contingent," programs to advertisers, meaning the shows will only get made if advertisers are willing to support them.<sup>1120</sup> Another trend is the availability of family-friendly features and content. In January 2013, Amazon announced that it had commissioned pilots of five original children's programs.<sup>1121</sup> In addition, Target has partnered with Common Sense Media to enable parents to find content suitable for their children on its Target Ticket EST and rental OVD.<sup>1122</sup>

287. The term "discovery" refers to an OVD's ability to identify and highlight content that might be of interest to a consumer in a convenient manner.<sup>1123</sup> Ericsson, a provider of communications technology and services, reports that consumers are substituting recommendation-based navigation for search engines and program guides.<sup>1124</sup> OVDs' discovery screens vary.<sup>1125</sup> For example, Netflix's

<sup>1114</sup> SNL Kagan, *The State of Online Video Delivery*, 2013 Edition, at 2.

<sup>1115</sup> Dave Kendrick, *Original Comedies Coming from Amazon Studios: Your Feedback Decides Which Pilots are Greenlit*, Nofilmschool, Dec. 22, 2012, [http://www.huffingtonpost.com/2012/12/20/amazon-instant-video-pilots-browsers\\_n\\_2338454.html](http://www.huffingtonpost.com/2012/12/20/amazon-instant-video-pilots-browsers_n_2338454.html).

<sup>1116</sup> Janet Tu, *Almost Showtime for Microsoft Xbox*, THE SEATTLE TIMES, April 28, 2014. See also Janet Tu, *New Game for Xbox: Original TV Shows*, THE SEATTLE TIMES, April 8, 2014.

<sup>1117</sup> Chris O'Brien, *Sony Hopes to Generate Buzz for "Powers,"* L.A. TIMES, June 14, 2014. See also Janet Tu, *Almost TV Showtime for Microsoft Xbox*, THE SEATTLE TIMES, April 28, 2014. Analysts speculate that the perception that Sony has catered more to gamers than Microsoft with its consoles is one reason why PlayStation 4 outsold Xbox One by 7 million to 5 million, as of June 2014. Chris O'Brien, *Sony Hopes to Generate Buzz for "Powers,"* L.A. TIMES, June 14, 2014. The program is being produced by Sony's subsidiary, Sony Pictures Entertainment. Chris O'Brien, *Sony Hopes to Generate Buzz for "Powers,"* L.A. TIMES, June 14, 2014.

<sup>1118</sup> David Carr, *Giving Viewers What They Want*, N.Y. TIMES, Feb. 24, 2013.

<sup>1119</sup> Jake Coyle, *Netflix Shuffles the TV Deck with 'House of Cards,'* THE ASSOCIATED PRESS, Jan. 24, 2013.

<sup>1120</sup> Brian Stelter, *Hulu Says Number of Paid Subscribers Has Doubled*, N.Y. TIMES, May 1, 2013.

<sup>1121</sup> Amazon.com, Inc., *Amazon Instant Video Now Available on Nintendo's Wii Console* (press release), Jan. 14, 2013. Amazon.com, Inc., *Prime Instant Video Commissions Its First Children's Pilots for Production* (press release), Jan. 31, 2013.

<sup>1122</sup> Target Corporation, *Target Introduces Target Ticket, A Family-Friendly Digital Video Service* (press release), Sept. 25, 2013.

<sup>1123</sup> Chuck Parker, *Why Discovery is So Hard to Implement; Enabling Technology*, THE ONLINE REPORTER, May 4, 2012.

<sup>1124</sup> Ericsson Consumerlab, *TV and Video: An Analysis of Evolving Consumer Spending Habits*, Aug. 2012, at 9 ("Ericsson 2012 TV and Video White Paper"). A search involves a user looking for something specific and trying to find it. A recommendation involves a service suggesting a movie or television program based on genres, actors, or other features of content a user has viewed in the past. Chuck Parker, *Why Discovery is So Hard to Implement; Enabling Technology*, THE ONLINE REPORTER, May 4, 2012. For example, for each movie or television program, Amazon's site notes "Customers Who Viewed This Item Also Viewed . . ." and suggests a list of similar programs. Amazon.com, *Amazon Instant Video: Mad Men*, <http://www.amazon.com/Dark->

(continued...)

recommendation engine, search capabilities, and social media features aim to match subscribers with content choices that a specific subscriber might enjoy.<sup>1126</sup> In August 2013, Netflix introduced a feature, enabling individual members of a household to create separate profiles; each account can have up to five profiles.<sup>1127</sup> Other services, such as Amazon and iTunes, also offer personalized profiles of the consumers, but each OVD's profile is proprietary.<sup>1128</sup>

288. As the availability of content on OVDs becomes more fragmented, discovering the content becomes more difficult for consumers.<sup>1129</sup> Advertising-supported TV.com and M-Go EST/rental OVD enable consumers to search across OVDs.<sup>1130</sup> The website "canistream.it" enables consumers to search across multiple OVDs to see which movies and television shows are available for viewing and to set up notifications when selected content becomes available.<sup>1131</sup>

289. OVDs vary in their picture quality. For example, none of the major advertiser-supported OVDs offers HD service. Among subscription OVDs, Netflix offers HD service in 1080p, while Hulu Plus and Amazon Prime offer it in 720p. Most major EST and rental OVD services offer HD service; several offer videos in 1080p. In September 2013, Sony launched the Video Unlimited 4K EST/rental service, offering movies and television programs in 4K Ultra HD format on Sony's 4K Ultra HD Media Player and televisions.<sup>1132</sup> The format has four times as many pixels as standard HD and vastly improves the clarity of video on larger screens that measure 60 or more inches diagonally.<sup>1133</sup> Both Netflix and Amazon have made their original series available in 4K.<sup>1134</sup> Netflix encodes the 4K streams at 15.6 Mbps compared with 7 Mbps for HD programming.<sup>1135</sup> WGAW contends, however, that as video migrates to 4K resolution, requiring file sizes about double those of current HD videos, ISP imposed data caps could potentially be implicated.<sup>1136</sup>

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[Shadows/dp/B008359JXI/ref=sr\\_1\\_1?ie=UTF8&qid=1352906710&sr=8-1&keywords=mad+men](http://www.shadows.dp/B008359JXI/ref=sr_1_1?ie=UTF8&qid=1352906710&sr=8-1&keywords=mad+men) (visited Nov. 14, 2012).

<sup>1125</sup> Chuck Parker, *Why Discovery is So Hard to Implement; Enabling Technology*, THE ONLINE REPORTER, May 4, 2012. See also TV.COM, <http://www.tv.com/shows/masterpiece-theatre/watch/> (visited June 18, 2014) (directing visitors to watch the full-length episodes of the PBS television series *Masterpiece Theater (Classic)* on Netflix, and informing them that other OVDs do not offer the series).

<sup>1126</sup> Netflix Comments at 3-4. In October 2006, while it was a DVD by mail service, Netflix initiated a contest with a \$1 million prize for the first team of people to improve the predictive capabilities of Netflix's recommendation feature. The winners would own the algorithm, but Netflix would have a license to use it. The contest was open to any person from any country. More than 40,000 teams from 186 countries registered. Netflix awarded the prize in July 2009. AT&T Laboratory, the employer of members of the winning group, also uses the technology for its U-verse video distribution service. *Netflixed*, Gina Keeting, Penguin (2012) at 185-97.

<sup>1127</sup> Haseeb Ali, *Netflix Rolss Out "Profiles" Feature*, SNL KAGAN, Aug. 1, 2013.

<sup>1128</sup> Ali Choukeir, *Problems for OTT: Demand, Fragmentation*, SNL KAGAN, Jan. 10, 2014.

<sup>1129</sup> *Id.*

<sup>1130</sup> Dawn C. Chmielewski, *Services Aim to Simplify Search*, L.A. TIMES, Jan. 10, 2013.

<sup>1131</sup> Urban Pixels, *Can I Stream.it?: How CISI Works*, <http://www.canistream.it/#howItWorks> (visited July 3, 2014).

<sup>1132</sup> Sony Corporation, *Sony Launches World's First 4K Ultra HD Video Download Service and Expands 4K Ultra HD TV Line*, (press release), Sept. 4, 2013.

<sup>1133</sup> Ryan Nakashima, *Netflix App to Stream 4K on New TVs Immediately*, THE ASSOCIATED PRESS, Jan. 10, 2014.

<sup>1134</sup> Maane Khatchatourian, *Emmy Creative Arts: Netflix, Amazon Try New Approaches Without Creative Restriction*, VARIETY, June 3, 2014.

<sup>1135</sup> Benny Evangelista, *TV Makers Hope 4K More Solid than 3-D*, THE HOUSTON CHRONICLE, Jan. 29, 2014.

<sup>1136</sup> WGAW Comments at 19.

290. The ability to view content on multiple devices is another key factor in non-price rivalry. SNL Kagan estimates that in 2013, 53 million U.S. households watched online video and these households used an average of 4.8 Internet connected devices (*i.e.*, game consoles, streaming media players, Internet-connected television sets and Blu-ray players, tablets and home computers).<sup>1137</sup> SNL Kagan contends that the pervasiveness of connected devices eliminates a barrier for OVD market entry and represents new opportunities for OVD expansion.<sup>1138</sup>

291. Both Crackle and Hulu have stated that a substantial number of their viewers watch on non-PC devices.<sup>1139</sup> For example, in December 2013, Hulu stated that about 50 percent of its Hulu Plus subscribers use only mobile devices to view programs. In March 2013, a Crackle executive stated that only one third of its viewers watch on PCs, with another third watching on mobile devices, and the remaining third watching on game consoles and other Internet-enabled devices. In contrast, Viewster's CEO reported in March 2013 that it receives about 70 percent of its views from desktop computers, 25 percent from mobile devices, and five percent from Internet-enabled devices.

292. *Advertisers.* Some OVDs rely on advertising revenues. Online video ads enable advertisers to gather information and details about the extent to which customers interact with their brands that are not always readily available with traditional media.<sup>1140</sup> Because online advertising and traditional television advertising use different ratings metrics, calculating an advertising campaign's total reach and frequency across different platforms is difficult.<sup>1141</sup> The key television ratings metric for advertisers is the "C3 rating," a measurement of network television commercials watched live and on DVRs within three days of their original airing.<sup>1142</sup> For online viewing to be included in a program's C3 television viewing, a network must include the same set of commercials in the program online that it includes on air.<sup>1143</sup>

293. Debate remains whether advertising viewed on OVD sites should be measured in the same manner as advertising aired on traditional television, particularly if OVDs seek a larger share of total advertising budgets.<sup>1144</sup> Online advertising operates under a different set of metrics than traditional

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<sup>1137</sup> SNL Kagan, *Media Trends*, 2013 Edition, at 151.

<sup>1138</sup> Ian Olgeirson & Deana Myers, *Service Providers Lessen OTT Substitution, but Challenges Persist*, SNL KAGAN, Sept. 11, 2012. See also Table 31 above listing examples of number of devices.

<sup>1139</sup> Seth Shafer, *Viewster Gains but Hulu Still Rules OTT Ad-Supported Streaming Video Market*, SNL KAGAN, Jan. 29, 2014.

<sup>1140</sup> See, e.g., Nicole Rawski, *How to Really Measure Engagement*, IMEDIA CONNECTION, June 15, 2012, <http://www.imediaconnection.com/content/32065.asp> (visited Nov. 19, 2012).

<sup>1141</sup> Jeanine Poggi, *Nielsen Marries TV, Online Ratings*, ADVERTISING AGE, Oct. 1, 2012, <http://adage.com/article/media/nielsen-marries-tv-online-ratings/237516/> (visited Nov. 7, 2012).

<sup>1142</sup> Claire Atkinson, *Commercial-Ratings White Paper: How Commercial Ratings Changed the \$70B TV Market*, ADVERTISING AGE, Oct. 13, 2008, at 2 ("Ad Age Commercial Ratings White Paper"). See also TVB, *Local Broadcast TV Markets Surpass National Time-Shifted Viewing* (press release), Nov. 26, 2012.

<sup>1143</sup> Paige Albiniak, *Nielsen Now Counting All Runs*, BROADCASTING & CABLE, April 25, 2011, [http://www.broadcastingcable.com/article/467188-Nielsen\\_Now\\_Counting\\_All\\_Runs.php](http://www.broadcastingcable.com/article/467188-Nielsen_Now_Counting_All_Runs.php) (visited Nov. 7, 2012). The same criteria holds for programs viewed via MVPDs' video on demand services. Clair Atkinson, *Biting for Bucks: Comcast Aims to Grab Ads from Bing Viewing*, N.Y. POST, Dec. 2, 2013.

<sup>1144</sup> *The Economics of Online Video 2011* (White Paper), ADVERTISING AGE, Feb. 14, 2011, at 13 ("AD AGE 2011 White Paper"). Some say that using a common currency could dilute what makes each medium unique. Paul Heine, *Is This the Long-Awaited Answer to Measuring Video Viewers Everywhere They're Watching*, Adweek, March 23, 2014, <http://www.adweek.com/news/advertising-branding/long-awaited-answer-measuring-video-viewers-everywhere-they-re-watching-156457>.

television.<sup>1145</sup> In 2012, some advertising-supported OVDs, including Hulu and Crackle, began presenting their original online programming in the Digital Content NewFronts.<sup>1146</sup> Reports indicate that despite the proliferation of professionally-produced online video programming some marketers are reluctant to purchase advertising in them due to small audiences and high prices, relative to traditional television.<sup>1147</sup> Websites, in contrast to traditional television, often seek advertisers to sponsor entire series (*i.e.*, purchase all of the commercials in the show), potentially for \$2 million to \$3 million.<sup>1148</sup> In 2014, however, some sites developed new selling strategies, offering media buyers the opportunity to purchase a package of programs with similar audiences, enabling advertisers to reduce their risk.<sup>1149</sup>

294. As discussed above, prices of television commercials are based on the cost of delivering 1,000 impressions (cost per thousand, or CPM) nationally, and cost per point locally.<sup>1150</sup> While online advertising also uses pricing based on CPMs, prices also may be based on an advertisement's performance.<sup>1151</sup> With this pricing model, advertisers pay based on a set of agreed upon performance criteria, such as a percentage of online revenues or delivery of new sales leads.<sup>1152</sup> The Interactive Advertising Bureau ("IAB") reports that performance-based pricing has grown increasingly popular, representing 62 percent of Internet advertising revenue in 2010, 64 percent in 2011, and 67 percent during the first six months of 2012.<sup>1153</sup> CPM-based pricing declined from 33 percent of Internet advertising revenues in 2010 to 32 percent in 2011 and 31 percent during the first half of 2012.<sup>1154</sup>

295. According to the research firm SQAD, in 2013 to reach 1,000 adults 18-49 years old, the websites of NBC, CBS, and ABC charged \$30, compared with an average of \$23.03 charged for an online video advertisement.<sup>1155</sup> Although Hulu does not release its CPMs, reports indicate that Hulu charges a CPM of about \$25 to \$30.<sup>1156</sup> This compares with cable and broadcast network rates of \$15.63 and

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<sup>1145</sup> WPP Group, *Reading Room: Nielsen Online Campaign Ratings*, Francesca Hills, Mindshare, <http://www.wpp.com/wpp/marketing/digital/nielsen-online-campaign-ratings/> (visited July 4, 2014). See also Forrester Research Group, *Optimism Despite Unresolved Issues About Video Advertising* (Dec. 2013) at 3-4, available at <http://www.videostrategygroup.com/research-data/a/independent-research-paper-u.s-optimism-despite-unresolved-issues-about-vid/#.U7cLQ6hqs0> (visited July 4, 2014).

<sup>1146</sup> Michael Learmonth, "TV" is Really Just a State of Mind, *ADVERTISING AGE*, Apr. 16, 2012. The presentations, which take place annually in April, are modeled after the May broadcast and cable network "upfront" presentations to encourage advertisers to buy commercial time ahead of the fall television season.

<sup>1147</sup> Emily Steel, *Online Originals Face Battle to Win Over Advertisers' Hearts*, *FINANCIAL TIMES*, Apr. 18, 2014; Tim Peterson, *Newfront Sellers Take Page from TV*, *ADVERTISING AGE*, Apr. 7, 2014.

<sup>1148</sup> Tim Peterson, *Newfront Sellers Take Page from TV*, *ADVERTISING AGE*, Apr. 7, 2014.

<sup>1149</sup> *Id.*

<sup>1150</sup> See also *supra*, ¶ 176.

<sup>1151</sup> Online advertisers may also use a hybrid of impression- and performance-based pricing models.

<sup>1152</sup> Interactive Advertising Bureau, *Wiki, Main Glossary, Performance Pricing Model*, [http://www.iab.net/wiki/index.php/Performance\\_pricing\\_model](http://www.iab.net/wiki/index.php/Performance_pricing_model) (visited July 9, 2013).

<sup>1153</sup> Interactive Advertising Bureau, *IAB Internet Advertising Revenue Report, 2012 First Six Months' Results*, Oct. 2012, at 18.

<sup>1154</sup> *Id.*

<sup>1155</sup> Jim Barthold, *Online Video Ads Cost 38 percent more than Cable, Report Says*, *FIERCECABLE*, Mar. 17, 2014, at <https://www.google.com/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=fiercecable> (visited Aug. 19, 2014).

<sup>1156</sup> Jack Marshall, *What Online Ads Really Cost*, *Digiday*, Feb. 22, 2013, <http://digiday.com/publishers/what-online-ads-really-cost/> (visited July 4, 2014); Christopher Rick, *And Hulu's Average CPM in 2013 is . . .*, *REELSEO*, Dec. 19, 2013, <http://www.reelseo.com/hulu-cpm-2013/> (visited July 4, 2014).

\$44.11 respectively to reach 1,000 adults 18-49 years old. WGAW notes that long-form online video content now commands higher advertising rates than shorter content, and that, in 2013, the number of advertisements on long-form videos grew four times faster than the number on short-form videos.<sup>1157</sup>

296. In traditional television, Nielsen ratings are the sole currency for advertisers.<sup>1158</sup> For online video, Nielsen and comScore are the major ratings services. Because they use different methodologies, their results differ.<sup>1159</sup> In February 2011, three advertising trade groups launched an initiative called “Making Measurement Make Sense” to standardize online measurement metrics.<sup>1160</sup> In August 2011, Nielsen launched its Online Campaign Ratings service, which subsequently became the first Internet measurement service to provide demographic ratings for online advertising campaigns with certain metrics comparable to those used for television advertising.<sup>1161</sup> In September 2012, The CW became the first television network to sign on with Nielsen Online Campaign Ratings, guaranteeing advertisers that they will reach a minimum number of targeted viewers during the 2012-2013 television season.<sup>1162</sup> The ABC networks group, representing Walt Disney Company owned ABC and cable networks followed suit in March 2013.<sup>1163</sup>

297. Another challenge facing advertising-supported OVDs, particularly those featuring programming from broadcast and cable networks, is the inability to track viewers of a single program across a range of devices. Both Nielsen and comScore are developing methods to include mobile devices in their ratings. Nielsen intends to add viewing on mobile devices to its C3 television ratings for the 2014-2015 television season.<sup>1164</sup> Throughout 2013, comScore has been working with ESPN and the Coalition for Innovative Media Measurement (CIMM) to test a system that tracks video, audio, and text

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<sup>1157</sup> WGAW Comments at 18.

<sup>1158</sup> *Watching the TV Watchers*, DAILY VARIETY, Jan. 12, 2011, at 8.

<sup>1159</sup> Cotton Delo, *Your Guide to Who Measures What in the Online Space*, ADVERTISING AGE, Sept. 19, 2011, <http://adage.com/article/media/guide-measures-online-space/229858/> (visited Nov. 7, 2012). Nielsen and comScore have traditionally measured online viewing using large panels of consumers who participate voluntarily, and then project the behavior to the entire population based on demographic variables. Michael Depp, *Online Metrics Inch Closer to Standardization*, NETNEWSCHECK, Dec. 4, 2011, <http://www.netnewscheck.com/article/15811/online-metrics-inch-closer-to-standardization> (visited Nov. 7, 2012).

<sup>1160</sup> The trade groups are the Interactive Advertising Bureau (IAB), The Association of National Advertisers (ANA), and the American Association of Advertising Agencies (4A's). IAB, ANA, 4A's, *IAB, ANA, & 4A's Join Forces to "Make Measurement Make Sense" – Leading Trade Groups Take on Top Industry Challenge* (press release), Feb. 28, 2011.

<sup>1161</sup> Nielsen, *The CW to Use Nielsen Online Campaign Ratings for All Online Audience Guarantees* (press release), Sept. 27, 2012.

<sup>1162</sup> *Id.* If the guarantees fall short, The CW will include inventory on its website along with inventory on its linear network in its make-goods. Jeanine Poggi, *Nielsen Marries TV, Online Ratings*, ADVERTISING AGE, Oct. 1, 2012, <http://adage.com/article/media/nielsen-marries-tv-online-ratings/237516/> (visited Nov. 7, 2012). A make-good is an offer by television network to rerun a commercial, at no additional charge. The second airing of the commercial is generally of value equal to or greater than the original placement and used to compensate advertisers for unanticipated ratings that fall short of the rating which the network originally guaranteed. Occasionally a television network will return cash to the advertiser instead. Vogel at 577.

<sup>1163</sup> Bill Carter, *ABC Networks Will Offer Guarantees to Advertisers Across Platforms*, N.Y. TIMES, Mar. 4, 2013, [http://mediadecoder.blogs.nytimes.com/2013/03/04/abc-networks-will-offer-guarantees-to-advertisers-across-platforms/?\\_php=true&\\_type=blogs&\\_r=0](http://mediadecoder.blogs.nytimes.com/2013/03/04/abc-networks-will-offer-guarantees-to-advertisers-across-platforms/?_php=true&_type=blogs&_r=0) (visited Aug. 19, 2014).

<sup>1164</sup> Paul Heine, *Is This the Long-Awaited Answer to Measuring Video Viewers Everywhere They're Watching*, ADWEEK, Mar. 23, 2014, <http://www.adweek.com/news/advertising-branding/long-awaited-answer-measuring-video-viewers-everywhere-they-re-watching-156457>.

across television, radio, computers, smartphones, and tablets. The experimental product is primarily intended as a media-planning tool rather than a new ratings currency. ComScore plans to complete its test during the fall of 2014.<sup>1165</sup>

#### 4. Select OVD Operating Statistics and Financial Performance

298. Due to data limitations, our analysis of OVD performance is limited to that of a few of the most widely recognized industry players and is not intended to be a comprehensive assessment of the entire OVD industry. With these limitations, we describe consumer usage of OVDs, and OVD viewership, subscribership, revenue, investment, and profitability.<sup>1166</sup>

##### a. OVD Usage, Viewership and Subscribership

299. *Consumer Usage.* SNL Kagan estimates that, as of 2013, more than 53 million U.S. households watched online programming with at least one Internet-connected device, including computers, game consoles, streaming media players, television sets, and Blu-ray players, with an average of 4.8 such devices per online viewing household.<sup>1167</sup> Nielsen reports that Americans spent an average of one hour and ten minutes per week using a DVD/Blu-ray device and one hour and 43 minutes per week using a game console.<sup>1168</sup> Adobe Systems, which publishes quarterly reports about U.S. online video consumption,<sup>1169</sup> found that during the fourth quarter of 2013, 12.8 percent of video streams were viewed on smartphones, compared with 7.2 percent during the fourth quarter of 2012; 9.2 percent of video streams were viewed on tablets, compared with 7.3 percent during the fourth quarter of 2012; and .03 percent of video streams were viewed using game consoles, compared with .01 percent during the fourth quarter of 2012.<sup>1170</sup> Adobe attributes the rise in viewing on game consoles to the introduction of Microsoft's Xbox One and Sony's PlayStation 4 game consoles during 2013.<sup>1171</sup>

300. In the last Report, we noted that the amount of time consumers spend watching online video varies by age, gender, ethnicity, life-stage and lifestyle.<sup>1172</sup> For the fourth quarter of 2013, Nielsen data indicate similar viewing patterns. Among different age groups, adults aged 65 years or older spend the most time watching traditional television – more than 50 hours per week compared with an average of 33 hours and 53 minutes per week for all Americans. In addition, on average, Americans watch three hours and 12 minutes per week of time-shifted television, spend four hours and six minutes per week using the Internet, and 50 minutes per week watching video on the Internet.<sup>1173</sup> Likewise, among different age groups, adults aged 18-24 and 25-34 spent the most time watching online video – more than 90

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<sup>1165</sup> *Id.*

<sup>1166</sup> In addition, due to the limitations of available data, our performance analysis includes data regarding OVDs that distribute professionally produced as well as user-generated video content, both short-form and long-form.

<sup>1167</sup> SNL Kagan, *Media Trends*, 2013 Edition, at 151.

<sup>1168</sup> *Id.* at 10, Table 1.

<sup>1169</sup> Adobe Systems Incorporated, *Adobe Digital Index, U.S. Digital Video Benchmark*, at 1. The remaining share of video streams came from personal computers. Adobe Systems Incorporated, *Adobe Digital Index, U.S. Digital Video Benchmark*, at 9 (Appendix). Adobe's sample includes more 22.5 billion total video starts and more than 500 million video starts from mobile devices. *Id.* at 8 (Methodology).

<sup>1170</sup> Adobe Systems Incorporated, *Adobe Digital Index, U.S. Digital Video Benchmark* (Q4 2013), at 1.

<sup>1171</sup> *Id.* at i, 1.

<sup>1172</sup> *See 15<sup>th</sup> Report*, 28 FCC Rcd at 10649, ¶ 312.

<sup>1173</sup> Nielsen, *The Cross-Platform Report*, Quarter 4, 2013, at 10, Table 1 (“Nielsen Cross-Platform Report Q4”). Data estimating the average time spent watching video on a smartphone was unavailable during the period. Estimates are based on the total U.S. population over the age of two whether or not they have the technology (*i.e.*, DVRs, games consoles, etc.) in their households. *Id.* at 22-23.

minutes per week, compared with an average of 50 minutes per week for all Americans.<sup>1174</sup> ComScore estimates that, in December 2013, online video reached 85 million U.S. viewers daily, with young adults spending 48 percent more time watching online video than an average American viewer.<sup>1175</sup> In January 2014, comScore reported that users watched over 48.5 billion videos, with an average of 1,155 minutes (or 19.25 hours) per user.<sup>1176</sup> Measured differently, the top 20 percent of Internet video viewers watches an average of 22 minutes per day, compared with an average of 2.8 minutes per day for all people who live in households with Internet connections.<sup>1177</sup> In contrast, ranked by in-home television viewing behavior of people living in Internet households, the top 20 percent watch an average of four hours and 1.6 minutes per day of television, compared with an average of four hours and 25 minutes per day for all persons living in Internet households.<sup>1178</sup> A TiVo survey of millennials, cited by CEA, indicates that nearly three-quarters (72 percent) of survey respondents reported using free online streaming services, such as Hulu, YouTube and the TV network streaming sites.<sup>1179</sup> Nearly two-thirds (60 percent) regularly use subscription video-on-demand (VOD) services, such as Netflix, Amazon Instant Video, Hulu Plus and HBOGo. Other age groups, in contrast, reported making use of these services 40 percent of the time. Citing a TiVo study, CEA reports that millennials spend 36 percent of their TV viewing time watching traditional TV programming, such as TV shows and live sports, but access this content primarily through Internet streaming and subscription services.<sup>1180</sup>

301. Observers differ with respect to the degree to which consumers are replacing MVPD services with OVD services, cord cutting and cord shaving. SNL Kagan states that while the majority of U.S. households will continue to subscribe to MVPDs, the increased availability of content via OVDs – albeit in delayed distribution windows – combined with the increased availability of broadband service and Internet-enabled devices, will likely lead to increased OVD substitution in the long term.<sup>1181</sup> NAB contends that the decline in MVPD subscribers in 2013 indicates that television viewers increasingly recognize the value provided by broadcast television service.<sup>1182</sup> NAB states some over-the-air households supplement their viewing of television broadcast signals with video content from OVDs. NAB adds that recent data show that 35 percent of over-the-air only households watch streaming video on a computer using the Internet.

302. SNL Kagan estimates that 4.9 percent of occupied U.S. households watched television programs or movies via OVDs in lieu of MVPDs in 2013, compared to 3.9 percent in 2012.<sup>1183</sup> Nielsen estimates that, as of December 2013, about one percent of U.S. television households received video

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<sup>1174</sup> *Id.* The estimates are based on the total population of the United States, including those who do not have access to online video.

<sup>1175</sup> comScore, *U.S. Digital Future in Focus (2014)* at 23, available at <https://www.comscore.com/Insights/Presentations-and-Whitepapers/2014/2014-US-Digital-Future-in-Focus>. The estimates are based on viewing via desktop computers.

<sup>1176</sup> CEA Comments at 9.

<sup>1177</sup> Nielsen Cross-Platform Report Q4 at 14, Table 5. Nielsen bases streaming and Internet measurements on the use of home personal computers exclusively (i.e., the measurements exclude streaming on mobile devices, game consoles, etc.). *Id.* at 23.

<sup>1178</sup> *Id.* at 14, Table 5.

<sup>1179</sup> CEA Comments at 9-10.

<sup>1180</sup> *Id.* at 9.

<sup>1181</sup> SNL Kagan, *Media Trends (2013)*, at 154-155.

<sup>1182</sup> NAB Comments at 6.

<sup>1183</sup> See Ian Olgeirson and Deana Myers, *Online Video Buffets, but Does Not Break Multichannel Model*, SNL KAGAN, Oct. 1, 2013.

exclusively through an Internet connection via a television/monitor instead of over-the-air broadcast or MVPD.<sup>1184</sup> Centris Marketing Science found that eight percent of U.S. households it surveyed reported that they had eliminated their MVPD service in the third quarter of 2013, compared with four percent in the first quarter of 2013.<sup>1185</sup> Among the cord-cutting households, 63 percent reported that they subscribed to an OVD service in the third quarter of 2013, compared with 56 percent during the first quarter of 2013.<sup>1186</sup> NAB, citing GfK's Home Technology Monitor 2013 Ownership Survey and Trend Report, states that two-thirds of television households that dropped MVPD service cited cutting costs as their reason for stopping service.<sup>1187</sup> Over four in ten (41 percent) also said they stopped MVPD service because it did not offer enough value for the cost.

303. A survey by DigitalSmiths indicates that 8.0 percent of respondents to a fourth quarter 2013 survey reported dropping premium cable networks, and 7.6 percent reported reducing the level of their MVPD service.<sup>1188</sup> DigitalSmiths also reports that 28.8 percent of respondents used EST/rental services, while 45.3 percent of respondents used subscription OVDs.<sup>1189</sup> The Diffusion Group, which has tracked OVD substitution since 2010, indicates that, as of 2013, 15.3 percent of adult broadband and MVPD subscribers it surveyed said they were likely to cancel their MVPD service, compared with 15.1 percent in 2012.<sup>1190</sup> NAB, citing GfK's survey, reports that among pay TV households that kept their service, 15 percent decreased their level of service, with 69 percent of these cutting back on the number of program tiers purchased.<sup>1191</sup>

304. NAB states that the GfK survey found that nearly 70 percent of broadcast-only households are "cord nevers," reporting that they have never subscribed to MVPD service.<sup>1192</sup> Nielsen compared cord nevers with cord cutters in its sample of broadband-only households, that Nielsen included in its panel of television households for the first time during the 2013-2014 television season.<sup>1193</sup> Nielsen found that overall, broadband-only homes tend to be younger and have lower incomes than traditional

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<sup>1184</sup> The Nielsen Company, *Television Audience Report* (2013) at 4, 28.

<sup>1185</sup> MarketCharts staff, *Pay TV Trends: Cord-Cutting and Cord-Shaving on the Rise*, Marketing Charts, Jan. 21, 2014, <http://www.marketingcharts.com/wp/television/pay-tv-trends-cord-cutting-and-cord-shaving-on-the-rise-39291/> (visited July 8, 2014). Data as of fourth quarters of 2013 and 2012 were not publicly available.

<sup>1186</sup> *Id.*

<sup>1187</sup> The Home Technology Monitor™ is an independent syndicated research service that tracks both ownership of over 100 media technology devices and services and the ways that people are using those devices in everyday life. The 2013 Ownership Survey and Trend Report is based on a survey, fielded in March and April 2013, comprised of interviews with a total of 3,106 households, including representative proportions of cell-phone-only, non-Internet and Spanish-speaking homes. NAB Comments at 2, n. 4.

<sup>1188</sup> DigitalSmiths *Q4 2013 Trends Report* at 4. DigitalSmiths, a TiVo-owned company that develops software to enable consumers to discover television programs and movies, indicates that 6.3 percent of survey added premium networks such as HBO or Showtime.

<sup>1189</sup> *Id.* at 18.

<sup>1190</sup> The Diffusion Group, *Cord Cutting Proclivities Remain Unchanged Among Adult Broadband Users* (press release), June 5, 2014, <http://tdgresearch.com/cord-cutting-proclivities-remain-unchanged-among-adult-broadband-users/>.

<sup>1191</sup> NAB Comments at 2, nn. 4, 5.

<sup>1192</sup> *Id.*

<sup>1193</sup> Pat McDonough, Senior Vice President, Insights, the Nielsen Company, *The Changing TV Landscape*, Oct. 30, 2013 (presentation). See also Meg James, *Nielsen to Include Internet Viewers in its Definition of TV Homes*, THE LOS ANGELES TIMES, May 7, 2013, <http://www.latimes.com/entertainment/envelope/cotown/la-et-ct-nielsen-expands-definition-of-tv-home-which-top-115-million-20130507-story.html>.

television households.<sup>1194</sup> Of the cord-never homes it recruited for its sample, two thirds have a head-of-household who is 34 years old or younger, compared with about one third of cord cutter homes. About 50 percent of both cord never and cord cutter households have annual incomes of less than \$50,000.<sup>1195</sup>

305. *Audience.* Consumers have many choices when it comes to online video content.<sup>1196</sup> OVDs use several metrics to measure audience size and usage of online video content, including the number of videos per viewer and the amount of time viewers spend watching.<sup>1197</sup> As noted, different ratings services use different methodologies to measure viewership, leading to different rankings.<sup>1198</sup> Table 29 below, based on comScore information from December 2013, illustrates, among other things, that 188.2 million U.S. Internet users watched online video content for an average of 19.4 hours per viewer (*i.e.*, 1,164.5 minutes/60 minutes) in December 2013.<sup>1199</sup> The top ten properties remained relatively stable between 2012 and 2013, with the exception of Vimeo and Turner Digital, which were not in comScore's top ten list in December 2012.<sup>1200</sup>

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<sup>1194</sup> Pat McDonough, Senior Vice President, Insights, the Nielsen Company, *The Changing TV Landscape*, Oct. 30, 2013 (presentation) at 25.

<sup>1195</sup> *Id.* at 33.

<sup>1196</sup> CEA Comments at i.

<sup>1197</sup> comScore, *Surviving the Upfronts in a Cross-Media World: An Actionable Guide for Success*, June 6, 2012, at 7, [http://www.comscore.com/Insights/Presentations\\_and\\_Whitepapers/2012/Surviving\\_the\\_Upfronts\\_in\\_a\\_Cross-Media\\_World](http://www.comscore.com/Insights/Presentations_and_Whitepapers/2012/Surviving_the_Upfronts_in_a_Cross-Media_World) (visited July 7, 2014) (“comScore, *Surviving the Upfronts in a Cross-Media World*”).

<sup>1198</sup> *See 15<sup>th</sup> Report*, 28 FCC Rcd 10639, n. 1046.

<sup>1199</sup> comScore, Inc., *comScore Releases December 2013 U.S. Online Video Rankings* (press release), Jan. 10, 2014 (“comScore Video Metrix”) We note that many of the parent companies of the websites listed in the table (*e.g.*, Google, Yahoo!, AOL, Facebook, and Vevo) specialize in short-form, rather than long-form content. Will Richmond, *Cloud-Based Startup Portico Aims to Package Online Video Into TV Experiences*, VIDEONUZE, Dec. 6, 2012, <http://www.videonuze.com/article/cloud-based-startup-portico-aims-to-package-online-video-into-tv-experiences> (visited July 7, 2014).

<sup>1200</sup> *See also comScore Releases December 2012 U.S. Online Video Rankings* (press release), Jan. 14, 2013 (December 2012 data).

**Table 29: Top U.S. Online Video Properties Ranked by Unique Views (December 2013)  
comScore**

Rank	Property	Total Unique Viewers (in thousands)	Videos <sup>1201</sup> (in thousands)	Minutes per Viewer
1	Google Sites <sup>1202</sup>	159,090	13,384,434	356.7
2	Facebook.com <sup>1203</sup>	79,105	3,749,940	50.1
3	AOL, Inc.	76,178	1,414,138	60.4
4	Yahoo! Sites	53,499	392,542	47.8
5	NDN <sup>1204</sup>	49,388	530,275	71.2
6	Amazon Sites	44,626	215,795	17.1
7	VEVO <sup>1205</sup>	39,424	632,788	51.0
8	Microsoft Sites	36,662	609,765	36.9
9	Vimeo <sup>1206</sup>	32,932	142,426	32.3
10	Turner Digital	29,008	221,105	39.0
	<b>Total Internet<sup>1207</sup></b>	<b>188,249</b>	<b>52,374,583</b>	<b>1,164.5</b>

<sup>1201</sup> comScore defines a video as any streamed segment of audiovisual content, including both progressive downloads and live streams. For long-form, segmented content (e.g., television episodes with advertising in the middle) each segment of the content is counted as a distinct video segment. Video views include both user-initiated and auto-played videos viewed for longer than three seconds.

<sup>1202</sup> As reflected in this table, “Google Sites” includes the website YouTube which hosts user-generated video, as well as professionally-produced video. In terms of unique viewers, YouTube is the leader, attracting more than 140 million viewers each month. YouTube offers hundreds of channels of professionally-produced, themed programming, such as music videos and games. YouTube: *YouTube Partner Program*, <http://www.youtube.com/yt/partners/> (visited July 3, 2013).

<sup>1203</sup> Facebook’s December 2013 online video viewership increased substantially from previous months due to the inclusion of short-form videos from Vine, a video app from Twitter that enables people to share six-second videos. Dara Keer, *Vine Highlights Popular videos with Loop Counts*, CNET, July 1, 2014, <http://www.cnet.com/news/vine-highlights-popular-videos-with-loop-counts/>. In addition, Facebook introduced auto-play videos in the Facebook News Feed.

<sup>1204</sup> The News Distribution Network (“NDN”) is a video syndication service that supplies the websites of newspapers and other publishers with video news clips from partners including broadcast television stations. Douglas MacMillan, *Yahoo is in Talks to buy Online Video Service NDN*, The Wall Street Journal, March 31, 2014, <http://online.wsj.com/news/articles/SB10001424052702304157204579473780432974344>.

<sup>1205</sup> Vevo, a distributor of music videos jointly owned by Sony Music Entertainment, Universal Music Group, and Abu Dhabi Media Company, operates both its own website and a channel within YouTube. Vevo, *Vevo Partners with Abu Dhabi Media Company* (press release), Oct. 19, 2009. See also Vevo, *About Us: Company Profile*, <http://www.vevo.com/about> (visited July 7, 2014). Among YouTube’s partner channels, Vevo was the most popular. comScore Video Metrix; comScore, *Surviving the Upfronts in a Cross-Media World* at 5.

<sup>1206</sup> Vimeo, owned by IAC, offers videos by independent producers without advertising. IAC, *Our* <http://iac.com/brands> (visited July 7, 2014). See also Vimeo, LLC, *About Vevo*, <http://www.vevo.com/about> (visited July 7, 2014); Sam Gutelle, *Vimeo Seeks Profit for Itself and Its Creators with Tip Jars, Paywalls*, TUBEFILTER, Sept. 20, 2012, <http://www.tubefilter.com/2012/09/20/vimeo-tip-jar-pay-to-view/> (visited July 7, 2014).

<sup>1207</sup> Total Internet includes totals for all sites, not just the top ten sites reported separately here.

306. Data from the Nielsen Company, shown below, illustrates the average number of monthly unique viewers who visited the top online video brands between January and October 2013, as well as the percentage change since the same period during 2012.<sup>1208</sup>

**Table 30: Top U.S. Online Video Properties Ranked by Average Unique Viewers (2013)**  
The Nielsen Company

Rank	Site	Average Unique Viewers (in thousands)	Year over Year Percentage Change
1	YouTube	128,436	-6%
2	VEVO	37,209	-9%
3	Yahoo	35,412	-8%
4	AOL Media Network	26,448	5%
5	MSN/WindowsLive/Bing	19,784	6%
6	The College Humor Network <sup>1209</sup>	18,351	-6%
7	Perform Group <sup>1210</sup>	15,978	58%
8	Hulu	13,117	-2%
9	ESPN Digital Network	12,644	4%
10	Netflix	11,946	1%

307. The firm DigitalSmiths conducts quarterly surveys of consumers to track their viewing habits. In the fourth quarter of 2013, it asked respondents if they used each of the EST/Rental services listed below.<sup>1211</sup>

Rank	Site	Respondents Using Service During 4Q 2013
1	Amazon	8.5%
2	iTunes (Apple)	6.4%
3	YouTube (paid)	1.5%
4	Vudu (Wal-Mart)	1.4%
5	CinemaNow (Best Buy)	0.7%

308. *Subscribership.* As of December 31, 2013, Netflix had 31.7 million U.S. subscribers to its streaming service, a 25 percent increase from 25.5 million subscribers at the end of December 2012.<sup>1212</sup>

<sup>1208</sup> The Nielsen Company, *Tops of 2013: Digital*, December 16, 2013, <http://www.nielsen.com/us/en/insights/news/2013/tops-of-2013-digital.html> (visited July 7, 2014). These data reflect total U.S. home/work/university locations. Nielsen does not publicly report the most popular online video sites on a regular basis; thus December 2013 data are not readily available.

<sup>1209</sup> CollegeHumor Media multi-media, multi-platform studio comprised of three website properties, a long-form TV development division and a film production division targeting people ages 18-49. It is owned by IAC. IAC, *Brand, CollegeHumor Media*, <http://iac.com/brand/collegehumor-media> (visited July 7, 2014).

<sup>1210</sup> Perform Group provides sports video and data to consumers and betting companies. Mark Sweney, *Share Price of Digital Sports Rights Company Perform Group Halves*, THE GUARDIAN, Dec. 12, 2013, <http://www.theguardian.com/media/2013/dec/12/sports-rights-perform-shares-fall> (visited July 7, 2014).

<sup>1211</sup> DigitalSmiths Q4 2013 Video Trends Report at 8.

The mix of Netflix's subscribers continues to change, as it continues to shift spending from the DVD-by-mail segment to content and marketing for its streaming service.<sup>1213</sup> Between December 2012 and December 2013, Netflix's DVD subscribers declined 16 percent, from 8.8 million to 8.0 million.<sup>1214</sup> Netflix notes that its subscriber growth is seasonal, reflecting when consumers most frequently buy Internet-connected devices (October through March), and when they tend to increase video viewing (July through September).<sup>1215</sup>

309. Hulu reported that, as of the December 2013, it had more than five million subscribers for its Hulu Plus service, up from three million as of December 2012.<sup>1216</sup> During the first quarter of 2014, Hulu Plus had more six million subscribers.<sup>1217</sup> Amazon does not disclose the number of subscribers to its Prime service or the number of members who take advantage of the video streaming service.<sup>1218</sup> SNL Kagan estimated that it had 10 million subscribers in 2013, while a Bernstein analyst estimates the number to be 20 to 25 million as of 2014<sup>1219</sup> and CEA cites an estimate of 18.7 million Amazon Prime subscribers.<sup>1220</sup>

(Continued from previous page) \_\_\_\_\_

<sup>1212</sup> We use the term "subscribers" to refer to paid subscribers only. Netflix and other OVD services offer free trial memberships to new and certain rejoining members. Therefore, the total number of subscribers is slightly higher than the total number of paid subscribers. As of 2013, in Netflix's domestic streaming segment, it derived monthly membership fees for services consisting solely of streaming content offered through a membership plan. Netflix, 2013 Form 10K at 19. See also CEA Comments at 7.

<sup>1213</sup> Netflix 2013 Form 10K at 19, 21.

<sup>1214</sup> Netflix *3Q 2012 Earnings Statement*, Oct. 23, 2012, at 1. NCTA notes note that while Comcast is the largest MVPD service, Netflix has more subscribers. NCTA Comments at 14. At the end of 2013, Comcast had 21.7 million subscribers. See Table 7 *supra*.

<sup>1215</sup> Netflix 2013 Form 10K at 2.

<sup>1216</sup> Brian Stelter, *Hulu to Pass the Billion-Dollar Mark*, CNN, Dec. 18, 2013, <http://money.cnn.com/2013/12/18/technology/hulu-billion/index.html>. See also CEA Comments at 7.

<sup>1217</sup> Meredith Blake, *Hulu Plus Expands Original Content, Boasts Six Million Hulu Plus Subscribers*, The Los Angeles Times, April 30, 2014, <http://www.latimes.com/entertainment/tv/showtracker/la-et-st-hulu-upfront-originals-6-million-hulu-plus-subscribers-20140430-story.html>.

<sup>1218</sup> SNL Kagan, *The State of Online Video Delivery*, 2013 Edition, at 7.

<sup>1219</sup> *Id.* See also Jeff Baumgartner, *Prime Numbers*, MULTICHANNEL NEWS, Feb. 10, 2014, <http://multichannel.com/blog/bauminator/prime-numbers/373105> (visited Aug. 19, 2014) (citing Bernstein Research analyst Carlos Kirjner's estimates based on a survey of 1,500 online U.S. homes).

<sup>1220</sup> CEA Comments at 7.

310. The firm DigitalSmiths conducts quarterly surveys of consumers to track their viewing habits. In the fourth quarter of 2013, it asked respondents if they used each of the subscription OVD services listed below.<sup>1221</sup>

Rank	Site	Respondents Using Service During 4Q 2013
1	Netflix	39.0%
2	Amazon Prime	11.6%
3	Hulu Plus	7.7%
4	Redbox Instant by Verizon <sup>1222</sup>	2.6%

**b. Revenue**

311. *Subscription, EST, and Rental.* OVDs earn revenues from advertisers as well as directly from consumers through subscriptions, EST, and rentals. As shown in Table 31, SNL Kagan estimates that OVDs earned about \$5.4 billion in total revenues in 2013 and about \$4.1 billion in 2012.<sup>1223</sup>

**Table 31: OVD Revenue Streams**<sup>1224</sup>  
(Revenue in millions)

	2012	2013
<b>Revenue Source</b>		
Movie Purchases	\$ 557.7	\$ 661.4
TV Purchases	\$ 351.5	\$ 449.3
<b>Total EST</b>	<b>\$ 909.2</b>	<b>\$1,110.7</b>
Movie Rentals	\$ 514.8	\$ 669.8
TV Rentals	\$ 0	\$ 0
<b>Total Rentals</b>	<b>\$ 514.8</b>	<b>\$ 669.8</b>
<b>Subscription</b>	<b>\$2,700.2</b>	<b>\$3,665.2</b>
<b>Total Paid/Subscription</b>	<b>\$4,124.2</b>	<b>\$5,445.7</b>

<sup>1221</sup> DigitalSmiths Q4 2013 Video Trends Report at 8.

<sup>1222</sup> As noted above, Redbox Instant by Verizon shut down its subscription service on October 7, 2014. *See supra*, ¶ 275.

<sup>1223</sup> SNL Kagan, *Internet Video-on-Demand Revenue Projections, 2010-2023*, June 30, 2014 (Excel spreadsheet); SNL Kagan, *Media Trends, U.S. Internet Advertising Revenues, 2002-2012*, Dec. 2013 at 115 - 116; Deana Myers & Wade Holden, *Online Video Market Remains Hot*, SNL KAGAN, June 30, 2014.

<sup>1224</sup> SNL Kagan has revised its estimates of 2012 figures since our last report. *See also 15<sup>th</sup> Report*, 28 FCC Rcd at 10643, Table 33 (December 2012 data). Estimates of revenues vary. For example, the Digital Entertainment Group estimates that subscription OVD services earned \$808.42 million from EST in 2012, and \$1.2 billion in 2013, and \$2.4 billion on OVD subscription services in 2012, compared with \$3.2 billion in 2013. Digital Entertainment Group, *Year-End 2013 Home Entertainment Report*, Jan. 7, 2014 (press release). Estimates of advertising revenues for OVDs, as defined in this Report, are not readily available.

312. While revenues of individual OVDs are not generally available, Netflix reports that it earned \$2.65 billion from its domestic streaming segment during 2013, an increase of seven percent from the \$2.48 billion it earned in 2012.<sup>1225</sup>

313. *Advertising.* OVDs obtain advertising fees from variety of advertising formats: (1) search, (2) display, (3) classifieds, (4) lead generation, (5) mobile, (6) e-mail, and (7) digital video.<sup>1226</sup> Search advertising accounted for about 43-49 percent of all Internet advertising in 2013.<sup>1227</sup> IAB reports total Internet advertising reached \$42.8 billion in 2013, compared with \$36.6 billion in 2012.<sup>1228</sup> IAB estimates that digital video advertising represented about seven percent of total Internet advertising in 2013 and six percent in 2012.<sup>1229</sup> Similarly, SNL Kagan estimates that digital video represented 9.4 percent of total Internet advertising in 2013 and 7.2 percent in 2012.<sup>1230</sup> SNL Kagan also reports that total U.S. online ad spending was almost \$42.7 billion in 2013, compared with \$37.0 billion in 2012.<sup>1231</sup>

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<sup>1225</sup> Netflix 2013 Form 10K at 19.

<sup>1226</sup> See eMarketer.com, *Mobile Gains Greater Share of Search, Display Spending*, Aug. 21, 2013, <http://www.emarketer.com/Articles/Print.aspx?R=1010148> (visited July 7, 2014); SNL Kagan, *Media Trends* (2013 edition) at 116. Search advertising is a format whereby advertisers pay a fee to an Internet company to list and/or link the advertiser's site to a specific search word or phrase. Display advertising refers to a format whereby an advertiser pays an Internet company for space to display a static or hyperlinked banner or logo on one or more of the Internet company's pages. For classified advertising, advertisers pay fees to Internet companies to list specific products or services. Lead generation refers to fees advertisers pay to Internet advertising companies that refer qualified purchase inquiries or provide consumer information where the consumer opts into being contacted by a marketer. Mobile advertising is advertising tailored to and delivered through wireless mobile devices. E-mail advertising refers to banner ads, links, or advertiser sponsorships that appear in commercial email communications. Digital video advertising is advertising that appears before, during, or after video content and includes TV commercials that appear in streaming content or in downloadable video. Interactive Advertising Bureau, *IAB Internet Advertising Revenue Report, 2013 Year End Results*, April 2014, at 23-24, [http://www.iab.net/research/industry\\_data\\_and\\_landscape/adrevenueereport](http://www.iab.net/research/industry_data_and_landscape/adrevenueereport) (visited July 7, 2014).

<sup>1227</sup> SNL Kagan, *Media Trends* (2013 edition) at 116; Interactive Advertising Bureau, Interactive Advertising Bureau, *IAB Internet Advertising Revenue Report, 2013 Year End Results*, April 2014, at 13, [http://www.iab.net/research/industry\\_data\\_and\\_landscape/adrevenueereport](http://www.iab.net/research/industry_data_and_landscape/adrevenueereport) (visited July 7, 2014).

<sup>1228</sup> Interactive Advertising Bureau, Interactive Advertising Bureau, *IAB Internet Advertising Revenue Report, 2013 Year End Results*, April 2014, at 13, [http://www.iab.net/research/industry\\_data\\_and\\_landscape/adrevenueereport](http://www.iab.net/research/industry_data_and_landscape/adrevenueereport) (visited July 7, 2014).

<sup>1229</sup> *Id.*

<sup>1230</sup> SNL Kagan, *Media Trends* (2013 edition) at 115-116.

<sup>1231</sup> *Id.*

314. Table 32 compares the viewership of select advertising-supported OVDs.

**Table 32: Top U.S. Online Video Properties by Video Ads Viewed (December 2013)**<sup>1232</sup>

Property	Video Ads (in thousands)	Total Ad Minutes (millions/month)	Frequency (Ads per Viewer)	Reach of Total U.S. Population (%)
AOL, Inc. (including Adapt.tv)	4,326,305	1,850	26.9	51.9%
LiveRail.com	3,566,607	1,506	23.4	49.2%
Google Sites	3,564,204	353	32.3	35.6%
SpotXchange Video Ad Marketplace	2,895,520	975	24.5	38.0%
TubeMogul Video Ad Platform	2,467,934	802	21.3	37.3%
BrightRoll Video Network	2,451,140	1,148	14.8	53.3%
Specific Media	2,185,660	859	13.8	51.2%
Hulu	1,388,482	551	82.3	5.4%
Tremor Video	1,209,948	537	11.7	33.3%
Videology	991,078	445	10.5	30.4%
<b>Total:</b>	<b>35,235,361</b>	<b>13,235</b>	<b>204.1</b>	<b>55.6%</b>

315. SNL Kagan estimates that Hulu generated \$562.3 million in advertising revenues in 2013, and \$449.3 million in 2012.<sup>1233</sup> Hulu splits its revenues with entities who license its content. SNL Kagan estimates that Hulu earned a total of \$116.4 million for advertising in 2013, and it earned \$93.5 million in 2012.<sup>1234</sup> According to SNL Kagan, 2013 represented the first year in which Hulu earned more from subscriptions than advertising. It estimates that advertising represented 47.3 percent of Hulu's total \$246.1 million in U.S. net revenues in 2013, compared with 56.2 percent of its \$166.3 million in U.S. net revenues in 2012. Overall, Hulu generated about \$955.4 million from its U.S. operations in 2013.

### c. Investment

316. As emerging and evolving businesses, OVDs are investing in programming, proprietary Internet-enabled devices, infrastructure, and technology. OVDs must invest in programming to attract viewers. For example, Netflix pays a flat fee for multi-year licensing agreements with studios for television programs, movies, and original programming for license windows that generally range from six months to five years.<sup>1235</sup> Terms of the payments may extend throughout the window, or may require more up-front payments as is typically the case for original content or content licensed for an early distribution window.<sup>1236</sup> Between 2007 and 2013, Netflix spent \$5.96 billion on content for its subscription OVD service.<sup>1237</sup> OVDs also invest in original content. Netflix is reportedly committed to spending \$400

<sup>1232</sup> comScore, Inc., *comScore Releases December 2013 U.S. Online Video Rankings* (press release), Jan. 10, 2014.

<sup>1233</sup> Seth Shafer, *Hulu Soldiers on in Battle to Catch Netflix*, SNL KAGAN, Dec. 27, 2013.

<sup>1234</sup> *Id.*

<sup>1235</sup> Netflix 2013 Form 10K at 29.

<sup>1236</sup> *Id.*

<sup>1237</sup> *State of Online Video Delivery* (2013), SNL KAGAN, at 5.

million on original programming in 2014, or roughly 10 percent of its total programming expenses.<sup>1238</sup> As previously mentioned, Hulu Plus and Amazon Prime have added original content as well.<sup>1239</sup>

317. OVDs also are investing in infrastructure and technology to facilitate delivery of their content to consumers, including cloud computing.<sup>1240</sup> Google, Microsoft, Apple, and Amazon have invested in their operating systems and/or cloud services to allow computers and mobile devices to seamlessly upload files to one master remote location so that the files can be accessed later by any device; this process is often referred to as cloud syncing.<sup>1241</sup> Reports indicate that Apple may be in the process of developing its own cloud services.<sup>1242</sup> As previously mentioned, OVDs also have developed, or are in the process of developing, content delivery networks. For instance, Google, Netflix, Amazon, Microsoft, and Apple operate their own proprietary CDNs.<sup>1243</sup>

318. During 2013 and the first half of 2014, several OVDs have invested in additional proprietary devices to facilitate OVD viewing. These include Amazon (Kindle Fire TV and Fire Smartphone), Microsoft (Xbox One), Sony (PlayStation 4 and 4K Ultra HD Media Player and television sets), and Google (Chromecast streaming device). In addition, several OVDs have invested in UltraViolet or other technologies to facilitate viewing on multiple third party devices.

#### d. Profitability

319. Many OVDs are subsidiaries of or operations within larger businesses. Because the assets, liabilities, revenues and expenses of the parent company and the subsidiaries are often reported in consolidated financial statements that reflect the total resources of the combined entity rather than any of its specific component parts, assessing the profitability of a subsidiary of a larger enterprise can be difficult.<sup>1244</sup> Of the companies that are the focus of our OVD analysis, only Netflix, which is a standalone OVD, breaks out operating income from streaming services in publicly available reports.<sup>1245</sup> Netflix reports that it earned a profit of almost \$623 million from its domestic streaming segment during 2013, an increase of 69 percent from the \$369 million profits it earned in 2012.<sup>1246</sup>

320. Due to the diverse nature of OVD business models and strategies, however, we do not believe that Netflix alone is sufficiently representative of the entire OVD segment. Thus, for this Report, we are unable to conduct an analysis of the profitability of OVDs. As OVDs continue to mature and

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<sup>1238</sup> Samantha Bookman, *A Closer Look at the Billions of Dollars Netflix, Amazon and Hulu are Spending on Original Content*, FIERCEONLINEVIDEO, June 4, 2014, at <http://www.fierceonlinevideo.com/special-reports/closer-look-billions-dollars-netflix-amazon-and-hulu-are-spending-original> (visited Aug. 19, 2014).

<sup>1239</sup> See *supra*, ¶¶ 232-33.

<sup>1240</sup> SNL Kagan, *The State of Online Video Delivery*, 2012 Edition, at 6.

<sup>1241</sup> Sandvine, *Global Internet Phenomena Report*, Fall 2011, at 13. Netflix is a customer of Amazon's cloud computing services. SNL Kagan, *The State of Online Video Delivery*, 2012 Edition, at 6.

<sup>1242</sup> Brandon Butler, *Apple Looks to Pick Off Engineers from Amazon, OpenStack to Build Out iCloud*, NETWORK WORLD, July 17, 2013.

<sup>1243</sup> See *supra*, ¶ 244.

<sup>1244</sup> For example, during Amazon's third-quarter earnings conference call, analysts asked executives questions related to the returns on Amazon's investments in acquiring content and developing Kindle Fire tablets. Amazon declined to provide specifics. Sarah Barry James, *Update: Analysts Tell Amazon, "Show Us the Money!"*, SNL KAGAN, Oct. 25, 2012.

<sup>1245</sup> For 2012, Netflix had revenues of approximately \$3.6 billion, operating income of almost \$50 million and net income of approximately \$17.2 million. Netflix, Inc., *SEC Form 10-K for the Year Ended December 31, 2012*, at 19. Sources of OVD revenue are discussed further, *supra*, III.C.4.b.

<sup>1246</sup> Netflix 2013 Form 10K at 19.

evolve, we anticipate that future public reporting of more entities may include data on profitability and other metrics to assess the financial viability of this segment of the delivered video market.

#### IV. CONSUMER PREMISES EQUIPMENT

##### A. Introduction

321. Changes in consumer premises equipment (“CPE”) and user equipment technology continue to have an important impact on competition in the video programming market. CPE is necessary for consumers to access the services that broadcasters, MVPDs, and OVDs provide. Because CPE is an integral part of viewing video programming, CPE features, such as recording, home networking, mobile access, and user interface, are factors consumers must consider when choosing to purchase programming services. Consumers also choose electronics products based on the availability of content and where they want to view video, within or outside of the home.<sup>1247</sup> Interoperability of CPE will encourage innovation and give consumers the ability to seamlessly switch providers.<sup>1248</sup> Today’s CPE marketplace offers consumers more flexibility in content consumption through a growing list of devices that also enable time- and place-shifting.<sup>1249</sup> In this section, we examine technological, regulatory and market developments related to CPE since the last report. First, we introduce advancements in higher resolution video content and televisions. Next we consider MVPD and non-affiliated vendors’ development of navigation devices. Finally, we review developments in devices used to access online and mobile video services.

##### B. 4K/UltraHD Televisions

322. Since the last report, televisions that encompass higher resolutions (more pixels) and more realistic color than HDTV have become available in the U.S. marketplace. These televisions, known as Ultra High-Definition<sup>1250</sup> (“Ultra HD”), or “4K,” present a leap forward in television picture quality with four times the number of pixels of HD televisions, giving viewers a feeling of being immersed in what they are watching.<sup>1251</sup> CEA defines the core characteristics of Ultra HD to include monitors and projectors with an aspect ratio of 16 x 9 and display resolution of at least eight million pixels with a minimum of 3,840 horizontally and 2,160 vertically (3,840 x 2,160).<sup>1252</sup> The sets also are capable of higher frame rates (*i.e.*, more frames per second) and have improved color standards with greater dynamic range (*i.e.*, brighter highlights and darker shadowing).<sup>1253</sup> Prices of larger Ultra HD sets

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<sup>1247</sup> CEA Comments at i.

<sup>1248</sup> AllVid Alliance Comments at 2-3.

<sup>1249</sup> CEA Comments at i.

<sup>1250</sup> CEA News Release, *Consumer Electronics Industry Announces Ultra High-Definition*, Oct. 18, 2012, <http://www.cea.org/News/News-Releases/Press-Releases/2012-Press-Releases/Consumer-Electronics-Industry-Announces-Ultra-High.aspx> (visited June 30, 2014).

<sup>1251</sup> Jack Wetherill, *Is Now the Time to Buy a 4K TV Set? Yes: If You Buy it Now, You Are Set for Many Years to Come*, WALL ST. J., May 11, 2014, <http://online.wsj.com/articles/is-now-the-time-to-buy-a-4k-tv-set-1399645629> (visited May 14, 2014).

<sup>1252</sup> CEA News Release, *Consumer Electronics Industry Announces Ultra High-Definition*, Oct. 18, 2012, <http://www.cea.org/News/News-Releases/Press-Releases/2012-Press-Releases/Consumer-Electronics-Industry-Announces-Ultra-High.aspx> (viewed May 15, 2014). See also International Telecommunications Union Recommendation ITU-R BT.2020, [http://www.itu.int/dms\\_pubrec/itu-r/rec/bt/R-REC-BT.2020-0-201208-I!!PDF-E.pdf](http://www.itu.int/dms_pubrec/itu-r/rec/bt/R-REC-BT.2020-0-201208-I!!PDF-E.pdf) (visited May 16, 2014).

<sup>1253</sup> Lucas Mearian, *Why You Shouldn’t Buy a 4K TV This Year*, COMPUTERWORLD, Nov. 27, 2014, [http://www.computerworld.com/s/article/9244406/Why\\_you\\_shouldn\\_t\\_buy\\_a\\_4K\\_TV\\_this\\_year](http://www.computerworld.com/s/article/9244406/Why_you_shouldn_t_buy_a_4K_TV_this_year) (visited June 30, 2014).

from Panasonic, Sony, Samsung and LG Electronics start at around \$3,000,<sup>1254</sup> down from \$5,000 from just over a year ago.<sup>1255</sup> According to the NPD Group, fewer than 100,000 Ultra HD TVs were sold in the United States during the twelve months ending in March 2014 with Samsung, having a 35.4 percent share, and Sony, with a 34.5 percent share.<sup>1256</sup> Ultra HD TV ownership is expected to reach nearly a third of U.S. homes by 2020.<sup>1257</sup>

323. At this time, there are no broadcast outlets in the United States supporting Ultra HD and no movies available on disc in Ultra HD, thus content is only available through broadband connectivity.<sup>1258</sup> Content in Ultra HD, however, is becoming available. Sony's new Unlimited 4K download service was launched in 2013 with seventy 4K movies and television shows for owners of their 4K Ultra HD Media Player and 4K Ultra HD TVs.<sup>1259</sup> Netflix also now offers some of its original shows in 4K to those Ultra HD TVs with their built-in app and native HEVC (H.265) decoding capabilities.<sup>1260</sup> Comcast is working with programmers, including its NBCUniversal subsidiary, to provide a library of Ultra HD content for the Xfinity TV 4K app.<sup>1261</sup> Some issues regarding this technology remain unsettled, such as the level of security acceptable to content producers and owners, and therefore the amount of 4K content continues to be limited.<sup>1262</sup> In addition, Ultra HD resolution requires file sizes of about double those of current HD videos<sup>1263</sup> with broadband speeds of 15 megabits per second (Mbps) to ensure a good experience.<sup>1264</sup> Akamai added "4K Readiness" to its first quarter 2014 State of the Internet Report using a

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<sup>1254</sup> John Morris, *Ready or Not, 4K Video is on Its Way*, ZDNet, Apr. 23, 2014, <http://www.zdnet.com/ready-or-not-4k-video-is-on-its-way-7000028706/> (visited May 16, 2014); <http://consumerist.com/2014/01/08/buy-a-4k-tv-now-if-you-have-gobs-of-money-like-kevin-spacey-a-lot-like-a-whole-lot/>.

<sup>1255</sup> Andrew Tarantola, *Sony's 4K TVs Will Be Surprisingly Affordable—in That They Cost Less than a Car*, GIZMODO Apr. 7, 2013, <http://gizmodo.com/5993798/sonys-4k-tvs-will-be-surprisingly-affordable-in-that-they-cost-less-than-a-car> (visited May 16, 2014). A Sony 55 inch XBR-55X900A retailing for \$4999.99 at the time of the story is now selling for \$2699.99 on Sony's website, <http://store.sony.com/55-class-54.6-diag-xbr-4k-ultra-hd-tv-zid27-XBR55X900A/cat-27-catid-All-XBR-Series-TVs> (visited May 16, 2014).

<sup>1256</sup> *Id.*

<sup>1257</sup> Michelle Clancy, *UltraHD Penetration Faster than Expected*, RAPID TV NEWS, May 13, 2014, <http://www.rapidtvnews.com/2014051333628/ultrahd-penetration-faster-than-expected.html> (visited May 12, 2014).

<sup>1258</sup> John R. Quain, Sean Captain, *What is 4K TV?*, Mar. 10, 2014, <http://www.tomsguide.com/us/4k-tv-explained.news-17877.html> (visited May 19, 2014).

<sup>1259</sup> TVTechnology and BroadcastEngineering.com, *Sony Launches 4K Download Service; Can UltraHD OTT be Too Far Behind?*, Sept. 11, 2013, <http://www.tvtechnology.com/cable-satellite-iptv/0149/sony-launches-k-download-service-can-ultrahd-ott-be-too-far-behind/226054> (visited May 12, 2014). Sony 4K Ultra HD Media Player FMP-X1 Retail for \$699.99 with built-in 2 tera byte hard drive, <https://store.sony.com/4k-ultra-hd-media-player-zid27-FMPX1/cat-27-catid-All-Internet-Players> (visited May 20, 2014).

<sup>1260</sup> Andrew Michael, *Netflix Begins Streaming House of Cards in 4K Ultra HD*, ULTRA HDTV MAGAZINE, Apr. 8, 2014, <http://www.ultrahd.tv/netflix-begins-streaming-house-of-cards-in-4k-ultra-hd/> (visited May 12, 2014).

<sup>1261</sup> Alistair Bar, *CES 2014: 4K TVs start to get 4K content*, USA TODAY, Jan. 6, 2014, <http://www.usatoday.com/story/tech/2014/01/06/4k-tvs-content/4345165/> (visited May 20, 2014).

<sup>1262</sup> Peter Suci, *Is 2014 Going to be the Year of 4K TV?*, CHI. TRIB., Jan. 3, 2014, [http://articles.chicagotribune.com/2014-01-03/site/sc-cons-0102-tech-20140103\\_1\\_4k-tv-hdtv-colin-dixon](http://articles.chicagotribune.com/2014-01-03/site/sc-cons-0102-tech-20140103_1_4k-tv-hdtv-colin-dixon) (visited May 21, 2014).

<sup>1263</sup> WGAW Comments at 19.

<sup>1264</sup> Jack Wetherill, *Is Now the Time to Buy a 4K TV Set? Yes: If you Buy it Now, You Are Set for Many Years to Come*, WALL ST. J., May 11, 2014, <http://online.wsj.com/articles/is-now-the-time-to-buy-a-4k-tv-set-1399645629> (visited May 14, 2014).

benchmark for an average connection speed above 15 Mbps for countries and regions.<sup>1265</sup> The report finds that 17 percent of the United States is prepared to deliver 4K services through broadband and that the United States ranks thirteenth globally in 4K readiness.<sup>1266</sup>

### C. CPE Used to Access MVPD Services

#### 1. Leased CPE

324. While MVPDs are giving significant attention to new devices and venues for viewing content,<sup>1267</sup> the majority of television and movie viewing is done on a traditional television.<sup>1268</sup> As CEA notes, while the use of portable and mobile devices is growing, they continue to supplement, rather than replace, in-home viewing of television content distributed by MVPDs,<sup>1269</sup> and MVPD products leased to customers dominate the marketplace for set-top boxes dedicated to video programming.<sup>1270</sup> MVPDs therefore continue to develop and refine their leased CPE offerings to improve the consumer experience, lay the groundwork for future technological changes in network technologies, and provide value to the operator in other contexts.

325. Inside the home, MVPDs are refining and expanding the technology ecosystem that leased set-top boxes operate in. Refinements to DISH Network's Hopper and DIRECTV's Genie lines of set-top boxes include offering with the ability to transmit programming wirelessly from a primary set-top box to other set-top boxes in the home<sup>1271</sup> and to configure parental controls and other settings via smartphone or tablet applications.<sup>1272</sup> Additionally, DIRECTV's customers can now connect their HD-DVR to the Internet and get instant access to all of DIRECTV's On Demand programming.<sup>1273</sup> DIRECTV states that its subscriber acquisition costs have risen 2.3 percent<sup>1274</sup> in the last year to \$873 per

<sup>1265</sup> Akamai, *Akamai's State of the Internet Q1 2014 Report Volume 7 Number 1*, [http://www.akamai.com/dl/akamai/akamai-soti-q114.pdf?WT.mc\\_id=soti\\_Q114](http://www.akamai.com/dl/akamai/akamai-soti-q114.pdf?WT.mc_id=soti_Q114) (viewed June 30, 2014).

<sup>1266</sup> Jeff Baumgartner, *Akamai: 17% of U.S. is '4K Ready,'* MULTICHANNEL NEWS, June 26, 2014, <http://www.multichannel.com/news/tv-apps/akamai-17-us-4k-ready/375406> (viewed June 30, 2014).

<sup>1267</sup> See Handheld and Mobile Video Devices, *infra*.

<sup>1268</sup> See Deloitte Digital Democracy Survey at 9, available at [http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/TMT\\_us\\_tmt/us\\_tmt\\_deloitte\\_digitaldemocracy.pdf](http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/TMT_us_tmt/us_tmt_deloitte_digitaldemocracy.pdf). Across all age groups, 71 percent of television and movie viewing was done on a television. However, unique among demographic cohorts in the study, consumers 14 to 24 years old in 2014 spent only 44 percent of their time utilizing a traditional television configuration, allocating the remaining 56 percent among desktops, laptops, smartphones, tablets, and gaming devices. *Id* at 9.

<sup>1269</sup> CEA Comments at 2; NAB Comments at 6.

<sup>1270</sup> *Id* at 6. In 2013, sales to dealers of set-top units configured for access to cable programming declined three percent; those configured for access to DBS programming increased by 12 percent. Unit sales to dealers of network-enabled digital media players rose by 35 percent, while prices in this category declined by 12 percent. Household penetration rates for network-enabled players increased to 19 percent in 2012 and to 24 percent in 2013.

<sup>1271</sup> See Dish Network, *DISH Eliminates Wire Clutter with New Wireless Joey*, (press release) June 23, 2014, and DIRECTV, *Wireless Genie Mini Frequently Asked Question*, [https://support.directv.com/app/answers/detail/a\\_id/4250/~/-wireless-genie-mini-frequently-asked-questions](https://support.directv.com/app/answers/detail/a_id/4250/~/-wireless-genie-mini-frequently-asked-questions) (visited Sept. 10, 2014).

<sup>1272</sup> DIRECTV Comments at 5, Dish Network, *Dish Anywhere App*, <http://www.mydish.com/dish-anywhere/dish-anywhere-app/> (visited Sept. 10, 2014).

<sup>1273</sup> DIRECTV Comments at 5.

<sup>1274</sup> See *15<sup>th</sup> Report*, 28 FCC Rcd at 10672, ¶ 356 (stating that DIRECTV's subscriber acquisition cost was \$853 dollars in 2013).

subscriber and 23 percent since 2010, reflecting the investments required for these kinds of advanced technologies.<sup>1275</sup>

326. While all major operators have now developed smartphone and tablet apps that allow them to function as OVD-like providers, enabling access to a subset of their programming on these mobile devices,<sup>1276</sup> operators are also utilizing these applications to provide service inside the home, either on devices connected to televisions that consumers already own or on televisions directly.<sup>1277</sup> For example, DIRECTV utilizes its RVU<sup>1278</sup> protocol to deliver content directly to certain Samsung, Sony, and Toshiba televisions.<sup>1279</sup> Verizon has developed FiOS TV apps for LG and Samsung televisions, smart Blu-ray players, and the Xbox game console,<sup>1280</sup> and in 2014, Verizon will roll out its Verizon Media Server, an in-home device that will enable third-party devices to discover, access, and control the suite of FiOS media services over a subscriber's home network, without an additional set-top box.<sup>1281</sup> Time Warner Cable allows customers to access their entire channel lineup via a Roku set-top box.<sup>1282</sup> The capabilities of MVPD devices and applications are now a potential bargaining chip in any dealings with content owners,<sup>1283</sup> allowing operators to develop advanced demographic and viewing habit models for targeted advertising.<sup>1284</sup>

327. Some MVPDs are deploying cloud-based user interfaces that take advantage of IP connectivity in leased set-top boxes, increased ability to provide new services on already-deployed boxes, and the additional processing and capabilities cloud services provide. Comcast is widely deploying their X1 platform which allows customers to experience a unified search and instant play of live TV, DVR recordings, and VOD.<sup>1285</sup> Comcast's cloud platform will also underpin its advanced accessibility initiatives, including speaking video programming guides tailored to blind users.<sup>1286</sup> Operators are even opening their leased CPE to apps from third-party developers, bringing functionality that consumers have come to demand on mobile devices to the primary device connected to their television. For example,

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<sup>1275</sup> DIRECTV Comments at 15.

<sup>1276</sup> NCTA Comments at 8. *See also* CPE Used to Access OVD Services, *infra*.

<sup>1277</sup> Free State Foundation Comments at 7.

<sup>1278</sup> RVU, pronounced "R-View," is a protocol combining open standards (including Digital Living Network Alliance (DLNA) and Universal Plug and Play (UPnP)) and a Remote User Interface (RUI) protocol allowing RVU client devices, such as TVs, to display content from an RVU server (DVR) through connections in the home such as Wi-Fi, Ethernet, or Multimedia Over Coax (MoCA). *See* RVU Protocol: Networked Home Entertainment With Pixel Accurate Remote Graphics (whitepaper), [http://www.rvualliance.org/files/static\\_page\\_files/RVU\\_White\\_Paper.pdf](http://www.rvualliance.org/files/static_page_files/RVU_White_Paper.pdf) (visited June 26, 2014).

<sup>1279</sup> *See* What is a DIRECTV Ready TV and how does it work?, [https://support.directv.com/app/answers/detail/a\\_id/3992/~/-what-is-a-directv-ready-tv-and-how-does-it-work%3F](https://support.directv.com/app/answers/detail/a_id/3992/~/-what-is-a-directv-ready-tv-and-how-does-it-work%3F) (visited Sept. 10, 2014).

<sup>1280</sup> Verizon Comments at 6.

<sup>1281</sup> *Id.* at 7.

<sup>1282</sup> *See* Time Warner Cable, *Watch TV Online*, <http://www.timewarnercable.com/en/tv/features/twc-tv.html> (visited Sept. 10, 2014).

<sup>1283</sup> AllVid Comments at 11.

<sup>1284</sup> *See, e.g.,* Jon Lafayette, *Dish, DirecTV Team for Addressable Political Ads*, MULTICHANNEL NEWS (Jan. 27, 2014) and *NBCU, Comcast Offer Targeted Advertising*, MULTICHANNEL NEWS (Jan. 30, 2014).

<sup>1285</sup> *See* Jeff Baumgartner, *Comcast Goes Wide with X1 Upgrade*, MULTICHANNEL NEWS (May 6, 2014).

<sup>1286</sup> *See* Tom Wlodkowski, *A Television Experience Tailored for the Blind*, <http://corporate.comcast.com/comcast-voices/a-pictures-worth-a-thousand-words>, June 11, 2013.

Comcast now supports Pandora, Facebook, and other applications on its X1 set-top boxes,<sup>1287</sup> and Time Warner Cable has entered into discussions to bring Netflix to its set-top boxes.<sup>1288</sup> As NCTA notes, these initiatives demonstrate MVPD's desire to make their leased CPE competitive with off-the-shelf alternatives.<sup>1289</sup>

## 2. Section 629 of the Communications Act

328. Section 629 of the Communications Act directs the Commission to “adopt regulations to assure the commercial availability . . . of converter boxes, interactive communications equipment, and other equipment” that consumers use to access MVPD services.<sup>1290</sup> In enacting Section 629, Congress pointed to the vigorous retail market for CPE used with the telephone network and sought to create a similarly vigorous market for devices used to access MVPD services.<sup>1291</sup> Generally, there are two opposing positions on how to achieve Section 629's directive. One position is that MVPDs must support open standards to develop a competitive retail marketplace.<sup>1292</sup> The other position is that government-imposed standards will stifle innovation.<sup>1293</sup> In this section, we detail the history of the Commission's regulations to assure the commercial availability of navigation devices and summarize recent developments involving navigation device regulation.

### a. The History of Section 629 Implementation and CableCARD

329. To carry out the directives of Section 629, in 1998 the Commission required MVPDs to make available a security element separate from the other elements of a “navigation device” (*i.e.*, a set-top box).<sup>1294</sup> The separation of security from the navigation device was designed to let unaffiliated consumer electronics companies offer retail video navigation devices and let MVPDs retain control over system security; in this vein, the Commission required the separate security to “be designed to connect to and function with other navigation devices . . . through the use of a commonly used interface or an interface that conforms to appropriate technical standards.”<sup>1295</sup> The Commission also required MVPDs to rely on this separated security in their own devices, a requirement that many refer to as “common reliance” or the “integration ban.”<sup>1296</sup> In 2003, the Commission specified a standard (the “CableCARD”

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<sup>1287</sup> See X1: Applications, <http://customer.comcast.com/help-and-support/cable-tv/dashboard-for-xfinity-tv-on-the-x1-platform/> (visited Sept. 10, 2014).

<sup>1288</sup> Chris Welch, *Time Warner Cable ‘Certainly Open’ to Including Netflix on its Set-top Boxes*, The Verge, Dec. 9, 2013 (available at <http://www.theverge.com/2013/12/9/5192636/time-warner-cable-open-to-including-netflix-on-its-set-top>). *But see*, Nathan Ingraham, *Time Warner Cable's Plans to Include Netflix on its Set-top Boxes may be in Jeopardy*, The Verge, Feb. 17, 2014 (available at <http://www.theverge.com/2014/2/17/5420688/time-warner-cable-netflix-plans-may-be-in-jeopardy>) (citing the proposed merger between Comcast and Time Warner cable as an impediment to continued negotiations).

<sup>1289</sup> NCTA Comments at 16.

<sup>1290</sup> 47 U.S.C. § 549(a). We refer to the universe of devices that can access MVPD services as “navigation devices.”

<sup>1291</sup> H.R. REP. NO. 104-204, at 112-3 (1995).

<sup>1292</sup> See AllVid Alliance Comments at 2-7; TiVo Comments at 17-19; Biller Reply at 5-8.

<sup>1293</sup> See Free State Foundation Comments at 13-14; NCTA Comments at 22-23; Verizon Comments at 15.

<sup>1294</sup> *Implementation of Section 304 of the Telecommunications Act of 1996*, 13 FCC Rcd 14775 (1998); 47 C.F.R. § 76.1204(a)(1).

<sup>1295</sup> *Implementation of Section 304 of the Telecommunications Act of 1996*, 13 FCC Rcd 14775 (1998); 47 C.F.R. § 76.1204(b).

<sup>1296</sup> *Implementation of Section 304 of the Telecommunications Act of 1996*, 13 FCC Rcd 14775 (1998); 47 C.F.R. § 76.1204(a)(1).

standard) that cable operators were required to rely on to meet these rules.<sup>1297</sup> The CableCARD is a small piece of hardware that cable operators can give to their subscribers. Those subscribers can insert the CableCARD into compatible devices to decrypt and receive cable service. On January 15, 2013, the D.C. Circuit vacated the Order adopting the CableCARD standard,<sup>1298</sup> but the cable industry continues to support and rely on CableCARDS as a practical matter.<sup>1299</sup>

330. Consumer adoption of retail CableCARD-compatible devices has not matched the Commission's expectations.<sup>1300</sup> The following table shows the reported number of CableCARD deployments for use in retail CableCARD-enabled devices since 2006<sup>1301</sup> and the deployment of operator-supplied set-top boxes with CableCARDS since the integration ban went into effect on July 1, 2007.<sup>1302</sup>

**Table 33: Deployment of CableCARDS (Cumulative)**<sup>1303</sup>

Year (as of June)	CableCARD Deployment for Use in Retail Devices – Top 10 Cable Operators	Operator- supplied Set-top Boxes With CableCARDS
2006	170,000	
2007	271,000	
2008	372,000	6,232,800
2009	437,800	14,085,000
2010	520,000	21,000,000

<sup>1297</sup> *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices; Compatibility Between Cable Systems and Consumer Electronics Equipment*, CS Docket No. 97-80, PP Docket No. 00-67, Second Report and Order and Second Further Notice of Proposed Rulemaking, 18 FCC Rcd 20885 (2003).

<sup>1298</sup> *Echostar Satellite, LLC v. FCC*, 704 F.3d 992 (D.C. Cir. 2013).

<sup>1299</sup> See NCTA Comments at 21. Charter and Cablevision rely on downloadable security to comply with the integration ban, but each continues to support consumer-owned CableCARD devices. See *Charter Communications, Inc. Request for Waiver of Section 76.1204(a)(1) of the Commission's Rules*, Memorandum Opinion and Order, 28 FCC Rcd 5212, 5218, ¶ 10 (MB 2013); *Cablevision Systems Corporation's Request for Waiver of Section 76.1204(a)(1) of the Commission's Rules*, Memorandum Opinion and Order, 24 FCC Rcd 393, 395, ¶ 4 (MB 2009).

<sup>1300</sup> *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, CS Docket No. 97-80, Third Report and Order and Order on Reconsideration, 25 FCC Rcd 14657, 14660 ¶ 4 (2010). See also NCTA Comments at 16-17; Verizon Comments at 13.

<sup>1301</sup> The Commission directed certain cable operators to file reports with the Commission detailing CableCARD deployments. See *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, CS Docket No. 97-80, Second Report and Order, 20 FCC Rcd 6794, 6814-15, ¶ 39 (2005) ("2005 Deferral Order").

<sup>1302</sup> Effective July 1, 2007, cable operators were required to separate security in their leased devices and rely on the same conditional access mechanism that consumer electronics manufacturers use in their commercially available devices. 47 C.F.R. § 76.1204(a)(1). See *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, CS Docket No. 97-80, Order and Further Notice of Proposed Rulemaking, 18 FCC Rcd 7924, 7926 ¶ 4 (2003); *2005 Deferral Order*, 20 FCC Rcd at 6802-03 ¶ 13.

<sup>1303</sup> See Letters from Neal M. Goldberg, Vice President and General Counsel, NCTA, to Marlene H. Dortch, Secretary, FCC, CS Docket No. 97-80 (filed June 29, 2006, June 25, 2007, June 23, 2008, June 26, 2009, June 23, 2011, June 30, 2011, July 30, 2012, July 31, 2013).

2011	582,000	29,300,000
2012	618,000	36,000,000
2013	603,000 <sup>1304</sup>	42,000,000

331. Nearly all commenters that addressed CableCARD agree that “the CableCARD standard is far from an optimal solution” to consumer equipment compatibility problems.<sup>1305</sup> But as TiVo points out, CableCARD is the only solution that allows retail manufactures to build a device which consumers can use “nationwide to view all content to which they have subscribed.”<sup>1306</sup> TiVo therefore asserts that regulation is necessary to spur competition and reduce skyrocketing equipment lease fees.<sup>1307</sup> MVPDs, on the other hand, insist that device regulation is unnecessary to drive innovation of navigation devices and criticize the CableCARD regime as expensive and ineffective.<sup>1308</sup> And while the parties state these positions with respect to the current CableCARD standard, their sights are focused on the future.<sup>1309</sup>

**b. The STELA Reauthorization Act of 2014 and Future Developments**

332. Section 106 of STELAR terminates the integration ban effective December 4, 2015, and directs the Commission to establish a committee (the Downloadable Security Technical Advisory Committee or “DSTAC”) to “identify, report, and recommend performance objectives, technical capabilities, and technical standards of a not unduly burdensome, uniform, and technology- and platform-neutral software-based downloadable security system designed to promote the competitive availability of navigation devices.”<sup>1310</sup> The DSTAC must report on its work to the Commission by September 4, 2015<sup>1311</sup> The Commission will review this report to determine the appropriate actions to fulfill Section 629’s directive to assure a retail market for MVPD-compatible devices.

**D. CPE Used to Access OVD Services**

333. The evolution of technology has brought about the integration of services across multiple platforms employing various technologies.<sup>1312</sup> Broadband continues to provide consumers with IP-

<sup>1304</sup> In October 2012, Comcast reevaluated its CableCARD report process, which revealed that Comcast had miscounted by roughly 30,000 CableCARDS: “The figures indicating total numbers of deployed CableCARDS for use in retail CableCARD-enabled devices take into account a decline of approximately 30,000 CableCARDS reported by Comcast Corporation. As Comcast notes in its individual report, this decline is a direct result of an improved reporting process to ensure more accurate results, and is not indicative of an actual decline in CableCARD deployments or increased disconnections in the marketplace.” See Letter from Neal M. Goldberg, Vice President and General Counsel, NCTA, to Marlene H. Dortch, Secretary, FCC, CS Docket No. 97-80 (October 31, 2012).

<sup>1305</sup> TiVo Reply at 8 (citing NCTA Comments at 19-20; Verizon Comments at 14-15; FSF Comments at 8-9).

<sup>1306</sup> TiVo Comments at 11. See also CEA Comments at 14-15; Biller Reply at 1-2, 5.

<sup>1307</sup> TiVo Comments at 11.

<sup>1308</sup> See NCTA Comments at 19-20; Verizon Comments at 13-15.

<sup>1309</sup> See Letter from Jordan Goldstein, Vice President, Regulatory Affairs, Comcast Corporation, and Matthew Zinn, Senior Vice President, General Counsel, Secretary, and Chief Privacy Officer, TiVo, to Marlene H. Dortch, Secretary, FCC, CS Docket No. 97-80 (filed July 14, 2014).

<sup>1310</sup> STELAR, § 106, 128 Stat. 2063-64. See also *FCC Seeks Nominations for Membership for the Downloadable Security Technical Advisory Committee*, Public Notice, DA 14-1763 (MB rel. Dec. 4, 2014).

<sup>1311</sup> *Id.*

<sup>1312</sup> House Energy and Commerce Committee White Paper, Competition Policy and the Role of the Federal Communications Commission, May 19, 2014, <http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/analysis/CommActUpdate/20140519WhitePaper-Competition.pdf>, May 19, 2014.

delivered video content within the home across multiple broadband-capable devices, game consoles, and standalone devices like those provided by Apple, Roku, Boxee, Google, Xbox, and Playstation. These devices allow users to navigate and receive video delivered via broadband Internet and display it on a television monitor or wireless device such as a smartphone, laptop, or tablet. Google and Amazon introduced new OVD devices since our last report. Google's Chromecast is a thumb-sized media streaming device that plugs into a TV's High Definition Multimedia Interface ("HDMI") port. Set-up and control can be done through a mobile app on a smartphone, tablet or laptop, allowing viewers to watch video programming, movies, and music.<sup>1313</sup> Amazon's Fire TV is a small box that plugs into a television's HDMI port but uses a remote control that includes voice search, among its features. Fire TV allows consumers to watch over 200,000 television program episodes and movies in addition to sports, news, music, and to play games.<sup>1314</sup>

334. IP-enabled, or Smart TVs, provide IP-capabilities through built-in Ethernet and/or Wi-Fi connections.<sup>1315</sup> Smart TVs, with advanced electronics, have apps for online video already installed.<sup>1316</sup> All ten of the largest MVPDs have built apps for Smart TVs in addition to gaming devices, smartphones, and tablets.<sup>1317</sup> Verizon FiOS TV has apps for LG and Samsung Smart TVs whereby subscribers can watch 75 live TV channels and thousands of FlexView on-demand TV shows and movies.<sup>1318</sup> Samsung, the number one manufacturer of televisions and Smart TVs in the world, with a 29.6 percent world market share,<sup>1319</sup> states that more than 75 percent of their televisions will be Smart TVs in 2014.<sup>1320</sup> Researchers expected over 35 million U.S. households to have at least one television connected (by Smart TV or set-top box) to the Internet by the end of 2013.<sup>1321</sup> At this time, estimates are that 53 percent of connected televisions in the U.S. are connected through streaming devices, with Smart TVs accounting for the remaining 47 percent; however it is anticipated that as prices drop, Smart TVs will overtake the number of connected televisions.<sup>1322</sup> Consumers' viewing experience with IP-delivered video can vary

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<sup>1313</sup> Google Chromecast, <http://www.google.com/intl/en/chrome/devices/chromecast/?gclid=CJSk4pSDIb4CFRFnOgod7xYAzQ> (visited May 20, 2016).

<sup>1314</sup> Amazon Fire TV, [http://www.amazon.com/gp/product/B00CX5P8FC/ref=amb\\_link\\_412650922\\_2?pf\\_rd\\_m=ATVPDKIKX0DER&pf\\_rd\\_s=right-csm-1&pf\\_rd\\_r=1P0MP9CV3W2GFNGN5CYH&pf\\_rd\\_t=101&pf\\_rd\\_p=1786695002&pf\\_rd\\_i=507846](http://www.amazon.com/gp/product/B00CX5P8FC/ref=amb_link_412650922_2?pf_rd_m=ATVPDKIKX0DER&pf_rd_s=right-csm-1&pf_rd_r=1P0MP9CV3W2GFNGN5CYH&pf_rd_t=101&pf_rd_p=1786695002&pf_rd_i=507846) (visited May 20, 2014).

<sup>1315</sup> Bradley Mitchell, *Home Networking for Internet TV (Television)*, About.com Guide, <http://compnetworking.about.com/od/consumerelectronicnetworks/a/home-nnetworking-for-internet-tv.htm> (visited May 20, 2014).

<sup>1316</sup> NCTA Comments at 12-13.

<sup>1317</sup> NCTA Reply Comments at 8.

<sup>1318</sup> Verizon Comments at 6.

<sup>1319</sup> Alex Tretbar, *Samsung is Still King of (smart) TV Sales, but Vizio Eyes the Throne from Second Place*, Digital Trends, Mar. 11, 2014, <http://www.digitaltrends.com/home-theater/samsung-and-vizio-ruled-tv-sales-last-year/#ixzz31WfQXlqv> (visited May 12, 2014).

<sup>1320</sup> Brian X. Chen and Nick Wingfield, *Smart TVs Are Next Bet for Makers as Sales Languish*, NY Times, Jan. 6, 2014, [http://www.nytimes.com/2014/01/06/technology/smart-tvs-are-next-bet-for-makers-as-sales-languish.html?\\_r=0](http://www.nytimes.com/2014/01/06/technology/smart-tvs-are-next-bet-for-makers-as-sales-languish.html?_r=0) (visited May 12, 2014).

<sup>1321</sup> eMarketer, *Connected TVs Reach One in Four Homes*, Jan. 13, 2013, <http://www.emarketer.com/Article/Connected-TVs-Reach-One-Four-Homes/1009581> 9 (visited May 12, 2014).

<sup>1322</sup> Mark Hoelzel, *Smart TVs Are About To Overtake Streaming Devices In the U.S.*, Business Insider, Apr. 17, 2014, <http://www.businessinsider.com/the-connected-tv-landscape-why-smart-tvs-and-streaming-gadgets-are-conquering-the-living-room-2-2014-3> (visited May 12, 2014).

with broadband speeds regardless of the CPE used. As discussed above, many of the leading OVDs make their services available via a wide variety of consumer electronics products.<sup>1323</sup> The converse is also true – many consumer electronics products give consumers access to a variety of OVD services.

335. Vendors have also begun to integrate and blend linear television service from MVPDs and broadcasters with OVD services. An example is Boxee's LiveTV, a digital television tuner peripheral where the over-the-air broadcast television signals are distributed to consumers alongside OVD services. The Boxee Box plugs into the USB drive then connects to the six-inch antenna using an included cable.<sup>1324</sup>

## E. Handheld and Mobile Video Devices

### 1. Mobile IP Devices

336. As noted in the House Energy and Commerce Committee White Paper, “[t]he rise of mobile communications as a complement and substitute to traditional communications tools has made communications and technology an integral part of our daily lives.”<sup>1325</sup> IP video distribution opportunities for MVPDs and OVDs continue to expand through portable media devices. According to a Vubiquity study, 58 percent of consumers found downloading television video content to a tablet appealing and 63 percent indicated that they would be willing to pay \$1 to \$5 to stream or download content.<sup>1326</sup> Broadband connected devices, such as laptops, netbooks, smartphones, and media tablets, all have high resolution screens for consumers to watch video. Device storage and battery life limit consumers’ viewing on mobile devices.<sup>1327</sup> International Data Corporation (“IDC”) forecasts that tablet shipments will surpass total PC shipments (desktop and laptop) on an annual basis by the end of 2015.<sup>1328</sup> There are now more than 62.5 million devices with 4G wireless connectivity in the U.S. market, a number that continues to grow.<sup>1329</sup> 4G connections enable video providers to potentially deliver high quality video to viewers.<sup>1330</sup> MVPDs continue to make their video content accessible over a host of portable devices through the mobile IP marketplace. Many MSOs and OVDs offer at least some of their content through on-demand video apps to laptops, smartphones, and tablets.<sup>1331</sup> DIRECTV’s “nomad” service allows consumers to copy recordings from their HD DVR to their phones, laptops, or tablets for viewing without an active network connection. A TiVo brand DVR allows consumers to use a TiVo Stream in their

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<sup>1323</sup> See *supra*, ¶¶ 292-93.

<sup>1324</sup> Jason Gilbert, *Free TV! Boxee Box With Live TV Tuner Delivers HD Shows For \$0 Per Month*, Huffington Post Captain Gadget, May 12, 2012, [http://www.huffingtonpost.com/2012/05/25/free-tv-boxee-box-live-tv-tuner-high-definition\\_n\\_1537010.html](http://www.huffingtonpost.com/2012/05/25/free-tv-boxee-box-live-tv-tuner-high-definition_n_1537010.html) (visited May 20, 2014).

<sup>1325</sup> See House Energy and Commerce Committee White Paper at 1.

<sup>1326</sup> Vubiquity, *TV Content Drives Multiplatform Viewing Says New Research from Vubiquity* (press release), Mar. 18, 2014, <http://www.vubiquity.com/node/326> (visited May 2, 2014).

<sup>1327</sup> *Id.*

<sup>1328</sup> IDC, *Tablet Shipments Forecast to Top Total PC Shipment in Fourth Quarter of 2013 and Annually by 2015, According to IDC* (press release), Sept. 11, 2013, <http://www.idc.com/getdoc.jsp?containerId=prUS24314413> (visited Apr. 29, 2014). Worldwide smart connected device sales were expected to be \$622.4 billion in 2013, of which \$423.1 billion were expected to be from sales of smartphone and tablets costing \$350 or less. *Id.*

<sup>1329</sup> CTIA Ex Parte GN Docket No. 09-51, WT Docket No. 13-135, Nov. 13 2013, at 2, <http://www.ctia.org/docs/default-source/default-document-library/statistics.pdf?sfvrsn=0>.

<sup>1330</sup> Mushroom Networks, *Can 4G LTE networks sustain HD Video?*, Dec. 16, 2013, <http://www.mushroomnetworks.com/blog/2013/12/16/can-4g-lte-networks-sustain-hd-video/> (visited May 1, 2014).

<sup>1331</sup> Letter from Michael Powell, NCTA President and CEO, to Julius Genachowski, Chairman, FCC, MB Docket No. 07-269 (July 7, 2011) at 4 (“Letter from Michael Powell”).

homes to stream or copy recordings from their DVR to Apple devices for off-line viewing.<sup>1332</sup> To facilitate these services, MVPDs and programmers are looking to cloud-delivery mechanisms for IP-connected devices, including tablets, smartphones, televisions, laptops, and other mobile devices.<sup>1333</sup>

## 2. Specialty Mobile Devices

337. Specialty mobile devices are those that include specialized hardware to receive mobile video services from the mobile provider's network, as opposed to those that receive mobile video via the Internet. Such devices often have the advantage of being served by a broadcast or point-to-multipoint system, so they do not consume data from a data plan, and many devices can receive content simultaneously in a crowded location such as a stadium or arena. However, the specialized hardware needed to access the mobile video services requires vendors to design devices for a specific service, potentially restricting the number of services a device can access and diminishing the willingness of vendors to build devices that support the service.

338. Since the last report, the trend in mobile video CPE has continued to focus on IP-delivery, but some advances have been made using ATSC Mobile/Handheld ("ATSC M/H"). NAB reports that more than 150 stations in 31 states broadcast ATSC M/H programming.<sup>1334</sup> The newer ATSC M/H receivers wirelessly connect to Android and iOS based mobile devices, which allows them to be compatible with many more display devices than ones that require a physical connection.<sup>1335</sup>

339. To compete in the mobile video marketplace by delivering video over their own networks, satellite-based providers face technical challenges such as antenna size, weight, and ability to track satellites while in motion. Because they must be larger than what is typically found in a handheld device, mobile satellite-based devices are more often integrated into larger passenger vehicles and require a satellite dish attached to the roof of the vehicle. Improvements in dish design have resulted in relatively low-profile dishes such as the TracVision A7, but these dishes are still too large to be conveniently placed on small passenger vehicles.<sup>1336</sup> As a result, satellite-based mobile TV services more typically appear on commercial vehicles such as buses and limousines and recreational vehicles.

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<sup>1332</sup> See TiVo, *Grab TV by the iPad*, <http://www.tivo.com/products/tivo-stream/index.html> (visited June 26, 2014).

<sup>1333</sup> Letter from Michael Powell at 2.

<sup>1334</sup> NAB Comments at 13.

<sup>1335</sup> See Audiovox Mobile TV Receiver, <http://dyle.tv/devices/audiovox-mobiletv-receiver/> (visited Apr. 2, 2014).

<sup>1336</sup> See TracVision A7, <http://www.kvh.com/Commercial-and-OEM/Land-Systems/Television/Single-Cable-Systems/TracVision-A7.aspx> (visited Apr. 2, 2014).

**V. PROCEDURAL MATTERS**

340. This *16<sup>th</sup> Report* is issued pursuant to authority contained in sections 4(i), 4(j), 403, and 628(g) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 154(j), 403, and 548(g).

341. It is ORDERED that the Office of Legislative Affairs shall send copies of the *16<sup>th</sup> Report* to the appropriate committees and subcommittees of the United States House of Representatives and the United States Senate.

342. It is FURTHER ORDERED that the proceeding in MB Docket No. 14-16 IS TERMINATED.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch  
Secretary

**APPENDIX A****List of Commenters****Comments**

All Vid Tech Company Alliance, Computer & Communications Industry Association (CTIA), Consumer Action, Free Press Action Fund, the National Consumers League, and Public Knowledge (“AllVid Alliance”)

American Cable Association (“ACA”)

AT&T Services, Inc. (“AT&T”)

CenturyLink

Consumer Electronics Association (“CEA”)

DIRECTV, LLC

The Free State Foundation (“Free State”)

National Association of Broadcasters (“NAB”)

National Cable & Telecommunications Association (“NCTA”)

NTCA – The Rural Broadband Association (“NTCA”)

TiVo Inc.

Verizon

Writers Guild of America, West, Inc. (“WGAW”)

WTA – Advocates for Rural Broadband (“WTA”)

**Reply Comments**

Samuel J. Biller (“Biller”)

DIRECTV, LLC

National Association of Broadcasters (“NAB”)

National Cable & Telecommunications Association (“NCTA”)

TiVo Inc.

Verizon

## APPENDIX B

## National Video Programming Services

Table B-1

## National Video Programming Services Affiliated with One or More MVPDs

Network Owner:	Networks Wholly Owned or Owned in Part
Bright House Networks	3net, 3net HD, Animal Planet, Animal Planet HD, Discovery Channel, Discovery Channel HD, Discovery Español, Discovery Familia, Discovery Fit & Health, <sup>(1)</sup> Discovery Fit & Health HD, <sup>(1)</sup> Destination America, Destination America HD, HD Theater, iN Demand, iN Demand HD, Investigation Discovery, Investigation Discovery HD, American Heroes Channel, <sup>(2)</sup> American Heroes Channel HD, <sup>(2)</sup> OWN, OWN HD, Science Channel, Science Channel HD, The HUB, The HUB HD, TLC, TLC HD, Turbo, Velocity HD
Cablevision (AMC Networks Inc.)	AMC, AMC HD, IFC, IFC HD, Sundance Channel, Sundance Channel HD, WE TV, WE TV HD
Comcast/NBCU	Bravo, Bravo HD, Chiller, Chiller HD, Cloo, CNBC, CNBC HD, CNBC World, CNBC World HD, E! Entertainment TV, E! Entertainment TV HD, Esquire, <sup>(3)</sup> Esquire HD, <sup>(3)</sup> FEARnet, FEARnet HD, G4, G4 HD, Golf Channel, Golf Channel HD, iN Demand, iN Demand HD, MLB Network, MLB Network HD, MSNBC, MSNBC HD, mun2, <sup>(4)</sup> NBC Sports Network, NBC Sports Network HD, NHL Network, NHL Network HD, Oxygen Network, Oxygen Network HD, PBS Kids Sprout, PBS Kids Sprout HD, Retirement Living TV, SYFY, SYFY HD, Telemundo, Telemundo HD, TV One, TV One HD, The Weather Channel, The Weather Channel HD, Weatherscan, Universal HD, Universal Sports, Universal Sports HD, USA Network, USA Network HD
Cox Enterprises	iN Demand, iN Demand HD, MLB Network, MLB Network HD, Travel Channel, Travel Channel HD
DIRECTV	Game Show Network, GSN HD, MLB Network, MLB Network HD, Audience Network, Audience Network HD
Liberty Media Corporation <sup>(5)</sup> (Starz, LLC) <sup>(6)</sup>	3net, 3net HD, Animal Planet, Animal Planet HD, Destination America, Destination America HD, Discovery, Discovery HD, Discovery Español, Discovery Familia, Discovery Fit & Health, <sup>(1)</sup> Discovery Fit & Health HD, <sup>(1)</sup> Encore, Encore HD, Encore Action, Encore Action HD, Encore Drama, Encore Drama HD, Encore Español, Encore Family, Encore Love, Encore Suspense, Encore Westerns, GAC, HD Theater, HSN, HSN HD, HSN2, Indieplex, Investigation Discovery, Military Channel, Military Channel HD, MoviePlex, OWN, OWN HD, QVC, QVC HD, QVC Plus, <sup>(7)</sup> QVC Plus HD, <sup>(7)</sup> RetroPlex, Starz, Starz HD, Starz Cinema, Starz Cinema HD, Starz Comedy, Starz Comedy HD, Starz Edge, Starz Edge HD, Starz in Black, Starz in Black HD, Starz Family, Starz Family HD, Science Channel, Science Channel HD, TLC, TLC HD, The Hub, The HUB HD
Time Warner Cable, Inc.	iN Demand, iN Demand HD, MLB Network, MLB Network HD

**Notes:**

<sup>(1)</sup> On January 15, 2015, Discovery Communications renamed Discovery Fit & Health to Discovery Life Channel. Discovery Communications, *Discovery Communications Announces Discovery Fit & Health Will Become Discovery Life Channel on January 15, 2015: Network Embraces Life, Unexpected* (press release), Jan. 15, 2015.

<sup>(2)</sup> The Military Channel was renamed the American Heroes Channel on March 3, 2014. Discovery Communications, *Discovery Communications to Rename Military Channel: American Heroes Channel to Debut on March 3, 2014* (press release), Mar. 3, 2014.

<sup>(3)</sup> On September 23, 2013, Style changed its name to Esquire Network. Lynette Rice, *Style to Become Esquire Network*, ENTERTAINMENT WEEKLY, Sept. 9, 2013, <http://insidetv.ew.com/2013/09/09/style-to-become-esquire-network/> (visited Jan. 26, 2015).

<sup>(4)</sup> On February 1, 2015, NBCUniversal rebranded mun2 and renamed it NBC UNIVERSO. NBCUniversal, *mun2 to Relaunch as "NBC UNIVERSO" Cable Network, Delivering More World-Class Entertainment and Sports to Latinos* (press release), Nov. 4, 2014.

<sup>(5)</sup> Liberty owns 57 percent of the DIRECTV Group. See DIRECTV Group, *2013 Annual Report*, at 29-30.

<sup>(6)</sup> On January 11, 2013, Liberty Media Corporation separated its Starz assets. The separate entity, Starz, LLC, offers 16 movie channels including the flagship networks Starz, Encore and MoviePlex. We include Liberty/Starz here since Liberty and DIRECTV share of common ownership, officers, and directors.

<sup>(7)</sup> QVC Plus was launched on August 22, 2013. QVC, *QVC Launches Second Broadcast Channel, QVC Plus* (press release) Aug. 22, 2013.

**Sources:**

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SNL Kagan, *Economics of Basic Cable Networks* (2013 Edition).

Starz, LLC, <http://www.starz.com/corporate> (visited April. 30, 2014).

Time Warner Cable Inc., *TWC/Comcast Application* at Exhibit 8.

Time Warner Cable Inc., *SEC Form 10-K for the Period Ending December 31, 2013*, at 5.

**Table B-2**  
**National Networks Affiliated with a Television Network, Broadcast Television Licensee, or Other Media Company**

<b>Network Owner:</b>	<b>Networks Wholly Owned or Owned in Part</b>
CBS Corporation	CBS Sports Network, CBS Sports Network HD, FLIX, FLIX HD, Showtime, Showtime HD, Showtime Beyond, Showtime Beyond HD, Showtime Extreme, Showtime Extreme HD, Showtime Family Zone, Showtime Family Zone HD, Showtime Next, Showtime Next HD, Showtime Showcase, Showtime Showcase HD, Showtime 2, Showtime 2 HD, Showtime Women, Showtime Women HD, Smithsonian Channel, Smithsonian Channel HD, TMC, TMC HD, TMC Xtra, TMC Xtra HD, TVGN, <sup>(1)</sup> TVGN HD <sup>(1)</sup>
Crown Media Holdings	Hallmark Channel, Hallmark Channel HD, Hallmark Movie Channel, Hallmark Movie Channel HD
Daystar Television Network	Daystar TV
Discovery Communications	3net, 3net HD, A&E, A&E HD, Animal Planet, Animal Planet HD, Destination America, Destination America HD, Discovery, Discovery HD, Discovery Español, Discovery Familia, Discovery Fit & Health, <sup>(2)</sup> Discovery Fit & Health HD, <sup>(2)</sup> HD Theater, Investigation Discovery, American Heroes Channel, American Heroes Channel HD, OWN, OWN HD, Science Channel, Science Channel HD, TLC, TLC HD, The Hub, Velocity HD
Hearst Corporation	3net, 3net HD, A&E, A&E HD, FYI, <sup>(3)</sup> FYI HD, <sup>(3)</sup> Crime & Investigation, Crime & Investigation HD, ESPN Classic, ESPN Deportes, ESPN, ESPN HD, ESPN2, ESPN2 HD, ESPNEWS, ESPNEWS HD, ESPNU, ESPNU HD, H2, H2 HD, History, History HD, History en Español, History International, Lifetime, Lifetime HD, Lifetime Real Women, Lifetime Real Women HD, LMN, LMN HD, Military History Channel
Hubbard Broadcasting Corp.	Reelz Channel, Reelz Channel HD, Ovation TV, Ovation TV HD
InterMedia Partners	Aspire TV, Aspire TV HD, Up TV, <sup>(4)</sup> Up TV HD, <sup>(4)</sup> The Sportsman Channel, The Sportsman Channel HD, Universal Sports HD, WAPA-America
Scripps Networks Interactive <sup>(5)</sup>	Cooking Channel, Cooking Channel HD, DIY Network, DIY Network HD, Food Network, Food Network HD, Great American Country, HGTV, HGTV HD, Travel Channel, Travel Channel HD
The Walt Disney Company	3net, 3 net HD, A&E, A&E HD, ABC Family, ABC Family HD, FYI, FYI HD, Crime & Investigation Network, Crime & Investigation HD, Disney Channel, Disney Channel HD, Disney Junior, Disney XD, Disney XD HD, ESPN 3D HD, <sup>(6)</sup> ESPN Classic, ESPN Deportes, ESPN, ESPN HD, ESPN2, ESPN2 HD, ESPNews, ESPNews HD, ESPNU, ESPNU HD, Fusion, Fusion HD, H2, H2 HD, History, History HD, History en Español, LMN, LMN HD, Lifetime Real Women, Lifetime TV, Lifetime TV HD, Military History Channel

Network Owner:	Networks Wholly Owned or Owned in Part
Time Warner Inc.	@Max, @Max HD, 5 Star Max, 5 Star Max HD, Action Max, Action Max HD, Boomerang, Cartoon Network/Adult Swim, Adult Swim HD, Cinemax, Cinemax HD, CNN, CNN HD, CNN Airport, CNN Headline News, CNN Español, CNN International, HBO, HBO HD, HBO2, HBO2 HD, HBO Comedy, HBO Comedy HD, HBO Family, HBO Family HD, HBO Signature, HBO Signature HD, HBO Zone, HBO Zone HD, Max Latino, Max Latino HD, More Max, More Max HD, NBA, NBA HD, NuvoTV, Outer Max, Outer Max HD, TBS, TBS HD, TMC, TMC HD, Thriller Max, Thriller Max HD, TNT, TNT HD, Tru TV, Tru TV HD, WMAX, WMAX HD
Viacom Inc.	BET, BET HD, BET Gospel, BET Hip Hop, CENTIC, CMT, CMT HD, CMT Pure Country, CMT Pure Country HD, Comedy Central, Comedy Central HD, LOGO, MTV, MTV HD, MTV Hits, MTV Jams, MTV2, Nick 2, Nickelodeon/Nick at Nite, Nickelodeon/Nick at Nite HD, Nicktoons Network, Nick Jr, Palladia HD, Spike TV, Spike TV HD, TeenNick, EPIX HD, Tr3s, TV Land, TV Land HD, VH1, VH1 HD, VH1 Classic, VH1 Soul
Trinity Broadcasting Network	JCTV, Smile of a Child, TBN, TBN HD, TBN Enclave, The Church Channel
Univision Communications	Bandamax, De Pelicula, De Pelicula Classico, Galavision, Ritmoson Latino, Telehit, Univision Deportes, Univision Noticias, Univision TInovelas

**Notes:**

<sup>(1)</sup> On January 14, 2015, TVGN was rebranded as Pop. TVGN, *TVGN Goes "POP" on Wednesday, Jan. 14, 2015* (press release), Nov. 17, 2014.

<sup>(2)</sup> On January 15, 2015, Discovery Communications renamed Discovery Fit & Health to Discovery Life Channel. Discovery Communications, *Discovery Communications Announces Discovery Fit & Health Will Become Discovery Life Channel on January 15, 2015: Network Embraces Life, Unexpected* (press release), Jan. 15, 2015.

<sup>(3)</sup> In July 2014, A&E Networks rebranded the Biography Channel to FYI. A&E Networks, *A&E Networks to Launch New Network – FYI* (press release), Dec. 11, 2013.

<sup>(4)</sup> On June 1, 2013, Gospel Music Channel was renamed Uplifting Entertainment ("UP"). UP, *GMC TV Changes its Name to UP* (press release), May 30, 2013.

<sup>(5)</sup> On July 30, 2014, E. W. Scripps Company and Journal Communications agreed to merge their broadcast operations and spin off and then merge their newspapers. The merged broadcast and digital media company will retain the E.W. Scripps Company name, and the Scripps family shareholders will continue to have voting control. E.W. Scripps Co., *Scripps, Journal merging broadcast operations, spinning off newspapers* (press release), July 30, 2014.

<sup>(6)</sup> On June 13, 2013, Disney announced that it would shut down ESPD 3-D by the end of 2013. See Ryan Nakashima, *3-D TV Falling Flat: ESPN to Pull Plug on 3-D Broadcasts by Year's End, Saying Too Few Viewers*, WASHINGTON POST, June 13, 2013.

<sup>(7)</sup> On June 28, 2013, News Corporation split into two companies: 21<sup>st</sup> Century FOX, which retained most of News Corporation's television, film, and new media holdings; and News Corp. which focusses primarily on publishing. Both companies are chaired by Rupert Murdoch. 21<sup>st</sup> Century FOX, *News*

*Corporation Board of Directors Approves Separation of Businesses* (press release), May 24, 2013.

<sup>(8)</sup> On September 2, 2013, 21<sup>st</sup> Century FOX launched cable network FXX, replacing FOX Soccer Channel.

**Sources:**

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Scripps Networks Interactive, *About Us*, <http://www.scrippsnetworks.com/about.aspx?code=about> (visited May 1, 2014).

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TwentyFirst Century FOX, Inc., *Company Overview*, <http://www.21cf.com/> (visited May 1, 2014).

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Viacom Inc., *About Viacom*, <http://www.viacom.com/about/pages/default.aspx> (visited May 1, 2014).

Walt Disney Corporation, *Company Overview*, <http://corporate.disney.go.com/corporate/overview.html> (visited May 2, 2014).

## APPENDIX C

## Regional Video Programming Services

Table C-1

## Regional Video Programming Services Affiliated with One or More MVPDs

Network Owner:	Networks Wholly or Owned in Part
Bright House Networks	<p><b>Regional News Networks:</b> Bay News 9, Bay News 9 HD, Bay News 9 en Español, CFN 13 (Central FL News)</p> <p><b>Regional Sports Networks:</b> Bright House Sports Network, Bright House Sports Network HD</p>
Cablevision Systems Corporation (Madison Square Garden)	<p><b>Regional News Networks:</b> News 12 CT, News 12 Bronx, News 12 Brooklyn, News 12 Hudson Valley, News 12 Long Island, News 12 NJ, News 12 Traffic &amp; Weather – CT, News 12 Traffic &amp; Weather – Long Island, News 12 Traffic &amp; Weather – Hudson Valley, News 12 Traffic &amp; Weather – NJ, News 12 Traffic &amp; Weather – NY, News 12 Westchester</p> <p><b>Regional Sports Networks:</b> MSG, MSG HD, MSG Plus, MSG Plus HD, MSG Varsity</p>
Charter Communications	<p><b>Regional Sports Networks:</b> Comcast/Charter SportsNet Southeast</p>
Comcast/NBCU	<p><b>Regional News Networks:</b> CN8, New England Cable News, New England Cable News HD</p> <p><b>Regional Sports Networks:</b> Comcast Entertainment TV (CET), Comcast SportsNet Bay Area, Comcast SportsNet Bay Area HD, Comcast SportsNet California, Comcast SportsNet California HD, Comcast SportsNet Chicago, Comcast SportsNet Chicago HD, Comcast SportsNet Mid-Atlantic, Comcast SportsNet Mid-Atlantic HD, Comcast SportsNet New England, Comcast SportsNet New England HD, Comcast SportsNet Philadelphia, Comcast SportsNet Philadelphia HD, Comcast SportsNet Northwest, Comcast SportsNet Northwest HD, Comcast SportsNet Washington, Comcast SportsNet Washington HD, Comcast SportsNet West, Comcast SportsNet West HD, Comcast SportsNet Southwest, SportsNet New York, SportsNet New York HD</p>
Cox Communications, Inc.	<p><b>Regional News Networks:</b> 24/7 News Channel, Arizona News Channel, Kansas 22 Now, Las Vegas One News, Local News on Cable (Hampton), News Now 53 (Oklahoma City), News Now 53 (Tulsa), NewsWatch 15 (Louisiana), Pittsburgh Cable News Channel, Rhode Island News Channel, San Diego's News Channel 15</p> <p><b>Regional Sports Networks:</b> Channel 4 San Diego, Channel 4 San Diego HD, Cox Sports Television</p>
DIRECTV	<p><b>Regional Sports Networks:</b> Roots Sports Northwest, Roots Sports Northwest HD, Roots Sports Pittsburgh, Roots Sports Pittsburgh HD, Roots Sports Rocky Mountain, Roots Sports Rocky Mountain HD</p>

Network Owner:	Networks Wholly or Owned in Part
Time Warner Cable	<p><b>Regional News Networks:</b> Desert Cities TV (Desert City, CA), TWC News (Palmdale, CA), TWC SoCal 101, K-Life (HI), NGN (HI), OC 16 (HI), TWC Local Weather (Kansas City), cn/2 (KY), TWC TV (New England/Portland/Augusta), TWC News NY1, TWC Noticias NY1, TWC News (Buffalo), TWC News(Hudson Valley), TWC News (Jamestown), TWC News (Rochester), TWC Capital Region (Albany), TWC New Central NY (Syracuse), TWC North Country (Watertown), TWC News Southern Tier (Binghamton), TWC News Your Traffic (Albany), TWC News Lie Radar (Syracuse), TWC News Rail &amp; Road (Hudson Valley), TWC News Rail &amp; road (NYC), TWC News (Charlotte), TWC News (Greensboro), TEC News (Raleigh), TWC News(Wilmington), TWC live Radar (Columbia), TEC local Weather (Cleveland/Akron), TEC News (Austin), TWC (Waco), TWC Local Weather (Austin), TWC Your Traffic (Austin), TWC Noticias Tiempo (Austin), TWC News Live Radar (Austin/ North, Central, south, West Waco/ Killeen/ Beaumont), TWC News Live Radar (Corpus Christi)</p> <p><b>Regional Sports Networks:</b> TWC 858 (Spanish), TWC Deportes (Spanish), TWC SportsNet (CA/NV), Canal de Tejas (North: Waco/El Paso; South: Austin/San Antonio/Corpus Christi, Laredo), OC 12 (HI), TWC Sports (Kansas City),TWC Sports2 (Kansas City), TWC Sports (NE), TWC Sports (Albany), TWC Sports (Buffalo), TWC Sports (Rochester), TWC Sports (Syracuse), TWC Sports 2 (Syracuse), TWC Sports (Cincinnati/Dayton), TWC Sports (Cleveland/Akron), TWC Sports (Columbus/Toledo), TWC Sports (North: Dallas/El Paso; South: Austin/San Antonio/Corpus Christi), TWC Sports (Milwaukee/Green Bay), TWC Sports (Raleigh/Charlotte/Greensboro/Wilmington, NC, Columbia, Florence/Myrtle Beach, SC), SportsNet New York, SportsNet LA</p>

**Sources:**

*Application of News Corporation and The DIRECTV Group, Inc., Transferors, and Liberty Media Corporation, Transferee, For Authority To Transfer Control, Consolidated Application For Authority to Transfer Control, Jan. 29, 2007, at 10-11.*

Cablevision Systems Corporation, *SEC Form 10-K for Fiscal Year Ended December 31, 2013*, at 9.

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Charter Communications, *About Charter*, <http://www.charter.com/footer/footerPage.jsp?tag=about> (visited Apr. 30, 2014).

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Madison Square Garden, Inc., *SEC Form 10-K for the Fiscal Year Ending June 30, 2014*, at 4.

**Table C-2**  
**Regional Networks Affiliated with a National Broadcast Television Network, Broadcast Television Licensee, or Other Media Company**

Network Owner:	Networks Wholly or Owned in Part
Allbritton Communications <sup>(1)</sup>	<b>Regional News Networks:</b> NewsChannel 8, NewsChannel 8 HD
Gannett Co. Inc. <sup>(2)</sup>	<b>Regional News Networks:</b> 24/7 News Channel (Boise, ID), Arizona New Channel (Arizona), Local News (Virginia), NewsWatch 15 (Louisiana), Northwest Cable News (Washington, Oregon, Idaho), TXCN (Texas)
Scripps Networks Interactive	<b>Regional Sports Networks:</b> FOX Sports South, FOX Sports South HD, SportsSouth, SportsSouth HD
Twenty-First Century FOX, Inc.	<b>Regional Sports Networks:</b> FOX Sports Arizona, FOX Sports Arizona HD, FOX Sports Carolinas, FOX Sports Carolinas HD, FOX Sports Detroit, FOX Sports Detroit HD, FOX Sports Florida, FOX Sports Florida HD, FOX Sports Houston, FOX Sports Houston HD, FOX Sports Indiana, FOX Sports Indiana HD, FOX Sports Kansas City, FOX Sports Kansas City HD, FOX Sports Midwest, FOX Sports Midwest HD, FOX Sports New Orleans, FOX Sports New Orleans HD, FOX Sports North, FOX Sports North HD, FOX Sports Ohio, FOX Sports Ohio HD, FOX Sports Oklahoma, FOX Sports Oklahoma HD, FOX Sports San Diego, FOX Sports San Diego HD, FOX Sports South, FOX Sports South HD, FOX Sports Southwest, FOX Sports Southwest HD, FOX Sports Tennessee, FOX Sports Tennessee HD, FOX Sports Utah, FOX Sports Utah HD, FOX Sports West and Prime Ticket, FOX Sports West and Prime Ticket HD, FOX Sports Wisconsin, FOX Sports Wisconsin HD, SportSouth, SportSouth HD, SportsTime Ohio, SportsTime Ohio HD, Sun Sports, Sun Sports HD, Yankee Entertainment & Sports (YES) Network, Yankee Entertainment & Sports (YES) Network HD

**Notes:**

<sup>(1)</sup> Sinclair acquired Allbritton's broadcast stations and regional cable networks on August 1, 2014. See Sinclair Broadcast Group, Inc., *Sinclair to Close on Allbritton Stations August 1, 2014* (press release), July 25, 2014.

<sup>(2)</sup> Formerly Belo RSNs. Gannett Co., Inc., *Gannett Completes Acquisition of Belo* (press release), Dec. 23, 2013.

**Sources:**

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**APPENDIX D**  
**Regional Sports Networks**

<b>Regional Network Name<sup>(1)</sup></b>	<b>MVPD Owner</b>	<b>Other Owners</b>
Altitude Sports Network		Stan Kroenke (owner of the Denver Nuggets and the Colorado Avalanche)
Altitude Sports Network HD		Stan Kroenke (owner of the Denver Nuggets and the Colorado Avalanche)
Bright House Sports Network	Time Warner Cable	
Bright House Sports Network HD	Time Warner Cable	
Big Ten Network		Big Ten Conference, News Corporation
Big Ten Network HD		Big Ten Conference, News Corporation
Channel 4 San Diego	Cox Enterprises	
Channel 4 San Diego HD	Cox Enterprises	
Comcast/Charter Sports Southeast	Comcast, Charter	
Comcast/Charter Sports Southeast HD	Comcast, Charter	
Comcast SportsNet Bay Area	Comcast/NBCU	San Francisco Giants
Comcast SportsNet Bay Area HD	Comcast/NBCU	San Francisco Giants
Comcast Sports Net California	Comcast/NBCU	
Comcast SportsNet California HD	Comcast/NBCU	
Comcast SportsNet Chicago	Comcast/NBCU	J. Joseph Ricketts (owner of the Cubs), Jerry Reinsdorf (owner of the Bulls and the White Sox), Rocky Wirtz (owner of the Blackhawks)
Comcast SportsNet Chicago HD	Comcast/NBCU	J. Joseph Ricketts (owner of the Cubs), Jerry Reinsdorf (owner of the Bulls and the White Sox), Rocky Wirtz (owner of the Blackhawks)
Comcast SportsNet Houston <sup>(2)</sup>	Comcast/NBCU	Houston Astros, Houston Rockets
Comcast SportsNet Houston HD <sup>(2)</sup>	Comcast/NBCU	Houston Astros, Houston Rockets
Comcast SportsNet Mid-Atlantic	Comcast/NBCU	
Comcast SportsNet Mid-Atlantic HD	Comcast/NBCU	
Comcast SportsNet New England	Comcast/NBCU	

<b>Network Regional Name<sup>(1)</sup></b>	<b>MVPD Owner</b>	<b>Other Owners</b>
Comcast SportsNet New England HD	Comcast/NBCU	
Comcast SportsNet Northwest	Comcast/NBCU	
Comcast SportsNet Northwest HD	Comcast/NBCU	
Comcast SportsNet Philadelphia	Comcast/NBCU	Philadelphia Phillies
Comcast SportsNet Philadelphia HD	Comcast/NBCU	Philadelphia Phillies
Comcast SportsNet Washington	Comcast/NBCU	
Comcast SportsNet Washington HD	Comcast/NBCU	
Comcast Sports Southwest	Comcast/NBCU	
Comcast Sports Southwest HD	Comcast/NBCU	
Cox Sports Television (New Orleans)	Cox Enterprises	
Cox Sports Television HD (New Orleans)	Cox Enterprises	
FOX Sports Arizona		News Corporation
FOX Sports Arizona HD		News Corporation
FOX Sports Carolinas		News Corporation
FOX Sports Carolinas HD		News Corporation
FOX Sports Detroit		News Corporation
FOX Sports Detroit HD		News Corporation
FOX Sports Florida		News Corporation
FOX Sports Florida HD		News Corporation
FOX Sports Houston		News Corporation
FOX Sports Houston HD		News Corporation
FOX Sports Indiana		News Corporation
FOX Sports Indiana HD		News Corporation
FOX Sports Kansas City		News Corporation
FOX Sports Kansas City		News Corporation
FOX Sports Midwest		News Corporation
FOX Sports Midwest HD		News Corporation
FOX Sports New Orleans		News Corporation
FOX Sports New Orleans HD		News Corporation
FOX Sports North		News Corporation
FOX Sports North HD		News Corporation
FOX Sports Ohio HD		News Corporation
<b>Regional Network Name<sup>(1)</sup></b>	<b>MVPD Owner</b>	<b>Other Owners</b>
FOX Sports Oklahoma		News Corporation

FOX Sports Oklahoma HD		News Corporation
FOX Sports San Diego		News Corporation
FOX Sports San Diego HD		News Corporation
FOX Sports South		News Corporation
FOX Sports South HD		News Corporation
FOX Sports Southwest		News Corporation
FOX Sports Southwest HD		News Corporation
FOX Sports Tennessee		News Corporation
FOX Sports Tennessee HD		News Corporation
FOX Sports Utah		News Corporation
FOX Sports Utah HD		News Corporation
FOX Sports West		News Corporation
FOX Sports West HD		News Corporation
FOX Sports Wisconsin		News Corporation
FOX Sports Wisconsin HD		News Corporation
Lakers RSN		News Corporation
Lakers RSN HD	Time Warner Cable	
Lakers RSN (Spanish language)	Time Warner Cable	
Lakers RSN HD (Spanish language)	Time Warner Cable	
Longhorn Network	Time Warner Cable	
Longhorn Network HD		Walt Disney Company and Hearst
MASN		Walt Disney Company and Hearst
MASN HD		Baltimore Orioles and the Washington Nationals
Metro Sports (Kansas City)		Baltimore Orioles and the Washington Nationals
Metro Sports HD (Kansas City)	Time Warner Cable	
Metro Sports (Nebraska)	Time Warner Cable	
MSG	Time Warner Cable	
MSG HD	Cablevision	
MSG Plus	Cablevision	
<b>Regional Network Name<sup>(1)</sup></b>	<b>MVPD Owner</b>	<b>Other Owners</b>
MSG Plus HD	Cablevision	
NESN	Cablevision	

NESN HD		Boston Red Sox and Boston Bruins
OC 12 (Hawaii)		Boston Red Sox and Boston Bruins
OC HD (Hawaii)	Time Warner Cable	
PAC-12 Network	Time Warner Cable	
PAC-12 Network HD		PAC-12 Conference
ROOT Sports: Northwest		PAC-12 Conference
ROOT Sports: Northwest HD	DIRECTV Sports Networks	
ROOT Sports: Pittsburgh	DIRECTV Sports Networks	
ROOT Sports: Pittsburgh HD	DIRECTV Sports Networks	
ROOT Sports: Rocky Mountain	DIRECTV Sports Networks	
ROOT Sports: Rocky Mountain HD	DIRECTV Sports Networks	
SportsNet LA	DIRECTV Sports Networks	
SportsNet LA HD	TWC	Los Angeles Dodgers
SportsNet New York	TWC	Los Angeles Dodgers
SportsNet New York HD	Comcast, TWC	
SportsSouth	Comcast, TWC	
SportsSouth HD		News Corporation
SportsTime Ohio		News Corporation
SportsTime Ohio HD		News Corporation
Sun Sports		News Corporation
Sun Sports HD		News Corporation
TWC Sports (Albany)		News Corporation
TWC Sports HD (Albany)	Time Warner Cable	
TWC Sports (Buffalo)	Time Warner Cable	
TWC Sports HD (Buffalo)	Time Warner Cable	
TWC Sports (Rochester)	Time Warner Cable	
TWC Sports HD (Rochester)	Time Warner Cable	
<b>Regional Network Name<sup>(1)</sup></b>	<b>MVPD Owner</b>	<b>Other Owners</b>
TWC Sports (Syracuse)	Time Warner Cable	
TWC Sports HD (Syracuse)	Time Warner Cable	
TWC Sports 2 (Syracuse)	Time Warner Cable	

TWC Sports (Columbus/Toledo)	Time Warner Cable	
TWC Sports HD (Columbus/Toledo)	Time Warner Cable	
TWC Sports (Cincinnati/Dayton)	Time Warner Cable	
TWC Sports HD (Cincinnati/Dayton)	Time Warner Cable	
TWC Sports (Cleveland/Akron)	Time Warner Cable	
TWC Sports HD (Cleveland/Akron)	Time Warner Cable	
TWC Sports 858 (Spanish)	Time Warner Cable	
TWC Deportes (Spanish)	Time Warner Cable	
TWC SportsNet (California/Nevada)	Time Warner Cable	
TWC SportsNet HD (California/Nevada)	Time Warner Cable	
TWC Sports (Kansas City)	Time Warner Cable	
TWC Sports HD (Kansas City)	Time Warner Cable	
TWC Sports 2 (Kansas City)	Time Warner Cable	
TWC Sports 2 HD (Kansas City)	Time Warner Cable	
TWC Sports (NC: Raleigh/Charlotte/Greensboro/Wilmington; SC: Columbia/Florence/Myrtle Beach)	Time Warner Cable	
TWC Sports (Nebraska)	Time Warner Cable	
TWC Sports HD (Nebraska)	Time Warner Cable	
TWC Sports 32 HD (Milwaukee/Green Bay)	Time Warner Cable	
TWC Sports 32 HD (Milwaukee/Green Bay)	Time Warner Cable	
Texas Channel (North: Dallas/El Paso; South: Austin/San Antonio/Corpus)	Time Warner Cable	
Canal de Tejas (North: Dallas/Waco/El Paso, South: Austin/San Antonio/Corpus/Laredo) (Spanish)	Time Warner Cable	
Yankee Entertainment & Sports (YES) Network (New York)		Yankee Global Enterprises, News Corporation
Yankee Entertainment & Sports (YES) Network HD (New York)		Yankee Global Enterprises, News Corporation

**Notes:**

<sup>(1)</sup> This list is provided for illustrative purposes only. Inclusion or exclusion of a network should not be read to state or imply any position as to whether the network qualifies as an “RSN” as defined by the Commission.

<sup>(2)</sup> In November 2014, DIRECTV and AT&T acquired Comcast SportsNet Houston and Comcast SportsNet Houston HD. The network is now named ROOT Sports Southwest. DIRECTV, *New Network Under DIRECTV and AT&T Ownership to Re-launch in Four Times as Many Households For 2014-15 Rockets Season and 2015 Astros Season* (press release), Nov. 17, 2014.

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**STATEMENT OF  
COMMISSIONER AJIT PAI**

Re: *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, MB Docket No. 14-16.

The Commission's 16th Video Competition Report is filled with good news. When it comes to video programming, Americans have more choices than ever before. They can select from an amazing variety of programming. They can watch that programming on a wide array of devices. And they can view that programming when it is convenient for them. Indeed, the common complaint about television these days isn't that there isn't enough quality programming to watch; it's that there isn't enough time to watch all of the shows that are generating buzz! As a father of two young children, I certainly identify with that sentiment.

A quick note on why this report has been characterized by *Arrested Development*. The Communications Act requires us to "annually report to Congress on the status of competition in the market for the delivery of video programming."<sup>1</sup> Unfortunately, this statutory mandate has collapsed like a *House of Cards*, as the Commission failed to issue such a report in 2014.<sup>2</sup> Instead, the FCC has been *Breaking Bad* by focusing on other matters. We are not *Mad Men*; we are regulators, and it is *Elementary* that we are bound by the law. If we are to oversee the communications *Empire* for *The Americans*, we should provide timely marketplace snapshots as Congress asked us to do. It would be a *Scandal* if we continue to ignore this legal obligation. Hopefully, we will do so next time—well before *The Wire*—so we do not end up on Congress's *Blacklist*.

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<sup>1</sup> 47 U.S.C. § 548(g).

<sup>2</sup> Unless, of course, a 2014 version of the report has been buried in *The X-Files*.