

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

In the Matter of	)	
	)	
Annual Assessment of the Status of Competition	)	MB Docket No. 05-255
in the Market for the Delivery of Video	)	
Programming	)	

**TWELFTH ANNUAL REPORT**

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By the Commission: Chairman Martin, Commissioners Copps, Adelstein, and Tate issuing separate statements.

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**I. INTRODUCTION**

1. As required by Section 628(g) of the Communications Act of 1934, as amended, this is the Commission's twelfth annual report (*2005 Report*) to Congress on the status of competition in the market for the delivery of video programming.<sup>1</sup> Congress imposed this annual reporting requirement in the Cable Television Consumer Protection and Competition Act of 1992 (1992 Cable Act)<sup>2</sup> as a means of obtaining information on the competitive status of the market for the delivery of video programming.

**A. Scope of this Report**

2. Consistent with the statutory purpose, we report on developments in the market for the delivery of video programming and on the factors that have facilitated or impeded changes in the competitive environment over the past year. We present information and analysis regarding changes in the market since the *2004 Report*, and we describe how those changes affect the current state of the market. The information and analysis provided in this *Report* are based on information submitted by

<sup>1</sup> The Commission's previous reports appear at: *Implementation of Section 19 of the 1992 Cable Act (Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming)*, 1994 Report, 9 FCC Rcd 7442 (1994); *1995 Report*, 11 FCC Rcd 2060 (1996); *1996 Report*, 12 FCC Rcd 4358 (1997); *1997 Report*, 13 FCC Rcd 1034 (1998); *1998 Report*, 13 FCC Rcd 24284 (1998); *1999 Report*, 15 FCC Rcd 978 (2000); *2000 Report*, 16 FCC Rcd 6005 (2001); *2001 Report*, 17 FCC Rcd 1244 (2002); *2002 Report*, 17 FCC Rcd 26901 (2002); *2003 Report*, 19 FCC Rcd 1606 (2004); and *2004 Report*, 20 FCC Rcd 2755 (2005). See Communications Act of 1934 § 628(g), 47 U.S.C. § 548(g).

<sup>2</sup> Pub. L. No. 102-385, 106 Stat. 1460 (1992).

commenters in response to a *Notice of Inquiry (Notice)* in this docket,<sup>3</sup> publicly available data, and filings in various Commission proceedings. Although the *Notice* asked commenters to provide certain kinds of data and other information, we do not require commenters to do so, nor do we audit the data that are provided.

3. The market for the delivery of video programming services is served by a number of operators using a wide range of distribution technologies. In Section II, we examine each of these delivery technologies, and the services provided over them, and we assess their ability to provide competitive services in the multichannel video market. Specifically, we examine the cable television industry, and other established multichannel video programming distributors (MVPDs), including direct broadcast satellite (DBS) providers, home satellite dishes (HSDs), and broadband service providers (BSPs), as well as broadcast television service. We also examine other wireline video providers, including local exchange carriers (LECs), which have initiated commercial services using copper-based, fiber, and hybrid-fiber coaxial cable distribution technologies for video programming, and electric and gas utilities. In addition, we address wireless video services, including services provided by private cable operators (PCOs), wireless cable systems using frequencies in the broadband radio and educational broadband services (wireless cable), and services offering video programming delivered over commercial mobile radio systems (CMRS). We also examine Internet-based video services. Finally, we review home video sales and rentals. In Section III, we examine market structure and competition, evaluating ownership trends in the multichannel video marketplace, vertical integration between programming services and distribution systems, issues pertaining to access to programming, and competitive issues in small and rural markets and multiple dwelling units (MDUs). We also address numerous technical issues (Section IV) regarding navigation and reception devices and emerging services. Finally, we survey developments in foreign markets (Section V).

## **B. Summary**

### **1. The Current State of Competition: 2005**

4. Americans are voracious consumers of media services, spending close to 30 percent of their day engaged in some activity involving media, with television viewing the dominant media activity.<sup>4</sup> For the September 2004 – September 2005 television season, the average household tuned into television for 8 hours, 11 minutes a day.<sup>5</sup> This is almost three percent higher than the previous season, over 12 percent higher than 10 years ago, and the highest level observed since television viewing was first measured by Nielsen Media Research in the 1950s.<sup>6</sup> Within the same period, the average person watched 4 hours, 32 minutes each day, again a record high.<sup>7</sup>

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<sup>3</sup> *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, 20 FCC Rcd 14117 (2005) (*Notice*). Where possible, we requested data as of June 30, 2005. Appendix A lists commenters and the abbreviations by which they are identified herein.

<sup>4</sup> *Study: Average Person Spends More Time Using Media than Anything Else*, Radio Business Report, Sept 5, 2005, available at [http://www.rbr.com/tvepaper/pages/september05/05-190\\_news1.html](http://www.rbr.com/tvepaper/pages/september05/05-190_news1.html), citing the Middletown Media Studies 2 from Ball State University.

<sup>5</sup> Nielsen Media Research, *Nielsen Reports Americans Watch TV at Record Levels* (press release), Sept. 29, 2005. Nielsen's estimates are based on its National People Meter service.

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

<sup>7</sup> *Id.* Children and teens are spending an increasing amount of time using new media. Young people are exposed to 8 hours and 33 minutes of media content each day; 3 hours and 51 minutes of which are spent watching television and videos. Kaiser Family Foundation, *Media Multitasking – Changing the Amount and Nature of Young People's Media Use* (press release), Mar. 9, 2005.

5. Competition in the delivery of video programming services has provided consumers with increased choice, better picture quality, and greater technological innovation. In particular, the effect of DBS competition has resulted in the addition of networks to cable operators' channel line ups, although it has only lowered cable rates slightly.<sup>8</sup> We find that almost all consumers have the choice between over-the-air broadcast television, a cable service, and at least two DBS providers. In some areas, consumers also may have access to video programming delivered by emerging technologies, such as digital broadcast spectrum, fiber to the home, or video over the Internet. In addition, through the use of advanced set-top boxes and digital video recorders, and the introduction of new mobile video services, consumers are now able to maintain more control over what, when, and how they receive information. Further, MVPDs of all stripes are offering nonvideo services in tandem with their traditional video services.

## 2. General Findings

6. The MVPD market has continued to grow. While the largest MVPD remains a cable operator, cable subscribership declined slightly since the *2004 Report*. The second and third largest MVPDs now are DBS operators. In addition, other delivery technologies continue to serve small numbers of subscribers in limited areas. LECs, such as SBC<sup>9</sup> and Verizon, who continue to partner with DBS providers to offer video service, have spent the past year preparing to offer video in their operating areas and are building out their facilities to add video offerings.

7. Large numbers of consumers continue to subscribe to cable service, which commands approximately 69 percent of all MVPD households. Cable operators have responded to the growth of DBS and its competitive service offerings by, among other things, expanding their channel line ups and bundling video service with other service offerings, such as cable modem service or telephone service. The number of cable subscribers selecting digital tiers and advanced services not offered by DBS continues to grow. These competitive efforts are matched by DBS operators' offering of local broadcast channels, additional sports and international programming, and advanced set-top boxes with digital video recorder (DVR) capabilities. Similarly, broadband service providers continue to offer a triple play of video, voice and Internet access service, which is proving to be price competitive with cable. Among our findings in rural and small markets are that LECs are upgrading their traditional copper facilities to digital subscriber line (DSL) and fiber-based platforms to allow them to offer a suite of video, telephone, and data services.

## 3. Specific Findings

8. The number of TV households and the number of MVPD subscribers increased in the past year. As of June 2005, there were 109.6 million TV households, compared to 108.4 million in June 2004. Of that number, approximately 94.2 million TV households, or almost 86 percent of TV households subscribe to an MVPD service, as compared to 92.3 million, or 85.1 percent as of June 2004. Cable serves the largest percentage of MVPD subscribers, but cable's share of the MVPD market continued to decline. As of June 2005, 69.4 percent of MVPD subscribers received video programming from a franchised cable operator, as compared to 71.6 percent as of June 2004.<sup>10</sup> DBS subscribers

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<sup>8</sup> See paras. 41 *infra*.

<sup>9</sup> Following its acquisition of AT&T Corp., SBC changed its name to AT&T Inc. We continue to refer to the company as SBC, the name under which it submitted its filings in this proceeding. See AT&T Inc., *New AT&T Launches* (press release), Nov. 18, 2005.

<sup>10</sup> This percentage is the result of adding together the number of subscribers to all MVPD services and calculating the percentage of this total represented by cable subscribers. See Appendix B, Table B-1. The 70/70 test, referred to in para. 12, *infra*, measures the share of cable subscribers to systems with 36 or more channels as a percent of homes to which cable systems with 36 or more channels are available.

comprise the second largest group of MVPD households, representing 27.7 percent of total MVPD subscribers as of June 2005, compared to 25.1 percent in June 2004, an increase of more than 10 percent. The competitive presence of MVPDs other than cable or DBS declined. The number of MVPD subscribers choosing all other delivery technologies decreased, representing 2.9 percent of all subscribers in June 2005, as compared to 3.3 percent in June 2004.

9. In 2005, the four MVPDs with the largest subscribership served 63 percent of all MVPD subscribers, while in 2004, the top four served 58 percent of all subscribers. The share of subscribers served by the top ten MVPDs also increased from approximately 85 percent in 2004 to 88 percent in 2005. Relatively few consumers have a second wireline alternative, such as an overbuild cable system. BSPs, which typically operate overbuild systems, reported no appreciable change in subscribership since last year, maintaining total subscribership of approximately 1.4 million.

10. **Cable Service.** The number of basic cable subscribers declined slightly, falling from 66.1 million in June 2004 to 65.4 million in June 2005. Cable penetration (*i.e.*, subscribers/homes passed) declined in 2004, as the number of subscribers decreased and the number of homes passed increased.

11. Cable revenue was projected to grow 10.8 percent in 2005 to \$66.5 billion. Much of the increase in revenue comes from advanced services, especially high-speed Internet service and digital cable services, and from higher basic cable rates. In addition to traditional analog video services, many cable operators offer subscribers one or more advanced video services, including digital video, video-on-demand, digital video recorders, and high-definition television; and nonvideo advanced services, including high-speed Internet access and telephony (circuit-switched telephony and/or voice over Internet protocol telephony). At year-end 2004, according to industry reports, 96 percent of all cable homes passed were offered digital video services, 93 percent were offered high-speed Internet access services, and telephony service (both VoIP and circuit-switched) was available to 38 percent of homes passed by cable.

12. Section 612(g) of the Communications Act provides that when cable systems with 36 or more activated channels are available to 70 percent of households within the United States and when 70 percent of those households subscribe to them, the Commission may promulgate any additional rules necessary to promote diversity of information sources. Data submitted in the record this year raises questions as to whether the so-called “70/70 test” has been satisfied. Accordingly, the Commission is seeking further public comment on the best methodologies and data for measuring the 70-percent thresholds and, if the thresholds have been met, what action might be warranted to achieve the statutory goals.

13. **Direct-to-Home (DTH) Satellite Service (DBS and Home Satellite Dish, or HSD).** As of June 2005, approximately 26.1 million U.S. households subscribed to DBS service. This represents an increase of 12.8 percent over the approximately 23.2 million DBS subscribers we reported last year. DBS accounts for approximately 27.7 percent of all U.S. MVPD subscribers. DBS operators continue to add local-into-local broadcast television service. In 167 of 210 television markets (*i.e.*, designated market areas, or DMAs), covering 96 percent of all U.S. TV households, at least one DBS provider offers the signals of local broadcast stations (local-into-local service). As of June 2005, there were 206,358 households authorized to receive HSD service, a decrease of 38.5 percent from the 335,766 we reported last year.

14. **Other Wireline MVPD Services.** For the purposes of this report, we consider broadband service providers (BSPs) to be newer firms that are building state-of-the-art, facilities-based networks to provide video, voice, and data services over a single network. As of June 2005, BSPs served approximately 1.4 million subscribers, representing 1.5 percent of all MVPD households. Electric and gas utilities also provide MVPD and other services. Reports indicate that 616 public power entities offer some kind of broadband services, serving about 14 percent of total households in the United States. Of those, 102 offered video service, 128 offered high-speed Internet access, 52 offered local telephone

service, and 42 offered long distance telephone service. Of the 102 offering video services, 10 are offering video-on-demand (VOD).

15. Incumbent local exchange carriers (ILECs) have reported plans to provide video service via asymmetric digital subscriber line (ADSL), very high-speed digital subscriber line (VDSL), or fiber to the home (FTTH) or fiber to the node (FTTN).<sup>11</sup> There are 652 communities in 46 states currently served at least in part by FTTH networks, with 322,700 “connected homes.” The larger LECs have accelerated their plans to roll out video services using DSL and fiber-based distribution platforms. Verizon is deploying an FTTH network under the brand name “FiOS” that will allow delivery of multichannel video services in addition to telephony and high-speed Internet access service at speeds above those of ADSL technology. Verizon has received franchises from local communities in California, Florida, Virginia, Texas, Massachusetts, and Maryland. It began offering multichannel video service in Keller, Texas, in September 2005, and now offers service to more than a dozen Texas communities; in Herndon, Virginia, in November 2005; and in Temple Terrace, Florida, in December 2005. SBC is planning to deploy an IP-enabled broadband network called “Project Lightspeed” using both FTTN and FTTH to deliver video and other services to residential customers. SBC reports that the network will be available to 18 million homes nationwide within three years. Qwest and a number of smaller incumbent LECs are offering, or preparing to offer, MVPD service over existing telephone lines using VDSL or ADSL technologies.

16. **Wireless Services.** Wireless cable systems provide video competition to incumbent cable operators only on a limited basis. The number of wireless cable subscribers has declined steadily from a peak of 1.2 million in 1996 to approximately 100,000 as of March 2005, down from an estimated 200,000 subscribers in April 2004. Several major cellular telephone companies are offering video services through handheld devices such as mobile telephones.<sup>12</sup> Verizon Wireless rolled out V-Cast, a service that offers video programming to cellular telephone users, in February 2005, and Sprint Nextel offers news, video clips, and other content in real time over their cellular phones. In addition, PCOs, also known as satellite master antenna (SMATV) systems, continue to serve a small number of MVPD subscribers, either through their own facilities or through partnership arrangements with DBS operators. PCO subscribership has declined to one million subscribers this year, a decrease of 9.1 percent from last year’s 1.1 million.

17. **Broadcast Television Service.** In this year’s *Report*, we find that there are almost 15.4 million U.S. TV households that do not subscribe to an MVPD service and thus rely solely on over-the-air broadcast television for their video programming. In addition, we note that many households that subscribe to an MVPD also rely on over-the-air signals to receive broadcast programming on some of their television sets.<sup>13</sup> They represent 14 percent of all U.S. TV households. From June 30, 2004 to June 30, 2005, the number of commercial and noncommercial television stations has remained unchanged at 1,747. As of October 2005, more than 1,537 stations nationwide are on the air with DTV operations, including all 119 of the top-four network affiliates in the top 30 television markets. The major broadcast networks (ABC, CBS, Fox, and NBC) now provide their most popular programming in high-definition.

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<sup>11</sup> Fiber to the node (also known as fiber to the neighborhood) is a hybrid network architecture involving optical fiber from the carrier network, terminating in a neighborhood cabinet (or “node”), which converts the signal from optical to electrical. The connection from the cabinet to the user premises is provided over unshielded twisted pair (UTC) or coaxial cable. While fiber to the house is preferable in terms of overall performance, it is more expensive to deploy than fiber to the node. See Harry Newton, *NEWTON’S TELECOM DICTIONARY* (CMP Books, 17<sup>th</sup> ed., 2001), at 296.

<sup>12</sup> In general, wireless carriers are providing video in clip form, allowing users to select segments of news, sporting event recaps, weather reports and music videos, although full-length video is available. See, e.g., Verizon, <http://getitnow.vzwnet.com/index.aspx?id=vcast> video. See also paras. 134, 231-2 *infra*.

<sup>13</sup> See Media Bureau, Staff Report Concerning Over-the-Air Broadcast Television Viewers, MB Docket 04-210, Feb. 28, 2005 (*OTA Report*).

Hundreds of local stations are using their digital channels to provide multicast programming, including news, weather, sports, religious material, music videos and coverage of local musicians and concerts, as well as foreign language programming. As of May 2005, cable operators were carrying commercial broadcasters' multicast programming in more than 50 markets (including at least seven of the top 10 markets).<sup>14</sup>

18. **Internet Video.** The amount of web-based video provided over the Internet continues to increase significantly each year. The overall number of homes with access to the Internet continues to grow, as does the number of Americans who access the Internet via a high-speed broadband connection. As of June 2005, there were approximately 33.7 million high-speed residential Internet access subscribers, representing approximately 48 percent of the 70.3 million residential Internet subscription households. As of January 2005, an average of 14 percent of all Americans had watched some form of streaming video in the preceding month, and approximately eight percent of Americans had accessed streaming video content in the preceding week.

19. **Home Video Sales and Rentals.** The sale and rental of home videos, including videocassettes and DVDs, offer consumers an alternative to the premium and pay-per-view offerings of MVPDs. Video-on-demand services provided by cable, DBS, and Internet providers have emerged, in turn, as competitive alternatives to home video. Nine out of 10 TV households have at least one VCR, and an estimated 80 million households have DVD capability, representing nearly three-quarters of all U.S. households.

20. **Cable System Ownership.** Between July 2004 and June 2005, a total of 22 MVPD transactions were announced.<sup>15</sup> Together these transactions were valued at approximately \$48.7 billion and affected approximately 12.7 million subscribers. At the end of 2004, there were 118 clusters with approximately 51.5 million subscribers compared to 108 clusters and approximately 53.6 million subscribers at the end of 2003 (although due to a change in methodology, these figures are not directly comparable). In the largest cluster size category (over 500,000 subscribers), the number of clusters remained constant at 29 between 2003 and 2004.

21. **Video Programming Services.** In 2005, using additional data resources, we identified 531 satellite-delivered national programming networks, an increase of 143 networks over the 2004 total of 388 networks. Of the 531 networks, 116 networks (21.8 percent) were vertically integrated with at least one cable operator. Five of the top seven cable operators (*i.e.*, Comcast, Time Warner, Cox, Charter, and Cablevision) hold ownership interests in satellite-delivered national programming networks. All of the vertically integrated networks are owned in whole or in part by one or more of these companies. Of the 531 national nonbroadcast networks we have identified, 274, or 51.6 percent, that are not affiliated with any cable operator or other media entity. There are 107 national, satellite-delivered nonbroadcast networks that are owned by a DBS operator or one or more national broadcast networks (*i.e.*, Fox, ABC, CBS, NBC Universal, and Univision) and that are not also owned by a cable operator. These networks represent 20.2 percent of the 531 national nonbroadcast networks we have identified, and 25.8 percent of the 415 networks that are unaffiliated with a cable operator. Twenty-two national nonbroadcast networks, not owned by a cable MSO, are vertically integrated with a DBS provider. During the 2004-2005 television season, more than half of all prime time viewers watched ad-supported nonbroadcast networks, the second consecutive year that these networks, combined, have topped all national broadcast networks, combined, for an entire TV season. Of the 15 top-rated prime time nonbroadcast networks, three are

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<sup>14</sup> This does not necessarily include all multicast programming available from broadcasters in all markets and may include only carriage of special events in certain markets. For example, several cable operators agreed to carry CBS stations' extra coverage of the 2005 NCAA men's college basketball tournament on multicast channels.

<sup>15</sup> These figures are for announced transactions, including the sale of Adelphia's assets to Comcast and Time Warner currently under review by the Commission.

vertically integrated with a cable operator. The remaining 12 networks are owned by other media entities. In addition, six of the top 20 nonbroadcast networks (ranked by subscribership) are vertically integrated with a cable operator. Of the other 14 networks, one is C-SPAN, which is funded, but not directly owned or controlled, by MVPDs; 12 are affiliated with noncable media entities; and one is unaffiliated.

22. In 2005, we identified 96 regional networks, the same number that we identified in 2004. Many, but not all, regional networks are delivered by satellite. These networks provide programming of local or regional interest and are distributed to subscribers of one or more MVPDs in an area. A number of regional networks offer local news or sports programming, but some provide more general programming, such as religious or ethnic programming. Of the 96 regional networks we identified, 44 networks, or 45.8 percent, were vertically integrated with at least one cable multiple system operator (MSO). We continue to monitor the availability of sports programming. There are 37 regional sports networks, representing 38.5 percent of all regional networks, devoted to sports programming, as compared to the 38 we reported last year. Of the 37 regional sports networks, 17, or 45.9 percent, are vertically integrated with a cable MSO. In addition, News Corp., which holds an interest in DBS operator DIRECTV, is affiliated with 16 regional sports networks.

23. **Consumer Equipment and Technical Developments.** The sale of DTV consumer electronics continues to accelerate. For 2005, industry estimates indicate that 8.2 million HD-ready monitors will be shipped to retailers. CEA reports that during the first six months of 2005, DTV products sold at a faster rate than during any previous comparable period of time, with 3.8 million DTV products sold, a 40 percent increase in unit sales from the same time period in 2004. In 2005, the average retail price of a DTV set was expected to drop to \$1,189 from \$1,489 in 2004, down from the average price of \$3,147 in 1998. CEA states that currently several DTV models are available for under \$700, and it expects that soon there will be DTV sets that sell for as low as \$400.

24. The development and deployment of CableCARDS continued in 2005. CableCARDS permit the reception of one-way secured digital cable services without the addition of a set-top box. As of November 30, 2005, there were 375 certified or verified models of CableCARD products collectively offered by 22 manufacturers, up from 60 models offered by 11 manufacturers the previous year. One-way CableCARDS have been deployed to more than 90,000 subscribers by the ten largest MSOs.

25. The video industry is evaluating the use of advanced compression technologies, such as MPEG-4/H.264 and Microsoft's VC-1, to replace the MPEG-2 standard in order to decrease the amount of bandwidth required to transmit digital video. For example, DIRECTV is using MPEG-4 to provide HD local-into-local in a number of markets. These advances are expected to allow existing video delivery services to provide more programming and to decrease barriers to entry for new entrants to the MVPD market.

26. **Foreign Markets.** In foreign markets, a number of incumbent operators and new entrants are providing Internet protocol television (IPTV) over DSL. Services are offered generally through a "triple play" service package of video, telephone and broadband Internet access. Operators also offer a wide selection of a la carte and themed video programming packages.



## II. COMPETITORS IN THE MARKET FOR THE DELIVERY OF VIDEO PROGRAMMING

### A. Cable Television Service

27. This section addresses the performance of cable television system operators during the past year.<sup>16</sup> First, we report on the general performance of the industry, including subscriber levels, availability of basic services, viewership, and cable rates. Second, we discuss the cable industry's financial performance, including its revenue, cash flow status, stock valuations, and system transactions. Third, we examine the cable industry's acquisition and disposition of capital. Lastly, we address the growth of advanced video services, including digital and high-definition television, video-on-demand, and digital video recorders; and nonvideo advanced services, including high-speed Internet access and voice over Internet protocol telephony.

#### 1. General Performance

28. The number of subscribers to basic cable service<sup>17</sup> and premium cable service<sup>18</sup> declined in 2004. Basic cable penetration, the ratio of the number of basic cable subscribers to the number of homes passed,<sup>19</sup> declined in 2004 and is estimated to have declined further in the first half of 2005. By many other measures, however, general cable industry performance increased across the board. For example, premium service subscriptions<sup>20</sup> and subscriptions to digital video service increased.<sup>21</sup> Although basic cable penetration decreased in 2004, homes passed increased during the same period. Channel capacity<sup>22</sup> and deployment of video-on-demand,<sup>23</sup> digital video recorders,<sup>24</sup> and high-definition service all

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<sup>16</sup> A cable system operator is "any person or group of persons (A) who provides cable service over a cable system, and directly or through one or more affiliates owns a significant interest in such cable system; or (B) who otherwise controls or is responsible for, through any arrangement, the management and operation of such a cable system." 47 U.S.C. § 522(5).

<sup>17</sup> Basic cable service, also referred to as the basic service tier (BST), is the level of cable television service that must be taken by all cable television subscribers. The content of basic cable service varies among cable systems but, pursuant to the Communications Act, must include all local television signals and public, educational, and governmental access channels and, at the discretion of the cable operator, may include other video services. Expanded basic cable service, also referred to as the cable programming service tier (CPST) for purposes of rate regulation, offers additional video channels on one or more service tiers. 47 U.S.C. § 543(b)(7); 47 U.S.C. § 543(k)(2).

<sup>18</sup> Premium services are nonbroadcast networks provided by a cable operator on a per-channel basis for an extra monthly fee. Pay-per-view (PPV) services are nonbroadcast networks provided on a per program basis. PPV service is a separate category from premium service.

<sup>19</sup> Homes passed is the total number of households capable of receiving cable television service.

<sup>20</sup> Premium service subscriptions are the number of premium services to which homes are subscribing (also known as pay units).

<sup>21</sup> Digital cable service refers to digitally compressed video channels offered on digital service tiers. Every subscriber of a cable system must subscribe to the basic tier in order to subscribe to any other tier of video service or to purchase any other video service. 47 C.F.R. § 76.920.

<sup>22</sup> Channel capacity is bandwidth dedicated to video use. Video channel capacity can be increased or decreased on any given system simply by using more or less bandwidth for other services, such as high-speed Internet access services or cable telephony.

<sup>23</sup> Video-on-demand (VOD) allows subscribers to select at any time movies and other programs they wish to view from a selection of titles stored on a remote server.

<sup>24</sup> Digital video recorders (DVRs) use a hard disk drive to record video programs.

increased during 2004 and the first half of 2005.<sup>25</sup> Deployment of nonvideo advanced services, such as high-speed Internet access service and telephone service, also increased during this period.

29. ***Cable's Capacity to Serve Television Households.*** A widely used industry measurement of cable availability is the percentage of homes with a television that are passed by a cable system. The calculation of cable availability has been a subject of controversy.<sup>26</sup> The number of homes passed depends on the data source used, and the percentage of homes passed varies based on the universe used for the comparison.<sup>27</sup>

30. According to NCTA, at the end of 2004, cable systems passed 108.2 million occupied homes with a television, and 109.6 million homes had a television.<sup>28</sup> Thus, NCTA estimates that at the end of 2004, cable systems passed approximately 99 percent of homes with a television.<sup>29</sup> We continue to use, as we have in the past, data derived from Kagan World Media (homes passed by cable systems) and Nielsen Media Research (total TV households) for historical consistency. We present these data to indicate trends, rather than as an absolute measure of cable availability. Kagan estimates that at the end of 2004, 109.6 million households had at least one television, and cable systems passed 108.6 million occupied homes (not all of them with a television).<sup>30</sup> Using Kagan's numbers, at the end of 2004, the percentage of occupied homes with a television that were passed by a cable system was approximately 99 percent, which is consistent with NCTA's estimate.<sup>31</sup>

31. Section 612(g) of the Communications Act provides that at such time as cable systems with 36 or more activated channels are available to 70 percent of households within the United States and are subscribed to by 70 percent of those households, the Commission may promulgate any additional rules necessary to promote diversity of information sources.<sup>32</sup> As discussed below, data submitted in the

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<sup>25</sup> High-definition (HD) service provides television signals with greater detail and fidelity than provided by the National Television Systems Committee (NTSC) system. The high-definition picture has approximately twice the visual resolution as NTSC. High-definition service also supports 5.1 channel Dolby Digital surround sound.

<sup>26</sup> See *Application of EchoStar Communications Corporation, General Motors Corporation, and Hughes Electronics Corporation, Transferors and EchoStar Communications Corporation, Transferee*, 17 FCC Rcd 20559, 20611-12 ¶¶ 122-25 (2002) (*EchoStar-Hughes HDO*) (designating for hearing the issue of the precise number of households that are not served by a cable operator, the number served by a low-capacity cable system, and the number served by a high-capacity cable system).

<sup>27</sup> Homes passed data evaluated in the context of our review of the EchoStar-DIRECTV merger application indicated that the number of homes not passed by cable might vary from four percent to 21.28 percent depending on the estimation methods. *EchoStar-Hughes HDO*, 17 FCC Rcd at 20612 ¶ 124 and n.356.

<sup>28</sup> NCTA, *Industry Statistics*, Cable Developments 2005, at 5. NCTA's estimate of 108.2 million occupied homes with a television that were passed by a cable system is a projection, not a current estimate, from Kagan Research, LLC, *Broadband Cable Financial Databook*, Aug. 2004, at 11. NCTA's estimate of 109.6 million homes with a television comes from Nielsen Media Research (January 2005).

<sup>29</sup> NCTA, *Industry Statistics*, Cable Developments 2005, at 5. NCTA calculated the 99 percent figure as follows: 108.2 million/109.6 million = 98.7 percent.

<sup>30</sup> Kagan Research, LLC, *Broadband Cable Financial Databook*, Aug 2005 (Cable Databook), at 11. Occupied homes passed by cable systems equals total cable homes passed times percent of total housing units that are occupied (108.6 million = 120.7 million x (111.4 million/123.8 million)). Cable Databook at 11 and 13.

<sup>31</sup> The 99 percent estimate is derived as follows: 108.6 million/109.6 million = 99.1 percent. Since the numerator includes homes that may not have a television, the calculation may overstate cable availability.

<sup>32</sup> 47 U.S.C. § 532(g). This provision was added to the Communications Act by the Cable Communications Policy Act of 1984, Pub. L. No. 98-549, 98 Stat. 2779.

record this year raises questions as to whether the so-called “70/70 test” has been satisfied.<sup>33</sup> Accordingly, we are seeking additional input to help the Commission further consider this issue.

32. Current Census Bureau data indicate that there are 107,850,000 occupied housing units.<sup>34</sup> According to Warren Communications News (Warren), there are 93,077,522 occupied homes passed by cable systems with 36 or more channels.<sup>35</sup> Thus, based on these data sources, cable systems with 36 or more channels are available to 86.3 percent (93,077,522/107,850,000) of occupied households.<sup>36</sup> No commenter provided any conflicting data relevant to the first prong of the test, and so there appears to be no serious disagreement that this prong of the analysis has been satisfied.

33. With respect to the second prong of the analysis, however, the record is less clear. At least one commenter has submitted a statistical analysis that suggests the cable subscription threshold has been satisfied, while other measures indicate that current cable subscribership falls just short of the statutory mark. SBC believes the second prong of the benchmark may have been met. Specifically, SBC calculates that 77.2 percent of all households passed by cable systems with 36 or more channels subscribe to these cable systems.<sup>37</sup> Using figures estimated by the Commission and NCTA, SBC asserts that 65,155,440 households subscribe to cable systems with 36 or more channels.<sup>38</sup> SBC derives this figure from NCTA’s estimate that 73,219,360 households subscribed to cable as of February 2005,<sup>39</sup> and the Commission’s calculation in last year’s *Report*, using Warren data as of October 2004, that 8,063,920 households subscribed to cable systems with fewer than 36 channels.<sup>40</sup> SBC subtracts the Commission’s estimate from NCTA’s estimate (73,219,360 – 8,063,920 = 65,155,440).<sup>41</sup> SBC then divides its estimate of households that subscribe to cable systems offering 36 or more channels by Warren’s October 2004 estimate, cited in the *2004 Report*, that 84,415,707 households homes were passed by cable systems with 36 or more channels.<sup>42</sup> This calculation produces a figure of 77.2 percent (65,155,440/84,415,707 = 0.772). SBC acknowledges that its data for households passed by cable systems and cable subscribers differ from the data used by the Commission to determine whether the statutory trigger has been met.<sup>43</sup>

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<sup>33</sup> We observe that each data source provides different estimates of the number of occupied homes, the number of homes passed by cable systems, and the number of basic cable subscribers. Some data sources identify cable systems with 36 or more channels, while other data sources report estimates for all cable systems without distinguishing between those with 36 or more channels and those with less than 36 channels.

<sup>34</sup> U.S. Census Bureau, *Census Bureau Reports on Residential Vacancies and Homeownership* (press release), July 28, 2005, Table 3. See <http://www.census.gov/hhes/www/housing/hvs/qtr205/q205prss/pdf> (visited Sept. 20, 2005).

<sup>35</sup> Warren Communications News, *Custom Report: From Television and Cable Factbook Online Datasets*, Sept. 21, 2005.

<sup>36</sup> *Id.* Warren defines homes passed as the total number of homes passed by cable systems having the potential of being served by a cable operator promptly. Specifically, the homes passed must be occupied and are assumed to have a television.

<sup>37</sup> See SBC Reply Comments at 15.

<sup>38</sup> *Id.*

<sup>39</sup> See NCTA, at <http://www.ncta.com/Docs/PageContent.cfm?pageID=86> (visited Oct. 21, 2005). NCTA’s website indicates that Nielsen Media Research is the source for this subscriber number.

<sup>40</sup> See *2004 Report*, 20 FCC Rcd 2768 ¶ 20. The Commission’s estimate is calculated using data from Warren Communications News, *Custom Report: From Television and Cable Factbook Online Datasets*, Oct. 19, 2004.

<sup>41</sup> See SBC Reply Comments at 15.

<sup>42</sup> See *2004 Report*, 20 FCC Rcd 2768 ¶ 20. The Commission’s data source was Warren Communications News, *Custom Report: From Television and Cable Factbook Online Datasets*, Oct. 19, 2004.

<sup>43</sup> SBC Reply Comments at 14-16. SBC acknowledges, however, that different data sources produce different results and that calculations based on available data may not be definitive.

To better determine whether the statutory trigger has been met, SBC asks the Commission to insist that the cable industry provide “the relevant data calculated on a consistent and transparent basis.”<sup>44</sup>

34. In contrast several other calculations indicate that the second prong of the 70/70 test has not been met. Warren estimates that of the occupied U.S. homes passed by cable systems with 36 or more channels, 63,145,124 of those households subscribe to cable service offered by such systems.<sup>45</sup> As a percentage measure, then, the Warren data indicates that 67.8 percent of homes passed (63,145,124/93,077,522) subscribe to these systems.<sup>46</sup> As alternatives, data from the 2005 Price Survey and the *Annual Report of Cable Television Systems* (FCC Form 325) could be used to estimate the second prong of the 70/70 benchmark. Neither source, however, indicates that the second element of the test has been met. From the 2005 Price Survey sample, the Commission staff estimates that the subscribers to systems with 36 or more channels as a percent of the homes passed by such systems is 56.3 percent, compared to 58.8 percent using data from the 2004 Price Survey sample.<sup>47</sup> Based on the Form 325 sample, our staff estimates that this figure is 54 percent, compared to 54.7 percent reported last year.<sup>48</sup> NCTA has arrived at still other measures. Using Warren, Nielsen, and Kagan data, NCTA submitted estimates of the second prong of the 70/70 benchmark ranging from 63.3 percent to 68.9 percent.<sup>49</sup>

35. We recognize that the available data sources have some limitations because the reported cable penetration rates are not calculated from a complete census of cable systems.<sup>50</sup> Each reported

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<sup>44</sup> SBC Reply Comments at 16.

<sup>45</sup> Warren Communications News, *Custom Report: From Television and Cable Factbook Online Datasets*, Sept. 30, 2005.

<sup>46</sup> *Id.* Warren reports that of the 66,300,059 cable subscribers in the United States, 63,145,124 subscribe to cable systems with 36 or more channels. Thus, there are 3,154,935 (66,300,059 – 63,145,124 = 3,154,935) subscribers to cable systems with fewer than 36 channels.

<sup>47</sup> Section 623(k) of the 1992 Cable Act, Pub. L. No. 102-385, 106 Stat. 1460, codified at 47 U.S.C. § 543(k), requires the Commission to publish annually a statistical report on average rates for the cable basic service tier, cable programming tier, and equipment. The information and analysis provided in the report are based on the Commission’s survey of a random sample of cable systems. The survey collects data on cable system subscribership, channel capacity, and homes passed. *See, e.g., Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992, Statistical Report on Average Prices for Basic Service, Cable Programming Services, and Equipment*, 20 FCC Rcd 2718 (2005). Using data from the annual Price Survey sample, we calculate subscriber-weighted estimates, taking into account our sampling procedures, in the same manner that we use for our report on cable rates.

<sup>48</sup> 47 C.F.R. § 76.403 requires that cable television systems notified by the Commission shall file FCC Form 325 (Annual Cable Report) soliciting general information and frequency and signal distribution information. Form 325 data for filing year 2004 is as of December 31, 2004. All systems with more than 20,000 subscribers and a randomly selected sample of smaller systems are required to file the Form 325. The Commission based last year’s Form 325 estimate on data for June 30, 2003. The estimates reported here are unadjusted figures from the data reported in Form 325 submissions.

<sup>49</sup> *See* Letter from Daniel L. Brenner, Senior Vice President, Law & Regulatory Policy, NCTA, to Marlene H. Dortch, Secretary, FCC, Dec. 15, 2005, at 2 (providing estimates using Warren, Nielsen, and Kagan homes passed and subscriber statistics). NCTA estimates that the penetration rate for cable systems with 36 or more channels is 68.9 percent using October 2004 Warren data and 63.3 percent using both sample and adjusted Nielsen FOCUS data. NCTA also submits Kagan data to calculate a cable penetration rate of 53.1 percent for all cable systems to demonstrate that the Warren data understate the number of homes passed by cable systems with more than 36 channels. NCTA claims that all three data sources demonstrate that the penetration rate is below the 70 percent threshold. *Id.*

<sup>50</sup> Warren’s database includes information on the majority of, but not all, cable systems. The Price Survey uses a stratified random sample based on system size. The Form 325 data are collected from all cable systems with more (continued....)

penetration rate is an estimate, subject to some variation from the actual penetration rate. The limitations of the data sources do not appear to affect the determination with respect to the first prong of the 70/70 test, which is higher than the threshold regardless of the data source used for the calculation. The question of whether the second prong has been met is less clear since at least one party finds that the benchmark has been exceeded and some other estimates, while under 70 percent, are very close to that threshold. Given these circumstances and the fact that all available data sources are imprecise to some extent, it is possible that the second prong of the 70/70 benchmark has been met.

36. In light of the significance of this issue and commenters' disagreements as to whether the statutory standard has been satisfied, the Commission is seeking further public comment on the best methodologies and data for measuring the 70-percent thresholds. For example, controversy has arisen in other proceedings regarding how the Commission should define whether a cable system is available to a household.<sup>51</sup> The question of how to define a household for purposes of the 70/70 test has also arisen.<sup>52</sup> Should we include only households that are occupied? Should we include only households that contain a television set? How should we determine whether a household subscribes to a cable system? Should we include only households that subscribe to the basic tier of video services, thereby excluding those households that subscribe only to non-video services?<sup>53</sup> We also seek comment on SBC's suggestion that the Commission should require the cable industry to provide "the relevant data on a consistent and transparent basis."<sup>54</sup> We also invite comment on what, if any, additional action should be undertaken to achieve the statutory goals, should we find that the thresholds have been met.<sup>55</sup> As a preliminary matter, we ask commenters who advocate that the Commission promulgate additional rules to address the scope of our statutory authority under Section 612(g) to do so. We also ask commenters who advocate the promulgation of additional regulations to provide a detailed description of the suggested regulations and of their potential costs and benefits. Deadlines for public comment on these questions are provided in the final section of this Report.

37. **Subscribership.** The number of basic cable subscribers declined slightly from 66 million in 2003 to 65.4 million in 2004, as shown in Table 1 below. Kagan estimated that the number of basic cable subscribers would remain unchanged at 65.4 million basic subscribers at year-end 2005.<sup>56</sup>

(Continued from previous page) \_\_\_\_\_  
than 20,000 subscribers and a 5 percent sample of systems with fewer than 20,000 subscribers. SBC's estimate combines data from several publicly available data sources.

<sup>51</sup> See *EchoStar-Hughes HDO*, 17 FCC Rcd at 20611-12 ¶¶ 122-25. See also *2004 Video Competition Report*, 20 FCC Rcd at 2766-68 ¶¶ 18-20; and *2003 Report*, 19 FCC Rcd at 1620-21 ¶¶ 21-22.

<sup>52</sup> *2004 Video Competition Report*, 20 FCC Rcd at 2766-68 ¶¶ 18-20; and *2003 Video Competition Report*, 19 FCC Rcd at 1620-21 ¶¶ 21-22.

<sup>53</sup> We recognize that at the time that Congress drafted Section 612, very few cable operators were providing services beyond multichannel video offerings.

<sup>54</sup> SBC Reply Comments at 16.

<sup>55</sup> Should our analysis of the further public input here indicate that Commission action under Section 612(g) may be warranted, we will issue a Notice of Proposed Rulemaking to seek comment prior to adoption of any potential new regulations.

<sup>56</sup> Cable Databook at 11.

**TABLE 1: Cable Television Industry Growth: 1999 - June 2005 (in millions)**<sup>57</sup>

Year	TV Households (TH) <sup>58</sup>		Homes Passed (HP) <sup>59</sup>		Basic Subscribers (Subs) <sup>60</sup>		HH Passed by Cable (HP/TH)	HHs Subscribing (Subs/TH)	U.S. Penetration (Subs/HP)
	Total	% Change Over Prior Yr	Total	% Change Over Prior Yr	Total	% Change Over Prior Yr			
1999	100.8	1.4%	97.6	2.1%	65.9	1.2%	96.8%	65.4%	67.5%
2000	102.2	1.4%	98.9	1.3%	66.6	1.1%	96.8%	65.2%	67.3%
2001	104.4	2.2%	100.6	1.7%	66.9	0.5%	96.4%	64.1%	66.5%
2002	106.7	2.2%	103.4	2.8%	66.1	-1.2%	96.9%	61.9%	63.9%
2003	108.4	1.6%	106.0	2.5%	66.0	-0.2%	97.8%	60.9%	62.3%
2004	109.6	1.1%	108.6	2.5%	65.4	-0.9%	99.1%	59.7%	60.2%
June 2005	109.6	0.0% <sup>61</sup>	109.7	1.0%	65.4	0.0%	100.1%	59.7%	59.6%

38. Although the number of basic subscribers was unchanged for the second quarter of 2005, as shown in Table 2, cable companies continue to experience variations in the number of basic subscribers they serve.

<sup>57</sup> Historical data in this table may differ from that previously reported because some data have been updated by Kagan. See Cable Databook at 9, 11.

<sup>58</sup> The 2004 and estimated June 2005 TV Household numbers are reported by Kagan Research, LLC as total U.S. TV households. The numbers are derived from Nielsen Media Research and Kagan estimates. *Id.* at 11.

<sup>59</sup> Kagan reports the 1999 through 2004 homes passed numbers as occupied cable homes passed. The June 2005 homes passed estimate is an average calculated from the actual 2004 and the projected 2005 numbers for occupied cable homes passed. *Id.* at 9, 11.

<sup>60</sup> Kagan reports the 1999 through 2004 basic subscriber numbers as basic subscribers. The June 2005 basic subscriber estimate is an average calculated from the actual 2004 and the projected 2005 numbers for total basic cable subscribers. *Id.*

<sup>61</sup> Percentage change columns in this row are from December 2004 to June 2005.

**Table 2: Top MSOs' Basic Cable Subscribers – 2003 to June 2005<sup>62</sup>**

Operator	Year End (YE) 2003	YE 2004	Gain/(Loss) YE 03-YE 04	June 2005	Gain/(Loss)YE 04 to June 2005
Comcast <sup>63</sup>	21,540,000	21,548,000	8,000	21,448,000 <sup>64</sup>	(100,000)
Time Warner <sup>65</sup>	10,919,000	10,884,000	(35,000)	10,905,000 <sup>66</sup>	21,000
Cox <sup>67</sup>	6,285,236	6,287,395	2,159	6,283,122	(4,273)
Charter <sup>68</sup>	6,200,500	5,991,500	(209,000)	5,943,100	(48,400)
Cablevision <sup>69</sup>	2,944,694	2,963,001	18,307	3,005,558	42,557

<sup>62</sup> Subscriber data reported here are those reported to the SEC and may differ from subscriber numbers reported for other purposes.

<sup>63</sup> Comcast Corp., *Comcast Reports Fourth Quarter and Year End 2004 Results* (press release), Feb. 3, 2005. Pro forma subscriber data excludes the results of the 314,000 cable subscribers sold to Bresnan Communications in March 2003 and excludes the results of the net reduction of 16,000 subscribers associated with the cable systems exchanged with Insight Communications in February 2003. Pro forma subscriber data includes the results of the 30,000 cable subscribers acquired from US Coastal Cable in April 2004 and 54,000 subscribers acquired in various small acquisitions during the periods presented. *Id.* The pro forma methodology permits an estimate of the number of Comcast's subscribers after Jan. 1, 2003, as if it had sold the cable systems to Bresnan Communications, exchanged the cable systems with Insight Communications, and bought the cable systems from US Coastal Cable on Jan. 1, 2003. For second quarter 2005 results, *see* Comcast Corp., *Comcast Reports Second Quarter 2005 Results* (press release), Aug. 2, 2005. Pro forma subscriber data include the results of the 30,000 subscribers acquired from US Coastal Cable in April 2004 and 60,000 subscribers acquired in various small acquisitions during the periods presented. *Id.* The pro forma methodology permits an estimate of the number of Comcast's subscribers after Jan. 1, 2004, as if it had owned the cable systems acquired from US Coastal Cable on Jan. 1, 2004.

<sup>64</sup> In addition to its wholly owned systems reported here, Comcast holds an attributable interest in systems serving approximately an additional 4.6 million subscribers through partnership and other ownership interests. *See* Application and Public Interest Statement of Adelphia Communications Corporation, Time Warner Inc., and Comcast Corporation, MB Docket No. 05-192 (filed May 18, 2005), at 14 n.27.

<sup>65</sup> Time Warner Inc., *Time Warner Reports Results for 2004 Full Year and Fourth Quarter* (press release), Feb. 4, 2005. Time Warner indicates that its subscriber data include "all subscribers at both consolidated entities and investees accounted for under the equity method of accounting that are managed by the Company." *Id.* at 29. For second quarter 2005 results, *see* Time Warner Inc., *Time Warner Inc. Reports Second Quarter 2005 Results* (press release), Aug. 3, 2005. Time Warner gained 26,000 basic cable subscribers in the first quarter of 2005 and lost 5,000 basic cable subscribers in the second quarter of 2005. *See also* Time Warner Inc., *Time Warner Inc. Reports First Quarter 2005 Results* (press release), May 4, 2005.

<sup>66</sup> In addition to its wholly owned systems reported here, Time Warner holds an attributable interest in systems serving approximately an additional 2.2 million subscribers. *See* Application and Public Interest Statement of Adelphia Communications Corporation, Time Warner Inc., and Comcast Corporation, MB Docket No. 05-192 (filed May 18, 2005), at 10-11, 73.

<sup>67</sup> Cox Communications Inc., *Cox Communications Announces Fourth Quarter and Full-Year Financial Results for 2004* (press release), Mar. 16, 2005. Subscriber data are based on the number of subscribers who receive analog or digital video service. *Id.* For second quarter 2005 results, *see* Cox Communications Inc., *Cox Communications Announces Second Quarter and Year-to-Date Financial Results for 2005* (press release), Aug. 9, 2005.

<sup>68</sup> Charter Communications Inc., *Charter Reports Fourth Quarter and Annual 2004 Financial and Operating Results* (press release), Mar. 1, 2005. Charter's subscribers include all persons that Charter's billing records show as receiving service (regardless of their payment status), except for complimentary accounts (such as Charter's employees). Pro forma subscriber data reflect the sales of systems to Atlantic Broadband Finance, LLC in Mar. and (continued...)

39. Cable penetration (*i.e.*, subscribers/homes passed) declined in 2004, as the number of subscribers decreased and the number of homes passed increased. Kagan estimated that cable penetration would decline further in the first half of 2005. The ratio of cable subscribers to television households also declined in 2004, as the number of subscribers decreased and the number of television households increased.<sup>70</sup>

40. For the second year in a row, the number of homes subscribing to premium cable services declined from 28.3 million in 2003 to 28.1 million in 2004, as shown in Table 3 below. At the end of 2004, approximately 43 percent of cable's 65.4 million subscribers also subscribed to premium services.<sup>71</sup> The number of premium services to which homes are subscribing (also known as pay units), however, increased from 83.4 million in 2003 to 90.8 million in 2004.<sup>72</sup> While cable systems sold premium cable services to fewer homes, the total revenue received from premium services also increased 6.2 percent in 2004.<sup>73</sup> Cable systems sold premium cable services to fewer homes, but the average number of subscriptions per premium subscriber increased, from an average 2.9 subscriptions per subscribing household in 2003 to an average 3.2 subscriptions per subscribing household in 2004.<sup>74</sup>

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April 2004 and WaveDivision Holdings, LLC, which closed in Oct. 2003, as if they both occurred as of Jan. 1, 2003. *Id.* The pro forma methodology permits an estimate of the number of Charter's subscribers after Jan. 1, 2003, as if Charter sold the cable systems to Atlantic Broadband Finance, LLC and WaveDivision Holdings on Jan. 1, 2003. For second quarter 2005 results, *see* Charter Communications Inc., *Charter Communications Reports Second Quarter 2005 Financial and Operating Results* (press release), Aug. 2, 2005.

<sup>69</sup> Cablevision Systems Corp., *Cablevision Systems Corporation Reports Fourth Quarter and Full Year 2004 Results* (press release), Feb. 23, 2005; Cablevision Systems Corp., *Cablevision Systems Corporation Reports Second Quarter 2005 Results* (press release), Aug. 9, 2005.

<sup>70</sup> From the end of 2004 to the end of June 2005, the ratio of cable subscribers to TV households was calculated to remain unchanged at 59.7 percent. This calculation is the result of holding the number of TV households constant at 109.6 million over the entire 2004-2005 season and assuming that the number of basic subscribers will remain unchanged at 65.4 million from January 2004 to June 2005. Cable Databook at 11.

<sup>71</sup> Cable Databook at 9.

<sup>72</sup> *Id.*

<sup>73</sup> *Id.* at 8.

<sup>74</sup> *Id.* at 9.



**TABLE 3: Premium Cable Services: 1999 - 2004 (in millions)**<sup>75</sup>

Year	Premium Cable Service Subscribers (Pay HH)		Premium Cable Service Subscriptions (Pay Units)		Average Number of Subscriptions	
	Total	% Change Over Prior Year	Total	% Change Over Prior Year	Pay Units/ Pay HH	% Change Over Prior Year
1999	28.0	0.7%	60.2	2.7%	2.2	4.8%
2000	28.5	1.8%	66.8	11.0%	2.3	4.5%
2001	29.0	1.8%	75.6	13.2%	2.6	13.0%
2002	29.3	1.0%	81.1	7.3%	2.8	7.7%
2003	28.3	-3.4%	83.4	2.8%	2.9	3.6%
2004	28.1	-0.7%	90.8	8.9%	3.2	10.3%

41. **Cable Rates.** Several studies, most notably several released by the U.S. Government Accountability Office (GAO), have shown that competition constrains cable prices. For example, in 2003, GAO found that competition to an incumbent cable operator from a wireline provider resulted in cable rates that were “substantially lower (by 15 percent)” than in markets without this competition.<sup>76</sup> In this study, GAO also concluded that DBS competition had lowered cable rates slightly, although the more pronounced competitive effect of DBS was the addition of nonbroadcast networks to cable operators’ channel line-ups.<sup>77</sup> In 2004, GAO examined six market pairs to assess the impact of a BSP overbuilder. In each market pair, one market was served by a BSP overbuilder, and the other market was not. The market pairs were chosen based on their similarities in terms of size and demographics.<sup>78</sup> GAO found that communities with overbuild competition experience lower rates (an average of 23 percent lower for basic cable) and higher quality service.

42. **Cable Industry Revenue.** Total revenue grew to \$60.0 billion in 2004, as shown in Table 4 below.<sup>79</sup> This represents a 10.4 percent increase over the 2003 total revenues of \$54.4 billion. Cable revenue is projected to grow 10.8 percent in 2005 to \$66.5 billion. Much of the increase in revenue comes from advanced services, especially high-speed Internet service and digital cable services, and from

<sup>75</sup> Historical data included in this table may differ from those previously reported because some data have been updated by Kagan. See Cable Databook at 9. The 1999 through 2004 premium cable service subscribers (Pay HH) numbers are reported by Kagan as pay subscribers. *Id.* at 9. The 1999 through 2004 premium cable service subscriptions (Pay Units) numbers are reported by Kagan as the sum of premium units and mini-pay units (defined as a service or pay TV that programs less than eight hours per day). Premium units include HBO, Cinemax, Showtime, Movie Channel, Starz, and Playboy. Mini-pay units include Sundance, Flix, and Encore. *Id.* at 9.

<sup>76</sup> See U.S. General Accounting Office, *Issues Related to Competition and Subscriber Rates in the Cable Television Industry*, GAO-04-8, Oct. 2003, at 3, 9.

<sup>77</sup> *Id.* at 3, 9-10.

<sup>78</sup> See U.S. General Accounting Office, *Telecommunications: Wire-Based Competition Benefited Consumers in Selected Markets*, GAO-04-241, Feb. 2004.

<sup>79</sup> The \$60 billion of revenue generated by the cable industry is about one-fifth the \$291 billion of revenue generated by the telephone industry. Industry Analysis and Technology Division, Wireline Competition Bureau, Federal Communications Commission, *Telecommunications Industry Revenues: 2003* (rel. Mar. 1, 2005).

higher basic cable rates, which are regulated by local communities.<sup>80</sup> Average monthly residential revenue per subscriber grew from \$66.22 in 2003 to \$72.87 in 2004 and is projected to increase to \$80.33 in 2005.<sup>81</sup> As shown in Table 4, all revenue categories increased, except revenue from installation/miscellaneous, which decreased 9.6 percent in 2004 but is expected to increase by 6.6 percent in 2005.<sup>82</sup>

43. **Cable Industry Cash Flow.** Cash flow (generally expressed as earnings before interest, taxes, depreciation, and amortization, or EBITDA) is often used to assess the financial position of cable firms and other companies in capital intensive industries.<sup>83</sup> Cash flow from operations is the net result of cash inflows from operations (revenue) and cash outflows from operations (expenses). Cash flow from operations indicates a firm's ability to meet its net financial and investment obligations and thus does not include noncash charges to net income such as depreciation and amortization. As Table 4 shows, cash flow from operations increased during 2004.<sup>84</sup> In addition, cash flow as a percentage of revenue (cash flow margin) increased in 2004. That is, cash flow increased at a greater rate than revenue, indicating that revenues grew faster than operating expenses during 2004.

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<sup>80</sup> Kagan estimated that total revenue from residential subscribers would grow from \$57.5 billion in 2004 to \$63.1 in 2005. Kagan expected total revenue from business subscribers to grow from \$2.6 billion in 2004 to \$3.4 in 2005. Cable Databook at 13.

<sup>81</sup> Cable Databook at 4.

<sup>82</sup> We note that installation/miscellaneous varies from year to year. It includes installation revenues and any other revenues reported by Kagan, but not included in the categories listed separately on Table 5.

<sup>83</sup> The cable industry has long used a cash flow valuation model. Cash flow valuation is an effective tool for valuing companies that have negative net income because they are building out capital infrastructure and accruing significant long-term debt early in their life-cycle. The traditional measurement of cash flow, a measure of operating profit, has evolved into EBITDA, which ignores the expenses of interest, taxes, depreciation and amortization, whereas the standard valuation model, net income, includes them. In the past year, free cash flow (FCF) has largely replaced EBITDA as a critical valuation metric of choice among industry analysts. Although a standardized definition of FCF does not exist, FCF essentially takes into account the periodic interest that must be paid on debt. Some analysts more recently have suggested that the cable industry should be valued on the traditional net income model, and not cash flow or its various proxies (EBITDA or FCF) because the industry has now reached a stage of maturation that would justify use of more traditional valuation metrics. *See 2003 Report*, 19 FCC Rcd at 1627 ¶¶ 28 and n.72.

<sup>84</sup> Kagan reports that it was high-speed data service that drove operating cash flow growth in 2004. Cable Databook at 7. *See also* Kagan Research, LLC, *HSD – Cable's Growth Driver*, Cable TV Investor: Deals and Finance (Cable TV Investor), Apr. 26, 2005, at 8.

**Table 4: Cable Industry Revenue and Cash Flow: 2003 – 2005<sup>85</sup>**

	2003	2004	03-04	2005	04-05
	Total	Total	% Change	Est. Total	% Change
Basic Subscribers (mil.)	66.0	65.4	-0.9%	65.4	0.0%
<b>Revenue Segments (mil.)</b>					
Basic Service and CPST Tiers	\$29,000	\$30,080	3.7%	\$31,125	3.5%
Premium (Pay) Tiers	\$5,891	\$6,255	6.2%	\$6,412	2.5%
VOD/Pay-Per-View <sup>86</sup>	\$976	\$1,279	31.0%	\$1,527	19.4%
Local Advertising	\$3,143	\$3,527	12.2%	\$3,950	12.0%
Home Shopping	\$307	\$329	7.2%	\$358	8.8%
Total Digital Tier	\$3,396	\$3,966	16.8%	\$4,526	14.1%
High-speed Internet	\$6,772	\$8,943	32.1%	\$11,172	24.9%
DVR Service	\$36	\$150	316.7%	\$405	170.0%
Circuit Switch and VoIP	\$1,511	\$1,660	9.9%	\$2,240	34.9%
Installation/Miscellaneous <sup>87</sup>	\$1,421	\$1,285	-9.6%	\$1,370	6.6%
Business Services	\$1,911	\$2,551	33.5%	\$3,411	33.7%
<b>Total Revenue (mil.)</b>	<b>\$54,364</b>	<b>\$60,025</b>	<b>10.4%</b>	<b>\$66,496</b>	<b>10.8%</b>
Revenue Per Subscriber	\$823.70	\$917.81	11.4%	\$1016.76	10.8%
<b>Operating Cash Flow (mil.)</b>	<b>\$20,875</b>	<b>\$23,410</b>	<b>12.1%</b>	<b>\$25,933</b>	<b>10.8%</b>
Cash Flow per Subscriber	\$316.29	\$357.95	13.2%	\$396.53	10.8%
<b>Cash Flow/Total Revenue</b>	<b>38.4%</b>	<b>39.0%</b>	<b>1.6%</b>	<b>39.0%</b>	<b>0.0%</b>

44. **Programming Costs.** Cable operators' combined program expenditures reached \$12.68 billion in 2004 compared to \$11.46 billion in 2003.<sup>88</sup> This represents expenditures for existing nonbroadcast networks and expenditures for new nonbroadcast networks.<sup>89</sup> In addition to expenditures for national nonbroadcast networks, cable companies produced or acquired local and regional programming, including cable news and public affairs networks. Included in the \$12.68 billion in

<sup>85</sup> Home shopping, digital video recorder, business revenue, and installation/miscellaneous data for 2003 come from Kagan Research, LLC, Broadband Cable Financial Databook, Aug. 2004, at 8-13. All other data come from the Cable Databook at 8-13 and 150. Historical data included in this table may differ from those previously reported because some data have been updated by Kagan.

<sup>86</sup> Includes VOD, subscription-video-on-demand (SVOD), near-video-on-demand (NVOD), and PPV.

<sup>87</sup> Installation/Miscellaneous revenue includes revenues derived from basic installation and pay installation, high-definition television, interactive games, home networking, and equipment charges. We note that there is often no additional cost for the standard-definition version of HDTV channels. In many cases, MSOs charge for HDTV channels that are not offered in a standard-definition version. Some MSOs do not charge higher prices for an HD set-top box, but most apply a professional installation fee. See Time Warner Cable, at <http://www.timewarnercable.com/corporate/products/digitalcable/hdtv.html> (visited Oct. 7, 2005); Cablevision Systems Corp., at <http://www.io.tv/index.jhtml?pageType=hdtv> (visited Oct. 7, 2005); Comcast Corp., at [http://comcast.p.delivery.net/m/p/com/mic/HD\\_Index.asp](http://comcast.p.delivery.net/m/p/com/mic/HD_Index.asp) (visited Oct. 7, 2005); Charter Communications, at <http://www.charter.com/products/hdtv/hdtv.aspx> (visited Oct. 7, 2005).

<sup>88</sup> NCTA Comments at 40. NCTA's calculation of programming expenditures includes license fees, copyright fees, and investments in local programming.

<sup>89</sup> In 2005, we have identified 531 nonbroadcast networks. See para. 157 *infra*.

program expenditures are copyright fees of \$132.4 million in 2004 for broadcast signal carriage pursuant to Section 111 of the Copyright Act.<sup>90</sup>

45. **Cable System Transactions.** The aggregate value of cable systems sold in any year depends on the number of transactions, the size of the cable systems involved, and the price paid. As shown in Table 5 below, there were 21 cable transactions in 2004, covering more than 2.7 million basic subscribers and representing an aggregate value of \$10.6 billion.<sup>91</sup> The acquisition of Cox Communications by Cox Enterprise Inc. for \$9.0 billion (\$3,846 per subscriber) accounted for most of the dollar value.<sup>92</sup> Most of the transactions, however, involved small rural cable systems with an average value of \$1,730 per subscriber.<sup>93</sup> The average value per subscriber for the 21 systems sold in 2004 was \$3,906.<sup>94</sup> In the first six months of 2005, there were nine proposed, but not necessarily completed, cable system transactions, representing an aggregate value of \$38.4 billion. Transactions during the first six months of 2005 included the proposed acquisition of Adelphia by Comcast and Time Warner for approximately \$17.7 billion (\$3,690 per subscriber), and the Dolan family group's proposed and recently rescinded acquisition of Cablevision for approximately \$13 billion (\$4,377 per subscriber).<sup>95</sup> In another transaction involving the privatization of a major cable system, Insight Communications recently reached agreement to sell its cable systems to Insight Acquisition Corp.<sup>96</sup>

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<sup>90</sup> Copyright Act, 17 U.S.C. § 111 *et seq.* Copyright Office, Library of Congress, *Licensing Division Report of Receipts*, Sept. 13, 2005. Copyright fees are due on a specific date, but are collected on a rolling basis.

<sup>91</sup> Cable Databook at 171.

<sup>92</sup> Cox Enterprise Inc. acquired the 38 percent of Cox Communications it did not already own. *Id.*

<sup>93</sup> Cable TV Investor, Jan. 31, 2005, at 8.

<sup>94</sup> Cable Databook at 171. Analysis of transactions over the past six years shows that smaller systems sold for an average of \$1,731 per subscriber and larger systems sold for an average of \$4,445 per subscriber. *Id.*

<sup>95</sup> *Adelphia Deal: More Efficient Industry, Attractive Price*, Cable TV Investor, Apr. 26, 2005, at 1-3; *Dolans Bid To Take Cablevision Private for \$4,377/Sub*, Cable TV Investor, June 30, 2005, at 8. Adelphia reached agreements for Time Warner and Comcast to acquire substantially all of the assets of Adelphia for \$12.7 billion in cash and 16 percent of Time Warner Cable's common equity. The applications of Adelphia, Comcast, and Time Warner to transfer control of and/or assign Adelphia's Commission licenses are pending before the Commission. *Applications for Consent to the Assignment and/or Transfer of Control of Licenses, Adelphia Communications Corporation, Assignors, to Time Warner Cable Inc., Assignees; Adelphia Communications Corporation, Assignors and Transferors, to Comcast Corporation, Assignees and Transferees; Comcast Corporation, Transferor, to Time Warner Inc., Transferee; Time Warner Inc., Transferor, to Comcast Corporation, Transferee, Applications and Public Interest Statement*, MB Docket No. 05-192 (filed May 18, 2005). *See also* Adelphia Communications Corp., *Adelphia Communications to be Acquired by Time Warner and Comcast* (press release), Apr. 21, 2005. Cablevision Systems Corp., *Response from Cablevision Systems Corporation Regarding Proposal by the Dolan Family Group* (press release), June 22, 2005. On Oct. 25, 2005, the Dolan Family Group withdrew their June 19, 2005, proposal to acquire the cable and telecommunications businesses of Cablevision because they were unable to reach agreement with Cablevision on the terms of their proposal. Dolan Family Group, *Dolan Family Group Withdraws Cablevision Going Private Proposal and Recommends That the Board of Directors Consider a Special Pro Rata Dividend of \$3 Billion* (press release), Oct. 25, 2005, at <http://www.prnewswire.com/cgi-bin/stories.pl?ACCT=109&STORY=/www/story/10-25-2005/0004193917&EDATE=> (visited Nov. 15, 2005). *See also* Cablevision Systems Corp., *Cablevision Statement on Dolan Family Group Proposal* (press release), Oct. 25, 2005, at [http://www.cablevision.com/index.jhtml?pageType=financial\\_news](http://www.cablevision.com/index.jhtml?pageType=financial_news) (visited Nov. 15, 2005).

<sup>96</sup> Insight Communications Co., Inc., *Insight Communications and Insight Acquisition Corp. Enter into Definitive Merger Agreement* (press release), July 29, 2005.

**TABLE 5: System Transactions: 2002 - June 2005<sup>97</sup>**

	2002	2003	2004	Jan-June 2005
Number of Systems Sold	24	34	21	9
Total Number of Subscribers Sold	607,446	650,759	2,701,552	10,143,967
Average Number of Subscribers per System Sold	25,310	19,140	128,645	1,127,107
Total Number of Homes Passed Sold	1,163,765	1,132,772	4,626,831	19,156,872
Average Number of Homes Passed per System Sold	48,490	33,317	220,325	2,128,541
Total Dollar Value (mil.)	\$1,381	\$1,495	\$10,554	\$38,398
Average Value (mil.) of System Sold	\$57.5	\$44.0	\$502.6	\$4,266
National Average Dollar Value Per Subscriber	\$2,273	\$2,297	\$3,906	\$3,785
Dollar Value Per Home Passed	\$1,186	\$1,319	\$2,281	\$2,004
Cash Flow Multiple	11.2	9.5	9.4	11.0

46. **Stock Prices.** Cable stock prices, as measured by the Kagan Cable MSO Average,<sup>98</sup> gained 28.8 percent from June 2004 to June 2005, while the S&P 500 gained 5.8 percent, and the NASDAQ gained 1.7 percent.<sup>99</sup> At the end of June 2005, cable stocks were trading at 8.5 times cash flow, which was unchanged from the historic low of 8.5 times cash flow reported at the end of June 2004.<sup>100</sup> One analyst reported that cable stocks have not risen because cable investors are concerned about the entry of telephone companies into the video delivery market and price reductions by telephone companies for their high-speed Internet service.<sup>101</sup>

## 2. Capital Acquisition and Disposition

47. **Industry Financing.** Table 6 shows the amount of financing raised per year by source. In past years, much of the money raised by cable operators was for upgrading and rebuilding cable systems. With the upgrading and rebuilding nearing completion, the majority of money raised in 2004 was for refinancing.<sup>102</sup> Kagan reports that only small rural cable companies are still borrowing for upgrading and rebuilding their systems.<sup>103</sup> In 2004, cable companies reduced public debt by \$4.9 billion.

<sup>97</sup> Data for 2004 come from *Cable System Sales Summary (Annually Through December)*, Cable TV Investor, Jan. 31, 2005, at 9. Data for January to June 2005 come from *Cable System Sales Summary*, Cable TV Investor, July 29, 2005, at 15. The numbers for January to June 2005 include all announced and proposed deals. Historical data included in this table may differ from those previously reported because some data have been updated by Kagan. See Cable Databook.

<sup>98</sup> The Kagan Cable MSO Average includes the following companies (stock symbol): Adelphia (ADELQ), Rogers B (USS) (RG), Charter (CHTR), Cable & Wireless (CWP), Alaska Comm. Sys. (ALSK), Washington Post (WPO), General Comm. (GNCMA), Mediacom (MCCC), Time Warner (TWX), Liberty Media A (L), NTL (NTLI), Comcast (CMCSA), Comcast Special A (CMCSK), Pegasus (PGTV), Telewest (TLWT), Insight (ICCI), Cablevision (CVC), and Liberty Media B (LMCB).

<sup>99</sup> Cable TV Investor, July 29, 2004, at 23; Cable TV Investor, July 29, 2005, at 19, 23.

<sup>100</sup> *Cable MSOs: Private Market Valuations*, Cable TV Investor, June 30, 2005, at 12; *Kagan Multichannel Projections: There's Life After DBS and Telco Competition*, Cable TV Investor, July 29, 2004, at 1.

<sup>101</sup> *How Important are Telco Franchising Gains?*, Cable TV Investor, July 29, 2005, at 1-2.

<sup>102</sup> Cable Databook at 149.

<sup>103</sup> *Id.*

Some companies began repurchasing stock.<sup>104</sup> As a result, Kagan reports that net equity raised by the cable industry was negative for the first time since it began tracking cable financings in 1982.<sup>105</sup>

**TABLE 6: Acquisition of Capital: 1999 - June 2005 (\$ in millions)<sup>106</sup>**

Year	Private Debt		Net New Public Debt		Private Equity (Pvt. Placement/VC)		Public Equity (Common/Preferred)		Total Capital Raised In Year
	Amount Raised	% of Total Raised in Year	Amount Raised	% of Total Raised in Year	Amount Raised	% of Total Raised in Year	Amount Raised	% of Total Raised In Year	
1999	\$34,358	51.9%	\$18,610	28.1%	\$5,385	8.1%	\$7,799	11.8%	\$66,152
2000	\$7,255	60.3%	\$4,288	35.7%	\$101	0.8%	\$380	3.2%	\$12,024
2001	\$6,668	31.4%	\$10,678	50.2%	\$623	2.9%	\$3,282	15.4%	\$21,251
2002	\$2,544	25.2%	\$3,942	39.0%	\$15	0.1%	\$3,608	35.7%	\$10,109
2003	\$1,791	66.5%	\$734	27.2%	\$116	4.3%	\$54	2.0%	\$2,695
2004	\$12,674	159.7%	-\$4,863	-61.3%	\$125	1.6%	\$0	0%	\$7,936
Jan-June 2005	\$270	28.7%	\$663	70.4%	\$9	0.9%	\$0	0%	\$942

48. **Capital Expenditures/Capital Investment.** Over the last decade, cable companies have invested heavily to rebuild and upgrade cable systems.<sup>107</sup> NCTA states that cable operators have invested almost \$100 billion since 1996 to replace coaxial cable with fiber optic technology and install new digital equipment in homes and system headends.<sup>108</sup> These investments have enabled cable operators to offer more channels of basic and digital cable services, premium movie services, pay-per-view service, high-definition service, high-speed Internet access services, CD-quality music, cable telephony, and more personalized programming options. According to NCTA, the cable industry's investment in broadband two-way networks makes available a number of advanced services on virtually every cable system today.<sup>109</sup> Kagan reports that at year-end 2004, 96 percent of all cable homes passed were offered digital video services and 93 percent were offered high-speed Internet access services.<sup>110</sup> Total capital expenditures were \$10.1 billion in 2004, and Kagan projects that they will increase to \$10.3 billion in 2005.<sup>111</sup>

<sup>104</sup> For example, Comcast completed a \$1.3 billion stock repurchase. Comcast Corp., *Comcast Reports Fourth Quarter and Year End 2004 Results* (press release), Feb. 3, 2005.

<sup>105</sup> Cable Databook at 149. Kagan reports that no money was raised through public equity, \$125 million was raised through private equity, and approximately \$1.315 billion was spent by cable companies to buy back stock shares. Thus, net equity declined approximately \$1.190 billion. *Id.* at 154.

<sup>106</sup> Data for 2004 come from Cable Databook at 154. Data for January 2005 to June 2005 come from Cable TV Investor, July 29, 2005, at 13. Historical data included in this table may differ from those previously reported because some data have been updated by Kagan. See Cable Databook at 154.

<sup>107</sup> Rebuilds are significant improvements made to existing systems that do not retain much of the old system plant and equipment. Upgrades are improvements to existing cable systems that do not require the replacement of the entire existing plant and equipment.

<sup>108</sup> NCTA Comments at 25. Kagan estimates annual cable infrastructure expenditures from 1996 to 2005 that total approximately \$104.2 billion. See Cable Databook at 150.

<sup>109</sup> NCTA Comments at 25.

<sup>110</sup> *Advanced Services Spread Across Cable Systems*, Cable TV Investor, Apr. 26, 2005, at 5.

<sup>111</sup> Cable Databook at 150. But see NCTA projection that total capital expenditures will decrease from \$10.1 billion in 2004 to \$9.6 billion in 2005. NCTA, *Industry Statistics*, Cable Developments 2005, at 10.

49. With the rebuilding and upgrading of cable systems nearing completion, cable operators are reducing capital expenditures on system upgrades. At the same time, however, as shown in Table 7, they are increasing capital expenditures on customer premises equipment upgrades.

**Table 7: Capital Expenditures by Major MSOs (millions)**

Operator	2004			2005		
	Total	Plant Upgrades	Customer Premises Equipment	Total Jan. - June	Plant Upgrades	Customer Premises Equipment
Comcast <sup>112</sup>	\$3,600	\$902	\$1,500	\$1,800	\$167	\$932
Time Warner <sup>113</sup>	\$1,700	\$139	\$719	\$899	\$69	\$431
Cox <sup>114</sup>	\$1,400	\$87	\$528	\$661	NA	NA
Charter <sup>115</sup>	\$924	\$49	\$451	\$542	\$22	\$228
Cablevision <sup>116</sup>	\$574	\$12	\$429	\$316	\$3	\$227

### 3. Advanced and Other Services

50. In addition to traditional analog video services, most cable operators offer subscribers advanced video services, including digital video, video-on-demand, digital video recorders, and high-definition television; and nonvideo advanced services, including high-speed Internet access and telephony (circuit-switched telephony and/or voice over Internet protocol telephony).<sup>117</sup> Mid-sized and smaller

<sup>112</sup> Comcast Corp., *Comcast Reports Fourth Quarter and Year End 2004 Results* (press release), Feb. 3, 2005; Comcast Corp., *Comcast Reports Second Quarter 2005 Results* (press release), Aug. 2, 2005.

<sup>113</sup> Time Warner Inc., *Time Warner Reports Results for 2004 Full Year and Fourth Quarter* (press release), Feb. 4, 2005; Time Warner Inc., *SEC Form 10-Q Quarterly Report for the Period Ending June 30, 2005*, at 31.

<sup>114</sup> Cox Communications Inc., *Cox Communications Announces Fourth Quarter and Full-Year Financial Results for 2004* (press release), Mar. 16, 2005; Cox Communications Inc., *Cox Communications Announces Second Quarter and Year-to-Date Financial Results for 2005* (press release), Aug. 9, 2005. For second quarter 2005 results, Cox did not report capital expenditures devoted to plant upgrades and CPE.

<sup>115</sup> Charter Communications Inc., *Charter Reports Fourth Quarter and Annual 2004 Financial and Operating Results* (press release), Mar. 1, 2005; Charter Communications Inc., *Charter Communications Reports Second Quarter 2005 Financial and Operating Results* (press release), Aug. 2, 2005.

<sup>116</sup> Cablevision Systems Corp., *Cablevision Systems Corporation Reports Fourth Quarter and Full Year 2004 Results* (press release), Feb. 23, 2005; Cablevision Systems Corp., *Cablevision Systems Corporation Reports Second Quarter 2005 Results* (press release), Aug. 9, 2005.

<sup>117</sup> Subscription data for advanced services shown in this *Report* are primarily for residential service, but also may include some small business service. For example, Comcast offers a business Internet service for teleworkers called Comcast Teleworker, and a business Internet service for small to medium-sized businesses called Comcast Workplace. Similarly, Time Warner also offers a business Internet service called Road Runner Business Class to small and medium-sized businesses, home offices, and telecommuters. Subscribers to these services are included in the reported numbers. Cable companies also sold \$2.6 billion in services to business in 2004 under separately run subsidiaries. For example, Cox Business Services offers high-speed Internet access, local and long distance telephone, advanced voice and data transport to businesses of all sizes; and Charter Business offers high-speed Internet access services and video services to small and large businesses. Small operators also offer advanced services to business customers. Bresnan, for example, provides high-speed Internet access, voice and data transport and video to large and small businesses under its Bresnan Business Services subsidiary; Susquehanna Communications offers businesses advanced communications services, including local and long distance telephone services, high-speed Internet access, and data transport and video; and Sunflower Broadband offers Sunflower Broadband Business Services providing high-speed Internet, telephone service, and professional IT support. Cable (continued....)

cable operators also are deploying advanced services. Our review of six mid-sized and smaller cable operators shows that all offer digital cable service and high-speed Internet service and many offer video-on-demand, digital video recorders, high-definition television, and telephone service.

51. **Digital Video Services.** Most cable operators offer digitally compressed video channels to cable subscribers. Digital cable subscribers typically rent a digital set-top box from the cable company and receive some free digital video service. Digital cable subscribers obtain video programming by purchasing one or more digital service tiers. Digital tiers provide a variety of programming similar to basic tiers or theme tiers, such as a movie tier, a sports tier, and a non-English-language tier. Digital cable subscribers may also purchase one or more premium digital tiers, such as HBO, Showtime, Cinemax, The Movie Channel, Starz!, and international programming.<sup>118</sup> A high-definition service tier also is available to many digital cable subscribers.<sup>119</sup> In addition, cable operators are offering interactive digital services to digital cable subscribers, such as digital video recorders and video-on-demand.<sup>120</sup> All of these digital services are available to subscribers with analog televisions that use a digital set-top box that converts digital signals to analog.<sup>121</sup> Data from the Form 325 for 2004 indicates that nearly 94 percent of homes passed have access to digital video and 84 percent of systems have digital video capability.<sup>122</sup> Approximately 96 percent of all cable homes passed had access to digital video services at the end of 2004 according to Kagan.<sup>123</sup> There were 25.4 million digital cable subscribers at the end of 2004, compared to 22.5 million at the end of 2003, a 12.9 percent increase.<sup>124</sup> At the end of June 2005, the number of digital cable subscribers rose to 26.3 million and the number was projected to increase to 28.2 million by the end of 2005.<sup>125</sup>

(Continued from previous page) \_\_\_\_\_  
Databook at 13; Comcast Corp., at <http://work.comcast.net/> (visited Sept. 26, 2005); Time Warner, Inc., at <http://www.timewarnercable.com/corporate/products/highspeedinternet/default.html> (visited Sept. 26, 2005); Cox Communications, Inc., at <http://www.coxbusiness.com/index.html> (visited Sept. 26, 2005); Charter Business, at <http://www.charter-business.com> (visited Sept. 26, 2005); Bresnan Communications, at <http://www.bresnan.com/unst/products/business> (visited Sept. 26, 2005); Susquehanna Communications, at <http://www.suscom.com/home/business.php> (visited Sept. 26, 2005); Sunflower Broadband, at <http://www.sunflowerbroadband.com/business> (visited Sept. 26, 2005).

<sup>118</sup> To receive a digital premium channel, a subscriber must subscribe to the premium channel. For example, to receive digital HBO, a subscriber must subscribe to HBO.

<sup>119</sup> The high-definition service tier requires a high-definition set-top box or CableCARD. Most high-definition programming is available at no additional charge. For example, the high-definition service from the broadcast networks is often available at no additional charge. In addition, high-definition service from a premium channel often is included with a subscription to the premium channel. Other high-definition programming may require additional fees.

<sup>120</sup> The digital video recorder service offered by cable operators requires a DVR set-top box.

<sup>121</sup> NCTA Comments at 26-27.

<sup>122</sup> 2004 FCC Form 325 data.

<sup>123</sup> *Advanced Services Spread Across Cable Systems*, Cable TV Investor, Apr. 26, 2005, at 5.

<sup>124</sup> Cable Databook at 11; Kagan Research, LLC, *Broadband Cable Financial Databook*, Aug. 2004, at 11.

<sup>125</sup> See NCTA, at <http://www.ncta.com/Docs/PageContent.cfm?pageID=91> (visited Oct. 20, 2005); *Broadband Evolution 2004-2015*, Cable TV Investor, June 30, 2005, at 2.



52. As shown in Table 8 below, as of June 2005, the top cable operators' digital subscriber counts equal 41% to 58% of their total basic cable subscribers.

**Table 8: Digital Cable Subscribers for Top MSOs (in millions)**

Operator	2004		2005	
	Digital Subscribers	% Basic Cable Subs	Digital Subscribers	% Basic Cable Subs
Comcast <sup>126</sup>	8.6	40%	9.1	43%
Time Warner <sup>127</sup>	4.8	44%	5.1	46%
Cablevision <sup>128</sup>	1.5	50%	1.7	58%
Cox <sup>129</sup>	2.4	38%	2.6	41%
Charter <sup>130</sup>	2.7	45%	2.7	45%

53. NCTA reports that, in January 2005, cable operators were carrying the digital broadcast signals – including high-definition and multicast signals – of 504 unique broadcast television stations.<sup>131</sup> In January 2005, NCTA reached an agreement with the Association of Public Television Stations to ensure that the digital service – including multicast channels – offered by local public television stations would be available to most cable subscribers.<sup>132</sup> Comcast has agreements to carry local multicast digital signals with over 200 commercial broadcast stations in 72 DMAs.<sup>133</sup> In addition, Comcast has agreed to carry the multicast digital signals of noncommercial broadcasters and expected to be carrying the digital signals of 58 noncommercial broadcast stations in 62 markets in the fall of 2005.<sup>134</sup>

54. In 2003, the Commission adopted rules based on an agreement between consumer electronics companies and cable operators that enable television sets to be built with “plug-and-play” functionality for one-way digital cable services, which include typical cable video services and premium channels such as HBO and Showtime.<sup>135</sup> For these services, consumers are able to plug their cable

<sup>126</sup> Comcast Corp., *Comcast Reports Second Quarter 2005 Results* (press release), Aug. 2, 2005; Comcast Corp., *Comcast Reports Fourth Quarter and Year End 2004 Results* (press release), Feb. 3, 2005.

<sup>127</sup> Time Warner Inc., *Time Warner Inc. Reports Second Quarter 2005 Results* (press release), Aug. 3, 2005; Time Warner Inc., *Time Warner Reports Results for 2004 Full Year and Fourth Quarter* (press release), Feb. 4, 2005.

<sup>128</sup> Cablevision Systems Corp., *Cablevision Systems Corporation Reports Second Quarter 2005 Results* (press release), Aug. 9, 2005; Cablevision Systems Corp., *Cablevision Systems Corporation Reports Fourth Quarter and Full Year 2004 Results* (press release), Feb. 23, 2005.

<sup>129</sup> Cox Communications Inc., *Cox Communications Announces Fourth Quarter and Full-Year Financial Results for 2004* (press release), Mar. 16, 2005; Cox Communications Inc., *Cox Communications Announces Second Quarter and Year-to-Date Financial Results for 2005* (press release), Aug. 9, 2005.

<sup>130</sup> Charter Communications Inc., *Charter Reports Second Quarter 2005 Financial and Operating Results* (press release), Aug. 1, 2005; Charter Communications Inc., *Charter Reports Fourth Quarter and Annual 2004 Financial and Operating Results* (press release), Mar. 1, 2005.

<sup>131</sup> NCTA Comments at 26-28.

<sup>132</sup> NCTA Comments at 28; APTS Comments at 2. See also NCTA, *Public Television and Cable Announce Major Digital Carriage Agreement* (press release), Jan. 31, 2005.

<sup>133</sup> Comcast Comments at 45.

<sup>134</sup> *Id.*

<sup>135</sup> *Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices, Compatibility between Cable Systems and Consumer Electronics Equipment*, 18 FCC Rcd 20885 (2003).

directly into their digital television set without the need for a set-top box. Consumers, however, must obtain a security card (often called a CableCARD), from their local cable operator, to be inserted into the television set. Approximately 90,000 one-way CableCARDS have been deployed.<sup>136</sup>

55. Consumers still need a set-top box to receive two-way services (e.g., video-on-demand), and the cable and consumer electronics industries continue to work on an agreement for two-way “plug-and-play” functionality.<sup>137</sup> Samsung Electronics recently achieved CableLabs Certified status for an OpenCable Application Platform (OCAP) enabled interactive digital television set that can connect directly to the cable system, and receive current advanced and premium cable services.<sup>138</sup> The television set is currently in trials with Time Warner in North Carolina.<sup>139</sup> Consumer electronics manufacturers are selling digital cable-ready television sets with over-the-air integrated DTV tuners as well as cable tuners.<sup>140</sup> Industry sources indicate that two-way digital devices will soon be available in retail stores.<sup>141</sup>

56. **Video-on-Demand (VOD).** VOD allows subscribers to order video programs from a central server at any time of day, and to fast-forward, rewind, and pause the programs.<sup>142</sup> In most cases, subscribers receive unlimited viewing of a VOD program for 24 hours. Some cable operators also offer subscription video-on-demand (SVOD) where subscribers pay a monthly fee for unlimited access to a library of pre-selected programs. Other cable operators offer near video-on-demand (NVOD) which typically features a schedule of popular movies and events offered on a staggered-start basis (e.g., every 15 to 30 minutes). Cable companies view VOD as a competitive service to DVD/VHS rentals and a means to help reduce subscriber churn. At year-end 2004, VOD service was available to 73 percent of

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<sup>136</sup> NCTA reports that 90,000 CableCARDS have been deployed by the 10 largest cable operators. See Letter from Neal M. Goldberg, General Counsel, NCTA, to Marlene H. Dortch, Secretary, FCC, CS Docket No. 97-80 (Dec. 29, 2005), at 1.

<sup>137</sup> See para. 211 *infra*. For a description of the progress of negotiations between the consumer electronics and cable industries, see Consumer Electronics Association, Joint Status Report of the Consumer Electronics Association and the National Cable & Telecommunications Association, Oct. 14, 2005, at [http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6518169296](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6518169296) (visited Oct. 21, 2005). See also Paul Gluckman, *Talks Progress on 2-Way Plug & Play, But Much Remains Undone, Report Says*, COMMUNICATIONS DAILY, Oct. 17, 2005.

<sup>138</sup> CableLabs, *Samsung Electronics Gains CableLabs Certification on 2-Way Digital Television* (press release), Aug. 23, 2005.

<sup>139</sup> Samsung, *Samsung and Time Warner Cable Depoly World's First Interactive OCAP TV* (press release), Jan. 11, 2006.

<sup>140</sup> CEA Comments at 5. With most cable systems, use of the digital cable-ready television set requires that cable subscribers obtain a CableCARD containing security and other circuitry for particular local cable systems. The CableCARD is a removable security module which, when inserted into an OpenCable certified device, enables delivery of digital cable service and other services. CableCARDS are provided directly by the cable operator to customers who request them. CableLabs, at <http://www.cablelabs.com/news/glossary.html#C> (visited Sept 27, 2005). See para. 211 *infra*.

<sup>141</sup> See Ed Bott, *More Two-Way CableCARD Products*, ED BOTT'S MEDIA CENTRAL, Sept. 29, 2005, at <http://www.edbott.com/mediacenter/archives/more-two-way-cablecard-products> (visited Oct. 8, 2005). See also Greg Tar, *Samsung Readies Two-Way Cable Products*, TWICE, Aug. 22, 2005, at <http://www.twice.com/article/CA6250081.html?verticalid=820&industry=Video&industryid=23099&pubdate=08/22/2005> (visited Oct. 8, 2005).

<sup>142</sup> VOD differs from PPV. PPV is a pay television service for which cable subscribers pay a one time fee for each program viewed. The programs are generally available at pre-set times and in some cases are time shifted across several channels to increase the opportunity for viewing. Once initiated, the program cannot be paused, rewound or fast-forwarded.

homes passed by cable systems.<sup>143</sup> At year-end 2004, there were 19.5 million VOD-enabled digital capable households and this is projected to grow to 23.9 million by the end of 2005.<sup>144</sup>

57. Comcast's VOD service, which is available to 87 percent of Comcast subscribers, allows digital cable subscribers to choose from a menu of more than 3,500 programs, at any given time, with most of these programs available free.<sup>145</sup> Comcast says its VOD service is growing rapidly, and it expected subscribers to order 1.5 billion VOD programs in 2005.<sup>146</sup> Comcast's VOD content includes the recently launched PBS Kids Sprout on Demand, independent films, multicultural programs, movies, and newscasts from local broadcast stations.<sup>147</sup> Comcast's "Select on Demand" service provides 15 VOD channels, each a collection of original programming organized by particular themes.<sup>148</sup> By the end of March 2005, Cox's VOD service had been deployed in eight markets and was available to about half of Cox's digital subscribers.<sup>149</sup> Cox's VOD service provides access to 600 hours of content, including 100 hours of free programming.<sup>150</sup> Time Warner's VOD service is available in all of its 31 cable operating divisions.<sup>151</sup> With Time Warner's Premiums on Demand VOD service, digital cable subscribers who also subscribe to a premium channel (*i.e.*, HBO, Showtime, Cinemax, or the Movie Channel) receive unlimited access to movies offered on the premium movie channels for a monthly fee.<sup>152</sup> With Time Warner's Movies on Demand VOD service, digital cable subscribers may access hundreds of movies for a rental fee.<sup>153</sup> Cablevision's VOD service provides over 200 hours of free programming and subscriptions to HBO on Demand, Cinemax on Demand, Anime Network on Demand, Showtime on Demand, Disney Channel on Demand, Playboy TV on Demand, and IFC Uncensored on Demand, which offers independent films and original series.<sup>154</sup> Charter's VOD service offers thousands of movies including those available through premium channels like HBO On Demand and Showtime on Demand.<sup>155</sup>

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<sup>143</sup> *Advanced Services Spread Across Cable Systems*, Cable TV Investor, Apr. 26, 2005, at 5.

<sup>144</sup> Cable Databook at 12.

<sup>145</sup> Comcast Comments at 48. For an overview of Comcast's VOD service, see <http://www.comcast.com/Benefits/CableDetails/Slot5PageOne.asp> (visited Sept. 27, 2005). See also Comcast Corp., at <http://www.cmcsk.com/phoenix.zhtml?c=147565&p=irol-digital> (visited Sept. 29, 2005).

<sup>146</sup> Jonathan Make, *Comcast Customers Will Use Its VOD Service 50% More Times by Year-End*, COMMUNICATIONS DAILY, Sept. 20, 2005.

<sup>147</sup> Comcast Comments at 48-49.

<sup>148</sup> For example, Select On Demand's "Wheels and Wings" channel focuses on content for car enthusiasts, while "Anime Selects" offers an array of animation programs. Comcast Comments at 51.

<sup>149</sup> The eight markets are: San Diego, California; Oklahoma City, Oklahoma; Hampton Roads, Virginia; Las Vegas, Nevada; New Orleans, Louisiana; Omaha, Nebraska; New England (markets in Connecticut and Rhode Island); and Orange County, California. Cable TV Investor, July 29, 2005, at 3.

<sup>150</sup> *Id.* For an overview of Cox VOD service, see <http://www.cox.com/DigitalCable/ondemand> (visited Sept. 27, 2005).

<sup>151</sup> Each of Time Warner's cable operating divisions is a cluster of cable franchises.

<sup>152</sup> For an overview of Time Warner's Premiums on Demand VOD service, see <http://www.timewarnercable.com/corporate/products/digitalcable/premiumsondemand.html> (visited Sept. 27, 2005).

<sup>153</sup> For an overview of Time Warner's Movies on Demand VOD service, see <http://www.timewarnercable.com/corporate/products/digitalcable/moviesondemand.html> (visited Sept. 27, 2005).

<sup>154</sup> For an overview of Cablevision's VOD service, see [http://www.io.tv/index.jhtml?pageType=on\\_demand](http://www.io.tv/index.jhtml?pageType=on_demand) (visited Sept. 27, 2005).

<sup>155</sup> For an overview of Charter's VOD service, see <http://www.charter.com/services/ondemand/ondemand.aspx> (visited Sept. 27, 2005).

58. **Digital Video Recorders (DVRs).** DVR service allows subscribers to record programs onto a hard drive located in a set-top box, which can then be played back at any time. DVR features include fast-forward, rewind, and the ability to pause live television. While early units were marketed independently, cable and satellite operators are integrating DVR functionality into their digital set-top boxes.<sup>156</sup> At the end of 2004, DVR service was available to 79 percent of the homes passed by cable systems and there were 1.8 million subscribers equipped with integrated DVRs.<sup>157</sup> Many cable and satellite operators use dual-tuner DVRs which enable subscribers to record one or more programs while watching another program.

59. Comcast's dual-tuner DVR service is available in all Comcast's markets and can be purchased by digital cable subscribers for an additional \$9.95 per month.<sup>158</sup> More than 575,000 households subscribe to Comcast's DVR service.<sup>159</sup> In March 2005, Comcast and TiVo announced a partnership to offer TiVo-based DVR service to Comcast subscribers.<sup>160</sup> DIRECTV, however, recently began to transition from TiVo's DVR hardware toward an in-house DVR product.<sup>161</sup> Cox's DVR service is available in Cox's upgraded service areas and costs \$9.99 per month.<sup>162</sup> In Northern Virginia, Cox is testing and planning to offer multi-room DVR service in 2006 that delivers DVR service to several televisions in a household with a single DVR set-top box.<sup>163</sup> At the end of June 2005, the number of subscribers to Time Warner's DVR service had grown to 1.1 million from 862,000 at the end of 2004, representing 22 percent of the company's digital cable subscribers.<sup>164</sup> Time Warner's DVR service is available to digital cable subscribers for \$9.95 per month. Cablevision's DVR service is also available to digital cable subscribers for \$9.95 per month. Charter dual-tuner DVR service is available in limited Charter service areas for \$9.99 per month.<sup>165</sup>

60. **High-Definition Television (HDTV).** HDTV features dramatically improved, highly detailed picture quality, improved audio quality, and a wide-screen display.<sup>166</sup> For subscribers to receive the high-definition service tier, most cable companies require subscription to the digital service and use of a high-definition set-top box.<sup>167</sup> To obtain the full visual effect of HDTV, a cable subscriber also needs

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<sup>156</sup> At the end of June 2005, there were approximately 8.3 million subscribers to DVR services in the U.S. See Nick Wingfield, *TiVo Slashes Recorder Price in Half, \$50*, WALL STREET JOURNAL, Sept. 7, 2005, at D1. TiVo, the leading seller of DVRs, has almost 3.6 million subscribers, although its lead is vanishing as cable and satellite operators are offering their own DVRs to subscribers. *Id.* See also Joe Mandese, *DVR Threat Gets Downgraded*, BROADCASTING & CABLE, Sept. 12, 2005, at 20.

<sup>157</sup> *Advanced Services Spread Across Cable Systems*, Cable TV Investor, Apr. 26, 2005, at 5.

<sup>158</sup> Comcast Corp., at <http://www.cmcsk.com/phoenix.zhtml?c=147565&p=irol-digital> (visited Sept. 29, 2005).

<sup>159</sup> Comcast Comments at 52.

<sup>160</sup> Comcast Corp., *Comcast and TiVo Announce Strategic Partnership* (press release), Mar. 15, 2005.

<sup>161</sup> Jane L. Levere, *In a Challenge to TiVo, DirecTV Promotes Its Own Box*, NEW YORK TIMES, Oct. 7, 2005, at <http://www.nytimes.com/2005/10/07/business/07adco.html> (visited Oct. 27, 2005).

<sup>162</sup> See Cox Communications, at <http://www.cox.com/Fairfax/Digitalcable/dvrfaqs.asp> (visited Oct. 4, 2005).

<sup>163</sup> *Cox Turns Attention to Advanced Video Services*, Cable TV Investor, July 29, 2005, at 3.

<sup>164</sup> Time Warner Inc., *Time Warner Inc. Reports Second Quarter 2005 Results* (press release), Aug. 3, 2005; Time Warner Inc., *Time Warner Reports Results for 2004 Full Year and Fourth Quarter* (press release), Feb. 4, 2005.

<sup>165</sup> See Charter Communications, at <http://www.charter.com/services/dvr/dvr.aspx> (visited Oct. 4, 2005).

<sup>166</sup> HDTV service typically includes a mix of broadcast, basic cable, and premium nonbroadcast networks.

<sup>167</sup> See Comcast, at [http://comcast.p.delivery.net/m/p/com/mic/HD\\_Index.asp](http://comcast.p.delivery.net/m/p/com/mic/HD_Index.asp) (visited Oct. 20, 2005); Cox, at <http://www.cox.com/Fairfax/digitalcable/hdvrates.asp> (visited Oct. 7, 2005); Time Warner, at <http://timewarnercable.com/corporate/products/digitalcable/hdtv.html> (visited Sept. 30, 2005); Cablevision, at (continued....)

an HDTV set. HDTV service from networks that have standard-definition or analog counterparts, including ABC, NBC, CBS, FOX, PBS, WB, UPN, and TNT, is often offered at no additional charge to HDTV subscribers. HDTV service from premium channels, including HBO and Showtime, is usually offered at no additional charge over the cost of subscriptions to those networks. Other programming, including programming offered only in HDTV, may be offered at an additional monthly fee. At the end of 2004, HDTV service was available to 87 percent of homes passed by cable service (approximately 92 million households).<sup>168</sup> Approximately 2.3 million cable subscribers were equipped with HDTV set-top boxes.<sup>169</sup> A total of 184 (out of 210) DMAs, including all of the top 100 DMAs, were served by at least one cable system offering HDTV service.<sup>170</sup> Twenty-three nonbroadcast networks offer HDTV service.<sup>171</sup>

61. Comcast's HDTV service is available in 72 markets, representing 94 percent of the homes passed by Comcast's cable systems.<sup>172</sup> Subscribers with a digital set-top box can upgrade to an HDTV set-top box for an additional \$5 monthly fee.<sup>173</sup> Comcast offers its HDTV subscribers high-definition local broadcast signals, including the signals of affiliates of ABC, NBC, CBS, and PBS, and cable networks ESPN HD, INHD and INHD2.<sup>174</sup> At no additional cost, Comcast's premium network subscribers can watch HBO HD, Showtime HD, Starz HD and Cinemax HD.<sup>175</sup> Cox's digital cable subscribers can upgrade to an HDTV set-top box for an additional \$6.50 per month.<sup>176</sup> At no additional charge, Cox HDTV service offers high-definition local broadcast signals, including the signals of affiliates of ABC, NBC, CBS, FOX, and PBS, as well as Discovery HD Theater, ESPN HD, INHD1, INHD2, and NBC Universal HDTV.<sup>177</sup> HBO HDTV and Showtime HDTV are included at no additional charge to those with HBO and Showtime subscriptions.<sup>178</sup> Time Warner's digital cable subscribers can upgrade to an HDTV set-top box for no additional charge.<sup>179</sup> Time Warner offers HDTV subscribers

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<http://www.io.tv/index.jhtml?pageType=hdtv> (visited Oct. 20, 2005); Charter, at <http://www.charter.com/products/hdtv/hdtv.aspx> (visited Oct. 7, 2005).

<sup>168</sup> *Advanced Services Spread Across Cable Systems*, Cable TV Investor, Apr. 26, 2005, at 5. See also NCTA Comments at 26.

<sup>169</sup> *Advanced Services Spread Across Cable Systems*, Cable TV Investor, Apr. 26, 2005, at 5.

<sup>170</sup> NCTA Comments at 26.

<sup>171</sup> *Id.* at 27. These include Cinemax HDTV, Comcast SportsNet HDTV, Discovery HD Theater, ESPN HD, ESPN2 HD, FSN HD, HBO HD, HDNet, HDNet Movies, INHD, INHD2, MSG Networks in HD, NBA TV, NFL Network HD, Outdoor Channel 2 HD, Showtime HD, Spice HD, STARZ! HDTV, The Movie Channel HD, TNT in HD, Universal HD, and YES-HD.

<sup>172</sup> Comcast Comments at 47-48.

<sup>173</sup> *Id.*

<sup>174</sup> See Comcast, at <http://www.comcast.com/Benefits/CableDetails/Slot4PageOne.asp> (visited Oct 6, 2005).

<sup>175</sup> *Id.* Comcast also offers regional sports networks in high-definition, including Comcast SportsNet Philadelphia, Mid-Atlantic, Chicago, and West. In addition, Comcast offers high-definition VOD service. A monthly equipment charge applies for an HDTV-enabled digital cable set-top box. See <http://www.cmcsk.com/phoenix.zhtml?c=147565&p=irol-digital> (visited Sept. 30, 2005).

<sup>176</sup> Cox subscribers pay \$3.50 per month for a digital set-top box and \$10 per month for an HDTV set-top box. See Cox Communications, at <http://www.cox.com/fairfax/rates.asp> (visited Oct. 7, 2005).

<sup>177</sup> See Cox Communications, at <http://www.cox.com/fairfax/digitalcable/hdtvrates.asp> (visited Oct. 7, 2005).

<sup>178</sup> *Id.*

<sup>179</sup> See Time Warner, at <http://www.timewarnercable.com/albany/products/hdtv/default.html> (visited Oct. 6, 2005).

high-definition local broadcast signals, including the signals of affiliates of ABC, CBS, NBC, and PBS.<sup>180</sup> Time Warner also offers HDTV service from HBO and Showtime at no extra charge to subscribers of these premium networks.<sup>181</sup> Cablevision's digital cable subscribers may upgrade to an HDTV set-top box at no additional cost over the standard set-top box rental fee.<sup>182</sup> Cablevision's subscribers with HDTV set-top boxes have access to 18 HDTV networks at no additional charge over the standard-definition version of the networks.<sup>183</sup> The networks include local affiliates of ABC, CBS, NBC, PBS, WB, and FOX.<sup>184</sup> Other networks include MSG Network, FSN New York, YES Network, ESPN, Universal HD, HBO, Showtime, Cinemax, Starz, The Movie Channel, and INHD.<sup>185</sup> Charter offers HDTV service in more than 33 markets.<sup>186</sup> Charter's HDTV set-top box costs \$3 more a month than its standard digital set-top box.<sup>187</sup> At no additional charge, Charter offers the HDTV service from local affiliates of ABC, CBS, and NBC.<sup>188</sup> Charter also offers HDTV service from Discovery HD, ESPN HD, HDNet, HDNet Movies, HBO HD to HBO subscribers, and Showtime HD to Showtime subscribers.<sup>189</sup>

62. ***High-Speed Internet Access Service.*** FCC Form 325 data from 2004 indicates that more than 93 percent of homes passed have access to high-speed Internet service. Approximately 80 percent of systems offer high-speed Internet service.<sup>190</sup> By the end of June 2005, the number of subscribers to high-speed Internet service offered by cable operators had grown to 23 million households.<sup>191</sup> Residential high-speed Internet access service is a principal driver of cable industry revenue growth, generating \$8.9 billion in 2004.<sup>192</sup> It is projected to generate \$11.2 billion in 2005.<sup>193</sup> Cable, DSL, wireline, and wireless technologies provided high-speed Internet access service to 35.3 million residential and small business subscribers at the end of 2004.<sup>194</sup> By January 2005, the U.S. had 11.4 broadband connections for every 100 inhabitants.<sup>195</sup> Coaxial cable technology provided 60.3 percent of that total, DSL technology

<sup>180</sup> See Time Warner, at <http://www.timewarnercable.com/corporate/products/digitalcable/hdtv.html> (visited Sept. 30, 2005).

<sup>181</sup> *Id.*

<sup>182</sup> Cablevision Systems Corp., *iO Adds WB11-HD to Industry-Leading High-Definition Line-Up* (press release), July 18, 2005.

<sup>183</sup> *Id.*

<sup>184</sup> *Id.*

<sup>185</sup> *Id.*

<sup>186</sup> See Charter Communications, Inc., at <http://www.charter.com/products/hdtv/hdtv.aspx> (visited Oct. 7, 2005).

<sup>187</sup> *Id.*

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

<sup>189</sup> *Id.*

<sup>190</sup> 2004 FCC Form 325 data.

<sup>191</sup> NCTA Comments at 31.

<sup>192</sup> *10-Year Projections: Cable's Growth Story Persists*, Cable TV Investor, June 30, 2005, at 2-3. See also Table 4 *supra*.

<sup>193</sup> *Id.*

<sup>194</sup> FCC, *High-Speed Services for Internet Access: Status as of December 31, 2004*, July 2005, at Chart 6. This report and previous releases of the *High-Speed Services for Internet Access* report are available at <http://www.fcc.gov/wcb/iatd/comp.html> (visited Nov. 15, 2005).

<sup>195</sup> See Global Broadband Penetration per 100 Inhabitants, International Telecommunications Union, at <http://www.itu.int/osg/spu/newslog/ITUs+New+Broadband+Statistics+For+1+January+2005.aspx> (visited Oct. 28, 2005).

provided 37.2 percent, and other wireline and wireless technologies provided the remaining 2.5 percent.<sup>196</sup> Cable's share has declined from 63.2 percent at the end of 2003 while DSL's share has increased from 34.3 percent at the end of 2003.<sup>197</sup> High-speed data services using cable modems now enable the delivery of emerging video services, such as Internet video and video-on-demand.<sup>198</sup>

63. Most cable operators provide high-speed Internet service with one proprietary Internet Service Provider (ISP) specifically created and owned by the cable operator.<sup>199</sup> For example, Cablevision offers high-speed Internet service under the brand Optimum Online; Comcast offers the service under the "Comcast High-Speed Internet" brand name; Charter offers the service under the "Charter High-Speed" brand name; and Cox offers the service under the "Cox High Speed Internet" brand name. Some cable operators, however, offer their high-speed Internet service subscribers the ability to use unaffiliated ISPs. For example, Time Warner Cable offers its subscribers multiple ISPs, including its own Road Runner Internet access service with AOL for \$49.95, Earthlink for \$44.95, and Stic.Net for \$44.95.<sup>200</sup>

64. As of June 30, 2005, Comcast's high-speed Internet access service was available to 40.8 million homes, or 98.9 percent of homes passed by Comcast's systems.<sup>201</sup> On June 30, 2005, Comcast had 7.7 million subscribers to its high-speed Internet access service, representing a penetration rate<sup>202</sup> of 18.9 percent, up from the 7 million high-speed Internet subscribers Comcast reported at the end of 2004.<sup>203</sup> At the end of June 2005, Cox's high-speed Internet service had grown to 2.8 million subscribers, representing a 26.9 percent penetration rate, compared to the 2.6 million high-speed Internet access

<sup>196</sup> FCC, *High-Speed Services for Internet Access: Status as of December 31, 2004*, July 2005, at Chart 6. This report and previous releases of the *High-Speed Services for Internet Access* report are available at <http://www.fcc.gov/wcb/iatd/comp.html> (visited Nov. 15, 2005).

<sup>197</sup> FCC, *High-Speed Services for Internet Access: Status as of December 31, 2003*, June 2004, at Chart 6. This report and other releases of the *High-Speed Services for Internet Access* report are available at <http://www.fcc.gov/wcb/iatd/comp.html> (visited Nov. 15, 2005).

<sup>198</sup> See paras. 135-39 *infra*.

<sup>199</sup> See 2001 Report, 17 FCC Rcd at 1266-67 ¶¶ 46-47 and n.136; see also *Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities, Internet Over Cable Declaratory Ruling, Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities, Declaratory Ruling and Notice of Proposed Rulemaking*, 17 FCC Rcd 4798 (2002) (*High-Speed Access Declaratory Ruling and NPRM*). In the *High-Speed Access Declaratory Ruling and NPRM*, the Commission concluded that "cable modem service, as it is currently offered, is properly classified as an interstate information service, not as a cable service, and that there is no separate offering of telecommunications service." *High-Speed Access Declaratory Ruling and NPRM*, 17 FCC Rcd at 4802 ¶ 7. See *AT&T v. City of Portland*, 216 F.3d 871 (9th Cir. 2000). See also *Brand X Internet Services v. FCC*, 345 F.3d 1120 (9th Cir. 2003), *reversed and remanded*, *National Cable & Telecommunications Ass'n v. Brand X Internet Services*, 125 S. Ct. 2688 (2005).

<sup>200</sup> See Time Warner Cable, at <http://www.timewarnercable.com/houston/products/cable/packagesandpricing.html?menu=CustomerService> (visited Oct. 11, 2005). See also <http://www.timewarnercable.com/houston/products/internet/earthlink.html> (visited Oct. 11, 2005).

<sup>201</sup> Comcast Corp., *Comcast Reports Second Quarter 2005 Results* (press release), Aug. 2, 2005.

<sup>202</sup> Although there is no standard method for reporting penetration rates for advanced services, high-speed Internet service penetration rates usually are calculated by dividing the number of high-speed Internet subscribers by the number homes passed where high-speed Internet service is available. This is the method often used when high-speed Internet services are not yet available to every home passed by a cable system. Cablevision, however, has completed its system upgrade and makes high-speed Internet service available to all homes passed by its cable systems. As such, Cablevision calculates its penetration rate for high-speed Internet service by dividing the number of high-speed Internet service subscribers by the number of homes passed by its cable system.

<sup>203</sup> Comcast Corp., *Comcast Reports Second Quarter 2005 Results* (press release), Aug. 2, 2005; Comcast Corp., *Comcast Reports Fourth Quarter and Year End 2004 Results* (press release), Feb. 3, 2005.

subscribers Cox reported for year end 2004.<sup>204</sup> Time Warner reported that it had 4.3 million high-speed Internet subscribers the end of June 2005, representing a penetration rate of 22 percent, compared to 3.9 million high-speed Internet subscribers at year-end 2004.<sup>205</sup> As of June 30, 2005, Cablevision had 1.5 million high-speed Internet subscribers and a penetration rate of 34 percent, up from the 1.4 million high-speed Internet subscribers reported for December 31, 2004.<sup>206</sup> Charter's high-speed Internet service had grown to more than 2 million subscribers at the end of June 2005, a penetration rate of 18 percent, compared to the 1.9 million high-speed Internet subscribers reported at the end of 2004.<sup>207</sup>

65. Over the past year, many cable operators have increased the speed of their high-speed Internet services as well as experimented with lower-priced tiers of service, some as low as \$25 per month.<sup>208</sup> Most cable operators are now offering 4 to 6 Mbps downstream and additional high-speed Internet tiers with even faster speeds.<sup>209</sup> NCTA says that the cable industry has developed technical specifications that will enable operators to continue increasing Internet service speeds to 160 Mbps downstream and 60 Mbps upstream.<sup>210</sup> Cable operators also offer a variety of features with their high-speed Internet services, including increased storage capacity; multiple e-mail accounts; integrated security suites with anti-virus, anti-spyware, and firewall protection; pop-up blocking and spam filtering; video e-mail; specialized content; and home networking for multiple devices.<sup>211</sup> Comcast offers 6 Mbps downstream and 384 Kbps upstream for \$42.95 per month and 8 Mbps downstream and 768 Kbps upstream for premium service subscribers.<sup>212</sup> For no additional charge, Comcast also provides broadband security services.<sup>213</sup> Cox offers security software, pop-up blocker, antivirus protection and speeds of 5 Mbps downstream and 2 Mbps upstream for \$39.95 per month; it offers speeds of 15 Mbps downstream and 2 Mbps upstream for \$54.95 per month.<sup>214</sup> Time Warner's high-speed Internet service provides 5 Mbps downstream for \$39.95 per month.<sup>215</sup> Cablevision's high-speed Internet service provides up to 10

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<sup>204</sup> Cox Communications Inc., *Cox Communications Announces Second Quarter and Year-to-Date Financial Results for 2005* (press release), Aug. 9, 2005; Cox Communications Inc., *Cox Communications Announces Fourth Quarter and Full-Year Financial Results for 2004* (press release), Mar. 16, 2005.

<sup>205</sup> Time Warner Inc., *Time Warner Inc. Reports Second Quarter 2005 Results* (press release), Aug. 3, 2005; Time Warner Inc., *Time Warner Reports Results for 2004 Full Year and Fourth Quarter* (press release), Feb. 4, 2005.

<sup>206</sup> Cablevision Systems Corp., *Cablevision Systems Corporation Reports Second Quarter 2005 Results* (press release), Aug. 9, 2005; Cablevision Systems Corp., *Cablevision Systems Corporation Reports Fourth Quarter and Full Year 2004 Results* (press release), Feb. 23, 2005.

<sup>207</sup> Charter Communications Inc., *Charter Reports Second Quarter 2005 Financial and Operating Results* (press release), Aug. 1, 2005; Charter Communications Inc., *Charter Reports Fourth Quarter and Annual 2004 Financial and Operating Results* (press release), Mar. 1, 2005.

<sup>208</sup> Marguerite Reardon, *Comcast Revs Up Downloads*, CNET, July 12, 2005, at [http://news.com.com/Comcast+revs+up+downloads/2100-1034\\_3-5785081.html?tag=st.rn](http://news.com.com/Comcast+revs+up+downloads/2100-1034_3-5785081.html?tag=st.rn) (visited Oct. 25, 2005).

<sup>209</sup> NCTA Comments at 35.

<sup>210</sup> *Id.*

<sup>211</sup> *Id.* at 35-36.

<sup>212</sup> Comcast Comments at 53. *See also* Comcast Corp., at <http://www.comcast.com/BenefitsCHSIBenefits.asp?LinkID=51> (visited Oct. 20, 2005).

<sup>213</sup> *Id.*

<sup>214</sup> *See* Cox, at <http://www.cox.com/Fairfax/HighSpeedInternet> (visited Oct. 7, 2005).

<sup>215</sup> The price applies to customers that subscribe to both high-speed internet service and digital cable service. Time Warner Cable, at <http://www.timewarnercable.com/houston/products/internet/default.html> (visited Oct. 7, 2005).



Mbps downstream for \$44.95 per month.<sup>216</sup> Cablevision is marketing 50 Mbps, expandable to 100 Mbps, for commercial subscribers. Cablevision's high-speed Internet service also provides software that scans for computer viruses.<sup>217</sup> Charter's high-speed Internet subscribers receive 3 Mbps downstream and 256 Kbps upstream, antivirus protection and firewall software for approximately \$40 per month.<sup>218</sup>

66. **Telephony Offered by Cable Operators.** Although some cable companies have been providing traditional circuit-switched telephony for years, the cable industry is now using digital technology to provide voice-over-Internet protocol (VoIP) services.<sup>219</sup> At the end of 2004, cable telephony service, both VoIP and circuit-switched, was available to 38 percent of the homes passed by cable.<sup>220</sup> At the end of 2004, there were 3.6 million subscribers to cable telephone service, with 3 million subscribers being served by circuit-switched service and 600,000 subscribers being served by VoIP service.<sup>221</sup> At the end of June 2005, there were 1.2 million subscribers to cable's VoIP service.<sup>222</sup> Most cable operators offer discounts for VoIP when it is bundled with other cable services.<sup>223</sup> For example, Cox charges \$49.95 for stand-alone VoIP service, \$44.95 when subscribers take a two-product bundle from Cox, and \$39.95 when subscribers take a three-product bundle from Cox.<sup>224</sup>

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<sup>216</sup> Cablevision Systems Corp., at [http://www.cablevision.com/index.jhtml?pageType=ool\\_product](http://www.cablevision.com/index.jhtml?pageType=ool_product) (visited Oct. 7, 2005).

<sup>217</sup> Cablevision Systems Corp., *Latest Value Enhancement from Optimum Online: Essential PC Maintenance Protection for PC Care at No Additional Cost* (press release), Sept. 7, 2005.

<sup>218</sup> Charter Communications Inc., at <http://www.charter.com/products/highspeed/highspeed.aspx> (visited Oct. 7, 2005).

<sup>219</sup> A circuit-switched cable telephony voice call and an IP telephony voice call provided by a cable operator both begin with special equipment that connects a household's twisted pair infrastructure with the cable infrastructure. Cable circuit-switched telephony, however, eventually turns the call over to the public switched telephone network (PSTN), while IP telephony turns the call over to an Internet IP gateway for IP processing onto the PSTN or a managed IP Network. IP telephony processes voice telephone calls much like data on the Internet; that is, digitized pieces of data are divided into discrete packets and are transported over an IP network following any path that does not resist transfer.

<sup>220</sup> *Advanced Services Spread Across Cable Systems*, Cable TV Investor, Apr. 26, 2005, at 5. One analysis shows that cable operators offered VoIP service to 16.9 million homes, or 15 percent of all households at the end of 2004. The analysis also projects that VoIP service will be available to 46.2 million homes, or 41 percent of all households, by the end of 2005. Craig Moffett, *et. al.*, *Quarterly VoIP Monitor: How High is Up for Cable VoIP?*, Bernstein Research Call, Sanford C. Bernstein & Co., Mar. 24, 2005, at 1. Cable companies also are adding mobile phone service to their telephony offerings. Anne Veigle, Howard Buskirk, *Cable Likely to Pursue Deals Similar to Time Warner's Sprint Offering*, COMMUNICATIONS DAILY, Dec. 30, 2004. Time Warner began marketing Sprint mobile phones to its subscribers in Kansas City, Missouri. Jim Hu, *Time Warner Cable Begins Cell Phone Trials*, CNET, Mar. 31, 2005, at [http://news.com.com/Time+Warner+Cable+begins+cell+phone+trials/2100-1039\\_3-5648954.html](http://news.com.com/Time+Warner+Cable+begins+cell+phone+trials/2100-1039_3-5648954.html) (visited Oct. 14, 2005). Cablevision also reached agreement to sell Sprint's wireless telephone service. Harry Berkowitz, *Cablevision, Sprint Team Up*, CED, May 3, 2005, at <http://www.cedmagazine.com/cedailydirect/2005/0505/cedaily050503.htm> (visited Oct. 17, 2005). Comcast, Time Warner, Cox, and Advanced/Newhouse have reached an agreement with Sprint Nextel to deliver cellular phone service to their cable subscribers. Yuki Noguchi, *5 Firms to Link Cable and Cell Phones*, WASHINGTON POST, Nov. 3, 2005, at <http://www.washingtonpost.com/wp-dyn/content/article/2005/11/02/AR2005110200609.html> (visited Jan. 17, 2006).

<sup>221</sup> *The Evolution of Cable: 1955-2004*, Cable TV Investor, July 29, 2005, at 4.

<sup>222</sup> NCTA Comments at 37.

<sup>223</sup> *Id.* at 38.

<sup>224</sup> Cox's VoIP service includes unlimited local and nationwide calling plus these features: Call Forwarding, Call Waiting, Speed Dial 8, Caller ID, Three-Way Calling, Call Return, Busy Line Redial, Selective Call Acceptance, Selective Call Rejection, Call Forwarding – Busy, Call Forwarding – No Answer, Call Forwarding of Call Waiting, (continued....)

67. Comcast is a facilities-based provider of cable telephone services that serves approximately 1.2 million subscribers in 18 markets with circuit-switched phone service.<sup>225</sup> In early 2005, Comcast began offering VoIP service to subscribers in Boston, Massachusetts; Chicago, Illinois; Hartford, Connecticut; Philadelphia, Pennsylvania; and Portland, Oregon, and it plans to deploy VoIP in additional markets in 2006.<sup>226</sup> Comcast's VoIP service is a primary service that offers E911 capability and provides battery backup power for up to eight hours.<sup>227</sup> As the largest cable telephone service provider in the nation, Cox has more than 1.4 million residential telephone subscribers using both circuit-switched and VoIP technologies.<sup>228</sup> Cox offers VoIP service in five markets and by the end of 2005, Cox planned to extend its VoIP service to Las Vegas, Nevada; Macon, Georgia; Central Florida (includes Gainesville and Ocala, Florida); Gulf Coast Florida (includes Fort Walton Beach and Pensacola, Florida); and Topeka, Kansas.<sup>229</sup> Cox provides what it calls a "lifeline service" that includes E911 service as a standard feature in all of its telephone markets and back-up power so that its digital phone service continues to work during a power outage.<sup>230</sup> Time Warner has deployed VoIP service to all 31 of its divisions and, as of September 30, 2005, had 854,000 VoIP subscribers.<sup>231</sup> Time Warner's VoIP service includes E911 service but does not include back-up power and will not function during a power outage.<sup>232</sup> Cablevision's VoIP service is available to 4.4 million homes and at the end of June 2005 the service had 478,000 subscribers, up from the 272,688 subscribers reported at the end of 2004.<sup>233</sup> Cablevision's VoIP service provides E911 service. It uses household electrical power and will not operate if the power in the home goes out.<sup>234</sup> Cablevision offers VoIP subscribers a battery back-up option that allows several hours of continued operation in the event of a power outage.<sup>235</sup> The network remains powered for several hours during a loss of electrical current, so with the battery back-up option VoIP subscribers continue to have service during an electrical interruption as long as they are not using electric telephones.<sup>236</sup> Charter offers

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Priority Ringing, Long Distance Alert, Call Waiting ID, Selective Call Forwarding, and Voice Mail (optional). See Cox Communications Inc., at <http://www.cox.com/Fairfax/telephone/rates.asp> (visited Oct. 21, 2005).

<sup>225</sup> See Comcast Corp., at <http://www.cmcsk.com/phoenix.zhtml?c=147565&p=irol-telephone> (visited Oct. 11, 2005).

<sup>226</sup> Comcast Comments at 52.

<sup>227</sup> See Comcast Corp., at <http://www.cmcsk.com/phoenix.zhtml?c=147565&p=irol-telephone> (visited Oct. 11, 2005).

<sup>228</sup> Cox Communications Inc., *Cox Names New 2005 Telephone Markets* (press release), Aug. 1, 2005.

<sup>229</sup> *Id.*

<sup>230</sup> *Id.*

<sup>231</sup> Letter from Arthur H. Harding, Counsel for Time Warner, Inc., to Marlene H. Dortch, Secretary, FCC, MB Docket No. 05-192 (Nov. 10, 2005) at 4.

<sup>232</sup> See Time Warner Cable, at <http://www.timewarnercable.com/CustomerService/FAQ/TWCFaqs.aspx?faqID=1178&MarketID=19&CatID=1392> (visited Oct. 11, 2005).

<sup>233</sup> Cablevision Systems Corp., *Optimum Voice Adds Valuable New Features, Debuts Enhanced and User-Friendly Web Portal* (press release), Aug. 17, 2005; Cablevision Systems Corp., *Cablevision Systems Corporation Reports Fourth Quarter and Full Year 2004 Results* (press release), Feb. 23, 2005.

<sup>234</sup> Cablevision Systems Corp., *Optimum Voice Adds Valuable New Features, Debuts Enhanced and User-Friendly Web Portal* (press release), Aug. 17, 2005.

<sup>235</sup> *Id.*

<sup>236</sup> See *Cablevision Integrates Home Security Systems in VoIP Service*, CONVERGE NETWORK DIGEST, June 29, 2005, at <http://www.convergedigest.com/searchdisplay.asp?ID=15207&SearchWord=cablevision> (visited Oct 28, 2005).

telephone service to 45,400 subscribers using VoIP in most markets.<sup>237</sup> Charter's VoIP service provides E911 service, and Charter's network has a built-in emergency battery backup that provides telephone service for most customers for eight to ten hours.<sup>238</sup> In addition, between January 10, 2005, and October 11, 2005, Adelphia engaged in a limited trial of VoIP services in the Colorado Springs, Colorado, area. Adelphia reports that it has no plans to conduct further trials or provide VoIP service during the pendency of its proposed sale to Comcast and Time Warner.<sup>239</sup>

68. **Mid-sized and Smaller Cable Operators.** The FCC Form 325 samples cable systems with between 5,000 and 20,000 subscribers and also surveys a sample of systems with fewer than 5,000 subscribers. Findings from data collected for 2004 show that in these smaller systems high-speed data service, digital cable service, and telephony are being offered. In particular, for systems with 5,000 or fewer subscribers, 33 percent offer high-speed Internet service, 45 percent offer digital cable service, 3 percent offer telephony services and 16 percent have cable plants with capacities of 750 MHz or greater. For systems with between 5,000 and 20,000 subscribers, 94 percent offer high-speed Internet service, 94 percent offer digital cable service, 6 percent offer telephony services and 68 percent have capacities of 750 MHz or greater.<sup>240</sup>

69. This year we examined six mid-sized and smaller cable operators to identify the advanced services they provide.<sup>241</sup> All provide high-speed Internet service. All provide digital video service but not all offer VOD, HDTV, and DVR service. Most provide telephone service and some use VoIP technology.<sup>242</sup> Bresnan Communications serves over 300,000 subscribers in Colorado, Montana, Wyoming, and Utah, offering a full range of advanced services that include digital video service, VOD, HDTV, DVR, high-speed Internet service, and digital telephone service to residential and business subscribers over an upgraded fiber-optic coaxial network.<sup>243</sup> Service Electric Cable TV &

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<sup>237</sup> Charter Communications Inc., *Charter Reports Fourth Quarter and Annual 2004 Financial and Operating Results* (press release), Mar. 1, 2005; Charter Communications, at <http://www.charter.com/products/telephone/telephone.aspx> (visited Sept. 15, 2005).

<sup>238</sup> Charter Communications Inc., *Inland Empire and High Desert Residents Will be First in California to Experience Charter Telephone Service* (press release), Oct. 5, 2005.

<sup>239</sup> Letter from Angie Kronenberg, Counsel for Adelphia, to Marlene H. Dortch, Secretary, FCC, MB Docket No. 05-192 (Dec. 22, 2005) at 161. See also n.95 *supra* (application for transfer of control of Adelphia to Comcast and Time Warner).

<sup>240</sup> 2004 FCC Form 325 data.

<sup>241</sup> The six mid-sized and smaller cable companies include Bresnan Communications, Service Electric Cable TV & Communications, Susquehanna Communications, Buckeye CableSystem, US Cable Group, and Sunflower Broadband. See also Michael Hopkins, *Thriving (Albeit Small) Empires: Independent MSOs Retool Systems, Expand Offerings in Highly-Competitive Markets*, THE BRIDGE, Sept. 30, 2005.

<sup>242</sup> Cable operators have signed agreements with telephone companies to assist in the provision of VoIP. For example, Sprint Corporation provides VoIP provisioning, switching, interconnections with the public switched telephony network, enhanced 911 services, local number portability, and directory assistance to Massillon Cable TV Inc., Wave Broadband, and Blue Ridge Communications. Karen Brown, *Sprint Lands Trio of Cable Deals, Passes Milestone*, CED, Apr. 4, 2005, at <http://www.cedmagazine.com/cedailydirect/2005/0405/cedaily050404.htm#6> (visited Oct. 14, 2005).

<sup>243</sup> See Bresnan Communications, at <http://www.bresnan.com/unst/about> (visited Sept. 19, 2005). Bresnan's first VoIP market was Grand Junction, Colorado where service began in February 2005. K.C. Neel, *Triple-Play Junction: Grand Junction System is the Jewel of Bresnan's Eye*, MULTICHANNEL NEWS, Feb. 28, 2005, at <http://www.multichannel.com/article/CA506703.html?display=Search+Results&text=Triple%2DPlay+Junction> (visited Oct. 14, 2005).

Communications serves approximately 280,000 subscribers in Pennsylvania and New Jersey.<sup>244</sup> Service Electric offers digital video service, HDTV, DVR, high-speed Internet service, and digital telephone service to residential and business subscribers.<sup>245</sup> Service Electric does not offer VOD service. Susquehanna Communications serves approximately 233,000 subscribers in Pennsylvania, New York, Illinois, Indiana, Maine, and Mississippi.<sup>246</sup> An advanced hybrid fiber optic and coaxial network is in place or under construction in nearly 93 percent of Susquehanna Communications' service area and is expected to be fully deployed in the next two years.<sup>247</sup> Susquehanna Communications offers digital video service, HDTV, DVR, high-speed Internet service, and digital telephone service to residential and business subscribers.<sup>248</sup> Susquehanna Communications does not offer VOD service. Buckeye CableSystem serves approximately 149,000 subscribers in Ohio, Michigan, and New York.<sup>249</sup> Buckeye CableSystem offers digital video service, VOD, HDTV, DVR, high-speed Internet service, and residential telephone service.<sup>250</sup> US Cable Group serves over 140,000 subscribers in Minnesota, Wisconsin, South Carolina, Georgia, Florida, Missouri, Texas, New Mexico, Colorado, and New Jersey.<sup>251</sup> US Cable Group offers digital video service to over 90 percent of homes passed.<sup>252</sup> US Cable Group also offers high-speed Internet service.<sup>253</sup> US Cable Group does not offer VOD, HDTV, DVR, or residential telephone service. Sunflower Broadband operates cable systems in Kansas and offers digital video service, VOD, HDTV, DVR, high-speed Internet service, and digital telephone service to residential and business subscribers.<sup>254</sup> In May 2005, Sunflower Broadband became one of the first cable companies in the country to offer an all digital channel line-up.<sup>255</sup> Digital cable subscribers can now see all channels with digital quality picture and sound.<sup>256</sup>

## **B. Direct-to-Home Satellite Services**

### **1. Direct Broadcast Satellite**

70. DBS service is provided via satellite to small parabolic "dish" antennas located at the individual residences of consumers or at business or educational organizations.<sup>257</sup> Three operators

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<sup>244</sup> See Service Electric Cable TV & Communications, at <http://www.sectv.com/comp.shtml> (visited Sept. 19, 2005). See also NCTA, *Top 25 MSOs Ranked by Number of Customers*, Cable Developments 2005, at 24.

<sup>245</sup> See Service Electric Cable TV & Communications, at <http://www.sectv.com/prod.shtml> (visited Sept. 19, 2005).

<sup>246</sup> See Susquehanna Communications, at <http://www.suscom.com/about/pfaltzgraff.php> (visited Sept. 19, 2005).

<sup>247</sup> *Id.*

<sup>248</sup> See Susquehanna Communications, at <http://www.suscom.com/home> (visited Oct. 6, 2005).

<sup>249</sup> See Buckeye CableSystem, at <http://www.buckeyecablesystem.com/index.html#indtop> (visited Oct. 6, 2005). See also NCTA, *Top 25 MSOs Ranked by Number of Customers*, Cable Developments 2005, at 24.

<sup>250</sup> See Buckeye CableSystem, at [http://www.buckeyecablesystem.com/main\\_tol.html](http://www.buckeyecablesystem.com/main_tol.html) (visited Oct. 6, 2005).

<sup>251</sup> See US Cable Group, at [http://www.uscablegroup.com/operating\\_companies.htm](http://www.uscablegroup.com/operating_companies.htm) (visited Sept. 19, 2005).

<sup>252</sup> See US Cable Group, at <http://www.uscable.com/aboutus.htm> (visited Sept. 19, 2005).

<sup>253</sup> *Id.*

<sup>254</sup> See Sunflower Broadband, at <http://www.sunflowerbroadband.com> (visited Sept. 19, 2005).

<sup>255</sup> *Id.*

<sup>256</sup> *Id.*

<sup>257</sup> We define the Direct Broadcast Satellite Service as "[a] radiocommunication service in which signals transmitted or retransmitted by space stations, using frequencies specified in § 25.202(a)(7), are intended for direct reception by the general public. For the purposes of this definition, the term direct reception shall encompass both individual reception and community reception." 47 C.F.R. § 25.201. See also *2004 Report*, 20 FCC Rcd at 2792 ¶ 53. We (continued....)

provide DBS service: DIRECTV, EchoStar (marketed as the DISH Network), and Dominion Video Satellite, Inc. (marketed as Sky Angel).<sup>258</sup>

71. Last year we reported on the Cablevision subsidiary Rainbow DBS, which began providing MVPD services under the VOOM brand name in October 2003. In December 2004, the Cablevision Board of Directors decided to pursue “strategic alternatives” for the Rainbow DBS assets. In January 2005, Cablevision reached an agreement with EchoStar to sell its Rainbow 1 satellite, located at the 61.5° W.L. orbital position; Commission licenses to construct, launch and operate DBS services over 11 channels at the 61.5° W.L. orbital position; and contents of Rainbow DBS’ ground facility in Black Hawk, South Dakota. Cablevision continued to explore uses for VOOM’s programming.<sup>259</sup> Subsequently, Rainbow DBS ended its VOOM service, which had attained a total subscribership of approximately 26,000 homes, and announced that it was launching a new HD programming service with 21 channels, 10 of which EchoStar agreed to carry initially, with all 21 being available to EchoStar subscribers by 2006.

72. **Subscribership.** As of June 2005, approximately 26.12 million U.S. households subscribed to DBS service. This represents an increase of 12.8 percent over the 23.16 million DBS subscribers we reported last year.<sup>260</sup> DBS accounts for approximately 27.7 percent of all U.S. MVPD subscribers.<sup>261</sup> Analysts attribute DBS’ continued growth to the increase in local-into-local broadcast stations; service enhancements, including multiple room viewing solutions and HDTV; and the ability to co-market DSL service.<sup>262</sup> In terms of subscriber penetration, DBS penetration initially occurred primarily in rural and small markets, but as a recent GAO study found, since 2001, DBS penetration has grown rapidly and increased in suburban and urban areas.<sup>263</sup> According to GAO, the DBS penetration rate was over 36 percent in areas where cable operators did not provide advanced services, such as digital cable, cable modem service and telephone service, compared with approximately 16 percent in areas where cable operators provided one or more such services, but not all, and only 14 percent in areas where cable operators provided all three advanced services.<sup>264</sup> GAO also reported that the DBS penetration rate

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note that this definition of DBS does not cover services offered in the Ka-band, although DBS operators have indicated that they plan to use this frequency band to provide future direct-to-home video services to subscribers.

<sup>258</sup> Dominion holds licenses for eight channels at the 61.5° W.L. orbital position.

<sup>259</sup> Cablevision Systems Corporation, *Cablevision to Sell Rainbow Direct Broadcast Satellite and Certain Related Assets to EchoStar for \$200 Million* (press release), Jan. 20, 2005.

<sup>260</sup> See *2004 Report*, 20 FCC Rcd at 2792 ¶ 54.

<sup>261</sup> See Appendix B, Table B-1 *infra*.

<sup>262</sup> Doug Shapiro, *4Q Wrap-Up: Connecting the Pixels*, Banc of America Securities Equity Research, Mar. 23, 2005. Shapiro also credits DIRECTV’s mandatory set-top box security upgrade for improving DIRECTV’s subscriber growth. Last year, we reported that analysts attributed DBS growth to an increase in niche programming, increased availability of local broadcast stations, and free set-top box equipment. *2004 Report*, 20 FCC Rcd at 2792 ¶ 54.

<sup>263</sup> See U.S. Government Accountability Office, *Direct Broadcast Satellite Subscribership Has Grown Rapidly, but Varies Across Different Types of Markets*, GAO-05-257, Apr. 2005. According to GAO, in 2001, DBS penetration rates were nearly 26 percent in rural areas, 14 percent in suburban areas, and about 9 percent in urban areas. By 2004, DBS penetration rates had increased to approximately 29 percent in rural areas, 18 percent in suburban areas, and 13 percent in urban areas. Over the 2001 to 2004 time frame, the DBS penetration rate grew about 50 percent and 32 percent in urban and suburban areas, respectively, compared with a growth rate of 15 percent in rural areas. *Id.* at 3.

<sup>264</sup> *Id.* at 11.

is 12 percent higher in areas where DBS customers can receive local-into-local service than where local-into-local is not available.<sup>265</sup>

73. DIRECTV is the largest DBS provider and second largest MVPD. DIRECTV served 14.67 million subscribers as of June 2005, an increase of 1.63 million, or 12.5 percent, from the 13.04 million subscribers as of June 2004.<sup>266</sup> EchoStar is the second largest DBS provider and third largest MVPD, with approximately 11.45 million subscribers as of June 30, 2005, an increase of 13.1 percent over the 10.12 million subscribers a year earlier.<sup>267</sup> Dominion Video Satellite's Sky Angel service serves fewer than one million subscribers and provides 20 family and religion-oriented channels.<sup>268</sup>

74. **Service and Equipment Pricing.** DIRECTV and EchoStar offer numerous programming packages. DIRECTV offers three English language programming packages and four Spanish language programming packages.<sup>269</sup> EchoStar offers five English language and three Spanish language program packages.<sup>270</sup> EchoStar and DIRECTV also offer packages to subscribers in Hawaii and Alaska.<sup>271</sup> Sky Angel service is not available in Hawaii or Alaska. In February 2005, EchoStar raised the prices on its English language program packages by an average of 6.5 percent, citing an increase of seven percent in programming costs.<sup>272</sup> EchoStar did not raise the price of its three Spanish language packages.<sup>273</sup>

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<sup>265</sup> *Id.* at 15.

<sup>266</sup> The DIRECTV Group, Inc., *SEC Quarterly Report Form 10-Q Pursuant to Section 13 or 15(d) of the Securities Act of 1934 for the Quarterly Period Ended June 30, 2005*, at 40.

<sup>267</sup> EchoStar Communications Corp., *SEC Quarterly Report Form 10-Q Pursuant to Section 13 or 15(d) of the Securities Act of 1934 for the Quarterly Period Ended June 30, 2005*, at 25.

<sup>268</sup> Sky Angel's subscribership was provided in a telephone conversation with Nancy Christopher, Vice President, Public Relations, Dominion Video Satellite. We have reported previously that Sky Angel had approximately one million subscribers. *See, e.g., 2002 Report*, 17 FCC Rcd at 26930 ¶ 59.

<sup>269</sup> DIRECTV's Total Choice package, which includes over 135 channels of nonbroadcast programming and local broadcast stations, costs \$41.99 per month; Total Choice Plus, which includes 155 channels of nonbroadcast programming and local broadcast stations, costs \$45.99 per month; and Total Choice Premier, which includes over 215 channels of nonbroadcast programming and local broadcast stations, costs \$93.99 per month. If local broadcast stations are not available in a particular market, DIRECTV deducts \$3.00 per month from the price of the package.

<sup>270</sup> EchoStar Comments at 15; EchoStar Communications Corp., Programming, at <http://www.dishnetwork.com/content/programming/packages/index.shtml>.

<sup>271</sup> EchoStar requires the purchase of an additional dish in order to receive certain channels in Alaska and Hawaii. EchoStar broadcasts the majority of its basic and premium programming from its satellites located at the 119° and 110° W.L. orbital locations. According to EchoStar, customers residing in Alaska or Hawaii are not able to receive the 110° satellite signal or any of the channels broadcast from this satellite with EchoStar's standard 20-inch dish. It offers a 24-inch satellite dish to subscribers in Alaska and Hawaii. Nevertheless, some programming is entirely inaccessible. *See* EchoStar Communications Corp., at [http://www.dishnetwork.com/content/programming/packages/hawaii/top\\_60\\_120/index.shtml](http://www.dishnetwork.com/content/programming/packages/hawaii/top_60_120/index.shtml). According to DIRECTV, its service offerings in Hawaii are identical to the national programming available on the mainland. *See* Letter from Stacy Fuller, Vice President, Regulatory Affairs, DIRECTV, to Marlene H. Dortch, Secretary, FCC, MB Docket No. 03-82 (Nov. 16, 2005).

<sup>272</sup> *Ergen Laments Price Jump, Hints at DISH HD Future*, SKYREPORT, Jan. 11, 2005. EchoStar's America's Top 60 with local channels programming package price increased \$2.00 per month, or 6.7 percent, to \$31.99; America's Top 120 and America's Top 180 without local channels increased \$3.00, or 8.5 percent, to \$37.99 and, 6 percent, to \$47.99, respectively. The America's 'Everything' Package increased \$4.00 per month, or 5 percent, to \$81.99. One analyst described EchoStar's price increases as larger than the percentage price increases of large cable operators in 2004 because EchoStar's increases applied to its entire video package, including channels that would be available on cable operators' digital tiers, while cable operators' price increases tend to affect their basic video tiers. George (continued...)

75. Subscribers to DBS service need a satellite dish and a set-top box. EchoStar and DIRECTV continue to rely on discounted set-top box equipment, free satellite dishes, and free installation to attract new customers.<sup>274</sup> With respect to equipment, DIRECTV and EchoStar offer a wide range of set-top box receivers. EchoStar's Digital Home Advantage plan offers discounts on programming packages based on the number of receivers the subscriber leases.<sup>275</sup> DIRECTV states that it does not lease equipment,<sup>276</sup> but it is reported to be considering introducing a leasing model for its equipment in early 2006.<sup>277</sup>

76. **Availability of Local Broadcast Stations.** Local broadcast television station availability is approaching 100 percent for both EchoStar and DIRECTV. In 167 of 210 television markets (*i.e.*, designated market areas, or DMAs), which represent 96 percent of all U.S. television households, at least one DBS provider offers the signals of local broadcast stations (local-into-local service).<sup>278</sup> EchoStar offers local-into-local service in 162 DMAs and Puerto Rico, representing approximately 95 percent of U.S. television households.<sup>279</sup> DIRECTV offers local-into-local service in 134 markets, representing 93 percent of U.S. television households.<sup>280</sup> EchoStar charges an additional \$5.99 where the major four broadcasting networks are available, whereas DIRECTV's program packages automatically include local broadcast signals where it offers local-into-local service.<sup>281</sup>

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Mannes, *EchoStar Launches Price Hike*, TheStreet.com, Jan. 5, 2005, citing Sanford Bernstein analyst Craig Moffett.

<sup>273</sup> DISH Latino with 30 channels and local broadcast stations is \$29.99 per month; DISH Latino DOS with 120 channels and local broadcast stations is \$39.99 per month; and DISH Latino MAX with over 160 channels and local broadcast stations is \$49.99 per month. *See* EchoStar Comments at 15.

<sup>274</sup> The cost of discounted equipment is reflected in DIRECTV's and EchoStar's subscriber acquisition cost (SAC), which describes the cost of acquiring a new subscriber. For example, as of June 30, 2005, EchoStar's SAC was \$667 per subscriber, up 16 percent from a year ago; DIRECTV's SAC was \$646 per subscriber, up almost 5 percent from a year ago. Christy Rickard, *DBS Net Adds Down, Profits Up*, The DBS Report (Kagan Research LLC), Aug. 29, 2005, at 3.

<sup>275</sup> For example, EchoStar's America's Top 120 Digital Home Advantage package costs \$42.99 per month for up to two televisions and increases to \$47.99 for subscribers using three or four multi-room receivers. In addition, under this plan, EchoStar charges \$4.98 per month per multi-room receiver. *See* EchoStar Communications Corp., at [http://www.widshnetwork.com/images/getdish/promotions/dha/dha\\_price.gif](http://www.widshnetwork.com/images/getdish/promotions/dha/dha_price.gif).

<sup>276</sup> DIRECTV Comments at 18.

<sup>277</sup> Linda Moss, *DIRECTV Opts For a Leasing Model*, MULTICHANNEL NEWS, Jan. 23, 2006.

<sup>278</sup> Based on Nielsen's 2004-2005 U.S. Television Households in 210 DMAs. Last year, we reported that at least one DBS provider offered local broadcast stations in 155 of 210 DMAs. *2004 Report*, 20 FCC Rcd at 2795 ¶ 58.

<sup>279</sup> In 64 DMAs, EchoStar requires the use of a "SuperDISH," which enables customers to receive signals from three orbital locations, the third of which allows customers to receive local programming. *See* EchoStar Satellite, LLC, <http://www.dishnetwork.com/content/programming/locals/index.asp>.

<sup>280</sup> The DIRECTV Group, Inc., Local Channel Markets, at [http://www.directv.com/DTVAPP/see/LocalChannels\\_markets.jsp](http://www.directv.com/DTVAPP/see/LocalChannels_markets.jsp). In 60 of these markets, DIRECTV requires the use of a DIRECTV Multi-Satellite System, and in 26 markets, it requires the use of a second 18-inch DIRECTV dish. In October 2005, DIRECTV announced that it would offer local broadcast channels in Mankato and Rochester, Minnesota, and Zanesville, Ohio by the end of 2005. *See* The DIRECTV Group, Inc., *DIRECTV Will Offer Local Channels in Three More Markets by Year-End* (press release), Oct. 13, 2005. The DIRECTV Group serves Puerto Rico through its DIRECTV Latin America subsidiary, which offers local stations.

<sup>281</sup> EchoStar Comments at 15. EchoStar charges \$4.99 where only three of the four major networks are offered, and it charges \$3.99 where only two of the four are offered.

77. **Regulatory Issues.** On December 8, 2004, the Satellite Home Viewer Extension and Reauthorization Act of 2004 (SHVERA) was enacted.<sup>282</sup> The Commission continues to implement the provisions of SHVERA related to the carriage of broadcast signals by DBS operators. In June 2005, pursuant to SHVERA, the Commission extended reciprocal good-faith bargaining obligations for retransmission consent negotiations to cable and satellite operators.<sup>283</sup> In August 2005, in accordance with SHVERA, the Commission ordered that DBS operators provide analog signals to Alaska and Hawaii, and specified that carriage elections for analog and digital signals must be made by October 1, 2005, and April 1, 2007, respectively, in order to meet the statutory requirement that satellite carriers provide these signals to substantially all of their subscribers in each station's local market by December 8, 2005 for analog signals and by June 8, 2007 for digital signals.<sup>284</sup> In September 2005, pursuant to SHVERA, the Commission submitted a report to Congress on the impact on competition in the MVPD market of the current retransmission consent provisions and the network nonduplication, syndicated exclusivity, and sports blackout rules, including the effect of those rules on the ability of rural cable operators to compete with the DBS industry in the provision of digital broadcast television signals to consumers.<sup>285</sup> The Commission did not recommend any changes to the statutory provisions relating to those Commission rules.<sup>286</sup> In November 2005, pursuant to SHVERA, the Commission established rules and regulations by which satellite carriers may offer Commission-determined "significantly viewed" signals of out-of-market (or "distant") broadcast stations to subscribers.<sup>287</sup> In December 2005, pursuant to Section 204(b) of SHVERA, the Commission submitted a Report to Congress concerning the digital signal strength standard and the signal testing procedures used to identify whether a household is

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<sup>282</sup> Pub. L. No. 108-447, 118 Stat 2809 (2004) (codified in scattered sections of 17 and 47 U.S.C.). SHVERA was enacted as Title IX of the Consolidated Appropriations Act, 2005. SHVERA extended certain provisions of the Satellite Home Viewer Improvement Act, primarily those pertaining to the distant signal copyright license and retransmission consent negotiations, for five years. It also added new provisions to the Communications and Copyright Acts pertaining to the retransmission by DBS of distant broadcast signals, including the option to carry broadcast stations deemed "significantly viewed" by the Commission. As required by the Satellite Home Viewer Improvement Act of 1999 (SHVIA), the Commission established rules to implement carriage of broadcast signals, retransmission consent, and program exclusivity with respect to satellite carriage of broadcast stations. SHVIA provides DBS carriers with the opportunity to carry local stations in a Designated Market Area (DMA) pursuant to a statutory copyright license similar to the one provided cable operators. If a DBS operator selects this option in a DMA, however, it must carry all the local stations in the DMA, effective January 1, 2002. *See also Implementation of the Satellite Home Viewer Improvement Act 1999: Broadcast Signal Carriage Issues, Retransmission Consent Issues*, 16 FCC Rcd 1918 (2000); *Implementation of the Satellite Home Viewer Improvement Act of 1999: Broadcast Signal Carriage Issues*, 16 FCC Rcd 16544 (2001); *Implementation of the Satellite Home Viewer Improvement Act of 1999: Retransmission Consent Issues: Good Faith Negotiation and Exclusivity*, 16 FCC Rcd 15599 (2001).

<sup>283</sup> *Implementation of Section 207 of the Satellite Home Viewer Extension and Reauthorization Act of 2004, Reciprocal Bargaining Obligation*, 20 FCC Rcd 10339 (2005).

<sup>284</sup> *Implementation of the Satellite Home Viewer Extension and Reauthorization Act of 2004 to Amend Section 338 of the Communications Act*, 20 FCC Rcd 14242 (2005). SHVERA amended certain rules concerning the carriage of local television broadcast stations by satellite carriers, specifically by requiring satellite carriers to carry the analog and digital signals of television broadcast stations in local markets in states that are not part of the contiguous United States.

<sup>285</sup> *Retransmission Consent and Exclusivity Rules: Report to Congress Pursuant to Section 208 of the Satellite Home Viewer Extension and Reauthorization Act of 2004*, Sept. 8, 2005.

<sup>286</sup> *Id.* at ¶ 86.

<sup>287</sup> *See Implementation of the Satellite Home Viewer Extension and Reauthorization Act of 2004, Implementation of Section 340 of the Communications Act*, 20 FCC Rcd 17278 (2005).



“unserved” for purposes of the satellite statutory copyright license for distant digital signals.<sup>288</sup> The Commission is currently undertaking a number of other rulemaking proceedings to implement SHVERA.<sup>289</sup>

78. ***Satellite Fleet Developments and Video Capacity.*** DIRECTV launched new satellites this year. In October 2005, DIRECTV took on-orbit delivery of SPACEWAY F1, which was launched in April 2005 and which is the first of four Ka-band satellites that DIRECTV will use to distribute local HD broadcast signals into several large markets.<sup>290</sup> In November 2005, DIRECTV also launched SPACEWAY F2.<sup>291</sup> Together, SPACEWAY F1 and SPACEWAY F2 are expected to provide local digital and HD signals to approximately 24 markets, representing 45 percent of U.S. television households.<sup>292</sup> DIRECTV states that the combined capacity of the four satellites will enable DIRECTV to retransmit more than 150 national channels in high-definition and the digital signals of approximately 1,500 local broadcast stations.<sup>293</sup> In order for DIRECTV subscribers to access programming transmitted by the new satellites, they will have to upgrade to a new satellite dish and HD compatible set-top box.<sup>294</sup> In May 2005, DIRECTV launched DIRECTV 8, a Ku/Ka-band hybrid satellite that will supplement DIRECTV’s existing satellite fleet and will replace an older DIRECTV satellite, which will function as a back-up satellite, at the 101° W.L. orbital location.<sup>295</sup> In early 2006, EchoStar is expected to launch its

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<sup>288</sup> See Report to Congress, *The Satellite Home Viewer Extension and Reauthorization Act of 2004, Study of Digital Television Field Strength Standards and Testing Procedures*, 20 FCC RCd 19504 (2005). In the Report, the Commission concluded that it did not need to make changes to the digital television field strength standards. We did determine, however, that a rulemaking proceeding should be conducted to specify procedures for measuring the field strength of digital television signals at individual locations that are generally similar to the current procedures for measuring the field strength of analog television stations. We also concluded that the existing, Individual Location Longley-Rice model should be used for predicting whether a household is unserved by digital television signals.

<sup>289</sup> See *Implementation of the Satellite Home Viewer Extension and Reauthorization Act of 2004, Procedural Rules*, 20 FCC Rcd 7780 (2005) (amending rules as specified in SHVERA).

<sup>290</sup> See The DIRECTV Group, Inc., *Boeing Delivers Next-Generation Commercial Satellite to DIRECTV, Inc.* (press release), Oct. 10, 2005. See also The DIRECTV Group, Inc., *DIRECTV’s Spaceway F1 Satellite Launches New Era in High-Definition Programming; Next Generation Satellite Will Initiate Historic Expansion of DIRECTV Programming* (press release), Apr. 26, 2005.

<sup>291</sup> *Spaceway Bird Finally Takes Flight*, SATELLITE BUSINESS NEWS FAXUPDATE, Nov. 18, 2005.

<sup>292</sup> According to DIRECTV, Spaceway 1 and Spaceway 2 will have the capacity for more than 500 local HD broadcast channels. Two other satellites to be launched in early 2007 will have combined capacity for more than 1,000 local HD broadcast channels and more than 150 national HD channels. All four satellites will use spot-beam technology to deliver local channels. See John Mansell, *New Strategies for DIRECTV and EchoStar*, The DBS Report (Kagan Research), Jan. 24, 2005, at 8; The DIRECTV Group, Inc., *DIRECTV Announces First 12 Markets to Receive Local Channels in High-Definition This Year* (press release), Jan. 6, 2005; The DIRECTV Group, Inc., *DIRECTV Spaceway F2 Satellite Will Expand Local Digital/HD Services for DIRECTV Customers* (press release), May 25, 2005.

<sup>293</sup> DIRECTV Comments at 4.

<sup>294</sup> The DIRECTV Group, Inc., *DIRECTV Announces First 12 Markets to Receive Local Channels in High-Definition This Year* (press release), Jan. 6, 2005. According to DIRECTV, it will transmit all local HD and other new services using MPEG-4 AVC, a new standard in digital video compression, and advanced modulation that it states will improve DIRECTV’s Ka-band capacity. To receive the HD programming, subscribers will require a new, slightly larger dish antenna and a new HD set-top box compliant with the MPEG-4 standard.

<sup>295</sup> The DIRECTV Group, Inc., *DIRECTV 8 Satellite Will Strengthen Service to DIRECTV Customers* (press release), May 22, 2005.

Echo X satellite at the 129° W.L. orbital location, which will be used to eliminate the need for some of its subscribers to use multiple dishes to receive programming.<sup>296</sup>

## 2. Home Satellite or Large Dish Service

79. The home satellite dish (HSD), or large dish, segment of the satellite industry is the original satellite-to-home service offered to consumers. It involves the home reception of analog signals transmitted by satellites operating in the C- and Ku-band frequencies, generally referred to here as C-band. Satellites in the C-band frequency are used primarily to transmit programming to cable operators via C-band receiving dishes at the cable operator's central technical facility or "headend." To be authorized to receive one or more scrambled channels, an HSD owner must purchase an integrated receiver-decoder from an equipment dealer and then pay a monthly or annual subscription fee to a program packager.<sup>297</sup>

80. As of June 2005, there were 206,358 households authorized to receive HSD service, a decrease of 38.5 percent from the 335,766 we reported last year.<sup>298</sup> By one estimate, an additional 100,000 households watch unscrambled channels.<sup>299</sup> In addition, two C-band program packagers have reported the number of subscribers they serve: National Programming Service, LLC (NPS) states that it provides service to approximately 100,000 customers, and Superstar/Netlink reports that it serves approximately 170,000 subscribers.<sup>300</sup> We observe that, combined, these subscriber counts exceed what has been reported by Motorola's Access Control Center and thus raise a question about the actual number of C-band subscribers.

81. Motorola introduced a digital home satellite dish solution called 4DTV, which enables C-band customers to receive digital only satellite channels in addition to available analog programming.<sup>301</sup> 4DTV allows customers to receive four types of programming: (1) free, unscrambled analog channels and so-called "wild feeds;" (2) VideoCipher II Plus subscription services; (3) free DigiCipher II services; and

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<sup>296</sup> EchoStar Communications Corp., *Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the Quarterly Period Ended September 30, 2005*, at 13.

<sup>297</sup> HSD systems are typically designed to receive programming from several different satellites at several different orbital locations. Most HSDs include motors that permit the receiving dishes to rotate and receive signals from these many satellites. Space considerations and zoning regulations restrict many viewers' ability to install the large antenna needed for HSD reception.

<sup>298</sup> *C-Band Decline Continues*, Satellite Business News FAXUpdate, July 6, 2005. The number is based on a report from Motorola's Access Control Center, which oversees authorizations and de-authorizations of satellite receivers using Motorola's proprietary conditional access systems.

<sup>299</sup> Jeffrey Krauss, *The End of the Big, Ugly Dish?*, CED Magazine, June 2005, at <http://www.cedmagazine.com/ced/2005/0605/06cc.htm>.

<sup>300</sup> Comments of National Programming Service and Reply Comments of EchoStar Acquisition L.L.C filed in *2000 Biennial Regulatory Review Streamlining and Other Revisions of Part 25 of the Commission's Rules Governing the Licensing of, and Spectrum Usage by, Satellite Network Earth Stations*, 20 FCC Rcd 5593 (2005) (*2000 Satellite Biennial*). In April 2004, EchoStar purchased Superstar/Netlink Group, LLC. See *2004 Report*, 20 FCC Rcd at 2799 ¶ 64, n. 342.

<sup>301</sup> 4DTV is Motorola's proprietary digital television receive-only communications satellite receiver box and uses the Motorola DigiCipher II, or DCII, standard of signal encryption and compression. 4DTV receivers are also capable of receiving analog satellite transmissions. See Motorola, Inc., at <http://www.4dtv.com/> (visited Jan. 14, 2005). VideoCipher is the conditional access system used by most C-band receivers to decode subscription based and premium satellite TV channels. DigiCipher II, or DCII, is Motorola's proprietary video distribution system that is used by most digital satellite channels.

(4) subscription-based DigiCipher II channels. The price of 4DTV digital receivers has decreased, retailing for approximately \$550.00 today, compared with \$800.00 last year.<sup>302</sup>

82. In March 2005, the Commission issued a notice of proposed rulemaking concerning technical changes to its earth station rules, including a proposal to prohibit analog video transmission in the C-band, with a one-year transition period.<sup>303</sup> This proceeding is pending.

### 3. Satellite-Based Advanced Services

83. **Broadband Satellite Services.** WildBlue, a new satellite-based two-way broadband Internet service provider, initiated service on the Telesat Anik F2 Ka-band “spot beam” satellite, which was launched in July 2004.<sup>304</sup> In June 2005, WildBlue acquired its first subscriber.<sup>305</sup> WildBlue offers three service packages for residential subscribers ranging in price from \$49.95 to \$79.95, with download speeds from 512 Kbps to 1.5 Mbps and upload speeds from 128 Kbps to 256 Kbps.<sup>306</sup> WildBlue’s equipment retails for \$299.00 plus required professional installation cost of \$179.95.<sup>307</sup> Hughes Network Systems’ continues to offer DIRECWAY’s satellite-based, two-way, high-speed Internet access to consumers.<sup>308</sup> As of June 30, 2005, DIRECWAY had approximately 253,000 residential and business customers.<sup>309</sup> In September 2005, DIRECWAY introduced new modems, which DIRECWAY claims will deliver faster download and upload rates, and new pricing plans for residential and business subscribers.<sup>310</sup> Existing DIRECTV subscribers cannot use their DIRECTV dish to receive DIRECWAY

<sup>302</sup> 2004 Report, 20 FCC Rcd at 2799 ¶ 65. The price of a receiver is often significantly discounted with the purchase of a programming package. For example, C-band programming provider Skyvision offers the Motorola 4DTV DSR922 receiver, with a retail price of \$550.00, for \$399.00 with the purchase of a programming package. See Skyvision, Inc., at <http://www.skyvision.com/store/mi4509029.html>.

<sup>303</sup> 2000 Satellite Biennial, 20 FCC Rcd at 5625 ¶ 88.

<sup>304</sup> WildBlue is a joint venture of the National Rural Telecommunications Cooperative, Intelsat, Ltd., Liberty Media Corporation, and Kleiner Perkins Caufield and Byers, a venture capital firm.

<sup>305</sup> WildBlue Communications Inc., *WildBlue Installs First Customer* (press release), June 3, 2005.

<sup>306</sup> WildBlue offers two business plans for \$69.95 and \$79.95 with download speeds of 1.0 Mbps and 1.5 Mbps, respectively, and upload speeds of 200 Kbps and 256 Kbps, respectively.

<sup>307</sup> WildBlue Communications, Inc., *Packages and Pricing*, at <http://www.wildblue.com/forYourHome/index.jsp>.

<sup>308</sup> In December 2004, The DIRECTV Group agreed to sell 50 percent of its subsidiary, Hughes Networks Systems, to SkyTerra Communications Inc., an affiliate of Apollo Management, L.P., a New York-based private equity firm. The transaction closed in April 2005. See The DIRECTV Group, Inc., *SkyTerra Communications to Acquire 50 Percent of Hughes Network System from THE DIRECTV Group* (press release), Dec. 6, 2004; Hughes Network Systems, LLC, *SkyTerra Communications and The DIRECTV Group Complete New Ownership Structure for Hughes Network Systems* (press release), Apr. 25, 2005.

<sup>309</sup> Hughes Network Systems, LLC, *Hughes Network Systems Achieves 26 percent Growth in Consumer and Small Business Subscribers for DIRECWAY Service* (press release), July 12, 2005. According to Hughes, this represents a 26 percent increase from June 2004.

<sup>310</sup> Hughes Network Systems, LLC, *Hughes Network Systems Boosts Speed and Performance of DIRECWAY Satellite Broadband* (press release), Sept. 12, 2005. DIRECWAY offers two residential pricing plans. The Home Plan costs \$599.00 for equipment and installation and \$59.99 per month with a 15-month commitment. The Home Plan provides download speeds up to 700 Kbps and upload speeds up to 128 Kbps. The Professional Plan is \$599.00 for equipment and installation and \$69.99 per month with a 15-month service contract. It provides download speeds up to 1.0 Mbps and upload speeds up to 200 Kbps. Alternatively, subscribers can choose to pay \$99.99 upfront for equipment and installation and \$99.99 per month for the Home Plan or \$109.99 per month for the Professional Plan, including a 15-month term service contract. After the 15-month contract period, the monthly subscription rate converts to the standard subscription rates described above. DIRECWAY also provides two service plans for businesses, both of which cost \$999.99 for equipment and installation. The Small Office plan costs (continued...)

service, but DIRECWAY satellite dishes can be upgraded to receive DIRECTV DBS service. EchoStar does not offer a satellite-based broadband Internet service at this time.<sup>311</sup>

84. EchoStar and DIRECTV continue to maintain co-marketing relationships with local exchange carriers to offer DSL broadband services. DIRECTV has relationships with Verizon, BellSouth, Qwest and Internet service provider Earthlink. EchoStar has existing relationships with SBC, Sprint, CenturyTel, and Earthlink.<sup>312</sup> In October 2005, EchoStar and ALLTEL signed a co-marketing agreement under which ALLTEL will offer EchoStar's DISH service in 15 states of its 36-state service territory.<sup>313</sup> EchoStar entered into a similar agreement with Frontier Communications, a subsidiary of Citizens Communications Company.<sup>314</sup> With respect to SBC, EchoStar renegotiated its co-marketing relationship with SBC.<sup>315</sup> In areas where SBC will not be immediately deploying its Project Lightspeed, EchoStar and SBC plan to introduce a single receiver manufactured by 2Wire, Inc. to integrate both satellite and DSL in one set-top box.<sup>316</sup>

85. **Other Advanced Services.** DBS providers continue to offer HD service but remain constrained in what they can offer by the capacity limitations of their satellite fleets. EchoStar's primary HD programming package remains essentially unchanged from last year and includes ESPNHD, Discovery HD, TNT in HD, HDNet and HDNet Movies. Earlier this year, it expanded its HD programming by offering VOOM HD Networks, which includes ten genre-based channels, such as Monsters HD (horror and science fiction programming) and Rush HD (extreme action sports programming). It also offers HBO HDTV, Showtime HDTV, CBS HDTV, and DISH Network Pay-Per-View in HD.<sup>317</sup> EchoStar offers two HD receivers,<sup>318</sup> and has packaged flat panel LCD televisions with

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\$99.99 per month and provides download speeds up to 1.5 Mbps and upload speeds up to 300 Kbps. The Business Internet Plan is \$199.00 per month and provides download speeds up to 2 Mbps and upload speeds up to 500 Kbps. Both plans require a 2-year service contract. See Hughes Network Systems, LLC, Service Offerings, at <http://www.direcway.com>.

<sup>311</sup> See 2004 Report, 20 FCC Rcd at 2799 ¶ 66.

<sup>312</sup> *Id.* at ¶ 67.

<sup>313</sup> ALLTEL Offering Dish Network, MULTICHANNEL NEWS, Oct. 19, 2005, at <http://www.multichannel.com/article/CA6275774.html>. See EchoStar Communications Corp., ALLTEL Signs Agreement to Offer DISH Network TV Service (press release), Mar. 8, 2005.

<sup>314</sup> EchoStar Communications Corp., *Frontier Communications Announces Strategic Alliance with EchoStar* (press release), Apr. 6, 2005.

<sup>315</sup> Christy Rickard, *EchoStar Inks New Deal with SBC*, The DBS Report (Kagan Research LLC), Sept. 30, 2005, at 3. Under the terms of the agreement, EchoStar will bear installation and equipment costs, while SBC will provide customer service and billing. SBC will receive a commission and a share of revenue from the subscribers it signs up. The agreement covers the 31.4 million households within SBC's local exchange telephone network service area.

<sup>316</sup> *Id.* at 4.

<sup>317</sup> DISH Network HD Pak costs \$9.99 per month. VOOM Original HD Pak retails for \$5.00 per month, and is only available with a subscription to DISH Network HD Pak. Premium channel HD programming is included free of charge with a subscription to the premium programming. Subscribers must have a DISH Network HD receiver, HD television and a dish antenna pointing at the appropriate orbital location. Some subscribers may require a second dish antenna to receive certain HD programming. EchoStar Communications Corp., at <http://www.dishnetwork.com/content/programming/hdtv/index.shtml>.

<sup>318</sup> EchoStar's DISH 811 retails for \$399.00 and its DISH Player-DVR 942 retails for \$699.00, which offers HD and DVR functionality with a 250 GB hard drive. The DISH Player-DVR 942 can record up to 180 hours of standard-definition programming, or up to 25 hours of HD programming.

its HD set-top boxes to offer an all-in-one equipment and service package.<sup>319</sup> In February 2006, EchoStar began delivering HD local broadcast stations in the New York and Los Angeles markets.<sup>320</sup> DIRECTV's HD Package includes ESPN HD, ESPN2 HD, Discovery HD Theater, HDNet, HDNet Movies and Universal HD for \$10.99 per month.<sup>321</sup> DIRECTV delivers the national HD broadcast feed of ABC, CBS, Fox, NBC, and WB in select markets.<sup>322</sup> DIRECTV is planning to use its Spaceway - F1 satellite to deliver HD local broadcast stations in select markets.<sup>323</sup> Beginning in October 2005, DIRECTV launched HD local broadcast stations in several markets.<sup>324</sup>

86. EchoStar and DIRECTV also continue to develop their DVR services. Presently, neither EchoStar nor DIRECTV offers real-time on-demand programming because they lack the capacity on their satellites to store programming and provide feeds to individual subscribers. DIRECTV states that it has experienced higher subscription rates for its DVR-enabled equipment and services following more attractive pricing for the service.<sup>325</sup> DIRECTV has been packaging TiVo's DVR platform into some of its receivers, but has announced that it will transition to its own DIRECTV Plus DVR, which is

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<sup>319</sup> Craig Moffett, Tom Wolzien, *View from the Back Office*, Bernstein Research, Jan. 7, 2005. DIRECTV sells a 30-inch LCD TV for \$1,600 and 40-inch TV for \$4,000, including delivery, installation, satellite dish, and the DISH 811 HD set-top box.

<sup>320</sup> EchoStar Communications Corp., *Dish Network Launches Local TV Stations in High Definition in Los Angeles via Satellite* (press release), Feb. 2, 2006; EchoStar Communications Corp., *Dish Network Launches Local TV Stations in High Definition in New York City via Satellite* (press release), Feb. 2, 2006.

<sup>321</sup> See The DIRECTV Group, Inc., HD Programming, at [http://www.directv.com/DTVAPP/imagine/HDTV\\_programming.jsp](http://www.directv.com/DTVAPP/imagine/HDTV_programming.jsp).

<sup>322</sup> For example, DIRECTV subscribers have two ways to receive satellite-delivered Fox HD programming. First, customers who have an HD receiver and a Total Choice programming package can receive Fox HD programming from either WNYW (located in New York) or KTTV (located in Los Angeles), depending upon their geographic location. The select markets where eligible customers may receive the feeds are: New York; Los Angeles; Chicago; Philadelphia; Boston; Dallas; Washington D.C.; Minneapolis; Detroit; Atlanta; Houston; Tampa Bay and Orlando; Cleveland; Phoenix; Denver; St. Louis; Milwaukee; Kansas City; Salt Lake City; Birmingham; Memphis; Austin and Greensboro, North Carolina. The second option, available only to unserved households, is to receive Fox HD programming as part of their Distant Network Service. Subscribers must have an HD capable TV set, a DIRECTV HD receiver, and a satellite dish capable of receiving signals from three separate DIRECTV satellites. See The DIRECTV Group, Inc., Local Channels in HD, at [http://www.directv.com/DTVAPP/imagine/HDTV\\_localchannels.jsp](http://www.directv.com/DTVAPP/imagine/HDTV_localchannels.jsp).

<sup>323</sup> Initially, DIRECTV plans to deliver local HD broadcast channels to the following television markets: New York, Los Angeles, Chicago, Philadelphia, Boston, San Francisco, Dallas, Washington, D.C., Atlanta, Detroit, Houston and Tampa. The DIRECTV Group, Inc., *DIRECTV Announces First 12 Markets to Receive Local Channels in High-Definition This Year* (press release), Jan. 6, 2005. DIRECTV states that it will carry each of the primary broadcast networks that offer an HD feed in the market and its customers who subscribe to a local channel package will receive both the standard-definition and HD signal. According to DIRECTV, HD local programming can be received via a new model of dish and customers will require new HD set-top boxes compatible with the new MPEG-4 compression standard.

<sup>324</sup> DIRECTV is providing high definition local channels in Boston, Massachusetts, Dallas and Houston, Texas, Tampa, Florida, Washington, D.C., Detroit, Michigan, New York, New York, and Los Angeles. See e.g., *DIRECTV Lights Up HD Locals in Detroit*, Satellite Business News FAXUPDATE, Oct. 21, 2005; The DIRECTV Group, *DIRECTV Delivers High-Definition Local Channels to Boston, Dallas, Houston, Tampa, and Washington, D.C.* (press release), Dec. 9, 2005; The DIRECTV Group, *DIRECTV Transmits High-Definition Local Channels in New MPEG-4 Transmission Standard to Los Angeles* (press release), Dec. 28, 2005; The DIRECTV Group, *DIRECTV Brings High-Definition Local Channels to New York Today* (press release), Dec. 28, 2005. DIRECTV is carrying the HD local broadcast feed of the ABC, NBC, CBS, and Fox affiliates.

<sup>325</sup> DIRECTV Comments at 18.

manufactured by News Corp. subsidiary NDS.<sup>326</sup> In addition to providing DVR functionality, the new set-top box is designed to support DIRECTV's new interactive features, VOD functionality, and pay-per-view movies with VOD functionality.<sup>327</sup> DIRECTV charges \$5.99 per month for its DVR service.<sup>328</sup> EchoStar introduced "DISH on demand" which is based on the model 625 set-top box that offers a hard drive that can record up to 100 hours of programming and reserves enough space for EchoStar to download movies and other content via satellite for the subscriber to view "on demand."<sup>329</sup> DIRECTV reported that it had two million subscribers with DVRs as of June 2005.<sup>330</sup> EchoStar has not reported its DVR subscribership since it reported that it reached one million DVR subscribers in September 2003.<sup>331</sup>

### C. Broadband Service Providers

87. For purposes of this report, we define broadband service providers (BSPs) as newer firms that are building state-of-the-art, facilities-based networks to provide video, voice and data services over a single network.<sup>332</sup> Most BSPs are overbuilders.<sup>333</sup> As we have noted previously, BSPs continue to face considerable challenges as discussed below, and competition to cable from BSPs is limited to very few markets. As discussed in the Local Exchange Carrier section, below, a renewed interest from large LECs in entering the video distribution market may change this fact over the next few years.

88. **OVS.** In 1996, Congress established the open video system (OVS) framework, one of four statutorily recognized options for the provision of video programming services by LECs.<sup>334</sup> BSPs

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<sup>326</sup> DIRECTV is expected to introduce its new DVR in late 2005. Ian Olgeirson, *DIRECTV Hit By DVR Delays, But Forecast Looks Bright*, The DBS Report (Kagan Research LLC), Aug. 29, 2005; Steve Donohue, *DIRECTV DVR Retail Debut Delayed*, MULTICHANNEL NEWS, Oct. 21, 2005.

<sup>327</sup> DIRECTV Comments at 18. The DIRECTV Plus receiver has a 160-hour recording capacity, but DIRECTV is reported to be making only 100 hours available for consumers to use for their own recording. The remaining 60 hours will be used by DIRECTV to deliver programming, which subscribers can purchase for an additional fee. For example, DIRECTV will deliver select NBC Universal programming from the NBC broadcast network and NBC Universal cable networks, such as USA, Sci Fi and Bravo, to its subscribers' DIRECTV Plus DVRs, which can be accessed on a commercial-free basis for \$0.99 per episode. See Brook Barnes and Peter Grant, *CBS, NBC Deals Accelerate Shift in TV Landscape*, WALL STREET JOURNAL, Nov. 8, 2005; The DIRECTV Group, Inc., *NBC Universal and DIRECTV Announce First Ever On Demand Deal for Primetime Network Programming; Top NBC Universal Content On Demand for \$0.99* (press release), Nov. 7, 2005.

<sup>328</sup> DIRECTV does not charge subscribers for DVR service if they are subscribers to its Total Choice Premier programming package, which costs \$93.99 per month. Existing customers seeking to upgrade their service must purchase a DVR equipped set-top box and agree to a new programming contract.

<sup>329</sup> Craig Moffett, Tom Wolzien, *View from the Back Office*, Bernstein Research, Jan. 7, 2005.

<sup>330</sup> Ian Olgeirson, *DIRECTV Hit By DVR Delays, But Forecast Looks Bright*, The DBS Report (Kagan Research LLC), Aug. 29, 2005, at 1. As of March 31, 2005, DIRECTV was reported to have 1.68 million DVR subscribers. Craig Moffett, Amelia Wong, and Lauren M. Pastrich, *DIRECTV (DTV): A Much Brighter Outlook for SDCF*, Bernstein Research Call, May 3, 2005, at 3.

<sup>331</sup> *2004 Report*, 20 FCC Rcd at 2800 ¶ 68. Kagan forecasts that DIRECTV and EchoStar will reach approximately 5.3 million DVR customers by the end of 2005, or approximately one-fifth of total DBS subscribers. See Kagan Research, LLC, *DIRECTV Hit By DVR Delays, But Forecast Looks Bright*, The DBS Report, Aug. 29, 2005, at 1.

<sup>332</sup> The term BSP is not intended to imply anything with respect to Commission's policy or proceedings that might involve broadband services. Usually, the services of a BSP can be purchased separately as well as in a bundle. See *2001 Report*, 17 FCC Rcd at 1296-97 ¶ 3. See also *2002 Report*, 17 FCC Rcd at 26948-52 ¶¶ 102-11.

<sup>333</sup> *2004 Report*, 20 FCC Rcd at 2801 ¶ 70. An overbuilder is an MVPD that "overbuilds" a second cable network where one already exists.

<sup>334</sup> Most, if not all, OVS providers are also overbuilders. We treat them in a separate section to highlight the separate regulatory classification that Congress created. 47 U.S.C. §571(a)(3)-(4); *1996 Report*, 12 FCC Rcd at (continued...)

are the only significant holders of OVS certifications or local OVS franchises.<sup>335</sup> BSPA reports that new OVS activity has been limited, but that some of its members have converted cable franchises into OVS franchises, which has enabled some BSPs to eliminate build-out requirements.<sup>336</sup> BSPA maintains that build out requirements limit wireline video competition by increasing the costs of entry.<sup>337</sup> BSPA argues that most incumbent cable operators have had decades to build out to current service boundaries with limited or no competition, and did not have to rely on capital markets for funding as current entrants do.<sup>338</sup>

89. **BSP Overbuilders.** RCN Corporation is the nation's largest overbuilder, supplying voice, video, and high-speed Internet access services to residential subscribers over its own network in the Boston, New York, Chicago, San Francisco, Los Angeles, Washington, D.C, Philadelphia, and Lehigh Valley, Pennsylvania, metropolitan markets.<sup>339</sup> As of June 2005, RCN was the 14th largest MVPD with 371,000 subscribers.<sup>340</sup> WideOpenWest (WOW) is the second largest overbuilder. WOW was the 16th largest MVPD and, as of June 2005, served 292,500 subscribers.<sup>341</sup> The third largest overbuilder is Knoxville, Tennessee-based Knology, which operates mainly in the Southeast. As of June 2005, Knology was the 23rd largest MVPD, and had 179,800 video subscribers.<sup>342</sup> Grande, which operates systems in several cities in Texas, reported that video connections increased from 78,000 to 85,440, and high-speed data increased from 47,000 to 63,241, between June 2004 and June 2005.<sup>343</sup>

90. Last year we reported that many overbuilders were continuing to experience financial difficulties. Since then, RCN emerged from Chapter 11 bankruptcy. RCN reports that it enjoys "a new management team, a new Board of Directors, and [an] improved balance sheet."<sup>344</sup> BSPA reports that

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

4395-98 ¶¶ 68-71. The OVS framework was designed to streamline the process of entering local MVPD markets and it subjects OVS certified providers to regulation under Title VI somewhat different than that applied 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. Open video systems are subject to, among others, the 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 LECs previously had offered video services.

<sup>335</sup> For a complete list of OVS certifications, see Current Filings For Certification of Open Video Systems, at <http://www.fcc.gov/mb/ovs/csovsccer.html> (visited Oct. 10, 2005).

<sup>336</sup> BSPA Comments at 6-7. OPASTCO reports that less than 8 percent of its members provide service under OVS certification. OPASTCO Reply Comments at 3.

<sup>337</sup> BSPA Comments at 19.

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

<sup>339</sup> RCN Comments at 1-2.

<sup>340</sup> Kagan Research, LLC, *Top Cable System Operators as of 6/05*, Cable TV Investor, Aug. 25, 2005, at 11.

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

<sup>342</sup> *Id.*

<sup>343</sup> See Grande Communications Holdings, Inc., *Grande Communications Holdings, Inc. Announces Results for the Second Quarter Ending June 30, 2005* (press release), Aug. 15, 2005.

<sup>344</sup> RCN Comments at 2 n.2.

BSPs are consolidating ownership of their system holdings, which may help BSPs gain economies of scale and become more financially stable.<sup>345</sup>

91. **Nature of MVPD Competition.** BSPA highlights a 2005 U.S. Government Accountability Office (GAO) study that examined overbuild video systems.<sup>346</sup> The report states that DBS penetration varies depending on the type of community (*i.e.*, urban, rural, or suburban) and the technical sophistication of the cable competitor and/or the presence of an overbuilder. BSPA maintains that DBS is not as direct a substitute for cable as are BSPs, and that the variation of DBS penetration across communities argues that the Commission should not accede to cable industry arguments that cable is no longer dominant in the MVPD market.<sup>347</sup> We note that the *2004 GAO Report* studied six market pairs for which one market of each pair was served by a BSP overbuilder, and the other was not. GAO found that communities with overbuild competition experienced lower rates (an average of 23 percent lower for basic cable) and higher-quality service. GAO also found that BSPs were facing difficulties competing, such as access to programming and Multiple Dwelling Units (MDUs), and franchise requirements imposed by localities.<sup>348</sup> BSPA calls upon the Commission to monitor and analyze DBS competition as GAO did in the *GAO 2005 Report*, and to reject the notion that markets are not competitive until such time as competitors achieve a market share of 25-30 percent.<sup>349</sup> Comcast strongly disputes the allegation that DBS competition is not meaningful, referring to the “dramatic effects” that DBS competition has had on the multichannel video marketplace.<sup>350</sup>

#### **D. Broadcast Television Service**

##### **1. General Performance**

92. Broadcast networks and local stations supply video programming directly over the air to consumers. Consumers who do not subscribe to an MVPD service rely solely on over-the-air transmission of local broadcast television signals. Other households receive broadcast television programming over the air on those television receivers that they have chosen not to connect to an MVPD service. In addition, many consumers receive broadcast signals via their cable, DBS, or other MVPD service.

93. As we reported last year, broadcast television stations’ audience shares have continued to fall as cable and DBS penetration, the number of cable channels, and the number of nonbroadcast networks continue to grow. For the 2004-2005 television season, broadcast television stations accounted for a combined average 47 share of prime time viewing among all television households, compared to a 48 share in the previous season.<sup>351</sup> Broadcast stations achieved a 41 share of all-day (24-hour) viewing

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<sup>345</sup> BSPA Comments at 6.

<sup>346</sup> GAO, *Direct Broadcast Satellite Subscribership Has Grown Rapidly, but Varies Across Different Types of Markets*, GAO-05-257, Apr. 2005 (*GAO 2005 Report*). The *GAO 2005 Report* studies how DBS penetration varies across different types of markets (rural, suburban, and urban) and against different types of cable systems (not upgraded, partially upgraded, and fully upgraded). The report finds that DBS penetration is highest in rural areas and lowest in urban, and highest in areas served by a cable system that has not been upgraded and lowest in areas served by a cable system that has been fully upgraded.

<sup>347</sup> BSPA Comments at 7-12.

<sup>348</sup> GAO, *Telecommunications: Wire-Based Competition Benefited Consumers in Selected Markets*, GAO-04-241, Feb. 2004.

<sup>349</sup> BSPA Comments at 10.

<sup>350</sup> Comcast Reply Comments at 37-41. *See also* Time Warner Reply Comments at 1-4.

<sup>351</sup> Nielsen Media Research, *Broadcast Calendar (TV Season) Share of Audience Report, Prime Time and Total Day*, Sept., 2005. Nielsen reports audience shares that exceed 100 percent when totaled due to simultaneous multiple set viewing. We have normalized audience shares to equal 100 percent.



during the 2004-2005 season, down from a 44 share the previous season. In contrast, nonbroadcast channels' collective audience share continues to grow. In the 2004-2005 television season, nonbroadcast channels<sup>352</sup> accounted for a combined average 53 share of prime time viewing among all television households, up from the 52 share in the previous season.<sup>353</sup> Nonbroadcast channels accounted for a 59 share of all-day viewing, up from a 56 share in the previous season.<sup>354</sup>

94. Since the 2004 Report, the number of commercial and noncommercial television stations has remained unchanged at 1,747 from June 30, 2004 to June 30, 2005.<sup>355</sup> Total television broadcast advertising revenues grew 11 percent from \$42.5 billion in 2003, to \$47.2 billion in 2004.<sup>356</sup> Advertising revenue for the seven most widely distributed broadcast networks (ABC, CBS, Fox, NBC, PAX, UPN, and WB) was estimated at \$24.9 billion in 2004, a 9.5 percent increase over the \$22.7 billion earned in 2003.<sup>357</sup> Cable programming networks fared somewhat better, experiencing a 17.7 percent increase in advertising revenue in 2004; they earned \$16.4 billion in advertising revenue compared to \$14 billion in 2002.<sup>358</sup>

## 2. Digital Television

95. DTV allows broadcasters to use a single 6 MHz channel to transmit a high-definition television (HDTV) signal, several standard-definition television (SDTV) signals (multicasting), or ancillary services in addition to video programming.<sup>359</sup> As of October 2005, more than 1,537 stations nationwide are on the air with DTV operations, including all 119 stations affiliated with the top-four network affiliates in the top thirty television markets.<sup>360</sup>

### a. Over-the-Air Households

96. On March 1, 2005, the Media Bureau released a staff report concerning over-the-air broadcast viewers (*OTA Report*).<sup>361</sup> The report presented information submitted in response to a *Public Notice (OTA Public Notice)* that posed several questions about U.S. TV households that receive broadcast

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<sup>352</sup> Includes basic (BST and CPST) networks, as well as premium and PPV networks, distributed by MVPDs.

<sup>353</sup> We note that individual broadcast networks generally attract higher audience shares than individual nonbroadcast networks. For example, during the 2004-2005 television season, six of the seven broadcast networks attained average prime time audience shares ratings greater than the average prime time audience rating of the highest rated nonbroadcast networks. Nielsen Media Research.

<sup>354</sup> Nielsen Media Research, *Broadcast Calendar (TV Season) Share of Audience Report, Prime Time and Total Day*, Sept., 2005.

<sup>355</sup> Compare Federal Communications Commission, *Broadcast Station Totals as of June 30, 2004* (FCC News Release), Aug. 20, 2004, with Federal Communications Commission, *Broadcast Station Totals as of June 30, 2005* (FCC News Release), Aug. 29, 2005.

<sup>356</sup> Television Bureau of Advertising, *2004 TV Ad Revenue Figures*, at [http://www.tvb.org/rcentral/adrevenue/track // revenue/2004/ad\\_figures](http://www.tvb.org/rcentral/adrevenue/track/revenue/2004/ad_figures) (visited Sept. 21, 2005).

<sup>357</sup> *Id.*

<sup>358</sup> Robert J. Coen, *U.S. Advertising Volume 2000-2005*, Universal McCann, Sept. 22, 2005.

<sup>359</sup> *Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television*, 17 FCC Rcd 15978, 15995-96 ¶¶ 39-40 (2002).

<sup>360</sup> *Summary of DTV Applications Filed and DTV Build Out Status*, at <http://www.fcc.gov/mb/video/files/dtvonairsum.html> (visited Oct. 2005).

<sup>361</sup> *Media Bureau Staff Report Concerning Over-the-Air Broadcast Television Viewers*, MB Docket 04-210, Feb. 28, 2005. (*OTA Report*).

television only in analog format and over the air via an indoor or outdoor antenna.<sup>362</sup> The *OTA Public Notice* asked how many analog over-the-air households there are, where they are located, what their demographic characteristics are, and why they do not subscribe to an MVPD service. The *OTA Public Notice* also requested comment on how best to provide for analog over-the-air households when analog broadcast television service is terminated at the end of the DTV transition. The *OTA Report* notes that the Commission's estimate of over-the-air only households is derived from figures reported in the *2004 Report*. At the time the *OTA Report* was released, the Commission estimated that about 14.86 percent of television households rely on over-the-air television broadcasts to receive video programming.<sup>363</sup> In this report, the *2005 Report*, we find that there are 15.36 million U.S. TV households that do not subscribe to an MVPD service and thus rely on over-the-air broadcast television for their video programming, representing 14 percent of all U.S. TV households.<sup>364</sup> In addition, we note that many households that subscribe to an MVPD also rely on over-the-air signals to receive broadcast programming on some of their television sets.<sup>365</sup> The *OTA Report* also notes that commenters in that proceeding estimate that the percentage of TV households that receive video programming over-the-air only ranges from 13 percent to 19 percent.<sup>366</sup>

97. Nielsen estimates that, as of July 2005, 15.43 million households, or 14 percent of the 109.6 total U.S. television households, rely exclusively on over-the-air television for video programming.<sup>367</sup> Commenters in this proceeding provide estimates of the number of television households relying solely on over-the-air television reception within the range of 12 percent to 18 percent of U.S. television households. NAB, for example, estimates that there are as many as 20.5 million households containing 45 million television sets that do not subscribe to an MVPD and that there are an additional 18.3 million MVPD households with 28 million television sets that are not connected to MVPD service.<sup>368</sup> CEA estimates that approximately 12 percent of all television households receive their

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<sup>362</sup> *Media Bureau Seeks Comment on Over-the-Air Broadcast Television Viewers*, Public Notice, 19 FCC Rcd 9468 (2004).

<sup>363</sup> See *Media Bureau Staff Report Concerning Over-the-Air Broadcast Television Viewers*, MB Docket 04-210, Feb. 28, 2005 (*OTA Report*). See also *2004 Report*, 20 FCC Rcd at 2869-70. Our estimates of households that do not subscribe to an MVPD service may include a number of households that are using MVPD service without paying for it, and thus overstate the number of OTA households. On the other hand, estimates of MVPD households may be overstated considering that as many as three percent of television households may subscribe to both cable and DBS services. The net effect of these inaccuracies is unknown. In addition, these figures are based on a nationwide average. It appears that the percent of OTA households varies substantially from one market to another. For example, in ten DMAs, over 80 percent of TV households subscribe to cable service. When DBS subscribers to local-into-local service are added, the total MVPD subscribership in most of these markets exceeds 85 percent. In contrast, in 13 DMAs, fewer than 50 percent subscribe to cable. *Id.* at 2872.

<sup>364</sup> See Appendix B, Table B-1. According to Table B-1, there are 109,590,170 TV Households, of which 94,226,357 subscribe to an MVPD. This means that at least 15.36 million TV households do not subscribe to an MVPD. *Id.* In the past it has been estimated that approximately 3 percent of all cable households may subscribe to more than one MVPD (3 percent of current cable subscribership is 1.9 million households), but with DBS carriage of local-into-local service, this figure is declining. See *id.* at note (i).

<sup>365</sup> *OTA Report*.

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

<sup>367</sup> Nielsen Media Research, *U.S. Television Household Estimates*, Sept. 2004, at 1. Nielsen's estimate of 15.43 million households is similar to our own estimate of 15.36 million households.

<sup>368</sup> NAB Comments at 2; NAB Reply Comments at 8-10. NAB argues that those households relying solely on over-the-air broadcasting are predominantly lower income and include relatively greater numbers of racial and ethnic minorities. NAB Comments at 3.

broadcast television signals over-the-air.<sup>369</sup> NCTA notes that approximately 15 percent of television households do not subscribe to an MVPD, and that a significant percentage of MVPD households include televisions that are not connected to an MVPD service.<sup>370</sup>

**b. Programming**

98. ***Programming Available Over the Air.*** NAB indicates that currently the major broadcast networks (ABC, CBS, Fox, and NBC) now provide their most popular programming in high-definition.<sup>371</sup> Special events, such as the Academy Awards and numerous major sporting events, also were broadcast in HD format over the past year.<sup>372</sup> In addition, 1,537 local stations are broadcasting digital signals, including digital multicast, with some broadcasting their local news in HD format.<sup>373</sup> The Association of Public Television Stations (APTS) states that, in 2005, PBS member stations will be distributing 125 hours of high-definition content and also will be distributing 290 hours of widescreen-formatted digital programming.<sup>374</sup> In addition, American Public Television (APT) will be supplying 91 hours of HD programming each month to public television stations. Public television stations also are broadcasting multiple program streams to bring new services to the public that could not be made available using a single analog stream.<sup>375</sup>

99. ***Programming Available Through MVPDs.*** NCTA reports that, as of January 2005, local cable systems were carrying the digital signals of 504 unique broadcast stations, and cable operators offer as many as 23 nonbroadcast networks that transmit much of their programming in HD format.<sup>376</sup> In April 2005, public television and cable operators serving over 80 percent of cable subscribers in markets comprising over 80 percent of U.S. TV households entered into an agreement providing for the carriage of public television stations' digital programming (including multicast channels) by cable operators.<sup>377</sup>

100. ***Multicasting.*** Multicasting is the process by which multiple streams of digital television programming are transmitted at the same time over a single broadcast channel. In the *Notice*, we requested information on the content provided using broadcasters' DTV spectrum, including the use of multicasting, and whether cable operators and other MVPDs are carrying multicast DTV programming.<sup>378</sup> As Comcast notes, the broadcast industry, like the cable industry, recently has undergone a technological evolution, and broadcasters that transmit in digital now are able to distribute multiple channels to any

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<sup>369</sup> CEA Comments at 7. CEA argues that the decision not to subscribe to an MVPD generally is not driven by economic reasons and that those who do not subscribe watch, on average, 30 percent less television per week than MVPD subscribers. CEA Comments at 7-8. CEA also notes that three-quarters of antenna-only households are willing to take some sort of voluntary action to ensure that they continue to receive television programming when analog broadcasts end. CEA Comments at 9.

<sup>370</sup> NCTA Comments at 15.

<sup>371</sup> NAB Comments at 7.

<sup>372</sup> *Id.*

<sup>373</sup> *Summary of DTV Applications Filed and DTV Build Out Status*, at <http://www.fcc.gov/mb/video/files/dtvonairsum.html> (visited Oct. 2005). See also NAB Comments at 7.

<sup>374</sup> APTS Comments at 4-5.

<sup>375</sup> *Id.*

<sup>376</sup> NCTA Comments at 26, 27. NCTA estimates that 92 million television households were passed by at least one cable system offering HDTV service in January 2005. *Id.*

<sup>377</sup> NCTA Comments at 28. See para. 53 *supra*.

<sup>378</sup> *Notice*, 20 FCC Rcd 14142 ¶ 69-71.

consumers who have also converted their home equipment to digital.<sup>379</sup> Comcast notes that broadcasters are now able to transmit multiple standard-definition over-the-air signals. This multicasting capability will allow stations to offer consumers more services and content, thereby increasing broadcasters' competitive impact in the multichannel video marketplace.<sup>380</sup>

101. NAB indicates that, in addition to providing HD format programming, hundreds of local stations, even local stations in medium and small markets, are using their digital channels for multicast services.<sup>381</sup> According to a study by Decisionmark Corp., the 11 largest broadcast networks and their affiliates broadcast more than 937,000 hours of multicast programming during the month of October 2005.<sup>382</sup> This multicast programming includes news, weather, sports, religious material, music videos and coverage of local musicians and concerts, as well as foreign language programming (especially, but not limited to, Spanish programming).<sup>383</sup> According to a July 2005 survey of full-power commercial television stations conducted by NAB, 50 percent of the responding stations are currently multicasting, and of the remaining 50 percent, 79 percent are considering multicasting in the future. Of those stations currently planning to multicast, 79 percent expect such programming to be locally produced or locally focused.<sup>384</sup> NAB also found that 79 percent of respondents said if multicast is not carried by cable operators, they will not provide these services.<sup>385</sup>

102. APTS states that more than 95 percent of all public television stations have committed to broadcast at least one multicast channel dedicated to formal educational programming.<sup>386</sup> In addition, public television stations plan to multicast public affairs and local issue coverage such as coverage of state legislatures, local town meetings and debates, and instructional television, as well as foreign language programming, children's programming and programming dedicated to the senior community.<sup>387</sup> PBS stations are also using digital transmission capability to offer educational data services discussed in the next section.

103. NCTA states that, as of May 2005, cable operators were carrying commercial broadcasters' multicast programming in over 50 markets (including at least seven of the top ten markets).<sup>388</sup> Comcast, for example, offers PBS multicast channel PBS Kids Sprout and has entered into

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<sup>379</sup> Comcast Comments at 31.

<sup>380</sup> Comcast Comments at 31-32.

<sup>381</sup> NAB Comments at 1, 7, 8.

<sup>382</sup> The 937,000 hours represented multicast programming broadcast by the 13 largest commercial and non-commercial national broadcast networks (ABC, CBS, Fox, NBC, Paxson, PBS, TBS, TBN, Telemundo, Univision, UPN, WB, and Paxson), their affiliates, or independent television stations. This includes digital simulcast and unique programming multicast stations. Decisionmark Corp., *Multicast Analysis*, Nov. 2005. PBS and its affiliates accounted for 47.5 percent of this programming. ABC, NBC, and Paxson each accounted for more than 10 percent of the total multicast programming available (10.25 percent, 10.35 percent and 10.45 percent, respectively). *Id.*

<sup>383</sup> NAB Comments at 7-8. *See also* APTS Comments at 4-7. Approximately 10 percent of all multicast programming during October 2005 was news programming, about 8.8 percent was children's or educational programming, 7.3 percent was documentary or nature programming, 7.2 percent was comedy or drama programming, 6.4 percent was weather, and 2.8 percent was sports. Decisionmark Corp., *Multicast Analysis*, Nov. 2005.

<sup>384</sup> NAB Comments at Attachment.

<sup>385</sup> *Id.*

<sup>386</sup> APTS Comments at 5-6

<sup>387</sup> *Id.* at 5-8.

<sup>388</sup> NCTA Comments at 28.

agreements with over 200 commercial broadcasters in 72 markets to carry their local multicast digital signals.<sup>389</sup> Several cable operators agreed to carry CBS stations' extra coverage of the NCAA men's college basketball tournament on multicast channels.<sup>390</sup> In addition, Verizon's video service FiOS and the Tribune Company, owner of 26 broadcast television stations nationwide, have tentatively entered into an agreement in which FiOS will carry any multicast programming Tribune decides to offer.<sup>391</sup>

104. APTS requests that the Commission require DBS providers to carry all free, over-the-air digital signals where local television stations are being carried pursuant to the Satellite Home Viewer Improvement Act of 1999 (SHVIA),<sup>392</sup> and argues that such carriage should include both high-definition programming and all multicast digital programming.<sup>393</sup> APTS argues that digital carriage on satellite will speed the digital transition, given that satellite subscribers account for over 20 percent of all TV households on average.<sup>394</sup> APTS also argues that the Commission should impose multicast carriage requirements on new LEC video providers, arguing that new entrants' broadband networks have more than enough capacity to accommodate such programming.<sup>395</sup>

105. ***Datacasting and Subscriptions Services.*** DTV also allows broadcasters to use part of their digital bandwidth for subscription multichannel video programming services and datacasting.<sup>396</sup>

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<sup>389</sup> Comcast Comments at 44-45. See also NCTA Comments at 28.

<sup>390</sup> NCTA Comments at 28.

<sup>391</sup> John Eggerton, *Tribune FiOS Deal Includes Multicasting*, BROADCASTING & CABLE, Oct. 28, 2005, at <http://www.broadcastingcable.com/article/CA6279281.html?display=Breaking+News> (visited Nov. 30, 2005).

<sup>392</sup> Pub. L. No. 106-113, 113 Stat. 1501, 1501A-526 to 1501A-545 (1999).

<sup>393</sup> APTS Comments at 14. In its *Second Report and Order* on digital television broadcast signal carriage, the Commission affirmed its decision in the *First Report and Order* to interpret the statutory term "primary video" to mean a single programming stream. If a digital broadcaster elects to divide its digital spectrum into several separate programming streams, only one of these streams is entitled to mandatory carriage. *Carriage of Digital Television Broadcast Signals: Amendment to Part 76 of the Commission's Rules*, Second Report and Order and First Order on Reconsideration, 20 FCC Rcd 4516, 4518 ¶ 3 (2005); see also *Carriage of Digital Television Broadcast Signals: Amendment to Part 76 of the Commission's Rules*, First Report and Order and FNPRM, 16 FCC Rcd 2598 (2001). On April 21, 2005, the Commission received five petitions for reconsideration, filed by the following: ABC Television Affiliates Association, CBS Television Affiliates Association, NBC Television Affiliates, ABC Owned Television Stations, and NBC and Telemundo Stations; DIC Entertainment Corporation; Minority Media and Telecommunications Council; National Association of Broadcasters and the Association for Maximum Service Television, Inc.; and Paxson Communications Corp. In its reply comments in this proceeding, Paxson reiterates that, in the absence of full digital multicast must carry, the Commission should not encourage broadcasters to offer ancillary and supplementary services in lieu of free over-the-air programming on their DTV stations. Paxson Reply Comments at 5-7.

<sup>394</sup> APTS Comments at 17.

<sup>395</sup> *Id.* at 36. Verizon replies that the Commission should not impose new regulation that discriminates against, and adds new burdens on, new entrants in the video market. Verizon Reply Comments at 13-14.

<sup>396</sup> Commercial and noncommercial educational DTV broadcast station licensees report annually, using Form 317, whether they have provided ancillary or supplementary services at any time during the 12 month period preceding September 30. Licensees that earn revenues from such services are required to pay fees to the Commission. *FCC Annual DTV Ancillary/ Supplementary Services Report*, 18 FCC Rcd 23972 (2003). See also 47 U.S.C. § 336 (a), (e). To date, the provision of ancillary and supplementary services has been modest. In the most recent year, the ancillary and supplementary services provided most often were pay television service and broadband Internet access. Reports on activity during 2005 were due on December 1, 2005. See also *Media Bureau Reminds Digital Television to File Report on Ancillary or Supplementary DTV Services on or before Dec. 1, 2005*, 20 FCC Rcd 19078 (2005).

(continued....)

These services can be provided simultaneously with HD or SD DTV programs, and can provide delivery of virtually any type of data, audio or video, including text, graphics, software, web pages, video-on-demand,<sup>397</sup> and niche programming.<sup>398</sup>

106. Last year, we reported on the activities of U.S. Digital Television, Inc. (USDTV), which combined broadcast spectrum licensed to a number of broadcasters to create subscription video distribution via DTV streams.<sup>399</sup> USDTV continues to offer a multichannel video programming service including broadcast and nonbroadcast programming using local over-the-air DTV spectrum.<sup>400</sup> USDTV provides service in Salt Lake City, Las Vegas, Albuquerque, and Dallas, and has announced plans to begin service in the Norfolk/Hampton Roads area in Spring 2006.<sup>401</sup> Its service costs \$20 per month for 30 channels of programming, including 12 nonbroadcast networks, and it serves between 4,500 and 5,000 subscribers.<sup>402</sup> In September 2005, News Corp's station group, Hearst-Argyle Television Inc., McGraw-Hill Broadcasting, LIN TV Corp., Morgan-Murphy Stations and Telcom DTV LLC jointly invested \$25.8 million in USDTV in return for an interest in the company. This additional funding is expected to allow USDTV to expand its service to other markets and to add technological upgrades to provide on-demand content and DVR services.<sup>403</sup>

107. APTS indicates that some public television stations are employing datacasting for supplemental programming and public safety purposes.<sup>404</sup> For example, New Jersey Network's 21<sup>st</sup> Century Digital Classroom program and WHYY, Philadelphia, Pennsylvania, are using datacasting to deliver media-rich video content over the air to students, teachers, and adults in classrooms and libraries.

(Continued from previous page)

<u>YEAR</u>	<u>NUMBER OF DTV LICENSEES THAT REPORTED FEEABLE SERVICES</u>	<u>GROSS REVENUES FROM FEEABLE SERVICES</u>	<u>FEEES COLLECTED FROM FEEABLE SERVICES</u>
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

<sup>397</sup> Video-on-Demand via over-the-air broadcast signals may be provided several ways. It may use a model similar to that contemplated by DBS where VOD programming is broadcast and then stored in a local DVR. With the addition of an internet connection, it is also possible to provide true VOD by using broadcast for the downstream transmission of video and an internet connection for the comparatively low bandwidth control signals.

<sup>398</sup> See 2004 Report, 20 FCC Rcd at 2807 ¶ 84.

<sup>399</sup> *Id.*

<sup>400</sup> U.S. Digital Television, Inc., at [http://www.usdtv.com/company\\_info.php](http://www.usdtv.com/company_info.php) (visited Oct. 19, 2005).

<sup>401</sup> U.S. Digital Television, Inc., at <http://www.usdtv.com/GET-USDTV.html> (visited Nov. 28, 2005). See also U.S. Digital Television, Inc., *USDTV Selects the Norfolk Virginia Market as First East Coast Launch of its All-Digital Low-Cost Cable Alternative* (press release), Jan. 5, 2006.

<sup>402</sup> Linda Moss, *USDTV Gets Cash Infusion*, MULTICHANNEL NEWS, Sept. 26, 2005, at <http://multichannel.com/article/CA6260559.html>?

<sup>403</sup> U.S. Digital Television, Inc., *USDTV Signs Agreement With Major Broadcasters to Expand "Over-the-Air" Digital Subscription TV* (press release), Sept. 26, 2005.

<sup>404</sup> APTS Comments at 10.

Such content includes video, text, audio, graphs and maps.<sup>405</sup> The New Jersey Network also datacasts workforce training programs to several sites around the state. Some public television stations are using datacasting to allow public safety and emergency management agencies to transmit securely critical, time-sensitive information to personal computers equipped with DTV tuner cards and a small antenna.<sup>406</sup> Public television stations using this service include Kentucky Educational Television, WNET in New York, New Jersey Network, Nashville Public Television, and New Hampshire Public Television.<sup>407</sup> APTS believes public television stations will play an important role in supporting a national and local digital broadcast emergency alert system through the digital interconnection infrastructure public broadcasting is developing.<sup>408</sup>

108. In addition, digital spectrum can be used for services provided on various types of electronic devices. As reported last year, iBlast and dotcast use the digital broadcast spectrum of local TV stations to distribute digital media content directly to home computers, set-top boxes, DVRs, vehicle entertainment systems, game consoles, PDAs and MP3 players.<sup>409</sup>

### c. DTV Equipment

109. The sale of DTV consumer electronics continues to accelerate.<sup>410</sup> Kagan Media Research estimates that between 1998, when digital television sets were first offered for retail sale, and year-end 2004, approximately 15.8 million HD-ready and enhanced-definition (ED)-ready monitors had been shipped to retailers, with 13.65 million of those being HD-ready monitors.<sup>411</sup> Of those shipped, Kagan estimates that a total of 14.7 million have been purchased by consumers, of which 12.4 million were HD-ready.<sup>412</sup> For 2005, Kagan also estimates that 9.9 million HD-ready and ED-ready monitors will be shipped to retailers, with 8.2 million of those HD-ready. Of those shipped, Kagan estimates that more than 8.9 million monitors will be purchased by consumers, with 7.8 million of those being HD-ready.<sup>413</sup> CEA research indicates that 85 percent of DTV displays sold in 2004 were capable of displaying a picture in HDTV resolution, while the remaining 15 percent were capable of EDTV resolution.<sup>414</sup> HD-ready and ED-ready monitors do not necessarily contain DTV tuners. The remaining households must purchase a

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<sup>405</sup> *Id.* at 9-14.

<sup>406</sup> *Id.* at 10-14.

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

<sup>408</sup> *Id.* at 13-14. The Commission recently examined issues pertaining to EAS in digital services in the *Review of the Emergency Alert System*, 20 FCC Rcd 18625 (2005).

<sup>409</sup> See iBlast Inc., *What is iBlast?*, at <http://www.iblast.com> (visited Oct. 18, 2005); see also Dotcast, Inc., at <http://www.dotcast.com/> (visited Oct. 18, 2005). See also *2004 Report*, 20 FCC Rcd at 2808 ¶ 86.

<sup>410</sup> CEA notes that digital television has been adopted twice as quickly as color television. While it took color television 10 years to achieve 5 percent penetration from introduction, digital television products are already in 16 million American homes. CEA Comments at 2.

<sup>411</sup> Kagan Research, LLC, *Digital TV Set Projection Model*, The State of High Definition Television 2005, at 269; Kagan Research, LLC, *Digital TV Set Projection Model*, Media Trends 2005, at 112. “Enhanced-definition” (ED) refers to digital television signals with a resolution somewhere between standard-definition (current analog signals) and high-definition (HD). Enhanced-definition is approximately DVD-quality. “HD-ready” and “ED-ready” mean that a television is capable of displaying an HD signal or an ED signal, but does not include a digital tuner for over-the-air reception of digital broadcast signals.

<sup>412</sup> Kagan Research, LLC, *Digital TV Set Projection Model*, The State of High Definition Television 2005, at 269; Kagan Research, LLC, *Digital TV Set Projection Model*, Media Trends 2005, at 112.

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

<sup>414</sup> CEA Comments at 2-3, 5.

DTV tuner to receive digital television over the air or must subscribe to an MVPD that retransmits digital signals. CEA forecasts that 15.3 million integrated DTVs will be sold in 2005, 24.3 million in 2006, 32.1 million in 2007 and 36.3 million in 2008.<sup>415</sup>

110. CEA estimates that, since 1998, more than 17 million DTV sets in total have been sold to consumers, and Americans have spent over \$30 billion to purchase DTV sets.<sup>416</sup> CEA reports that during the first six months of 2005, DTV products sold at a faster rate than during any previous comparable period of time, with 3.8 million DTV products sold, accounting for \$4.6 billion in sales, a 40 percent increase in unit sales from the same time period in 2004.<sup>417</sup> CEA estimates that, by 2009, Americans will purchase more than 152.3 million DTV tuners and over-the-air tuners will be found in 86 percent of American homes.<sup>418</sup>

111. CEA comments that DTV set prices are 75 percent lower than they were five years ago and are still declining by approximately 15 to 20 percent each year.<sup>419</sup> In 2005, the average retail price of a DTV set is expected to drop to \$1,189 from \$1,489 in 2004, down from the average price of \$3,147 in 1998.<sup>420</sup> CEA states that currently several DTV models are available for under \$700, and it expects that soon there will be DTV sets that sell for as low as \$400.<sup>421</sup> CEA adds that over the next two years manufacturers plan to introduce one or more \$60 digital-to-analog converters that will allow digital TV broadcasts to be converted to analog for viewing on analog TV sets.<sup>422</sup>

112. On June 15, 2005, NAB and the Association for Maximum Service Television, Inc., announced a project in which they would pursue the development of a high-quality, low-cost digital-to-analog converter box for terrestrial DTV reception.<sup>423</sup> CEA, however, states that the digital-to-analog converter box for which NAB and MSTV requested proposals includes features that consumers do not want or need.<sup>424</sup> CEA maintains that these features will add significant costs to the low-cost box originally envisioned, undermining Congress's ultimate goal that an affordable option be made available to consumers.<sup>425</sup> In October 2005, NAB chose LG Electronics, Inc., and Thomson, SA, to each develop a prototype high quality, low cost terrestrial digital converter box to receive digital signals on conventional analog televisions.<sup>426</sup>

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<sup>415</sup> *Id.* at 5.

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

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

<sup>418</sup> *Id.* at 6.

<sup>419</sup> *Id.* at 5.

<sup>420</sup> *Id.* at 3.

<sup>421</sup> *Id.* at 5.

<sup>422</sup> *Id.*

<sup>423</sup> NAB Comments at 5. Twelve consumer electronics firms submitted proposals in the process. *Id.* at 5-6.

<sup>424</sup> CEA Reply Comments at 2. *See also* Association for Maximum Service Television, Inc., *Thomson and LG Electronics Partner with Broadcasters to Develop Terrestrial Digital-to-Analog Converter Boxes*, Oct. 5, 2005.

<sup>425</sup> *Id.* at 2-3.

<sup>426</sup> National Association of Broadcasters, *Thomson and LG Electronics Partner with Broadcasters to Develop Terrestrial Digital-to-Analog Converter Boxes* (press release), Oct. 5, 2005. Neither NAB nor its partners have indicated when working prototypes would be available.



#### d. DTV Transition

113. In our *2004 Report*, we described several rulemaking decisions that the Commission adopted during 2004 intended to accelerate or promote the transition to DTV.<sup>427</sup> This year, we report on the Commission's continuing efforts to foster the DTV transition.<sup>428</sup>

114. ***DTV Signal Carriage Proceeding.*** In February 2005, the Commission considered petitions for reconsideration of the *Digital Must Carry First Report and Order* and the various comments submitted in response to the *Digital Must Carry FNPRM*.<sup>429</sup> The Commission affirmed its tentative conclusion not to require cable operators to carry both a broadcaster's analog and digital signals (*i.e.*, dual carriage) during the transition. In addition, as noted above, the Commission also denied petitions for reconsideration of its statutory interpretation of "primary video." In the interest of providing certainty on these significant issues, the Commission deferred the resolution of certain other issues to a future order. These include petitions requesting reconsideration or clarification with respect to the Commission's decisions on Program System and Information Protocol (PSIP) carriage and channel numbering, carriage of program-related material, material degradation, and down-conversion of digital-only stations.<sup>430</sup>

115. ***Low-Power Television and Television Translators.*** Last year, we reported that the Commission established rules in September 2004 to allow for the digital conversion of low-power television and television translator stations (*LPTV Report and Order*).<sup>431</sup> In the *LPTV Report and Order* the Commission found that LPTV and translator stations could either file for an on-channel digital conversion of their existing stations or file for a digital "companion channel" to operate in analog and digital simultaneously.<sup>432</sup> On October 4, 2005, a *Public Notice* was issued announcing that the Commission has commenced accepting applications for digital on-channel conversions.<sup>433</sup> The Commission has not yet commenced accepting applications for digital companion channels for LPTV and translator stations.

116. ***Channel Election and Designation.*** In the *Second Periodic Review*, the Commission adopted a multi-step channel election process through which commercial and noncommercial broadcast licensees and permittees (licensees) will select their ultimate "in-core" (*i.e.*, channels 2-51) DTV

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<sup>427</sup> *2004 Report*, 20 FCC Rcd at 2809-2811 ¶¶ 89-96.

<sup>428</sup> See Deficit Reduction Act of 2005, PL 109-171 (2006). Among other things, Title III, entitled the Digital Television Transition and Public Safety Act of 2005, establishes a hard deadline of February 17, 2009 for the end of analog transmissions and the transition to digital television. It allocates approximately \$990 million of the estimated \$10 billion in proceeds from the auction of the broadcast spectrum for a digital-to-analog converter box program.

<sup>429</sup> See *Carriage of Digital Television Broadcast Signals: Amendment to Part 76 of the Commission's Rules, Second Report and Order and First Order on Reconsideration*, 20 FCC Rcd 4516 (2005) (*Digital Must Carry Second Report and Order* and *Digital Must Carry First Reconsideration*) (released in a single proceeding). See also 47 C.F.R. § 1.429 (setting forth basis for granting petitions for reconsideration).

<sup>430</sup> See *Second Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television*, 19 FCC Rcd 18279 (2003) (*Second DTV Periodic Review*).

<sup>431</sup> *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*, 19 FCC Rcd 19331 (2004) (*LPTV Report and Order*). See also *2004 Report*, 20 FCC Rcd at 2811 ¶ 95.

<sup>432</sup> See *LPTV Report and Order*, 20 FCC Rcd at 19374-19381 ¶¶ 127-148.

<sup>433</sup> *FCC Commences Accepting Applications For On-Channel Digital Conversion of Low Power TV and TV Translator Stations and Announces Availability of Revised Application Forms 346 and 301-CA* (Public Notice), Oct. 4, 2005 (announcing, among other things, that all of the rules and forms outlined in the *LPTV Report and Order* received the approval of the Office of Management and Budget (OMB)).

channel.<sup>434</sup> In the first round of the election process, licensees currently holding in-core channels filed election forms by February 10, 2005. In June 2005, the Media Bureau approved a number of negotiated channel arrangements among licensees<sup>435</sup> and announced the tentative DTV channel designations for 1,554 licensees participating in the first round.<sup>436</sup> In addition, the Media Bureau notified approximately 160 licensees that had elected to keep their allotted NTSC (*i.e.*, analog) channel as their post-transition DTV channel that their proposed operations would result in impermissible interference to one or more stations, and gave these licensees 60 days to re-file indicating how they would resolve the interference conflict. After analyzing these submissions, the Media Bureau announced a total of 1,713 tentative DTV channel designations based upon the first round of channel elections.<sup>437</sup> The remaining licensees, which could not or did not elect in the first-round, filed second-round channel election forms by October 31, 2005.<sup>438</sup>

117. In early 2006, the Media Bureau expects to announce tentative DTV channel designations and interference conflicts for licensees participating in the second-round. The conflicted licensees will have 60 days from notification to re-file, indicating how they will resolve the conflict. The Media Bureau expects a third-round of elections, to cover any stations that were not tentatively assigned a channel in the prior two rounds.<sup>439</sup>

#### e. Educational Efforts

118. In the *2004 Report*, we provided information on efforts to educate consumers about the DTV transition. We reported on the Commission's web portal, <http://www.dtv.gov>, that was intended to serve as a one-stop source of information regarding the transition, and efforts by CEA, the Consumer Electronics Retail Coalition (CERC) and its member companies, NAB, NCTA, and individual MVPD operators.<sup>440</sup>

119. These educational efforts continue. For example, several organizations continue to operate websites, host conventions, and produce videos and publications designed to provide consumers with information about the transition. A consumer and retailer website, <http://www.checkhd.com>, operated by Decisionmark, continues to provide information about the availability of local digital and HD channels, information on how to purchase a digital set, and answers to basic DTV questions.<sup>441</sup> CEA operates several websites designed for both retail sales associates and consumers,<sup>442</sup> and continues to host

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<sup>434</sup> At the end of the DTV transition, 108 MHz of spectrum in the 700 MHz band currently used by broadcast channels 52-69 will be made available for wireless services – 24 MHz for urgent public safety needs and the remainder for advanced commercial wireless services.

<sup>435</sup> *Negotiated Channel Election Arrangements*, 20 FCC Rcd 10141 (MB 2005).

<sup>436</sup> *DTV Tentative Channels Designations for 1,554 Stations Participating in the First Round of DTV Channel Elections*, 20 FCC Rcd 10983 (MB 2005).

<sup>437</sup> *Tentative Digital Channel Designations for Stations Participating in the First Round of DTV Channel Elections and Second Round Election Filing Deadline*, 20 FCC Rcd 15785 (MB 2005).

<sup>438</sup> *See Deadline for Filing FCC Form 384, Digital Channel Election Form, Second Round Election, Extended Until October 31, 2005*, 20 FCC Rcd 16581 (MB 2005).

<sup>439</sup> *FCC Advances DTV Channel Election Process* (FCC News Release), June 8, 2005.

<sup>440</sup> *2004 Report*, 20 FCC Rcd 2811-13 ¶¶ 97-103.

<sup>441</sup> CheckHD includes information about local channels and programming, antenna selection by zip code, and DTV equipment. CEA provides educational materials and information for the site, including the consumer brochure and the HDTV Guide. NAB Comments at 6; CEA Comments at 16.

<sup>442</sup> Antennaweb.com determines the free over-the-air DTV signals that can be received in a given geographic area or television market and what type of antenna is needed to receive those signals over the air. CEknowhow.com provides training products for retail sales associates. *The Connections Guide*, [www.ce.org/connectionsguide/](http://www.ce.org/connectionsguide/), is (continued....)

conventions aimed at providing HDTV information updates to local retailers, broadcasters, manufacturer representatives, and cable and satellite providers.<sup>443</sup> CEA also produces “HDTV Update E-News,” which is a video that is updated several times per year and sent to retailers, manufacturers, and the press. In addition, NAB has developed an educational video series that it makes available to its television station members and that is designed to educate consumers on basic DTV concepts.<sup>444</sup>

120. In addition, CERC has issued a retail consumer guide that focuses on the choices that consumers will have when analog broadcasting ends.<sup>445</sup> CEA continues to distribute a consumer and retailer tip sheet, “*Buying a Digital Television*,” that it produced in partnership with the Commission and CERC.

## **E. Other Wireline Video Services**

### **1. Local Exchange Carriers**

121. The 1996 Act amended Section 651 of the Communications Act to permit common carriers to provide video services in their telephone service areas. The statute permitted common carriers to: (1) provide video programming to subscribers through radio communications under Title III of the Communications Act;<sup>446</sup> (2) provide transmission of video programming on a common carrier basis under Title II of the Communications Act;<sup>447</sup> (3) provide video programming as a cable system under Title VI of the Communications Act;<sup>448</sup> or (4) provide video programming by means of an open video system (OVS).<sup>449</sup>

122. As we reported last year, there are new signs of LEC interest in providing video services. We previously reported on joint marketing agreements between BellSouth, Qwest, SBC, and Verizon and DBS service providers,<sup>450</sup> and noted that several LECs have reported plans to provide video service via asymmetric digital subscriber line (ADSL), very high-speed digital subscriber line (VDSL), or fiber to the home (FTTH) using IP technology.<sup>451</sup> The Fiber-to-the-Home Council reports that there are 652 communities in 46 states served at least in part by FTTH networks, with 322,700 “connected homes.”<sup>452</sup>

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designed to help consumers better understand how to connect their DTV products. CEA Comments at 14-15. *See also* CEA, at <http://www.ce.org/hdtv>.

<sup>443</sup> CEA has hosted 25 “HDTV Updates” conventions nationwide. CEA Comments at 15.

<sup>444</sup> “DTV Lessons” describes DTV concepts in language accessible to the average viewer. NAB Comments at 6.

<sup>445</sup> CEA Comments at 16-17.

<sup>446</sup> 47 U.S.C. § 571(a)(1).

<sup>447</sup> 47 U.S.C. § 571(a)(2).

<sup>448</sup> 47 U.S.C. § 571(a)(3).

<sup>449</sup> 47 U.S.C. § 571(a)(3)-(4). *See also* para. 88 *supra*.

<sup>450</sup> *2004 Report*, 20 FCC Rcd at 2823 ¶ 125. BellSouth, for example, reports that 400,000 BellSouth telephone customers added DIRECTV service. BellSouth Comments at 2. *See also* Comcast Comments at 15-16.

<sup>451</sup> *See Availability of Advanced Telecommunications Capability in the United States, Fourth Report to Congress*, 19 FCC Rcd 20540, 20555-57. Some commenters use the term fiber to the premises (FTTP) instead of the term fiber to the home; the terms are equivalent. Additionally, some LECs are not deploying full FTTH, but instead are deploying fiber-to-the node (FTTN), which provides fiber facilities to the neighborhood node, and copper facilities from the neighborhood node to the residence. *See also* para. 15, n.11 *supra*.

<sup>452</sup> Fiber-to-the-Home Council, *Number of U.S. Fiber-to-the-Home Communities Tops 650* (press release), Oct. 4, 2005.

Over the past year, the larger LECs have continued and accelerated their plans to roll out video services, with Verizon actually signing cable franchises and beginning service in one community.<sup>453</sup>

123. As has been true for the past several years, BellSouth holds 20 cable franchises with the potential to pass 1.4 million homes and provides cable service to approximately 40,000 customers in 14 of its franchise areas.<sup>454</sup> BellSouth reports that it is studying the use of Internet Protocol Video, or IPTV, for further distribution of multichannel video services, and that a full-service market trial could begin next year.<sup>455</sup> Qwest provides video services via traditional Hybrid Fiber-Coaxial (HFC) architecture in the western suburbs of Omaha, Nebraska, and is deploying an FTTH network in Lone Tree, Colorado.<sup>456</sup> SBC is deploying an IP-enabled broadband network called “Project Lightspeed,” using both Fiber to the Node (FTTN) and FTTH to deliver video and other services to residential customers.<sup>457</sup> SBC reports that the network will be available to 18 million homes nationwide.<sup>458</sup> SBC separately reports that they will begin commercial service to limited subscribers in neighborhoods in San Antonio, Texas in late 2005 or early 2006, scale to full service in San Antonio in mid-2006, and reach the full 18 million households by the first half of 2008.<sup>459</sup>

124. The efforts of Verizon are noteworthy this year because it has begun commercial service in several communities and committed to beginning service in many additional communities in the near future. Verizon is deploying an FTTH network under the brand name “FiOS” that will allow delivery of multichannel video services in addition to telephony and high-speed Internet access service at speeds above those of ADSL technology. Verizon has received franchises from local communities in California, Florida, Virginia, Texas,<sup>460</sup> Maryland, and Massachusetts.<sup>461</sup> Verizon began offering multichannel video service in Keller, Texas, a city 30 miles from Dallas, on September 21, 2005, and now offers service to more than a dozen Texas communities;<sup>462</sup> in Herndon, Virginia, a suburb of Washington, D.C., on

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<sup>453</sup> Comcast Comments at 12-22; NCTA Comments at 16-18. In addition, the NRTC intends to offer its members IP technology and content by early 2006, and cable operator Time Warner is currently testing IP-based computer access of up to 75 cable channels of programming to certain subscribers in its San Diego system. NRTC Comments at 3, 4-6; Comcast Comments at 24.

<sup>454</sup> BellSouth Comments at 1-2.

<sup>455</sup> BellSouth Comments at 2-3. Microsoft is providing software to BellSouth to assist in its delivery of video service. See Jim Hi, *Bell South Begins Microsoft IPTV Trials*, NEWS.COM, Jan. 6, 2005. For general comments on IPTV, see also Network Domain Comments, generally; Alcatel Comments at 7-8.

<sup>456</sup> Qwest Comments at 1 n.3.

<sup>457</sup> SBC Comments at 7-8. Alcatel and Microsoft are working to assist SBC in its deployment of video service. SBC Comments at 2-3, 8-9; Alcatel Comments at 1-3. In February 2005, Alcatel entered into an agreement with Microsoft to develop an integrated IP delivery technology. Alcatel Comments at 1-3; Colin, C. Haley, *Alcatel, Microsoft to Hand Over Your IPTV*, INTERNET NEWS.COM, Feb. 22, 2005; *Alcatel, Microsoft Unveil IPTV Partnership*, COMM. DAILY, Feb. 23, 2005, at 4.

<sup>458</sup> SBC Comments at 8.

<sup>459</sup> SBC Communications, Inc., *SBC CIO Confirms Project Lightspeed Timing, Milestones at Analyst Conference* (press release), Nov. 3, 2005.

<sup>460</sup> Verizon Comments at 5.

<sup>461</sup> Verizon Communications, Inc., *City of Woburn Awards Video Franchise to Verizon, Providing More Choice and Benefits to Consumers* (press release), Sept. 30, 2005. See also Verizon Communications, Inc., *Howard County Council Grants Verizon Authority to Offer FiOS TV to More Than 265,000 Potential Viewers* (press release), Jan. 4, 2006.

<sup>462</sup> Verizon Reply Comments at 1-4. See also Verizon Communications, Inc., *Verizon FiOS TV Is Here! New Video Service Harnesses the Speed and Capacity of Broadband With the Power of Broadcast to Offer Consumer Choice in* (continued....)

November 21, 2005;<sup>463</sup> and in Temple Terrace, Florida, a city northeast of Tampa, on December 6, 2005.<sup>464</sup> Verizon commented that it would pass over three million homes and businesses by the end of 2005, and planned to pass an additional three million homes and businesses by the end of 2006.<sup>465</sup>

125. Qwest and a number of smaller incumbent LECs are offering, or preparing to offer, MVPD service over existing telephone lines using VDSL or ADSL technologies.<sup>466</sup> Qwest offers video, high-speed Internet access, and telephone service over existing copper telephone lines using VDSL in the Phoenix, Arizona, metropolitan area and in Denver and Boulder, Colorado.<sup>467</sup> Cincinnati Bell reports that it is upgrading its existing DSL architecture to provide IPTV services through an FTTN configuration similar to that being deployed by SBC.<sup>468</sup> CenturyTel is operating a trial IPTV service over DSL in La Crosse, Wisconsin, and planned commercial launch of the service in the fourth quarter of 2005.<sup>469</sup> Cincinnati Bell and CenturyTel both intend to store all available channels at the network node and deliver only the content requested by the subscriber, either by channel selection or program selection, rather than delivering all channels to all homes all the time.<sup>470</sup>

## 2. Electric and Gas Utilities

126. Electric and gas utilities possess certain assets that have positioned them well for entry into the MVPD market, including access to public rights-of-way, ownership and operation of various infrastructures amenable to the provision of network services, and well-established relationships with customers.<sup>471</sup> Some utilities continue to move forward with ventures involving multichannel video programming distribution, though such services are still not widespread.

127. As previously reported, some municipal, county, and public utilities provide voice, video, and high-speed Internet access services in competition with incumbent cable systems, generally using fiber optic networks.<sup>472</sup> Some utilities have built systems on their own, but many utilities involved in the video distribution market are engaged in joint ventures with other companies.<sup>473</sup> It is reported that utility systems are being deployed in urban and rural areas and serve both low-income and affluent

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*TV* (press release), Sept. 22, 2005; *More Verizon Customers in North Texas Get Competitive Choice, Greater Value for TV Service as Verizon Launches FiOS TV in 7 More Communities* (press release), Jan. 5, 2006.

<sup>463</sup> Verizon Communications, Inc., *Verizon to Launch FiOS TV in Herndon; First Rollout in East, New Video Service Harnesses Speed and Capacity of Fiber-Based Broadband With Power of Broadcast to Offer Consumer Choice in TV* (press release), Nov. 21, 2005.

<sup>464</sup> Verizon Communications, Inc., *Verizon to Launch FiOS TV in Temple Terrace; First Rollout in Florida, New Service Offers Customers Better Television Technology, True Competitive Choice and Greater Value* (press release), Dec. 6, 2005.

<sup>465</sup> See Letter from Leora Hochstein, Executive Director, Federal Regulatory Affairs, Verizon Communications, to Marlene H. Dortch, Secretary, FCC (Nov. 22, 2005).

<sup>466</sup> NRTC Comments at 4-5; NTCA Comments at 1-3.

<sup>467</sup> Qwest Comments at 1 n.3.

<sup>468</sup> Cincinnati Bell Comments at 1-5.

<sup>469</sup> CenturyTel Comments at 1.

<sup>470</sup> Cincinnati Bell Comments at 1-4; Century Tel Comments at 9. See also APTS Comments at 25-32; Comcast Reply Comments at 4-6.

<sup>471</sup> See *2004 Report*, 20 FCC Rcd at 2826 ¶ 131.

<sup>472</sup> *Id.* at 2826 ¶ 132.

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

communities.<sup>474</sup> To some extent these systems are bringing video, voice, and high-speed Internet access to previously unserved communities.

128. The American Public Power Association (APPA), created by and for the nation's more than 2,000 not-for-profit, community and state-owned electric utilities, surveyed its members at the end of 2004, and found that 616 public power entities offer some kind of broadband services, serving about 14 percent of total households in the United States.<sup>475</sup> Of those, 102 offered video service, 128 offered high-speed Internet access, 52 offered local telephone service, and 42 offered long distance telephone service. Of the 102 offering video services, 10 are offering video on demand (VOD).<sup>476</sup>

## F. Other Wireless Video Services

### 1. Private Cable Systems

129. Private cable operator (PCO) systems, also known as satellite master antenna (SMATV) systems, are video distribution facilities that use closed transmission paths without using any public rights-of-way.<sup>477</sup> PCOs acquire video programming and distribute it via terrestrial wiring in urban and suburban multiple dwelling units (MDUs), such as apartments and condominiums, as well as commercial multiple tenant units (MTUs), including hotels and office buildings. Traditionally, PCOs receive nonbroadcast programming from resellers called aggregators using satellite master antenna systems atop the buildings they serve. PCOs usually combine this nonbroadcast video programming with local broadcast television signals that they receive using master antennas. Thus, the packages PCOs provide their subscribers are comparable to those of cable systems, and they directly compete with franchised cable operators.

130. PCOs continue to serve a small number of MVPD subscribers, either through their own facilities or through partnership arrangements with DBS operators, DIRECTV and EchoStar.<sup>478</sup> PCO subscribership has declined to one million subscribers this year, a decrease of 9.1 percent from last year's 1.1 million.<sup>479</sup> The Independent Multi-Family Communications Council (IMCC), the trade association

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<sup>474</sup> Steven S. Ross, *Fiber Communities*, BROADBAND PROPERTIES, June 2005, at 10-22. An example of a partnership arrangement is Jackson, Tennessee, through its Jackson Energy Authority, which is building a fiber-optic network in partnership with Aeneas Internet & Telephone, to offer high-speed Internet, VoIP and video service. *Id.*; *Jackson Energy Authority and Aeneas Internet & Telephone Deliver VoIP over FTTP*, at [http://lw.Pennnet.com/Article\\_Display.cfm?Section=OnlineArticles&SubSection=Display&PU](http://lw.Pennnet.com/Article_Display.cfm?Section=OnlineArticles&SubSection=Display&PU) (visited Nov. 9, 2005). Douglas Electric Cooperative, Douglas County, Oregon, provides FTTH, which will include Internet, telephone and video services. BROADBAND PROPERTIES, June 2005 at 10-22.; <http://www.ftthciybuc.org>, *U.S. Optical Fiber Communities 2005* (visited Oct. 4, 2005). Examples of municipal utilities which provide video, voice, and Internet access services to their residents include Sylacauga, Alabama, Dalton, Georgia, Kutztown, Pennsylvania, Provo, Utah, and Bristol, Virginia. In Washington State, systems are being built by public utility districts. These include the counties of Bainbridge Island, Chelan County, Clallam County, and Grant County, which are offering Internet, voice, and video services. *Id.*; see also *Community Broadband: Separating Fact From Fiction*, American Public Power Association, Jan. 2004, at 31. In addition, Palo Alto, California, and Taunton, Massachusetts, are conducting trials for the provision of Internet, voice and video. BROADBAND PROPERTIES, June 2005, at 10-22.

<sup>475</sup> George S. Ford, *Does Municipal Supply of Communications Crowd-Out Private Communications Investment? An Empirical Study*, Applied Economic Studies, Feb. 2005, at 1.

<sup>476</sup> American Public Power Association, *2005-06 Annual Directory and Statistical Report*, at 230.

<sup>477</sup> 1996 Act, sec. 301(a)(2), 47 U.S.C. § 522(7). In addition, private cable and SMATV operators: (a) do not pay franchise and Federal Communications Commission subscriber fees; (b) are not obligated to pass every resident in a given area; (c) are not subject to rate regulation; and (d) are not subject to must carry and local government access obligations. *1997 Report*, 13 FCC Rcd at 1085 n.296.

<sup>478</sup> See *2004 Report*, 20 FCC Rcd at 2759 ¶10.

<sup>479</sup> Kagan Research, LLC, *Basic Cable Network Economics, 2004-2014*, Media Trends 2005, at 69.

that represents PCOs and the MDUs they serve, indicates that it currently has more than 150 members that are PCOs.<sup>480</sup> PCOs have received millions of dollars for the purpose of starting new PCOs in the last two years, and there has been some industry consolidation, creating larger and more stable PCOs. PCOs range in size from large operators serving customers throughout the entire United States, to small operators that serve MDUs in as few as three communities.<sup>481</sup>

## 2. Wireless Cable Systems

131. Wireless cable systems use Broadband Radio Service (BRS) and Educational Broadband Service (EBS) in the 2 GHz band to transmit video programming and provide broadband services to residential subscribers.<sup>482</sup> These services were originally designed for the delivery of multichannel video programming, similar to that of traditional cable systems, but over the past several years licensees have focused their operations instead on providing two-way high-speed Internet access services.<sup>483</sup> The number of wireless cable subscribers has declined steadily from a peak of 1.2 million in 1996 to approximately 100,000 as of March 2005, down from an estimated 200,000 subscribers in April 2004.<sup>484</sup> Thus, wireless cable systems provide video competition to incumbent cable operators only on a limited basis.

132. Last year we reported that BellSouth provides video programming in the areas where it holds MMDS/BRS and ITFS/EBS licenses.<sup>485</sup> BellSouth continues to provide video programming to limited areas in the Atlanta, New Orleans, and Louisville television markets and in parts of Florida.<sup>486</sup> W.A.T.C.H. TV, an operator of one of the few digital wireless cable systems in the U.S., claims that a wireless cable system can compete successfully against other cable systems and DBS if it digitizes its facilities, which allows it to offer hundreds of channels of programming to its subscribers.<sup>487</sup> W.A.T.C.H. TV reports that it has transformed its 11-channel analog video-only service to a state-of-the-art network, offering its 12,000 subscribers in the Lima, Ohio, market 200 channels of digital video and audio programming and offering high-speed Internet access to 4,800 subscribers, at a lower price than that charged by competing cable and DBS operators.<sup>488</sup> It further states that it is the only operator in its market to provide competition to incumbent cable operators because DBS does not offer either local-into-local broadcast service or a broadband service for consumers.<sup>489</sup>

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<sup>480</sup> In 2004, we reported that IMCC had 135 members operating throughout the United States. *See 2004 Report*, 20 FCC Rcd at 1666 ¶ 110. For a list of members, *see* Independent Multi-Family Communications Council, at <http://www.imcc-online.org/membership> (visited Sept. 2, 2005).

<sup>481</sup> Telephone conversation with William Burhop, Executive Director, IMCC, Oct. 12, 2005.

<sup>482</sup> This delivery technology was previously known as multipoint distribution service (MDS) and instructional television fixed service (ITFS) until the Commission renamed them in *Amendment of Parts 1, 21, 73, and 74 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands*, 19 FCC Rcd 14165 (2004).

<sup>483</sup> *2004 Report*, 20 FCC Rcd at 2814 ¶¶ 104-106.

<sup>484</sup> NCTA, *Analysis of MVPDs: March 2005*, Cable Developments 2005, at 15; *see also 2004 Report*, 20 FCC Rcd at 2814 ¶ 104.

<sup>485</sup> *2004 Report*, 20 FCC Rcd at 2814 ¶ 106.

<sup>486</sup> Telephone conversation with Bennett Ross, General Counsel-D.C., BellSouth, Oct. 25, 2005.

<sup>487</sup> W.A.T.C.H. TV Comments at 1.

<sup>488</sup> *Id.* at 2-3.

<sup>489</sup> *Id.* at 3. W.A.T.C.H. TV also contends that the Commission's ongoing rewrite of the BRS and EBS rules in WT Docket No. 03-66 has created regulatory uncertainty that threatens its viability, and it seeks action on its pending petition for reconsideration and waiver request. *Id.* at 1-2, 4-7.

### 3. Commercial Mobile Radio Service

133. In our *2004 Report*, we noted that several cellular telephone companies were beginning to offer video services on their mobile telephones.<sup>490</sup> Wireless companies are now spending billions of dollars to build third-generation, or 3G, networks which enable the transmission of live video to cellphones, and cellphone makers are selling video-ready telephones for as little as \$99 when bought with a subscription to a video service.<sup>491</sup> For services currently available, unlimited viewing costs \$15 to \$20 a month.<sup>492</sup> Mobile telephone providers are increasingly offering video that includes content from traditional cable networks, as well as pre-recorded content from a host of other producers. Examples include live and recorded programming from the Discovery Channel, ESPN, Weather Channel, Fox News and Nickelodeon.<sup>493</sup>

134. Several major cellular telephone companies are offering video services. Verizon Wireless rolled out V-Cast, a service that offers video programming to cellular telephone users, in February 2005. V-Cast provides news updates, sports highlights, celebrity news, stock market quotes, and information, weather and games for \$15 a month. Its television-like video, at high bit rates, allows customers to download music videos and other high-quality content.<sup>494</sup> Sprint Corporation began broadcasting live video over its wireless telephones in August 2004. Sprint PCS customers can now view news, video clips and other content in real time over their cellular telephones.<sup>495</sup> MobiTV, a video service available from Sprint PCS, Cingular, and several regional carriers, also sends video programming to cellphones and currently has 300,000 subscribers.<sup>496</sup> Qualcomm recently introduced its TV-to-cellphone technology, called MediaFLO.<sup>497</sup> HBO and Cingular Wireless are reportedly considering a wireless content distribution arrangement.<sup>498</sup>

#### G. Other Entrants

##### 1. Internet Video

135. The amount of web-based video provided over the Internet continues to increase significantly each year. As we have reported in the past, many traditional broadcast and nonbroadcast programmers are currently providing streaming and downloadable video content on their Internet web pages, as do many independent content producers. Several companies are also using the Internet, coupled with a television set-top box that allows an on-screen guide, to provide video directly to a television set. In addition, several companies are using Internet Protocol technology to provide facilities-based IP video, as are many independent content producers.

136. ***Streaming Video.*** Video streamed over the Internet through the web (sent from the content provider to the subscriber in real-time) is still most viable when delivered over broadband

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<sup>490</sup> See *2004 Report*, 20 FCC Rcd at 2815 ¶ 107.

<sup>491</sup> See Li Yuan, *Now, the Very Small Screen*, WALL STREET JOURNAL, Sept. 22, 2005, at B1.

<sup>492</sup> *Id.* at B9.

<sup>493</sup> Comcast Comments at 39.

<sup>494</sup> NCTA Comments at 11.

<sup>495</sup> See Li Yuan, *Now, the Very Small Screen*, WALL STREET JOURNAL, Sept. 22, 2005, at B9. Sprint Nextel has signed a five-year agreement with the National Football League.

<sup>496</sup> Comcast Comments at 39. MobiTV has partnered with Major League Baseball to offer mobile phone customers baseball highlights and “top plays” and is working toward offering live video of baseball games.

<sup>497</sup> NCTA Comments at 11.

<sup>498</sup> *Id.*



networks. Even with the most advanced compression technology available, broadcast quality video is not possible over a 56 kbps dialup connection.<sup>499</sup> Broadcast quality video is possible, however, at 768 kbps with advanced compression/decompression technology (codecs<sup>500</sup>) and at 1.5 Mbps or higher broadcast quality standard-definition MPEG-2 is possible.<sup>501</sup> Some industry observers continue to believe, however, that widespread adoption of streaming video will only be possible if connection speeds significantly increase over those currently achieved over cable and DSL broadband.<sup>502</sup> As we reported last year, the Internet2 network continues to facilitate high-quality streaming video using its highly reliable 10 Gbps backbone.<sup>503</sup> The Internet2 network, however, continues to primarily serve the research and academic communities.

137. Regardless of the fact that there is relatively minimal availability of high-quality video from such high-speed networks as the Internet2, many households continue to access streaming video using dial-up and residential high-speed Internet access connections. The overall number of homes with access to the Internet continues to grow, as does the number of Americans who access the Internet via a high-speed broadband connection. According to one report, as of June 2005, there were approximately 33.7 million residential high-speed Internet access subscribers, representing approximately 48 percent of the 70.3 million residential Internet subscription households.<sup>504</sup> As of January 2005, an average of 14 percent of all Americans had watched some form of streaming video in the past month, and approximately eight percent of Americans had accessed streaming video content in the past week.<sup>505</sup>

138. Many traditional programmers continue to offer streaming video on their websites to increase access to and supplement their regular television programming content. For example, CBS News, CNN, Comedy Central, and Nickelodeon offer 24-hour web access to some regularly featured television programming; ESPN.com has partnered with Major League Baseball to provide access to baseball games and baseball highlights; College Sports TV provides access to live video feeds of some college football games; MTV offers access to regularly featured programming and supplemental content; and In2TV, a partnership between AOL and Warner Bros., allows consumers to stream full-length episodes of popular television series from a library of thousands of television programs.<sup>506</sup> In addition,

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<sup>499</sup> Envivio, Inc., at <http://www.envivio.com/images/products/4CasterB3Datasheet050902.pdf> (visited Nov. 30, 2005).

<sup>500</sup> Codec is short for “compression/decompression.” Compression refers to the process by which redundant information is removed from a digital stream to reduce the bandwidth required to transmit it. Decompression is the reverse process of recovering the removed information to restore the original digital stream. Advanced video codecs are capable of removing more redundant information as compared to legacy codecs, with little impact on the video quality. Harry Newton, *NEWTON’S TELECOM DICTIONARY* (CMP Books, 17<sup>th</sup> ed., 2001), at 157.

<sup>501</sup> On2Technologies, Inc., at <http://www.on2.com> (visited Nov. 30, 2005). *See also* Network Domain Comments at 6.

<sup>502</sup> *2004 Report*, 20 FCC Rcd at 2817-8 ¶114.

<sup>503</sup> Led by more than 200 U.S. universities, working with industry and government, Internet2 is being developed and deployed for advanced network applications and technologies for research and higher education. The Internet2 cross-country backbone offers 10 gigabits per second, with the goal of offering 100 megabits per second of connectivity between every connected desktop. Internet2, at <http://www.Internet2.edu> (visited Nov. 30, 2005).

<sup>504</sup> *See* Morgan Stanley, *Cable/Satellite*, July 20, 2005, at 28. *See also* Federal Communications Commission, *High-Speed Services for Internet Access*, July 7, 2005, at Table 3 (reporting that, as of December 31, 2004, cable, DSL, wireline, and wireless technologies provided high-speed Internet access to 35.3 million residential and small business subscribers).

<sup>505</sup> Arbitron, Inc., *Internet and Multimedia 2005: The On-Demand Media Consumer*, Sept. 3, 2005, at 5.

<sup>506</sup> Comcast Comments at 24; CSTV Networks, Inc., *CSTV All Access: Thousands of Live Games Streamed Right to Your Computer*, at [http://allaccess.cstv.com/subscriptions/index\\_xxl.jsp?partnerId=cstv\\_aamg](http://allaccess.cstv.com/subscriptions/index_xxl.jsp?partnerId=cstv_aamg) (visited Dec. 27, (continued...))

some traditional content producers are also offering new and unique content over the Internet via the web. For example, Scripps Networks has announced that it will launch ten web-based video channels by the end of 2006; AOL continues to offer such exclusive and specialized video content as the Live8 concert and music videos; and Yahoo and Google are both exploring original content for distribution via the web.<sup>507</sup> Clear Channel Communications plans to add original streaming video programming to some 200 local radio stations' web sites.<sup>508</sup> Maxim Magazine plans to offer free streaming video programming on-demand to Internet users via MSN's video streaming service.<sup>509</sup> MTV plans to launch a free hybrid linear video and video-on-demand channel called MTV Overdrive.<sup>510</sup> "The Knot TV" is a 24-hour streaming video channel featuring wedding-related shows.<sup>511</sup>

139. **Downloadable Video.** As we reported last year, we expect that a large amount of video available through the web will be downloadable video. Downloadable video is available on the websites of both traditional programmers and independent producers of video content. There are numerous online services that allow users to download content to a computer hard drive for viewing on a personal computer, television, or mobile video device. In October 2005, Disney's ABC and Apple's iTunes entered into a deal to offer current and past season episodes of ABC and Disney Channel television shows for download from Apple's iTunes Music Store for viewing on a PC or iPod video player.<sup>512</sup> More established efforts to provide downloadable video include offerings from Movielink, Starz! Ticket on Real Movies, ClickStar and CinemaNow. For example, Movielink, a joint venture of Metro-Goldwyn-Mayer Studios, Paramount Pictures, Sony Pictures Entertainment, Universal Studios, and Warner Bros. Studios, offers movies, television shows, and other popular videos for download on a rental or purchase basis.<sup>513</sup> Some companies are offering or are planning to offer content distribution via the web for independent content producers. DaveTV, Brightcove, and Wi-FiTV provide an Internet-based distribution interface for content producers of all sizes.<sup>514</sup> Some content producers are offering their services directly to Internet users via websites such as Strandvenice.com, which is an online reality channel that offers a 50-minute series pilot episode for free and charges 99 cents for future 30-minute episodes.<sup>515</sup> Akimbo has partnered with producers and distributors of movies and videos to deliver video programming directly to a subscriber's television using the consumer's existing broadband connection.<sup>516</sup>

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2005); America Online, Inc. and Warner Bros., *AOL and Warner Bros. Announce 'In2TV,' New Broadband Network on AOL.com, Delivering The Largest Offering Of Long-Form Television Programming Online* (press release), Nov. 14, 2005.

<sup>507</sup> Comcast Comments at 24; AP, *Scripps Takes Latest Channel Direct to Web*, NEW YORK TIMES, Mar. 21, 2005; David Kaplan, *Home & Garden Hangs Hat Online*, MEDIAPOST, Jan. 14, 2005; Jefferson Graham, *Search Engine Google Sets Sights on Video*, USA TODAY, Jan. 25, 2005, at B1; Saul Hansell, *Google and Yahoo Are Extending Search Ability to TV Programs*, NEW YORK TIMES, Jan. 25, 2005, at C7.

<sup>508</sup> *Clear Channel Overhauls Its Net Strategy*, REUTERS, Mar. 24, 2005.

<sup>509</sup> Gavin O'Malley, *Ladies-On-Demand: Maxim Goes Video Via Deal With MSN*, MEDIA POST, Mar. 31, 2005.

<sup>510</sup> Steve Donohue, *MTV Goes Into Overdrive*, MULTICHANNEL NEWS, Apr. 6, 2005, at 11.

<sup>511</sup> Bob Tedeschi, *Web Sites' Sideline: TV-Type Shows*, NEW YORK TIMES, March 14, 2005, at C5.

<sup>512</sup> Walt Disney Company, *Disney, ABC & Apple Announce Deal to Sell TV Shows Online Hits to Include "Desperate Housewives," "Lost" and "That's So Raven,"* (press release), Oct. 12, 2005.

<sup>513</sup> See Movielink, LLC, *Downloadable Movies are Here*, at <http://www.movielink.com/store/web/help/eLanding.jsp> (visited Dec. 27, 2005).

<sup>514</sup> Comcast Comments at 27-28.

<sup>515</sup> Saul Hansell, *Smaller Video Producers Seek Audiences on Net*, NEW YORK TIMES, Oct. 6, 2005, at C1.

<sup>516</sup> Comcast Comments at 28; see Akimbo Systems, at <http://www.akimbo.com> (visited Nov. 30, 2005). See also Comcast Reply Comments at 8-9.

Akimbo provides the subscriber a set-top box that generates an on-screen guide that enables the subscriber to choose programming from a library of video selections. Akimbo then uses IP technology to deliver the video from a central office, over the Internet, to the subscriber's television.<sup>517</sup>

## 2. Home Video Sales and Rentals

140. The sale and rental of home video, including videocassettes and DVDs, are considered part of the video marketplace because they provide services similar to the premium and pay-per-view offerings of MVPDs.<sup>518</sup> As such, they offer some level of competition to broadcast television, cable television and DBS for the consumer's time and money. Video-on-demand services provided by cable, DBS, and Internet providers have emerged as competitive alternatives to home video.<sup>519</sup>

141. Nine out of ten TV households have at least one VCR.<sup>520</sup> DVDs also have made a significant impact on the home video market. An estimated 80 million households have DVD capability, representing nearly three-quarters of all U.S. households. Consumers purchased 37 million DVD players in 2004, an eight percent increase over 2003, and in the first six months of 2005 nearly 14 million DVD players were sold. Household penetration is expected to reach 80 percent by year-end 2005.<sup>521</sup> There are approximately 47,000 DVD titles available for purchase or rental today compared to 30,000 a year ago.<sup>522</sup> Consumers spent \$24.5 billion renting or purchasing DVDs or VHS videocassettes last year, compared to \$9.4 billion in U.S. movie ticket revenues.<sup>523</sup> Overall, consumers spent \$15.5 billion on DVD sales alone in 2004, a 33 percent increase over 2003, while DVD rentals increased 26 percent over 2003, as consumers spent more than \$5.7 billion.<sup>524</sup>

142. Sales and rentals of DVDs have accounted for 60 percent of entertainment companies' profits over the past eight years.<sup>525</sup> Consumers can purchase DVDs and videocassettes from video chains, such as Blockbuster or Hollywood Video; from mass merchandise stores, such as Target and Wal-Mart; or from online companies, such as Amazon. Consumers rented more than one billion DVDs during the first half of 2005,<sup>526</sup> either at retail outlets or via online services, such as Netflix.<sup>527</sup> Netflix currently has about 3.2 million subscribers. It is projected that Netflix will have four million subscribers by the end of 2005, and five million by the end of 2006.<sup>528</sup> Earlier this year, Wal-Mart and Netflix entered a partnership whereby Netflix will promote Wal-Mart DVD sales and Wal-Mart will offer its online customers the opportunity to sign up with Netflix at Wal-Mart's current online movie rental service price for the year.<sup>529</sup> Netflix also has announced that it plans to offer downloadable movies by the end of

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<sup>517</sup> Comcast Comments at 28.

<sup>518</sup> See *2003 Report*, 19 FCC Rcd at 1675 ¶ 108.

<sup>519</sup> See, e.g., paras. 56-7 *supra*.

<sup>520</sup> Nielsen Media Research, *Television Audience 2004*, Feb. 2005, at 4.

<sup>521</sup> *Id.* See also NCTA Comments at 15-16.

<sup>522</sup> NCTA Comments at 15.

<sup>523</sup> *Id.*

<sup>524</sup> *Id.* at 16.

<sup>525</sup> Comcast Comments at 35.

<sup>526</sup> *Id.* at 37.

<sup>527</sup> See *2004 Report*, 20 FCC Rcd at 2822 n.560.

<sup>528</sup> Comcast Comments at 36.

<sup>529</sup> *Id.*

2005.<sup>530</sup> In addition to its video stores, Blockbuster offers an online DVD rental service and is reported to have a million subscribers, a number that is expected to double by the first quarter of 2006.<sup>531</sup>

### III. MARKET STRUCTURE AND CONDITIONS AFFECTING COMPETITION

#### A. Market Structure and Ownership Issues

143. The video programming market is comprised of a retail market for the distribution of multichannel video programming to households, and a program supply market for the purchase of video programming by MVPDs. In this section, we first review changes in the market for the distribution of video programming, including changes in the level of competition in that market between June 2004 and June 2005. We then review the market for the purchase of video programming by MVPDs, examining the effects that changes in concentration among MVPDs at the national and regional levels have had on this market in the last year.

##### 1. Competitive Issues in the Retail Market for the Distribution of Video Programming to Consumers

144. In the past year, incumbent cable operators' share of all MVPD subscribers continued to decline. As of June 30, 2005, cable operators served 69.4 percent of the 94.2 million MVPD subscribers, compared to 71.6 percent of the 92.3 million MVPD subscribers a year earlier.<sup>532</sup> DBS, the major wireless MVPD technology that is available to subscribers nationwide, saw its share of MVPD subscribers increase between June 2004 and June 2005, from 25.1 percent of the market to 27.7 percent. Relatively few consumers, however, have a second wireline alternative, such as an overbuild cable system, as indicated by the small number of subscribers to BSPs and the limited entry by LEC thus far.<sup>533</sup> Several other MVPD technologies, such as private cable systems and wireless cable systems, offer consumers alternatives to incumbent cable services, but only in limited areas, and their overall share of the MVPD market has declined from 3.29 percent to 2.88 percent over the last year.

145. The Commission recently opened a proceeding to investigate whether the current local franchising process inhibits competitive entry in the retail market for the distribution of video programming.<sup>534</sup> The *Franchising NPRM* seeks comment on issues relating to the implementation of Section 621(a)(1) of the Communications Act. Specifically, the Commission asks how it can ensure that local franchising authorities (LFAs) do not unreasonably refuse to award cable franchises to competitive entrants. The *Franchising NPRM* tentatively concludes that the mandate of Section 621(a)(1) should be interpreted to prohibit not just the ultimate refusal to award a franchise, but also a broader range of behaviors, including the establishment of procedures and other requirements that unreasonably interfere with the ability of would-be new entrants to introduce their competitive offerings quickly.

146. In the *Notice*, we asked about the impact of the local franchising process on new entrants into local markets.<sup>535</sup> In their comments in response to the *Notice of Inquiry* in this docket, a number of

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<sup>530</sup> *Id.* at 29.

<sup>531</sup> *Id.*

<sup>532</sup> See Appendix B, Table B-1. The number of MVPD subscribers is the total number of subscribers to all MVPDs listed in the table. The share of MVPD subscribers served by cable systems is the result of adding together the number of subscribers to all MVPD services and calculating the percentage of this total represented by cable subscribers.

<sup>533</sup> See paras. 87-8, 121-5 *supra*. See also Appendix B, Table B-1.

<sup>534</sup> See *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*, Notice of Proposed Rulemaking, 20 FCC Rcd 18581 (2005) (*Franchising NPRM*).

<sup>535</sup> See *Notice*, 20 FCC Rcd at 14121 ¶ 10.

parties addressed this issue. LECs described the local franchising process as an impediment to entry into the market.<sup>536</sup> SBC maintains that cable franchise requirements are unnecessary given existing local authority to manage telephone company rights of way.<sup>537</sup> Verizon and others note that franchise negotiation gives notice of entry to the incumbent, delays entry, and allows LFAs to demand unrelated concessions from the entrant.<sup>538</sup> Verizon alleges that a “level playing field” approach to regulation is harmful to competition, and urges congressional action and Commission action pursuant to Section 621(a) of the Communications Act to alleviate these concerns.<sup>539</sup> Broadband service provider RCN reports that local franchise requirements have not prevented competitors like RCN from entering the market, but argues that RCN should receive equivalent relief if other competitors are relieved from franchise obligations.<sup>540</sup>

147. BSPA indicates that franchise build-out requirements are anachronistic and a barrier to entry and it supports a national policy to eliminate them.<sup>541</sup> BSPA argues that most incumbent cable operators have had decades to build out to current service boundaries with limited or no competition, and did not have to rely on capital markets for funding as current entrants do.<sup>542</sup> Verizon also objects to build-out requirements.<sup>543</sup> NCTA argues that existing franchise regulations and build-out requirements are

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<sup>536</sup> One academic study showed that policies that hinder a new entrant’s ability to sell video programming, such as requirements that entrants obtain a local cable franchise agreement, will strongly diminish that entrant’s incentive to deploy fiber to low-income households. See George S. Ford, Thomas M. Koutsy, and Lawrence J. Spiwak, *The Impact of Video Service Regulation on the Construction of Broadband Networks to Low-Income Households*, Phoenix Center Policy Paper No. 23, Sept. 2005. The authors use data from the U.S. Census Bureau and create simulations of network deployment to show that a new entrant will pass substantially more households, particularly low-income households, if that entrant can readily offer video with voice and broadband Internet access services than it will if its ability to sell video services is sharply curtailed or delayed.

<sup>537</sup> SBC Comments at 15-19. See also Cincinnati Bell Comments at 5-9; CenturyTel Comments at 4-6 and 7-10; OPASTCO Reply Comments at 3-4; Qwest Reply Comments at 1-10. BellSouth provides several examples of problems it has had in negotiating local franchises. BellSouth Comments at 3-12; SBC Reply Comments at 2-5.

<sup>538</sup> See Verizon Comments at 6-29; Verizon Reply Comments at 4-11; CenturyTel Comments at 6-7; USTA Comments at 8-14. See also Qwest Comments at 9-18; SBC Comments at 10-15; NRTC Comments at 7; Consumers for Cable Choice Comments at 2-3; Alcatel Comments at 8-10; USTA Comments at 14-16; USTA Reply Comments at 9-13; BellSouth Reply Comments at 1-9.

<sup>539</sup> In describing “level playing field” regulations, and franchise buildout requirements, Verizon states the following: “[I]ncumbent cable providers pressure LFAs (under threat of litigation) to require the new entrant to build-out and serve an entire franchise area on an expedited basis or to match all of the concessions previously provided by the incumbent in order for it to gain its original monopoly position in the local area, despite the vastly different competitive situation facing the new entrant.” Verizon Comments at 9.

<sup>540</sup> RCN Comments at 18. We note that Texas has passed a state-wide video franchising regime, and both Verizon and SBC have received state-wide franchises. Tex. Util. Code §§ 66.001 - 66.017. Lynn Stanton, *Texas PUC Grants SBC Video Franchise*, TR DAILY, Nov. 1, 2005. See also Verizon Communications, Inc., *Verizon to Accelerate Availability of FiOS TV Service in Texas* (press release), Sept. 30, 2005; Anne Veigle, *SBC Files for Tex. Franchise for Video Service*, COMMUNICATIONS DAILY, Oct. 12, 2005, at 1-3. Verizon reports that passage of this law in Texas will allow it to offer video services in 21 additional communities in Texas by the end of 2006. Verizon Reply Comments at 3.

<sup>541</sup> BSPA Comments at 18-20.

<sup>542</sup> *Id.*

<sup>543</sup> Verizon Reply Comments at 8-11.

appropriate for all providers in the multichannel video industry, and that they should not pose a “significant barrier” to competitive entry.<sup>544</sup>

148. In addition to franchising requirements, commenters assert that there are other factors that also may inhibit entry and competition. For example, Verizon raises the issue of open and competitively neutral technical standards.<sup>545</sup> BSPA states that discrimination in access to, and pricing of, video programming and other digital content constitutes a threat to BSP entry and competition.<sup>546</sup> SBC also stresses the importance of access to programming, particularly programming affiliated with incumbent cable operators and terrestrially delivered regional sports networks.<sup>547</sup>

149. BSPA also identifies exclusive long-term MDU access contracts as a barrier to entry and notes that difficulties remain for BSPs and other wireline MVPDs gaining access to utility poles at reasonable rates.<sup>548</sup> Verizon also raises the issues of access to residents of MDUs.<sup>549</sup>

150. NTCA and BSPA allege that incumbent cable operators faced with competitive entry have engaged in “targeted” or “predatory” pricing practices.<sup>550</sup> BSPA recommends that the Commission require cable operators to disclose all rates and promotions offered to any customer in a local franchise area, and to consider whether, even in areas in which a finding of effective competition has been granted, the Commission may continue to require uniform pricing; BSPA adds that, if necessary, the Commission should recommend that Congress amend the Communications Act to allow the Commission to require uniform pricing under the circumstances BSPA describes.<sup>551</sup> Comcast disagrees, stating that cable pricing practices are lawful and are indicative of a competitive marketplace.<sup>552</sup>

## 2. Competitive Issues in the Program Supply Market

151. Buyers in the market for the purchase of video programming are MVPDs, including cable operators and other video programming providers. The sellers are primarily nonbroadcast programming networks. This market tends to be regional or national because programmers seek to reach a much broader audience than could be provided by a local franchise area. For example, some programming

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<sup>544</sup> NCTA Comments at 18-24. *See also* RCN Comments at 18; NCTA Reply Comments at 2-22; Comcast Reply Comments at 15-22.

<sup>545</sup> *Id.* at 40-42. *See also* CEA Comments at 17-19.

<sup>546</sup> BSPA Comments at 12-15; RCN Comments at 9-14.

<sup>547</sup> SBC Comments at 19-27; Verizon Comments at 29-35; Qwest Comments at 19-24; NRTC Comments at 4-6; Cincinnati Bell Comments at 9-11; CenturyTel Comments at 10-12; NTCA Comments at 9-10; USTA Comments at 16-17; Qwest Reply Comments at 10-11; USTA Reply Comments at 13; Verizon Reply Comments at 11-13; SBC Reply Comments at 5-7. BellSouth argues that consolidation and clustering in the cable industry increases the ability of cable operators to gain exclusive contracts with unaffiliated cable networks. BellSouth Comments at 12-16. Smaller video providers stress the difficulties they face in negotiations with and receiving “reasonable rates” from large video programmers. NTCA Comments at 3-7. OPASTCO also raises the issue of the lack of access to affordable programming and states that expensive programming makes it difficult to create a workable business model for rural telecommunications providers offering video service. OPASTCO Reply Comments at 4-6. Comcast counters that no commenter denied access to programming can point to a violation of Commission rules. Comcast Reply Comments at 23-30. *See also* NCTA Reply Comments at 22-30.

<sup>548</sup> BSPA Comments at 20-23.

<sup>549</sup> Verizon Comments at 35-39.

<sup>550</sup> NTCA Comments at 7-9; BSPA Comments at 15-18. *See also* RCN Comments at 14-16.

<sup>551</sup> BSPA Comments at 15-18.

<sup>552</sup> Comcast Reply Comments at 41-43.

services are intended for nationwide audiences (e.g., CNN, USA), while others seek a regional audience (e.g., New England Sports Network).

152. Cable and DBS operators are the primary purchasers of multichannel video programming targeted to a national audience.<sup>553</sup> As shown in Table 9, in 2005, the four MVPDs with the largest subscribership served 63 percent of all MVPD subscribers,<sup>554</sup> while in 2004, the top four served 58 percent of all subscribers.<sup>555</sup> The share of subscribers served by the top ten MVPDs also increased from approximately 85 percent in 2004 to 88 percent in 2005.<sup>556</sup>

**TABLE 9: MVPD Competition and Concentration**

Percentage of MVPD Subscribers Served by Technology		
	2004	2005
<b>Cable</b>	71.6	69.4
<b>DBS</b>	25.1	27.7
<b>Other</b>	3.3	2.9
Percentage of MVPD Subscribers Served by Largest Providers		
	2004	2005
<b>Top 4</b>	58	63
<b>Top 10</b>	85	88
<b>Top 25</b>	90	94

153. To compare market concentration for the purchase of programming over a period of time, we have traditionally used the Herfindahl-Hirschman Index (HHI) to measure horizontal concentration.<sup>557</sup> We recognize that the HHI is not an indicator of “competition” in the market for the purchase of video programming, and that it is not being used in the same way that it would be for purposes of antitrust analysis. For purposes of this report, however, the HHI is a useful tool to follow trends in the

<sup>553</sup> Congress adopted Section 613(f) of the Communications Act as part of the 1992 Cable Act to address the consequences of horizontal concentration and vertical integration in the cable television industry. Section 613(f) was adopted as Section 11(c) of the Cable Television Consumer Protection and Competition Act of 1992, Pub. L. No. 102-385, 106 Stat. 1460, codified at 47 U.S.C. § 533(f). In *Time Warner Entertainment Co. v. FCC* (240 F.3d 1126 (D.C. Cir. 2001)), the United States Court of Appeals for the D.C. Circuit reversed and remanded the Commission’s rules implementing Section 613(f). The Commission has an ongoing proceeding to respond to the ruling of the court. See *Implementation of Section 11 of the Cable Television Consumer Protection and Competition Act of 1992*, 16 FCC Rcd 17312 (2001); *The Commission’s Cable Horizontal and Vertical Ownership Limits, Second Further Notice of Proposed Rulemaking*, 20 FCC Rcd 9374, 9412-3 ¶¶ 67-70 (2005).

<sup>554</sup> See Appendix B, Table B-4. In this section, reported statistics for 2004 are based on March data since June data comparable to that used in previous years were unavailable. This year, June data were available, so we reverted to June data for 2005.

<sup>555</sup> *Id.*

<sup>556</sup> *Id.* See also Appendix B, Table B-3; *2004 Report*, 20 FCC Rcd at 2872, Appendix B, Table B-3.

<sup>557</sup> *1998 Report*, 13 FCC Rcd at 24363 n.562. The HHI is a measure of concentration that is calculated by summing the squared market shares of the participants in the market. It is a measure of concentration that takes account of the distribution of the size of firms in the market. The HHI varies with the number of firms in the market and degree of inequality among firm size. Generally, the HHI increases when there are fewer and unequal sized firms in the market. HHI is usually employed to examine concentration in markets in which products are sold directly to consumers, not intermediate markets like the market for cable programming networks, but a comparison of HHIs from previous years shows a general trend in ownership concentration. The HHI calculation is based on the MVPD shares of cable companies serving over 91 percent of all subscribers and the two largest DBS operators. The addition of the shares of other cable operators and smaller MVPDs would change the HHI only by a small fraction.

concentration of MVPD size from year to year. We use the reported MVPD subscriber shares to calculate HHI figures. In June 2005, the HHI for the national market for the purchase of programming was 1201. This represents a marked increase from the March 2004 MVPD HHI of 1097.<sup>558</sup> This increasing HHI reflects the fact that the DBS providers grew very quickly, while virtually every cable operator, most especially smaller ones, shrank, thereby increasing the share of the industry served by the largest providers.

154. **Consolidation Among Cable Operators.** Cable operators continue to pursue a regional strategy of “clustering” their systems. The effect of clustering has drawn significant comment in the license transfer proceeding relating to the sale of Adelphia’s systems to Comcast and Time Warner, in which the transfer of systems will enlarge or consolidate various clusters owned by Comcast and Time Warner. The applicants assert that these transactions will enable Comcast and Time Warner to compete on more equal terms with DBS providers and ILECs.<sup>559</sup> BellSouth argues that consolidation and clustering in the cable industry increases the ability of cable operators to gain exclusive contracts with unaffiliated cable networks.<sup>560</sup>

155. Between July 2004 and June 2005, a total of 22 transactions were announced. Together these transactions were valued at approximately \$48.7 billion and affected 12,719,387 subscribers.<sup>561</sup> At the end of 2004, there were 118 clusters with approximately 51.5 million subscribers compared to 108 clusters and approximately 53.6 million subscribers at the end of 2003 (although due to a change in methodology, these figures are not directly comparable).<sup>562</sup> In the largest cluster size category (over 500,000 subscribers), the number of clusters remained constant at 29 between 2003 and 2004.<sup>563</sup>

## **B. Vertical Integration and Other Programming Issues**

### **1. Status of Vertical Integration**

156. In 1992, Congress enacted various provisions related to vertical integration between cable operators and programming networks (e.g., program access, channel occupancy limit) to foster competition and diversity.<sup>564</sup> Our examination of vertical integration in the MVPD industry, therefore, focuses on ownership affiliations between video programming distributors and video programming

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<sup>558</sup> In the *2003 Report*, we reported a 2003 HHI of 1031. See *2003 Report*, 19 FCC Rcd at 1689-90, 1721 ¶ 140, Appendix B, Table B-3. We have revised the 2003 HHI for this *Report* due to a revision of previous years’ cable industry and MVPD subscribers to allow for use of a consistent data source in the tables in Appendix B.

<sup>559</sup> *Applications for Consent to the Assignment and/or Transfer of Control of Licenses, Adelphia Communications Corporation, Assignors, to Time Warner Cable Inc., Assignees; Adelphia Communications Corporation, Assignors and Transferors, to Comcast Corporation, Assignees and Transferees; Comcast Corporation, Transferor, to Time Warner Inc., Transferee; Time Warner Inc., Transferor, to Comcast Corporation, Transferee, Applications and Public Interest Statement*, MB Docket No. 05-192, at 49-60. Numerous parties filing comments in this transaction dispute this characterization of the increased clustering that will result from the sale.

<sup>560</sup> BellSouth Comments at 12-16.

<sup>561</sup> Kagan Research, LLC, *Cable System Sales Summary*, CABLE TV INVESTOR, Aug. 25, 2005, at 14; Jan. 31, 2005, at 9; and July 29, 2004, at 13. These figures include announced transactions, most notably the proposed Adelphia transaction that is still pending before the Commission.

<sup>562</sup> See Appendix B, Table B-2. The way the clusters were counted by Kagan Research, LLC has changed between this year and last, leading to difficulties in directly comparing the two. In previous years, all of Comcast’s subscribers in the Northeast and Mid-Atlantic were counted as part of one “supercluster.” Beginning this year, those subscribers were broken out into separate clusters. This is probably a more accurate approach, but it causes direct year-to-year comparisons to be uninformative.

<sup>563</sup> See *id.* This figure has remained constant since 2002.

<sup>564</sup> See 47 U.S.C §§ 533, 548.



suppliers. Vertical relationships may have beneficial effects,<sup>565</sup> or they may deter competitive entry in the video marketplace and/or limit the diversity of programming.<sup>566</sup>

157. **Nationally Distributed Programming Networks.** In 2005, we identified 531 satellite-delivered national programming networks, an increase of 143 networks over the 2004 total of 388 networks.<sup>567</sup> Of the 531, 116 networks (21.8 percent) were vertically integrated with at least one cable operator in 2005.<sup>568</sup> Last year we identified 388 satellite-delivered national networks, 89 of which (22.9 percent) were vertically integrated with a cable operator.<sup>569</sup> In addition, 22 national nonbroadcast networks, not also owned by a cable MSO, are vertically integrated with a DBS provider.

158. This year we report a significant increase in the number of satellite-delivered national networks. We attribute this increase to several factors. First, we have updated our prior estimates based on additional data sources.<sup>570</sup> Also, we have investigated comments that noted errors or omissions regarding last year's data.<sup>571</sup> Finally, we have identified many new networks since the last report, most

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<sup>565</sup> Beneficial effects can include efficiencies in the production, distribution, and marketing of video programming, and providing incentives 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, 102nd Cong., 2d Sess. 56 at 41-43 (1992).

<sup>566</sup> Possible detrimental effects can include unfair methods of competition, discriminatory conduct, and exclusive contracts that are the result of coercive activity. *See 1995 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*, 10 FCC Rcd 7364, 7365 ¶ 4 (1995).

<sup>567</sup> Appendix C, Table C-1.

<sup>568</sup> *See* Appendix C, Table C-1. *See* Tables C-1 and C-2. We count each unique programming service of a multiplexed package separately. This includes the Spanish language simulcast of a particular network, such as Discovery en Español. We do not, however, count services that are not unique, as in a multiplexed programming service that is merely time shifted. *See 1998 Report*, 13 FCC Rcd at 24376, n.661. *See also 2000 Report*, 16 FCC Rcd at 6079, n.579. *See also* Appendix C, Table C-1. This year we also do not count the “on-demand” multiplexes because these versions of on-demand networks are often aggregated into a single “on-demand” channel operated by the MVPD for selection and playback. In addition, we note that last year our nonbroadcast network total included 35 multiplexed iN DEMAND channels and two iN DEMAND HD channels. Based on information obtained this year, we have identified 60 multiplexed iN DEMAND channels and two iN DEMAND HD channels. *See e.g.*, MLsnet.com, *Order the MLS Direct Kick Package: Available on DIRECTV, Dish Network, Digital Cable via iN DEMAND*, Oct. 21, 2005, at <http://mlsnet.com/MLS/schedule/tv.jsp> (visited Oct. 26, 2005). Last year, we also identified six Starz! networks, one Starz! HD network, and a 13 channel “Starz! Super Pack.” Based on information obtained this year, we have determined that the “Starz Super Pack” is a collection of networks already counted in our network totals, including six separately counted Starz! networks and seven separately counted Encore networks. *See* DIRECTV, Inc., *Starz Super Pack – The Best Movie Value from DIRECTV*, at [http://www.directv.com/DTVAPP/learn/Packages\\_TotalChoice\\_Starz.jsp](http://www.directv.com/DTVAPP/learn/Packages_TotalChoice_Starz.jsp).

<sup>569</sup> *2004 Report*, 20 FCC Rcd at 2832 ¶ 145. Although for purposes of this report we make every effort to identify ownership interests establishing vertical integration, we have not attempted to ascertain definitively whether certain vertical relationships would be cognizable under the Commission's attribution rules, nor would we wish to do so without reference to a particular rule or proceeding in which we could explore thoroughly all pertinent information. Hence, we do not intend here to render determinations regarding the application of the Commission's attribution rules.

<sup>570</sup> This year we have included more information from programmers directly, and information from channel lineups of MVPDs currently offering programming. *See* Appendix C, Tables C-1 and C-2 *Sources*.

<sup>571</sup> TAC Comments at 8-9, 15-17. TAC argues that the *2004 Report* did not adequately examine the ownership structure of the programming networks in existence, and thus did not thoroughly assess the health of competition in the video programming market or its impact on consumers' access to programming. TAC Comments at 3, 5, 9-10.

notably new, non-English and multicultural programming services.<sup>572</sup> Despite the substantial revisions to our list, the proportion of national nonbroadcast networks that are vertically integrated with a cable operator has remained relatively stable over the last year.

159. Five of the top seven cable operators (*i.e.*, Comcast, Time Warner, Cox, Cablevision, and Advance/Newhouse) hold ownership interests in satellite-delivered national programming networks. If we count iN DEMAND as one network, 57 satellite-delivered national programming networks are vertically integrated with one or more of these cable operators.<sup>573</sup> Time Warner has an ownership interest in 31 national networks; Cox has an ownership interest in 17 national networks; Advance/Newhouse, owner of cable operator Bright House Networks, has interests in 14 national networks; Comcast has an ownership interest in 11 national programming networks; and Cablevision, through its programming affiliate Rainbow Media, has an ownership interest in four national networks.<sup>574</sup>

160. In the *Notice*, we sought information regarding the ownership of national satellite-delivered programming networks by MVPDs other than cable operators and by “other” media entities, such as broadcast television networks and broadcast television station owners.<sup>575</sup> We have identified 141 programming networks that are owned by one or more of these media entities and that are not owned in any part by a cable operator.<sup>576</sup> These 141 networks represent 26.6 percent of the 531 total networks identified, and 34 percent of the 415 networks that are not affiliated with a cable operator. Thus, of the 531 national nonbroadcast networks we have identified, 116 networks are affiliated with a cable operator, 141 of the remaining networks not affiliated with a cable operator are affiliated with a media entity, and the remaining 274 networks, or 51.6 percent, are not affiliated with any cable operator or other media entity.<sup>577</sup>

161. As shown in Table 10 below, there are 107 national, satellite-delivered nonbroadcast networks that are owned by a DBS operator (DIRECTV, EchoStar, and Dominion), or one or more national broadcast television networks (*i.e.*, ABC, CBS, Fox, NBC-Universal, and Univision) and that are not also owned by a cable operator.<sup>578</sup> These 107 networks represent 20.2 percent of the 531 national nonbroadcast networks we have identified, and 25.8 percent of the 415 networks that are unaffiliated with a cable operator. For example, News Corporation, which holds a 34 percent interest in both DBS operator DIRECTV and an 82 percent interest in broadcast network Fox, has ownership interests in 19 national

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<sup>572</sup> This year, we focused our research efforts more closely than in the past on international networks. MVPDs may have carried some of those networks prior to the release of last year’s report.

<sup>573</sup> See Appendix C, Table C-1. Traditionally, the Commission has counted each channel of several multiplexed networks separately (*e.g.*, 60 channels for iN DEMAND) for the total number of networks and for these calculations. See *2004 Report*, 20 FCC Rcd at 2875 Appendix C, Table C-1. Time Warner, Comcast, and Cox each have an interest in iN DEMAND, which we treat as a single network for purposes of determining the number of networks in which each MSO has an ownership interest. See iN DEMAND Networks, at <http://indemand.com/about/faqDetailsIndemand.jsp?faqCat=1#6> (visited See also *DIRECTV v. In DEMAND, LLC*, File No CSR-6901-C (filed June 29, 2005); *EchoStar Satellite, LLC v. In DEMAND, LLC*, File No. CSR-6913P (filed July 5, 2005).

<sup>574</sup> See Appendix C, Table C-1.

<sup>575</sup> *Notice*, 20 FCC Rcd at 14121 ¶¶ 12-13.

<sup>576</sup> See Appendix C, Table C-2.

<sup>577</sup> See Appendix C, Tables C-1, C-2.

<sup>578</sup> *Id.* The WB network, through its parent company Time Warner, has ownership interests in 34 national nonbroadcast networks. See Appendix C, Table C-1. UPN (United Paramount Network) through its parent Viacom, also the parent of CBS, has ownership interests in 40 national nonbroadcast programming networks. See Viacom, at <http://www.viacom.com/broadcast.jhtml> (visited Nov. 8, 2005). In addition, EchoStar jointly owns G4videogameTV with Comcast, and PBS Kids Sprout is a joint venture between Comcast and PBS. *Id.*

nonbroadcast networks not also owned by a cable MSO.<sup>579</sup> Dominion Video Satellite, provider of DBS service Sky Angel, has interests in three networks. Viacom, the parent company of the CBS and UPN broadcast networks, has ownership interests in 40 national nonbroadcast networks not also owned by a cable MSO, including one network jointly owned with NBC-Universal. Broadcast network ABC, through its parent company Disney, has ownership interests in 22 national networks not also owned by a cable MSO.<sup>580</sup> NBC-Universal, through its parent company General Electric, has ownership interests in 21 nonbroadcast networks not also owned by a cable MSO, including six networks owned jointly with Disney and Hearst, one with Paxson Communications, and one with Viacom. Univision, a Spanish language network and station licensee, has ownership interests in nine networks not also owned by a cable MSO. In addition, Liberty Media, which has an ownership interest in News Corp. (and indirectly has ownership interests in networks owned by News Corp.), has direct ownership interests in 34 national programming networks, including 15 networks it owns jointly with one or more cable operators (*i.e.*, the Discovery-branded networks, which it co-owns with Cox and Advance/Newhouse, and Court TV, which it co-owns with Time Warner).<sup>581</sup>

162. We also have identified programming networks affiliated with broadcast television station licensees not also owned by a cable operator, also shown on Table 10. Hearst, in joint ventures with Disney and NBC-Universal, has ownership interests in a total of 17 national nonbroadcast programming networks not also owned by a cable MSO. Of these, 11 are owned jointly with Disney, and six are owned jointly with Disney and NBC-Universal. E.W. Scripps holds ownership interests in six national programming networks. The Trinity Broadcasting Network owns four programming networks. Landmark Communications owns two networks. The New York Times has ownership interest in one network not also owned by a cable MSO. Tribune and Daystar Television Network each have ownership interests in one programming network not also owned by a cable MSO, and Paxson Communications has an interest in one network with NBC-Universal.<sup>582</sup>

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<sup>579</sup> News Corp., *Company Information*, at <http://www.directv.com>. News Corp also owns one national network jointly with Comcast. See Appendix C, Table C-1.

<sup>580</sup> Disney also owns two national networks jointly with Comcast. See Appendix C, Table C-1.

<sup>581</sup> See Appendix C, Tables C-1 and C-2.

<sup>582</sup> See Table 10 and Appendix C, Table C-2.

**Table 10: National Networks Affiliated with a DBS Operator, National Broadcast Television Network, or Broadcast Television Licensee**

<b>Network Owner</b>	<b>Networks Wholly Owned or Owned in Part</b>
Dominion Video Satellite	Angel One, Angel Two, KTV- Kids and Teens Television
News Corp.	Fox Movie Channel, Fox News Channel, Fox Reality, Fox Sports Net, Fox Soccer Channel, FX, Fuel, National Geographic Channel, Speed Channel, TV Games Network, TV Guide Channel, TV Guide Interactive, Fox Sports en Español, Phoenix Info News, Phoenix North American Chinese Channel, Star Plus, Star One, Star News, Vijay
Viacom	BET, BET Gospel, BET Hip Hop, BET on Jazz, Country Music Television (CMT), Comedy Central, College Sports Television, Flix, Logo, MTV, MTV Hits, MTV Jams, MTV2, Nickelodeon/Nick at Nite, Nick 2, Nick GAS, Nicktoons, TV Land, Noggin, Showtime, Showtime HD, Showtime Beyond, Showtime PPV, Showtime Extreme, Showtime Family, Showtime Next, Showtime Showcase, Showtime Too, Showtime Women, Spike TV, The Movie Channel (TMC), TMC HD, TMC XTRA, VH1, VH1 Classic, VH1 Soul, VH1 Country, MTV Español, VH Uno
Viacom, NBC-Universal	Sundance Channel
NBC-Universal, Paxson	i- Independent Television (formerly PaxTV)
NBC-Universal	Bravo, CNBC, CNBC World, MSNBC, Sci-Fi Channel, Shop NBC, TR!O, Universal HD, USA Network, Weather Plus, Telemundo, Telemundo Puerto Rico, Mun2
NBC-Universal, Disney, Hearst	A&E, Biography Channel, History Channel, History International, Military History Channel, History Channel en Español
Disney	ABC Family, Disney Channel, SoapNet, Toon Disney, Toon Disney en Español.
Disney, Hearst	ESPN, ESPN Classic, ESPN2, ESPN HD, ESPNNews, ESPN2 HD, ESPNU, ESPN Deportes, Lifetime Television, Lifetime Real Women, Lifetime Movie Network
Univision	Bandamax, De Pelicula, De Pelicula Clasico, Ritmoson Latino, Telefe Internacional, Telefuturo, Telehit, Galavision, Univision
Liberty Media	Encore, Encore HD, Encore Action, Encore Drama, Encore Love, Encore Mystery, Encore WAM!, Encore Westerns, Game Show Network, Hallmark Channel, Movieplex, QVC, Starz!, Starz! Cinema, Starz!Kids & Family, Starz!HD, Starz! Comedy, Starz! Edge, Starz! InBlack
EW Scripps	DIY (Do-it-Yourself Network), Fine Living, Food Network, Great American Country, HGTV, Shop-at-Home
Trinity Broadcasting	Church Channel, JCTV, Trinity Broadcasting, TBN Enlace USA
Daystar	Daystar Television Network
Landmark Communications	Weather Channel, Weatherscan Local
Tribune Company	WGN Superstation
New York Times	Ovation: The Arts Network

163. **Top 20 National Programming Networks (by subscribership).** Currently, six of the top 20 nonbroadcast video programming networks (ranked by subscribership) are vertically integrated with a cable operator.<sup>583</sup> Of the remaining 14 networks, one is C-SPAN, which is funded, but not directly owned or controlled, by MVPDs, 12 are affiliated with noncable media entities, and one is unaffiliated. This

<sup>583</sup> See Appendix C, Table C-5.

figure represents a slight decrease from 2004, when seven of the top 20 networks were vertically integrated.<sup>584</sup> Additionally, it appears that there is some diverse ownership of the most popular networks. Eleven different entities own all or part of one or more of the top 20 programming networks in terms of subscribership.<sup>585</sup>

164. **National Nonbroadcast Programming Networks by Viewership.** Of the 15 top-rated prime time nonbroadcast programming networks, three are vertically integrated with a cable operator (Time Warner owns 100 percent of TNT and TBS, and Cox and Advance/Newhouse each own 25 percent of The Discovery Channel).<sup>586</sup> The remaining 12 networks are owned by other media entities. News Corp. has ownership interests in Fox News Channel, and Disney has ownership interests in The Disney Channel, Lifetime, Toon Disney, History Channel, and ESPN. Hearst has ownership interests in Lifetime, The History Channel, and ESPN. NBC has ownership interests in USA Network, The History Channel, and the Sci Fi Channel. Viacom has ownership interests in Nickelodeon, Nick at Nite, SpikeTV, and MTV.

165. During the 2004-2005 television season, the combined audience share<sup>587</sup> of all nonbroadcast networks<sup>588</sup> was higher than the combined audience share of all broadcast television stations<sup>589</sup> for both all day viewing and prime time viewing.<sup>590</sup> For all day viewing, the combined audience share of all nonbroadcast networks was 59, and the combined audience share of all broadcast television stations was 41. For prime time viewing, the combined audience share of all nonbroadcast networks was 53, and the combined audience share of all broadcast television stations was 47. More than half of all prime time viewers watched ad-supported cable networks during the past TV season, the second consecutive year that nonbroadcast networks have topped all national broadcast networks combined for an entire TV season.<sup>591</sup>

166. **Regional Programming Networks.** In 2005, we identified 96 regional networks, the same number of networks as last year, despite the exit and entry of several networks.<sup>592</sup> Many, but not all, regional networks are satellite-delivered. These networks provide programming of local or regional interest and are distributed to subscribers of one or more MVPDs in an area. A significant number of regional networks offer local news or sports programming, but some provide more general programming, such as religious or ethnic programming. Of the 96 regional networks we identified, 44 networks, or 45.8

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<sup>584</sup> See *2004 Report*, 20 FCC Rcd at 2901, Appendix C, Table C-6.

<sup>585</sup> They include: Time Warner, Cox, Disney, General Electric (NBC-Universal), Hearst, Liberty Media, Advance Newhouse, Viacom, Landmark Communications, E.W. Scripps, and C-SPAN (National Cable Satellite Corporation).

<sup>586</sup> See Appendix C, Table C-6.

<sup>587</sup> A share is the percent of all households using television during the time period that are viewing the specified station(s) or network(s). Due to simultaneous multiple set viewing, Nielsen reports audience shares that exceed 100 percent when totaled. We have normalized audience shares to equal 100 percent.

<sup>588</sup> Nonbroadcast network shares include basic (BST and CPST) networks, premium networks, and PPV networks distributed by MVPDs.

<sup>589</sup> Broadcast shares include network affiliates, independent, and public television stations.

<sup>590</sup> Prime time viewing is Monday through Saturday, 8 p.m.-11 p.m., and Sunday, 7 p.m.-11 p.m. Nielsen Media Research, *Broadcast Calendar (TV Season) Share of Audience Report, Prime Time and Total Day*, Sept. 2005. The most popular nonbroadcast networks continue to receive a lower audience share for all day and prime time viewing than any of the major broadcast television networks.

<sup>591</sup> NCTA Comments at 41.

<sup>592</sup> *2004 Report*, 20 FCC Rcd at 2895-2897, Appendix C, Table C-3.

percent, were vertically integrated with at least one MSO. Comcast has ownership interests in 14, or 14.6 percent, of all regional networks. Cablevision has ownership interests in 13, or 13.6 percent, of the regional networks. Time Warner has ownership interests in 10, or 10.4 percent, of the regional networks. Cox has ownership interests in six, or 6.2 percent, of the 96 regional networks, and Charter has an ownership interest in one regional network. Although not a cable MSO, News Corp., which holds an interest in DBS operator DIRECTV has ownership interests in 16, or 16.7 percent, of the 96 regional networks.<sup>593</sup>

167. **Planned Services.** This year, we identified 79 programming services that have been planned but are not yet operational.<sup>594</sup> The planned-services count includes some overlap from previous years because it can often take several years from the announcement of a new programming network to its initiation of service.<sup>595</sup>

## 2. Other Programming Issues

168. In this section, we discuss comments we received about the effectiveness of our program access, program carriage, and channel occupancy rules and issues relating to the carriage of local broadcast stations pursuant to must carry and retransmission consent. We also address other matters related to programming channels including sports programming; news programming; public, educational and governmental (PEG) channels; DBS public interest programming; non-English programming; locally originated and community-oriented programming; children's programming; access to programming by persons with disabilities; and packaging of programming services.

### a. Regulatory Issues

169. **Program Access and Program Carriage Rules.** The Commission's rules concerning competitive access to cable programming were initially adopted to implement the 1992 Cable Act. These rules seek to promote competition and diversity in the multichannel video programming market by preventing vertically integrated programming suppliers from favoring affiliated video distributors over unaffiliated MVPDs in the sale of satellite-delivered programming and making it more difficult for competing MVPDs to attract subscribers.<sup>596</sup> Also, these rules are intended to allow program suppliers that are unaffiliated with cable operators to secure carriage on cable systems that are affiliated with programmers. The program access rules apply to cable operators and to programming vendors that are affiliated with cable operators and deliver video programming via satellite to MVPDs. The rules prohibit any cable operator that has an attributable interest in a satellite cable programming vendor from improperly influencing the decisions of the vendor with respect to the sale or delivery, including prices, terms, and conditions of sale or delivery, of satellite-delivered programming to any competing MVPD. The rules also prohibit vertically integrated satellite programming distributors from discriminating in the prices or terms and conditions of sale of satellite-delivered programming to cable operators and competing MVPDs. In addition, cable operators generally are prohibited from entering into exclusive distribution arrangements with vertically integrated programming vendors. The Commission has concluded that the language of Section 628(c) expressly applies to "satellite cable programming and

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<sup>593</sup> See n.579 *supra*.

<sup>594</sup> See Appendix C, Table C-4. See also 2004 Report, 20 FCC Rcd at 2885, Appendix C, Table C-5.

<sup>595</sup> See 1995 Report, 11 FCC Rcd at Appendix H, Tables 3 and 4; 1996 Report, 12 FCC Rcd at Appendix G, Tables 3 and 4; 2004 Report 20 FCC Rcd at 2835 ¶ 152.

<sup>596</sup> 47 U.S.C. § 548. See also U.S.C. § 521(a)(5)-(6) nt.

satellite broadcast programming,” and that terrestrially delivered programming is “outside the direct coverage of Section 628(c).”<sup>597</sup>

170. As in previous years, a number of commenters address the statutory exemption for terrestrially delivered programming in the existing program access rules. Several commenters, citing past problems accessing terrestrially delivered, Comcast-affiliated programming in Philadelphia and Boston, repeat their concerns regarding incumbent cable operators’ ability to restrict competing MVPDs’ access to terrestrially delivered programming.<sup>598</sup> RCN and USTA express concern that terrestrial distribution of video signals will become increasingly common as a result of cable operators’ regional clustering of systems.<sup>599</sup> SBC, USTA, EchoStar, BellSouth, CenturyTel, BSPA, Verizon, RCN, and other commenters urge the Commission to ensure that all competitors have access to so-called “must have” programming and that the Commission eliminate the terrestrial exemption or recommend that Congress do so.<sup>600</sup> Comcast counters that these concerns are unfounded, stating that commenters provide no examples of programming networks that were migrated to terrestrial delivery other than Comcast SportsNet Philadelphia, and that terrestrial delivery of that network was premised on legitimate business considerations.<sup>601</sup> Comcast adds that its newest sports networks are delivered by satellite.<sup>602</sup> We are not aware of any comprehensive source for determining the delivery mode for each of the national and regional networks. We will seek such information for our next report on the status of competition in the market for delivery of video programming.

171. Commenters raise various other concerns relating to access to programming. EchoStar and Qwest ask the Commission to recommend that Congress eliminate the sunset of the exclusivity provisions in the program access rules.<sup>603</sup> Verizon suggests that the Commission ensure that cable companies are not able to foreclose access to programming by new MVPD entrants through arrangements that give an incumbent an exclusive right to carry particular programming.<sup>604</sup> CenturyTel proposes that new entrants be granted the right to opt into the terms of the programming agreements entered into by the incumbent cable operator in the market.<sup>605</sup> NCTA urges the Commission to reject these proposals stating that today’s video marketplace is competitive and that most of the popular and widely viewed nonbroadcast programming networks are available from cable’s MVPD competitors.<sup>606</sup> Comcast states

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<sup>597</sup> See *Implementation of the Cable Television Consumer Protection and Competition Act of 1992, Development of Competition and Diversity in Video Programming Distribution: Section 628 (c)(5) of the Communications Act, Sunset of Exclusive Contract Prohibition*, 17 FCC Rcd 12124, 12158 ¶ 73 (2002).

<sup>598</sup> See, e.g., RCN Comments at 12-14; USTA Comments at 16-17; DIRECTV Comments at 4; EchoStar Comments at 4-5; Verizon Comments at 30-33; BSPA Comments at 13; SBC Comments at 21-23.

<sup>599</sup> RCN Comments at 13; USTA Comments at 17.

<sup>600</sup> SBC Comments at 22-25; USTA Comments at 17; EchoStar Comments at 11; BellSouth Comments at 16; CenturyTel Comments at 14; BSPA Comments at 15; Verizon Comments at 32; RCN Comments at 16.

<sup>601</sup> Comcast Reply Comments at 25-26.

<sup>602</sup> *Id.*

<sup>603</sup> EchoStar Comments at 13; Qwest Comments at 20. Pursuant to 47 U.S.C. § 325(b)(3)(C)(ii), MVPDs are prohibited from retransmitting the signal of any commercial broadcasting station without the express authority of the originating station. Exclusive retransmission consent agreements are prohibited. Initially, the exclusivity provisions were to sunset on Dec. 31, 2005, but the sunset of the exclusivity provisions was extended to Jan. 1, 2010, in SHVERA.

<sup>604</sup> Verizon Comments at 35.

<sup>605</sup> CenturyTel Comments at 12.

<sup>606</sup> NCTA Reply Comments at 22.

that differentiation of program offerings is a normal and expected behavior in a competitive marketplace.<sup>607</sup>

172. Various commenters discuss programming cost differentials. BSPA is concerned about discounts cable incumbents receive when purchasing programming, which it asserts are discriminatory.<sup>608</sup> EchoStar asserts that vertically integrated programmers offer lower prices to incumbent cable operators and discriminate against EchoStar in other terms and conditions as well.<sup>609</sup> ACA estimates that the dominant media conglomerates charge smaller MVPDs programming rates that are between 30 percent and 55 percent higher than rates paid by larger MVPDs.<sup>610</sup> ACA states that when a smaller MVPD acquires a cable system from a major MSO, programming costs increase solely due to price discrimination against smaller providers. RCN states that vertically integrated programmers should be subject to affiliate transaction restrictions that would require sales between affiliated companies to be recorded at arm's-length market prices (*i.e.*, that prices be disclosed) and that the price of cable services reflect the market price.<sup>611</sup> Cincinnati Bell and OPASTCO state that the cost of such programming may serve as a barrier to entry into the video market by small and rural IPTV providers. OPASTCO states that it is virtually impossible for rural video providers to know the true market rates for programming because of nondisclosure agreements between programming providers and large cable companies.<sup>612</sup> Comcast claims that these commenters want the Commission to mandate terms of carriage on their behalf so that they need not negotiate with programmers in the marketplace. Comcast adds that government interference in the video marketplace would be inconsistent with Congressional intent to leave negotiations between MVPDs and program suppliers to the marketplace.<sup>613</sup>

173. Commenters also discuss programmers' ability to secure distribution. DIRECTV contends that clustering has enabled MSOs to concentrate their subscribers and achieve market share levels throughout many of the largest DMAs that they previously enjoyed only in their individual franchise areas, thus becoming indispensable to local and regional programmers seeking distribution.<sup>614</sup> The America Channel argues that carriage by both Comcast and Time Warner is essential for survival of advertiser-supported networks and that denial of carriage by either of these MSOs impacts a network's ability to procure funding and the minimal carriage necessary for market entry. The America Channel also states that new networks that are affiliated with cable operators or broadcasters are more likely to be carried than independent programming networks.<sup>615</sup> It maintains that programming networks developed by cable operators and other media companies are launched as linear networks (*i.e.*, basic nonbroadcast networks), while unaffiliated programming networks are able to gain carriage only through VOD distribution. The America Channel also claims that networks affiliated with MVPDs charge higher rates

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<sup>607</sup> Comcast Reply Comments at 42.

<sup>608</sup> BSPA Comments at 16.

<sup>609</sup> EchoStar Comments at 13.

<sup>610</sup> ACA Comments at 6. ACA does not identify the media conglomerates.

<sup>611</sup> RCN Comments at 17.

<sup>612</sup> Cincinnati Bell Comments at 10; OPASTCO Comments at 5.

<sup>613</sup> Comcast Reply Comments at 29-30.

<sup>614</sup> DIRECTV Comments at 15.

<sup>615</sup> TAC Comments at 13-14. We note earlier that 257 of the 531 and all of the top 15 non-broadcast programming networks are affiliated with a cable operator and/or another media entity. We will seek further information and comment on program carriage issues and their impact on various types of independent programming networks, including minority programming networks, for our next report on the status of competition in the market for delivery of video programming.



than those of independent networks.<sup>616</sup> The America Channel submits that unfair discrimination, not bandwidth constraints, underlie independent networks' inability to gain carriage. The America Channel requests that the Commission require MVPDs to disclose sufficient information regarding capacity and constraints so it can determine: (1) the digital bandwidth capabilities of the largest MVPDs on a per-system basis; (2) how many digital channels each can carry today; and (3) MVPDs' plans with respect to digital capacity in the future and how they will affect access for independent networks.<sup>617</sup>

174. Comcast states that cable operators and other MVPDs choose programming networks that they believe consumers will demand. It states that MVPDs consider many factors in making carriage decisions, including the content of the network, the necessity or desirability of its presentation as a linear network, the financing of the network, the experience and proven capability of the network's management team, the distribution arrangement the network has already secured, and the fees and terms of carriage. Comcast denies that carriage by Comcast or Time Warner is necessary for a programming network to be carried by other MVPDs. Comcast and Time Warner note that The Sportsman Channel launched successfully without any carriage agreements, secured its first carriage agreement with NCTC, and then signed agreements with 18 other cable operators before signing with Comcast.<sup>618</sup> Time Warner states that The America Channel's claim that affiliated networks charge higher license fees than independent networks is directly contradicted by a GAO report to Congress that found that ownership affiliations with broadcasters or cable operators had no influence on cable networks' license fees.<sup>619</sup>

175. **Must Carry and Retransmission Consent.** In 1992, Congress enacted statutory provisions concerning the carriage of local broadcast television stations by cable operators and subsequently extended similar provisions to DBS providers in 1999. Among the reasons for enacting broadcast signal provisions, Congress found that broadcasters and consumers benefit from the carriage of local television stations and that cable operators derive benefits from offering this popular programming. It also concluded that cable carriage of broadcast television signals without consent or copyright liability resulted in broadcasters subsidizing cable operators, creating a competitive imbalance between these two industries that compete for audience, advertising, and programming.<sup>620</sup>

176. Under Sections 614 and 615 of the Communications Act, cable operators must set aside up to one third of their channel capacity for the carriage of commercial television stations and additional channels for noncommercial stations depending on the system's channel capacity.<sup>621</sup> Pursuant to the SHVIA, DBS operators may provide local-into-local broadcast television service.<sup>622</sup> Unlike cable operators, which are required to carry local television stations in every market they serve, a DBS operator must carry all stations in any market where it chooses to carry any local television station ("carry one, carry all").<sup>623</sup> In both the cable and DBS contexts, commercial broadcasters may elect to be carried pursuant to must carry status or retransmission consent.<sup>624</sup> Where a station elects must carry, it is

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<sup>616</sup> TAC Comments at 21-24. It submits a license fee analysis based on information provided in Kagan Research's *Economics of Basic Cable Networks 2006, 12<sup>th</sup> Annual Edition*, to illustrate this difference. *Id.* at Exhibit A.

<sup>617</sup> TAC Comments at 16-19.

<sup>618</sup> Comcast Reply Comments at 32-35; Time Warner Reply Comments at 6-7.

<sup>619</sup> Time Warner Reply Comments at 5-6. *See also*, GAO, *Tele-communications: Issues Related to Competition and Subscriber Rates in the Cable Television Industry*, GAO-04-08, Oct. 2003, at 29.

<sup>620</sup> 47 U.S.C. § 521(a)(19) note; Pub. L. No. 102-385, 106 Stat. 1460, Oct. 5, 1992.

<sup>621</sup> 47 U.S.C. §§ 534(b), 535(b). *See also* 47 C.F.R. § 76.56.

<sup>622</sup> Pub. L. No. 106-113, 113 Stat. 1501, 1501A-526 to 1501A-545 (Nov. 29, 1999).

<sup>623</sup> 47 C.F.R. § 76.66.

<sup>624</sup> 47 C.F.R. § 76.64.

generally guaranteed carriage, but it is prohibited from receiving compensation for this carriage.<sup>625</sup> Under retransmission consent, the broadcaster and cable or DBS operator negotiate an agreement that may involve compensation in return for permission to retransmit the broadcast signal. The current rules apply to the carriage of analog television stations only.

177. As we observed in last year's report, through the retransmission consent process, broadcasters can receive cash or consideration comparable to cash in exchange for granting MVPDs the right to retransmit their signals.<sup>626</sup> In this year's *Notice*, we asked for information on the extent to which cable television and DBS retransmission consent negotiations are providing broadcasters with an additional revenue source, either through direct compensation or through indirect benefits such as, for example, contracts for the carriage of affiliated programming. We asked what forms of compensation broadcasters are receiving for retransmission consent, and how they account for indirect compensation.<sup>627</sup>

178. Joint Cable Commenters state that retransmission consent has been a key driver of cable rate increases because it has been used to launch and broaden the carriage of broadcaster-owned nonbroadcast networks.<sup>628</sup> ACA and OPASTCO claim that when dealing with small- and medium-size cable companies, networks and major affiliate groups are demanding monthly fees of \$0.50 to \$1.00 per subscriber or more for each network-affiliated station, adding \$2.50-\$5.00 or more per month to basic cable rates in smaller markets.<sup>629</sup> ACA contends that this could cost smaller cable companies and their customers an additional \$1 billion over the next three years.<sup>630</sup> BSPA also expresses concern about the ability of broadcasters to leverage retransmission consent to demand exorbitant compensation for programming and asks the Commission to monitor this situation and be prepared to take corrective action.<sup>631</sup> Qwest states that Section 548 of the Communications Act – which prohibits unfair practices, undue influence and price discrimination – does not go far enough to protect new MVPDs from television stations that may adopt a “pay cash or else” stance in the upcoming retransmission consent negotiations. It adds that the Commission should address this problem or, if necessary, make specific recommendations to Congress to correct the problem.<sup>632</sup> NRTC members are concerned about their ability to secure retransmission rights to local off-air signals on fair and reasonable terms, and urge the Commission to continue to monitor retransmission consent issues and to view those issues from the perspective of the small telco IPTV operator.<sup>633</sup>

179. NAB states that cable companies rarely pay cash for retransmission consent and that even if broadcasters could obtain cash payments in return for carriage of their signals, the \$1 billion figure cited by ACA is “fanciful at best.”<sup>634</sup> According to the Affiliates Associations, some broadcasters negotiated for and received consideration of other kinds, such as agreements by cable operators to purchase advertising on the stations; agreements by cable operators to allow a broadcast station to sell local advertising time in cable programming; and/or agreements by cable operators to carry local news

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<sup>625</sup> 47 C.F.R. § 76.60.

<sup>626</sup> See *2004 Report*, 20 FCC Rcd at 2805 ¶ 79.

<sup>627</sup> See *Notice*, 20 FCC Rcd at 14140 ¶ 64.

<sup>628</sup> Joint Cable Commenters Reply Comments at 17.

<sup>629</sup> ACA Comments at 7-8; OPASTCO Reply Comments at 5.

<sup>630</sup> *Id.*

<sup>631</sup> BSPA Comments at 24.

<sup>632</sup> Qwest Comments at 22-23.

<sup>633</sup> NRTC Comments at 8.

<sup>634</sup> NAB Reply Comments at 2-3.

programs or other programming owned by the broadcast company.<sup>635</sup> Some broadcasters do, however, receive cash payments that can be substantial. For example, Hearst Argyle Television Inc. reported a \$2.3 million increase in retransmission revenues for the period ending September 30, 2005.<sup>636</sup>

180. Disney states that there is no justification for any changes in the retransmission consent statute or regulations. It states that broadcasters, just like any other business, should be compensated for their product if it is distributed and resold by another entity. Disney adds that broadcasters invest billions of dollars annually to create valuable programming and are entitled to compensation.<sup>637</sup> Network Affiliates contend that the current retransmission consent process furthers the interest of competition in the programming marketplace. It asserts that past retransmission consent election cycles, as well as individual negotiations, show no evidence of a break-down in the process or in the marketplace, and it states that additional government intrusion into these private contractual negotiations is not needed.<sup>638</sup> NAB concurs with Disney and the Affiliates Associations regarding compensation for cable operators' carriage of broadcast signals, especially given cable operators' increasing competition with broadcasters for local advertising revenue. NAB adds that ACA's comments regarding retransmission consent do not accurately depict competitive realities in medium and small television markets, and that television broadcasters in these markets are facing severe financial pressures.<sup>639</sup>

181. Several commenters address the issue of retransmission consent agreements that require MVPDs to carry certain nonbroadcast networks in return for the right to carry local broadcast signals. EchoStar states that the use of such terms is widespread, and it claims that the broadcast networks leverage their ability to withhold must have broadcast programming to obtain carriage of affiliated programming. EchoStar maintains that such practices often violate antitrust law, although violations are difficult to prove because the Commission generally does not allow discovery in retransmission consent proceedings. It urges the Commission to provide for discovery in such proceedings.<sup>640</sup> OPASTCO states that the tying of retransmission consent for carriage of local broadcast networks to carriage of unwanted cable networks prevents rural carriers from crafting tiers that reflect the demands of their local markets.<sup>641</sup> Joint Cable Commenters believe that broadcasters' use of retransmission consent to launch and broaden the carriage of nonbroadcast programming networks has been a major factor in shaping the price and composition of the expanded basic package.<sup>642</sup>

182. Disney states that it negotiates retransmission consent only for its 10 owned-and-operated ABC affiliates. It indicates that it offers cable and satellite operators a stand-alone cash retransmission consent deal with no requirement to carry affiliated networks, but that it also offers alternatives that involve the carriage of nonbroadcast programming networks. According to Disney, it works with the MVPD to meet each operator's needs.<sup>643</sup> We will continue to monitor the issues raised by commenters and will seek further information and comment on them for our next report on the status of competition in the market for delivery of video programming.

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<sup>635</sup> Affiliates Associations Reply Comments at 8.

<sup>636</sup> Hearst Argyle Television Inc., *SEC 10-Q Filing for Period Ending September 30, 2005*, at 16.

<sup>637</sup> Disney Comments at 37-38.

<sup>638</sup> Affiliates Associations Reply Comments at 6-9.

<sup>639</sup> NAB Reply Comments at 3-5.

<sup>640</sup> EchoStar Comments at 8-9.

<sup>641</sup> OPASTCO Reply Comments at 6.

<sup>642</sup> Joint Cable Commenters Reply Comments at 17.

<sup>643</sup> Disney Comments at 39.

**a. Sports Programming**

183. We continue to monitor the availability of sports programming which many MVPDs consider must have programming in order to compete effectively in the video market.<sup>644</sup> There are 37 regional networks devoted to sports programming, a decrease from the 38 we identified last year.<sup>645</sup> Regional sports networks now represent approximately 38.5 percent of the 96 regional networks.<sup>646</sup> Of the 37 regional sports networks, 17, or 45.9 percent are vertically integrated with a cable MSO. Fox continues to be the leader in the distribution of regional sports networks, owning or holding an ownership interest in 16, or 43.2 percent, of all regional sports networks.<sup>647</sup>

184. While we report no new regional sports networks this year, in March 2005, ESPN launched an additional national sports channel, ESPNU, which carries regular season collegiate athletic events and the NCAA championships.<sup>648</sup> News Corp. and Cablevision restructured their ownership of several jointly owned regional sports channels. News Corp. owns 100 percent of Fox Sports Net and FSN Ohio, FSN Florida, and National Advertising Partners. Cablevision controls 100 percent of MSG and its properties, the New York Knicks, Rangers, and Liberty. Cablevision and News Corp. continue to own 20 percent and 40 percent, respectively, of FSN Bay Area, with Cablevision managing the network.<sup>649</sup> On March 7, 2005, the Empire Sports Network, which was owned by Adelphia and featured Buffalo Sabres NHL games, terminated its service.<sup>650</sup> C-SET, a regional sports network that carried sports programming in the Carolinas, terminated its service on June 30, 2005.<sup>651</sup> In addition, in 2005, the Baltimore Orioles and Major League Baseball formed a new network, the Mid Atlantic Sports Network (MASN). The network initially was formed to carry the Washington Nationals baseball games during the 2005 season, with plans to become a full-time network in 2006, and to carry the Baltimore Orioles baseball games once the Orioles' current agreement with Comcast Sports Net expires following the 2006 baseball season.<sup>652</sup>

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<sup>644</sup> 2004 Report, 20 FCC Rcd at 28462841 ¶ 166. See, e.g., SBC Comments at 22-25; USTA Comments at 17; EchoStar Comments at 11; BellSouth Comments at 16; CenturyTel Comments at 14; BSPA Comments at 15; Verizon Comments at 32; RCN Comments at 16.

<sup>645</sup> See Appendix C, Table C-3.

<sup>646</sup> *Id.*

<sup>647</sup> The Commission remains cognizant that Fox's ownership of numerous regional sports programming networks may pose a public harm when combined with DIRECTV's nationwide distribution platform. The Commission imposed conditions on News Corp. requiring it to enter into arbitration where negotiations fail to produce a mutually acceptable set of prices, terms and conditions. In addition, News Corp. cannot offer any existing or future regional programming services on an exclusive basis to any MVPD and shall make such services available to all MVPDs on a non-exclusive basis. See *News Corp Order*, 19 FCC Rcd at 531-2, 543, 552-555, 626, ¶¶ 127, 147-48, 172-79, 366.

<sup>648</sup> NCTA, *Directory of Programming Services*, Cable Developments 2005, at 84-85.

<sup>649</sup> News Corp., *Cablevision Swap Sports Nets*, SATELLITE BUSINESS NEWS FAXUPDATE, Feb. 23, 2005, at 2.

<sup>650</sup> R. Thomas Umstead, *The End of an Empire*, MULTICHANNEL NEWS, Jan. 21, 2005, at <http://www.multichannel.com/article/CA498108.html> (visited Jan. 26, 2005).

<sup>651</sup> National Basketball Association, at [http://www.nba.com/bobcats/news/c-set\\_050628.html](http://www.nba.com/bobcats/news/c-set_050628.html) (visited Oct. 27, 2005).

<sup>652</sup> CABLEFAX Daily, Oct. 28, 2005, at 1.

Due to a dispute between Comcast and MASN, which is being addressed in a separate proceeding,<sup>653</sup> MASN has been available only to RCN and DIRECTV subscribers in the Washington, D.C., area.<sup>654</sup>

**b. News Programming**

185. We requested comment on the extent to which MVPDs provide local news and community affairs programming because such programming allows MVPDs to provide a unique service that meets the interests and needs of their communities.<sup>655</sup> This year, of the 96 regional programming networks identified, 45, or 46.9 percent, are regional news networks.<sup>656</sup> A news channel may concentrate on a single metropolitan area, as do NY1, the News 12 networks, Bay News 9, and News 8 Austin. They may originate their own content, or repurpose news content from co-owned broadcast channels. NewsChannel 5+ in Nashville, NewsWatch 15 in New Orleans, NewsChannel5 in San Diego, and News on One in Omaha are examples of this model. In several markets, cable operators offer local news through VOD services. In Los Angeles, Time Warner is offering VOD newscasts from KNBC; Buckeye Cable offers its Toledo subscribers VOD news from NBC affiliate WNWO; Comcast Cable provides VOD news to its subscribers in Philadelphia, Baltimore, Minneapolis, Boston, San Francisco, Denver and Salt Lake City.<sup>657</sup> Cablevision launched two new News 12 networks, News 12 Brooklyn and News 12 Hudson Valley, this year.<sup>658</sup>

**c. Other Programming**

186. In the Notice we requested comment on a variety of other types of programming, including PEG programming, DBS public interest programming, non-English programming, locally originated and community-oriented programming, children's programming, and access to programming

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<sup>653</sup> On June 14, 2005, TCR Sports Broadcasting Holding, L.L.P. (TCR) d/b/a Mid-Atlantic Sports Network, Inc. (MASN) filed a Carriage Agreement Complaint and an Emergency Petition for Injunctive Relief requesting that the Commission direct Comcast to comply with 47 C.F.R. § 76.1301 by ceasing its discriminatory activities against TCR and mandate carriage of TCR's programming of Washington Nationals games on MASN on Comcast's systems in the Washington region. Prior to TCR's filings with the Commission, Comcast filed a related lawsuit against TCR in Montgomery County, Maryland, Circuit Court on April 21, 2005, claiming that TCR had violated its agreement with Comcast for the production and exhibition of Baltimore Orioles games. In October, 2005, the Maryland Circuit Court dismissed Comcast's lawsuit, and in November, 2005, Comcast appealed the judgment. *See Comcast SportsNet Mid-Atlantic, L.P., Plaintiff v. Baltimore Orioles L. P., TCR Sports Broadcasting Holding, L.L.P., Major League Baseball, Mid-Atlantic Sports Network*, Complaint, Civ. Action No. 260751-V (Md. Circ. Ct), filed April 21, 2005. *See also Comcast SportsNet Mid-Atlantic, L.P., Plaintiff v. Baltimore Orioles L. P., TCR Sports Broadcasting Holding, L.L.P., Major League Baseball, Mid-Atlantic Sports Network, Defendants*, Court's Order and Notice of Judgment, Civ. Action No. 260751-V (Md. Circ. Ct), entered October 6, 2005; *see also Comcast SportsNet Mid-Atlantic, L.P., Plaintiff v. Baltimore Orioles L. P., TCR Sports Broadcasting Holding, L.L.P., Major League Baseball, Mid-Atlantic Sports Network, Defendants*, Notice of Appeal, Civ. Action No. 260751-V (Md. Circ. Ct), dated November 2, 2005.

<sup>654</sup> RCN Comments at 12; DIRECTV Comments at Appendix B2. In October 2005, Charter announced an agreement to carry MASN. CABLEFAXDAILY, Oct. 28, 2005, [at 1. In a meeting with Media Bureau Staff, Comcast noted that it disputes the complaint and that the Commission is actively addressing the resolution of this issue in another proceeding. Comcast meeting with Media Bureau Staff, Nov. 21, 2005.

<sup>655</sup> *See Notice*, 20 FCC Rcd at 14122 ¶ 14.

<sup>656</sup> *See Appendix C*, Table C-3.

<sup>657</sup> Allison Romano, *Local News Taps Into Cable VOD*, BROADCASTING & CABLE, May 2, 2005, at 10.

<sup>658</sup> CABLEFAXDAILY, June 2, 2005, at 3.

by persons with disabilities. MVPDs use these types of programming to compete more effectively and to serve specific groups in their local communities.<sup>659</sup>

187. **PEG Programming.** Many cable operators set aside one or more channels on a cable system for public, educational, and governmental programming. Generally, these channels provide programming produced by community groups and individuals.<sup>660</sup> Local franchising authorities may request, as part of the franchising process, that operators devote a certain amount of channel capacity and equipment for this purpose.<sup>661</sup> According to the Consumer's Union, these channels are heavily used in some communities, but other communities have not sought PEG channels.<sup>662</sup> In Vermont, which regulates cable television at the state level, each cable system is required to set aside channels for PEG programming.<sup>663</sup>

188. **DBS Public Interest Programming:** DBS operators are required to reserve 4 percent of their channel capacity for "noncommercial programming of an educational or informational nature."<sup>664</sup> To qualify for carriage on this reserved capacity, programmers must be organized for a noncommercial, nonprofit purpose; they must be a national educational programming supplier; and they must be responsible for 50 percent of the direct costs incurred by the DBS operator in making the programming available. Furthermore, the programming offered by such programmers must contain no advertisements, must be of an educational or informative nature, and must be available on a regular schedule.<sup>665</sup> EchoStar reports that it provides 13 channels of public interest programming.<sup>666</sup> DIRECTV provides 12 channels of public interest programming.<sup>667</sup>

189. **Non-English Programming.** Cable and DBS operators continue to add non-English language programming either as part of their general packages or as themed tiers. EchoStar states that it is offering the Hispanic Information & Telecommunications Network as a Spanish educational,

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<sup>659</sup> See Notice, 20 FCC Rcd at 14122 ¶ 14.

<sup>660</sup> Mike Rhodes, *Media Democracy and the Struggle for Cable Access*, San Francisco Bay Area Independent Media Center, Aug. 9, 2004, at <http://www.fresnoalliance.com/home/pegca/leaccess.htm> (visited Oct. 20, 2005).

<sup>661</sup> 47 U.S.C. § 531. Local franchise authorities are allowed to establish procedures under which the cable operator may utilize unused PEG channel capacity for other services. 47 U.S.C. § 531(d)(1).

<sup>662</sup> *What's at Stake: Community Access*, at <http://www.hearusnow.org/tvradiocable/whatsatstake/communityaccess> (visited Oct. 20, 2005).

<sup>663</sup> The Vermont Public Service Board has established PEG obligations based on cable system channel capacity. Cable systems with a channel capacity of less than 21 channels must provide at least one full-time activated PEG channel and higher capacity systems are required to have up to three channels for such use, with one channel designated for each type of programming (*i.e.*, public, educational, and governmental programming). See Vermont Department of Public Service, at <http://publicservice.vermont.gov/cable/cable-pegaccess.html> (visited Oct. 25, 2005).

<sup>664</sup> See *Implementation of Section 25 of the Cable Television Consumer Protection and Competition Act of 1992, Direct Broadcast Satellite Public Interest Obligation*, 19 FCC Rcd 5647 (2004).

<sup>665</sup> See 47 U.S.C. § 25.701.

<sup>666</sup> EchoStar currently carries the following public interest channels: Brigham Young University, Classic Arts Showcase, Colours TV, Free Speech TV, Good Samaritan Network, Hispanic Information & Telecommunications Network, Worldlink TV, Northern Arizona University, Panhandle Area Education, PBS YOU, Research Channel, RFDTV, University of California, and University of Washington. EchoStar Comments at 13.

<sup>667</sup> DIRECTV currently carries the following public interest channels: HITN-TV, C-SPAN 1, Daystar, EWTN, Link TV, NASA TV, PBS YOU, TBN, The WORD Network, ONCE Mexico, BYU TV, and RFD-TV. *HITN-TV To Join DIRECTV Programming Lineup*, DIRECTV In The News, at [http://www.directv.com?DTVAPP/aboutus/headline.jsp?newsId=06\\_13\\_2004A](http://www.directv.com?DTVAPP/aboutus/headline.jsp?newsId=06_13_2004A) (visited Oct. 24, 2005).

instructional, and cultural programming channel in its public interest line-up. It also states that it offers the broadcast signals of Univision, Telefutera, Telemundo, and TV Azteca affiliates, as well as the signals of 88 local independent broadcast stations, which include ethnic, religious, Spanish, and shopping programming. In addition, it also offers three Latino packages consisting of 30, 120, or 160 nonbroadcast channels, as well as international programming packages in various languages, including African, Arabic, Armenian, Chinese, Farsi, French, German, Greek, Hebrew, Italian, Japanese, Korean, Polish, Portuguese, Russian, South Asian, Tagalog, and Urdu.<sup>668</sup> DIRECTV offers Univision, Galavision, ONCE Mexico, CCTV-9 (Chinese), and DIRECTV Para Todos, a 99-channel package of Spanish language programming.<sup>669</sup> Comcast reports that it offers a broad selection of Hispanic programming networks, including Discovery en Español, CNN en Español, and Toon Disney Español. It also states that in the past year it has launched several services catering to multicultural audiences and that, in total, Comcast carries over 50 multicultural channels and plans to add several more in English or other languages.<sup>670</sup>

190. **Locally Originated and Community-Oriented Programming:** APTS states that the nation's 356 local public television stations provide programming of interest to their communities. According to APTS, these stations are owned and operated by local community foundations, colleges, universities and school districts, as well as locally responsive state commissions. While these stations are 15 percent funded by the Federal government, the remaining 85 percent is donated by local residents, businesses, state and local governments, local colleges and universities, and foundations.<sup>671</sup> Comcast states that its CN8, which provides news and sports programming with local appeal to subscribers in the Mid-Atlantic states and New England, has expanded its service area to include Pittsburgh.<sup>672</sup> Comcast's VOD service provides local content, including local public affairs programming and newscasts from local broadcast stations that it makes available for as many as three days after the broadcast has occurred.<sup>673</sup> NAB states that broadcast stations remain the leading source of vital public safety information and are a significant source of local, diverse programming. It also states that the broadcast stations carried on cable systems continue to provide a guaranteed minimum of local and diverse voices for subscribers.<sup>674</sup>

191. **Children's Programming.** Nonbroadcast networks continue to attract a growing audience among children and families. Total day viewing of expanded basic networks by children (ages 2-11) increased from a 28.3 share in 1993/1994 to a 56.4 share during the 2004/2005 television season.<sup>675</sup> PBS Kids Sprout, a joint venture of Comcast, Sesame Workshop, HITS Entertainment, and PBS Kids, launched on VOD in early 2005.<sup>676</sup> Comcast began distributing the network in September 2005 as a full-time network on some of its systems.<sup>677</sup> According to RCN, PBS Kids Sprout is a must have network for

<sup>668</sup> EchoStar Comments at 13-16.

<sup>669</sup> DIRECTV Comments at Exhibit D.

<sup>670</sup> Comcast Comments at 46.

<sup>671</sup> APTS Comments at 3-4.

<sup>672</sup> Radio-Television News Directors Foundation, *A Look At Regional News Channels and State Public Affairs Networks*, May 2004, at 12; Comcast Comments at 44.

<sup>673</sup> See Letter from Martha E. Heller, Wiley, Rein & Fielding, to Marlene Dortch, Secretary, FCC, MB Docket No. 05-192 (Nov. 15, 2005) at Attachment; Comcast meeting with Media Bureau Staff, Nov. 21, 2005. See also Comcast Corp., *Comcast and CBS Announce Deal to Offer Hit Shows through Video on Demand* (press release), Nov. 7, 2005. See also Comcast Comments at 49-50. Comcast's local VOD service also includes programming on community service initiatives addressing issues such as literacy and substance abuse. *Id.*

<sup>674</sup> NAB Comments at 4.

<sup>675</sup> NCTA Comments at 42-43.

<sup>676</sup> *2004 Report*, 20 FCC Rcd at 2846 ¶ 175.

<sup>677</sup> Comcast Comments at 44.

the children's demographic. Before Comcast acquired an interest in the network, RCN received PBS Kids Sprout through programming supplier TVN as part of its children's VOD package, Kids Unlimited. RCN claims that since Comcast acquired an interest in the network, RCN has experienced difficulties obtaining access to the programming. In spring 2005, RCN lost access to it, resulting in an 83 percent drop in its customers' usage of its Kids Unlimited VOD service.<sup>678</sup>

192. **Access to Programming by Persons with Disabilities.** We invited comment and information regarding the accessibility of closed captioning and video description to persons with disabilities.<sup>679</sup> In particular we sought comment regarding the quality, accuracy, placement, technology, and instances of delayed or missing captioning. Currently, video programming distributors are required to provide at least 1,350 hours of captioned "new" nonexempt programming on each channel during each calendar quarter.<sup>680</sup> As of January 1, 2006, the transition period for new programming ends and video programming distributors then will be required to provide captioning for 100 percent of all new nonexempt programming.<sup>681</sup> In addition, a video programming distributor must include captioning in 30 percent of its "pre-rule" nonexempt programming on each channel during each calendar quarter.<sup>682</sup> The rules exempt several specific classes of programming from the closed captioning requirements.<sup>683</sup> Video programming providers may also petition the Commission for an exemption from the closed captioning rules if the requirements would impose an undue burden.<sup>684</sup> The closed captioning rules are enforced through a complaint process, with the complaint initially directed to the video programming distributor responsible for compliance with the rules.<sup>685</sup>

193. Only one commenter provided information on closed captioning. DIRECTV states that it passes along all NTSC closed captioning information in line 21, fields 1 and 2 of the Vertical Blanking Interval (VBI). It adds that programmers are able to use the Secondary Audio Programming (SAP) channels for video description if they do not currently use them for other purposes. DIRECTV currently carries a SAP channel on 39 nonbroadcast channels and over 200 broadcast channels, but it leaves the decision on how to use the SAP channel to programmers. DIRECTV does not monitor the SAP channels on a regular basis. It is unaware of any current HD programming that is being authored with native CEA-708B closed captioning, but it has tested its own receivers, which all functioned properly during testing.<sup>686</sup>

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<sup>678</sup> RCN Comments at 10-11.

<sup>679</sup> Notice, 20 FCC Rcd at 14124 ¶ 20. In 1997, the Commission adopted phase-in schedules to increase the amount of closed captioned video programming over time. See *Closed Captioning and Video Description of Video Programming, Implementation of Section 305 of the Telecommunications Act of 1996, Video Programming Accessibility*, Report and Order, 13 FCC Rcd 3272 (1998); Order on Reconsideration, 13 FCC Rcd 19973 (1998).

<sup>680</sup> 47 C.F.R. § 79.1(b)(1) (phase-in schedule for "new" programming which is defined as programming first published or exhibited on or after January 1, 1998). Video programming first published or exhibited for display on television receivers equipped for display of digital transmissions or formatted for such transmission is defined as "new" as of July 1, 2002. 47 C.F.R. § 79.1(a)(6)(ii). See *Closed Captioning Requirements for Digital Television Receivers*, 15 FCC Rcd 16788, 16808-09 ¶ 60 (2000) (*Digital Captioning Order*). A separate phase-in schedule applies for Spanish programming. 47 C.F.R. § 79.1(b)(3)-(4).

<sup>681</sup> 47 C.F.R. § 79.1(b)(iv).

<sup>682</sup> 47 C.F.R. § 79.1(b)(2) (phase-in schedule for "pre-rule" programming). See also 47 C.F.R. § 79.1(a)(6) (definition of pre-rule programming).

<sup>683</sup> 47 C.F.R. § 79.1(d).

<sup>684</sup> 47 C.F.R. § 79.1(f).

<sup>685</sup> 47 C.F.R. § 79.1(g).

<sup>686</sup> DIRECTV Comments at 16.



194. On July 21, 2005, the Commission released a *Notice of Proposed Rulemaking* seeking comment about: (1) the current status of the Commission's closed captioning rules in ensuring that video programming is accessible to deaf and hard of hearing Americans and whether any revisions should be made to enhance the effectiveness of those rules; and (2) several compliance and quality issues relating to closed captioning that were raised in a *Petition for Rulemaking* filed by Telecommunications for the Deaf, Inc., the National Association of the Deaf, Self Help for Hard of Hearing People, Inc., the Association for Late Deafened Adults, and the Deaf and Hard of Hearing Consumer Advocacy Network.<sup>687</sup> This proceeding is pending.

#### d. Packaging of Programming Services

195. In the *Notice*, we sought information on how video programming distributors package and market their programming. We also sought comment concerning the extent that MVPDs offer or plan to offer consumers more choice in channel selection rather than traditional tiering of programming services.<sup>688</sup> The commenters indicate that MVPDs generally continue to offer packages or tiers of service that include a large number of programming networks, including a variety of family-friendly services. Generally, however, parents cannot subscribe to those channels alone.<sup>689</sup> Instead, they must buy the channels they do not want their families to view in order to receive the family-friendly channels they desire. Commenters note that by offering programming on a theme tier or smaller package basis, MVPDs can address consumers' concerns regarding their inability to prevent objectionable content from coming into their homes, can differentiate their service offerings, and can allow subscribers to pay only for those programming services they regularly watch.<sup>690</sup>

196. Recently, a number of cable operators have announced plans to offer family-friendly programming tiers.<sup>691</sup> For example, on December 15, 2005, Time Warner announced that it would launch a family tier in the first quarter of 2006.<sup>692</sup> Consisting of 15 channels, the tier will be priced at an additional \$12.99 a month above the monthly cost of the basic service tier, which averages about \$12 across Time Warner's systems, and generally will require a digital set-top box for every television in the home that will receive the family tier.<sup>693</sup> On December 22, 2005, Comcast announced that it will launch a family tier with an average of 35-40 channels beginning in early 2006.<sup>694</sup> In addition to the 20-25

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<sup>687</sup> See also *2004 Report*, 20 FCC Rcd at 2848 at ¶ 178. See *Closed Captioning of Video Programming, Telecommunications for the Deaf, Inc., Petition for Rulemaking*, 20 FCC Rcd 13211 (2005).

<sup>688</sup> *Notice*, 20 FCC Rcd at 14122 ¶ 16.

<sup>689</sup> The one exception is Sky Angel's DBS service, which offers a family-friendly, faith-based programming service. See para. 73 *supra*.

<sup>690</sup> ACA Comments at 12; BSPA Comments at 15; see, e.g., Consumers Union and Consumer Federation of America Comments and Reply Comments, MB Docket No. 04-207, July 15, 2004. See Oral Statement of Kevin J. Martin, Chairman, FCC, Before the Committee on Commerce, Science and Transportation, U.S. Senate, *Open Forum on Decency*, Nov. 29, 2005; *Chairman Kevin J. Martin's Statement on the Announcement that Cable Companies May Voluntarily Offer Family Tier* (FCC News Release) Dec. 12, 2005.

<sup>691</sup> According to NCTA, six of the largest MSOs plan to introduce family tiers, although they may have different approaches to launching these tiers, which are in various stages of development. These cable operators are Time Warner, Comcast, Advance/Newhouse Communications (Bright House Networks), Insight Communications, Bresnan Communications, and Midcontinent Communications. See Glen Dickson, *Family Tiering Gets Technical*, BROADCASTING & CABLE, Dec. 19, 2005, at 24.

<sup>692</sup> See Time Warner, *Time Warner Cable Launches Family Choice Tier* (press release), Dec. 15, 2005.

<sup>693</sup> The 15 channels are: Broomerang, C-SPAN 2, C-SPAN 3, CNN Headline News, The Science Channel, Discovery Kids, Disney Channel, DIY Network, FIT-TV, Food Network, HGTV, La Familia, Nick Games & Sports, The Weather Channel, and Toon Disney. *Id.*

<sup>694</sup> See Comcast Corp., *Comcast Announces Family Tier* (press release), Dec. 22, 2005.

channels that customers receive on their basic service tier, Comcast's family tier will include 16 family-friendly networks of primarily G-rated content.<sup>695</sup> According to Comcast, the Family Tier package will cost an average of \$31.20 per month, which will reflect its national average for basic service of \$12, the 16-channel Family Tier for \$14.95, and a digital cable set-top box at a national average price of \$4.25 per month. In January 10, 2006, Cox announced it would launch a Family Tier in early 2006, which will consist of an average of 40 channels of programming, including local broadcast stations and broad-based general entertainment, news, and sports programming.<sup>696</sup> Cox's Family Tier will be offered at a national average price of \$32 per month for the programming package, set-top box with electronic/interactive program guild capability and parental controls for specific programs and channels. On January 17, 2006, Insight announced that it would offer a Family Tier as a digital package that will include 15 channels of programming for \$13 per month. This new tier will be available as an add-on to the 21-channel basic service tier.<sup>697</sup> Other cable operators, such as Midcontinent and Charter, have stated they are committed to developing family-friendly offerings, but have not yet announced specific plans.<sup>698</sup> In addition, DIRECTV plans to offer a Family Tier with more than 40 channels that will include local broadcast stations and nonbroadcast networks at a price of \$34.99 per month.<sup>699</sup> On February 1, 2006, EchoStar began offering a family tier with approximately 40 channels at a price of \$19.99 per month for nonbroadcast channels, and \$24.99 per month with local channels.<sup>700</sup>

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<sup>695</sup> The 16 networks include: Disney Channel, Toon Disney, PBS KIDS Sprout, Discovery Kids, Science Channel (Discovery), Nickelodeon/Nick Too, Nickelodeon GAS (Games and Sports), TBN (Trinity Broadcasting), HGTV, Food Network, DIY, CNN Headline News, The Weather Channel, National Geographic, C-SPAN, and C-SPAN 2. *Id.*

<sup>696</sup> Cox Communications, Inc., *Cox communications Announces Family Friendly Package* (press release), Jan. 10, 2006. The 40 channels include: local affiliates of ABC, CBS, NBC, PBS, Fox, WB, UPN, and Univision, and C-SPAN, WGN, home shopping channels, TV Guide Channel, local public, education, and government access channels, and the Disney Channel, Discovery Kids, Headline News, National Geographic Channel, Home & Garden TV, DIY (Do It Yourself), Nickelodeon, Fit TV, Sprout, Discovery Science, Boomerang, and GSN. Local systems will be able to tailor the package with The Weather Channel or Weatherscan Local, C-SPAN 2 or 3, and additional religious and Spanish-language programming.

<sup>697</sup> Insight Communications Company, *Insight Communication Announces Plans for Family-Friendly Tier of Programming* (press release), Jan. 17, 2006. The new tier of programming will include: Home & Garden Television, Food Network, DIY Network, C-SPAN 2, CNBS, CNN Headline News, The History Channel, The Weather Channel, Discovery Kids, Discovery Science, Nick Games & Sports, The Disney Channel, Toon Disney, PBS KIDS Sprout, and Trinity Broadcasting Network (TBN).

<sup>698</sup> See Midcontinent, *Midcontinent Communications to Develop Family Friendly Choice* (press release), Dec. 12, 2005; Jean Spenner, *Cable TV Planning "Family Friendly" Tier*, THE SAGINAW NEWS, Dec. 16, 2005, at <http://www.mlive.com/business/sinews/index.ssf?/base/business-1/1134746428242260.xr..> (visited Dec. 29, 2005).

<sup>699</sup> DIRECTV, Inc., *DIRECTV to Offer Family Programming Package* (press release), Jan. 18, 2006. DIRECTV's package of programming will include: Bloomberg, Boomerang, BYU TV, CNN Headline News, C-SPAN 1, C-SPAN-2, Daystar, Discovery Kids, Disney East, Disney West, DIY Network, EWTN, Food Network, Hallmark Channel, HGTV, HITN, HSN, Link TV, NASA TV, National Geographic Channel, Nickelodeon/Nick at Night East, Nickelodeon/Nick at Night West, Nicktoons, Noggin/The N, NRB Network, Once TV, PBS Kids Sprout, QVC, RFD TV, Shop at Home, Shop NBC, TCT Network, The Science Channel, The Weather Channel, Toon Disney, Trinity Broadcasting Network, Word Network, World Harvest Network, XM Disney Radio, and XM Kids.

<sup>700</sup> EchoStar Communications Corporation, *DISH Network Introduces "DishFAMILY" Programming Tier* (press release), Jan. 19, 2006. EchoStar's programming package includes: Animal Planet, The Biography Channel, Bloomberg TV, Boomerang, BYUTV, C-SPAN, C-SPAN 2, CSTV, Discovery Kids, Discovery Times, Do It Yourself Network, EWTN, Food Network, Fox News Channel, Great American Country, CNN Headline News, HSN, NASA, Nickelodeon East, Nickelodeon West, Nick Games & Sports, Nick Toons, Outdoor Channel, RFDTV, Shop at Home, ShopNBC, The Science Channel, The Weather Channel, TBN, TV Land, and QVC.

197. Alternatively, a number of groups have raised issue with the voluntary industry proposals to offer family tiers. For example, the Parents Television Council contends that “family tiers are not the same as providing consumers with cable choice, the ability to take and pay for only what they want.”<sup>701</sup> In a joint letter to Congress, Consumers Union, the Consumer Federation of America, and Free Press state that the recently announced family tiers are a good first step and demonstrate that cable operators can offer smaller, specialized bundles of service.<sup>702</sup> It, however, is concerned that cable operators, along with broadcasters, have decided which channels will be included and the tiers offer consumers very little choice. In addition, The Concerned Women for America (CWA) assert that parents, rather than the cable industry, should be the ones to decide what is appropriate for their children to watch and that control is taken out of parents’ hands when the cable operators determine which channel to include in their family tiers.<sup>703</sup> Because the announcement and availability of family tiers is a recent development, we are unable to evaluate the effectiveness of these programming packages in this Report.

198. In response to the request for comment on the packaging of programming in the *Notice*, ACA states that many small- and medium-sized cable operators would like to offer themed tiers at a lower cost, and a more family-friendly expanded basic tier, but that major programming providers prevent it by imposing various types of distribution restrictions and requirements. ACA reports that if its members were permitted to move sports services to a separate tier, they would do so because their subscribers would prefer a lower cost expanded basic package and less sports programming. ACA also states that some of its members would like to be able to respond to customers who find the content on certain entertainment networks that carry mature programming to be objectionable and would like to move these networks to a “Contemporary Adult” tier. It adds that these networks carry partial nudity, sexually explicit content, and profanity. According to ACA, this would reduce wholesale costs for the expanded basic tier, ease retail rate pressure, and address subscribers’ concerns.<sup>704</sup>

199. BSPA recognizes that the issue of tiering flexibility, and a la carte service raise many questions which need to be addressed in the marketplace, rather than on paper at the Commission before any decision can be made regarding the final costs and benefits of such offerings (whether to consumers, programmers, or distributors). Accordingly, BSPA proposes that several of its members, with those program suppliers and other cable providers who agree to participate, initiate focused, multi-year market tests in selected local markets, involving a la carte-type offerings. BSPA asserts that its proposed market tests would shed light on a number of questions, including (1) how many subscribers would choose the current structure over a voluntary a la carte option; (2) what level of a la carte would balance the needs of consumers, distributors, and content producers; (3) how many new customers would subscribe to MVPD service if they had a greater choice of offerings; (4) how advertising rates and structures are affected; (5) which networks or types of content would fail to garner significant numbers of subscribers; and (6) the potential financial impact on content producers and distributors. BSPA adds that a market test would improve the Commission’s understanding of the key issues and would better inform the legislative debate in Congress regarding consumer choice, pricing, and indecency issues. BSPA asks the Commission to endorse and support the industry’s pursuit of limited market tests of a la carte offerings.<sup>705</sup>

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<sup>701</sup> See Parents Television Council, *PTC Calls “Family Tiers” a “Red Herring”* (press release), Dec. 12, 2005.

<sup>702</sup> See Letter from Jeannine Kenney, Consumers Union, Mark Cooper, Consumer Federation of America, and Ben Scott, Free Press, to Senators Ted Stevens and Daniel Inouye, Co-Chairmen, Committee on Commerce, Science and Transportation, U.S. Senate (Jan. 18, 2006).

<sup>703</sup> See Concerned Women for America, *CWA: Family-Friendly Tiers are Not the Answer* (press release), Dec. 12, 2005.

<sup>704</sup> ACA Comments at 12-13.

<sup>705</sup> BSPA Comments at 26-27.

200. OPASTCO states that practices that require rural carriers to carry channels that most of their customers do not demand, or that compel them to place less popular channels in certain tiers, prevent these carriers from creating tiers that match the demands of their individual markets.<sup>706</sup> Cincinnati Bell states that although it would like to offer differentiated programming packages, pricing options, and bundled services that compete with packages offered by incumbent cable or satellite providers, it will not be able to do so unless it can obtain reasonably priced programming, as well as carriage and tiering flexibility.<sup>707</sup>

201. Consumers for Cable Choice complain that cable's spectrum limitations keep valuable programming from special interest and minority markets. It claims that only those willing to pay a substantial premium can access additional channels and services of interest, if they are available at all. It adds that broadband-based networks offer the promise of substantially more programming options for these important markets. Consumers for Cable Choice point to the Latino market as an example, stating that many cable providers make available only one or two Spanish-speaking networks, and often no English-speaking Latino networks. It claims that IPTV technology could expand the amount of programming available to minority groups and special interests.<sup>708</sup>

202. Disney claims that MVPD subscribers enjoy many program packaging options that typically include retransmission of local broadcast signals, PEG channels, and selected other programming services.<sup>709</sup> DIRECTV provides examples of its programming packages, which include various packages targeted to specific audiences. Its Total Choice package includes sports, movies, family entertainment, music and local channels. It also offers premium channel packages, such as HBO, Starz, Showtime, and Cinemax, as well as several sports and international packages.<sup>710</sup> Dominion Video Satellite, Inc., through its Sky Angel DBS service, provides faith-based programming, as well as news and family-oriented entertainment networks. It states that it serves the needs of an audience that desires a multichannel service that offers a wide variety of both faith-based and family-friendly channels without being required to receive and subsidize programming that is overtly in conflict with their values.<sup>711</sup>

### C. Other Competitive Issues

#### 1. Competitive Developments in Small and Rural Markets

203. In the *Notice*, we requested information and comment regarding issues specific to video programming distribution in rural and smaller markets.<sup>712</sup> Small cable operators and telephone companies

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<sup>706</sup> OPASTCO Reply Comments at 6.

<sup>707</sup> Cincinnati Bell Comments at 10.

<sup>708</sup> Consumers for Cable Choice Comments at 3-4.

<sup>709</sup> Disney Comments at 4-6. Disney attached its comments in response to the Commission's *Public Notice* in the *A La Carte* proceeding, MB Docket No. 04-207, filed July 15, 2004, to its comments in this proceeding. In those comments, Disney stated that any form of a la carte or tiering would result in consumers paying more for less.

<sup>710</sup> DIRECTV Comments at Exhibits B, C, and D.

<sup>711</sup> E-mail from Nancy Christopher, Vice President, Public Relations, Dominion Sky Angel DBS Television and Radio System, Nov. 15, 2005.

<sup>712</sup> *Notice*, 20 FCC Rcd at 14125-6 ¶ 23. Pursuant to Section 208 of SHVERA, the Commission conducted an inquiry and submitted a Report to Congress on the impact on competition in the MVPD market of the retransmission consent, network nonduplication, syndicated exclusivity, and sports blackout rules, including the impact of those rules on the ability of rural cable operators to compete with the direct broadcast satellite industry in the provision of digital broadcast television signals to consumers. See *Retransmission Consent and Exclusivity Rules: Report to Congress Pursuant to Section 208 of the Satellite Home Viewer Extension and Reauthorization Act of 2004*, Sept. 8, 2005.

have video subscribership ranging from 50 subscribers up to 100,000 subscribers. These relatively small numbers belie the fact that in the aggregate small cable operators and telephone companies serve a significant percentage of the MVPD market. The American Cable Association reports that its 1,100 members serve approximately eight million subscribers, or 12 percent of total U.S. cable subscribers.<sup>713</sup> Their principal competitors are DBS operators DIRECTV and EchoStar, which have higher penetration rates in rural markets than in urban or suburban markets.<sup>714</sup> Many small and rural MVPDs are rolling out advanced services, including Internet access, VoIP, DVR and VOD.<sup>715</sup> OPASTCO states that its members experience increased subscription rates when they bundle broadband services with video services.<sup>716</sup>

204. Generally, small and rural cable operators and telephone companies serve very small numbers of subscribers in communities that experience little or no population growth. These demographics can limit their ability to raise capital for plant and equipment upgrades that will allow these small operators to compete with MVPDs having larger regional or national distribution platforms, such as cable MSOs and DBS, respectively. Thus, small and rural cable operators and telephone companies argue that a major factor limiting their ability to compete is the lack of a cost-effective means to receive and distribute video services.<sup>717</sup> NRTC, which represents approximately 1,200 rural utilities and affiliates in 47 states, states that many of its members distribute DIRECTV's service, but many also are pursuing a multi-platform approach, including satellite, wireless technologies, fiber platforms, and broadband-over-power line technologies, in order to compete for video subscribers.<sup>718</sup> OPASTCO reports that its rural LEC members are becoming MVPDs by exploiting newer technologies.<sup>719</sup> NRTC states that it is focused on providing its members with cost-effective access to television programming by using a low-cost, end-to-end IPTV delivery system, with commercial deployment expected in early 2006.<sup>720</sup> NRTC reports that

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<sup>713</sup> ACA Comments at 2. According to one analyst, small cable operators serve approximately 22 percent of total U.S. cable subscribers. See Michael Hopkins, *Thriving (Albeit Small) Empires*, THE BRIDGE, Sept. 30, 2005, at 1.

<sup>714</sup> See 2005 GAO Report at 9-15; Michael Hopkins, *Thriving (Albeit Small) Empires*, THE BRIDGE, Sept. 30, 2005. For example, in Vermont, The Bridge reports DTH penetration to be 35 percent compared to almost 47 percent for cable; in Utah, DTH and cable penetration are tied at approximately 33 percent; in Montana, DTH penetration is 32 percent and cable penetration 48 percent; in Idaho, DTH penetration is 32 percent and cable penetration is 45 percent; in Missouri, DTH penetration is 30 percent and cable penetration is 44 percent. DTH's national average penetration rate is 20 percent and cable's is 54 percent. *Id.* at 8.

<sup>715</sup> See, e.g., Michael Hopkins, *Thriving (Albeit Small) Empires*, THE BRIDGE, Sept. 30, 2005, at 8; Gerry Blackwell, *Rural Cooperative Does IPTV*, ISP Technology, Aug. 22, 2005; Stewart Schley, *Declaration of Innovation; Indie Ops Fight Rivals by Blazing New Trails*, MULTICHANNEL NEWS, Aug. 1, 2005; Matt Stump, *Co-op Brings IPTV to OK*, MULTICHANNEL NEWS, May 2, 2005; Linda Moss, *Telecom: Key to Rural Happiness*, MULTICHANNEL NEWS, Mar. 28, 2005.

<sup>716</sup> OPASTCO Comments at 7.

<sup>717</sup> See, e.g., OPASTCO Comments at 4; NTCA Comments at 12.

<sup>718</sup> NRTC Comments at 2. NRTC reports that, in March 2005, it and the National Rural Electric Cooperative Association's Cooperative Research Network entered into a partnership to conduct two pilot projects to study the performance of broadband-over-powerline in rural communities. NRTC Comments at 4.

<sup>719</sup> OPASTCO reports that based on a survey of its membership, approximately 50 percent use coaxial cable/hybrid fiber coax; 20 percent use IPTV over DSL; 14 percent use radio frequency based fiber to the home; 13 percent use asynchronous transfer mode; 8 percent use IP-based fiber to the home; and one percent use IP-based VDSL. Some members use more than one technology. OPASTCO Comments at 3, n.7.

<sup>720</sup> NRTC Comments at 4. NRTC states that a majority of rural telephone companies are exploring video distribution systems using IPTV over digital subscriber lines (DSL). NRTC asserts that video platform costs are a limiting factor for small and rural LECs seeking to provide video services in their territories. According to NRTC, a head-end supporting the MPEG-2 video compression standard costs \$1 million, and a system using the newer (continued...)

it has entered into an agreement with satellite operator SES-AMERICOM to support and market to its members a service called “IP-Prime,” a centralized, satellite-delivered IPTV/MPEG-4 video distribution platform, which will enable small and rural operators to use standard headends to receive signals that can be bundled with standard-definition and HD programming, high-speed Internet, and telephony services.<sup>721</sup> NRTC reports that a commercial rollout of the IP Prime system is expected in the second quarter of 2006.<sup>722</sup>

205. Access to must have programming, including major national cable networks and regional sports networks, on a timely basis and at competitive rates is a key competitive issue for all MVPDs. Small and rural cable operators and LECs planning to offer video programming complain that securing access to programming is cumbersome and expensive.<sup>723</sup> NTCA, a trade association representing more than 560 rural telecommunications providers, reports that small providers lack leverage in their negotiations with video content providers. It states that its members who provide video service spend approximately 50 percent of their operating expenses for programming, adding that it expects that percentage to increase in the future. NTCA adds that rural subscribers are penalized because its member companies serve fewer subscribers than medium- and large-sized MSOs.<sup>724</sup> In addition, NTCA states that some of its members that have analog cable systems are being required to upgrade their facilities to digital in order to gain rights to carry certain programming.<sup>725</sup> NRTC believes that programming providers are hesitant to enter into programming agreements with small and rural LECs that plan to use an IPTV platform due to concerns about digital content copyright infringement.<sup>726</sup> ACA, which represents small cable operators, states that more than half of its members serve fewer than 1,000 subscribers. ACA states that many of its members lack leverage in dealing with large programmers, and that retransmission consent fees will add approximately \$1 billion to the cost of basic cable service in the small cable sector.<sup>727</sup> ACA asserts that “lighter regulatory burdens and costs” of DBS have ensured its success in competing against cable operators in small and rural markets.<sup>728</sup>

206. Many small cable operators purchase video programming through buying cooperatives, such as the National Cable Television Cooperative (NCTC), which represents approximately 1,000

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MPEG-4 compression standard can cost \$3 million, but due to the limited number of households served by the average rural cable operator or LEC, such an investment is not feasible. NRTC Comments at 5-6. According to NRTC, its members believe they must choose IPTV-over-DSL platforms that support the more costly MPEG-4 standard because it will allow them to deliver multiple channels simultaneously and enable delivery of HD programming, which is not possible using MPEG-2 compression over DSL. *Id.* at 5 n.5.

<sup>721</sup> NRTC Comments at 6. NRTC states that the initial capital cost for a fully deployed IPTV/MPEG-4 system capable of delivering up to 200 channels of video programming will be \$100,000.

<sup>722</sup> NRTC Comments at 6.

<sup>723</sup> Michael Hopkins, *Thriving (Albeit Small) Empires*, THE BRIDGE, Sept. 30, 2005. According to one small cable operator executive, most cable operators face a rise in programming costs of 10 percent to 20 percent annually. *Id.* at 6.

<sup>724</sup> NTCA Comments at 3-6.

<sup>725</sup> *Id.* at 12. NTCA reports that one of its members, which provides analog cable television service to only 50 subscribers, would be required to incur an expenditure of \$180,000-\$250,000 to upgrade its network to a digital platform, but the cost of the upgrade would require a substantial increase in rates that would put it at a disadvantage relative to DBS operators. *Id.*

<sup>726</sup> NRTC Comments at 5.

<sup>727</sup> ACA Comments at 15.

<sup>728</sup> *Id.* at 3-4.

independent cable operators serving approximately 14 million subscribers nationwide.<sup>729</sup> NCTC negotiates master agreements with cable programming networks, cable hardware and equipment manufacturers, and other service providers on behalf of its membership. Through NCTC, small cable operators earn volume discounts to which they would not be entitled on their own. Disney states that it provides volume discounts to NCTC on behalf of rural cable operators for each of its national programming services, and adds that 99 percent of NCTC's members opted into ESPN's most recent carriage agreement negotiated with NCTC.<sup>730</sup>

## 2. Competitive Developments in the MDU Market

207. Multiple dwelling units (MDUs) comprise a separate segment of the MVPD market because alternative video providers may have difficulty offering service in MDUs in competition with an incumbent provider.<sup>731</sup> To some extent, competitive choices for MDU residents have been limited, especially from DBS, since many MDU residents do not have the line-of-sight necessary to receive DBS service.<sup>732</sup> DIRECTV reports, however, that it has simplified the delivery of its satellite TV to customers living in apartment buildings.<sup>733</sup> It announced a "single wire" distribution system that makes it possible for DIRECTV to combine all signals from its satellites on a single wire running to multiple set-top boxes in a building.

208. Exclusive contracts are those that specify that video service in an MDU will be provided only by a particular MVPD. Perpetual contracts are those which grant an MVPD the right to provide service for an indefinite or very long period of time, or which have automatic renewal provisions (sometimes referred to as "evergreen" clauses). Competitive entrants into the MVPD market have raised concerns with these kinds of contracts for the past several years. As it did the last two years, BSPA identifies exclusive, long-term MDU access contracts as a barrier to entry.<sup>734</sup> Verizon also raises this issue.<sup>735</sup>

## IV. TECHNICAL ISSUES

209. Technology changes have important consequences for the state of video competition. Accordingly, we report on a number of developments in this area that affect the manner and state of competition. We examine both regulatory developments and market developments that may affect competition in the video market in the coming years.

### A. Navigation and Reception Devices

210. **Tuner Mandate.** The DTV reception requirement initially was implemented in phases based on classes of screen size, mandating a date by which 50 percent of manufactured sets of a certain size must include the capability to receive digital television signals and a later date by which 100 percent of sets of a certain size must contain the necessary circuitry. For television sets 36" and larger, July 1,

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<sup>729</sup> NCTC, at <http://www.cabletvcoop.org/welcome.asp?t=/index.asp>.

<sup>730</sup> Disney Comments at 5.

<sup>731</sup> The incumbent provider is not necessarily the incumbent cable operator. Private cable operators are the incumbent video provider for many MDUs. We note that a Commission proceeding regarding certain issues of inside and home run wiring is still pending. See *Telecommunications Services Inside Wiring, Customer Premises Equipment*, 19 FCC Rcd 1498 (2004).

<sup>732</sup> DIRECTV estimates that as many as half of MDU residents cannot receive DIRECTV service. DIRECTV Comments at 9.

<sup>733</sup> *DirectTV Says Single Wire Simplifies MDU Delivery*, COMMUNICATIONS DAILY, Aug. 19, 2005, at 3.

<sup>734</sup> BSPA Comments at 20-23.

<sup>735</sup> Verizon Comments at 35-39.

2005 was the effective date on which all televisions with an analog tuner were required to include a DTV tuner.<sup>736</sup> On June 9, 2005, the Commission modified the schedule by which new televisions and other receiving devices, such as VCRs and digital video recorders, are required to include the capability to receive over-the-air digital broadcast signals.<sup>737</sup> Specifically, the Commission advanced the date on which 100 percent of TV receivers with screen sizes 25"-36" must include DTV tuners to March 1, 2006.<sup>738</sup> On November 8, 2005, the Commission amended its rules to advance to March 1, 2007 the date on which new television receivers with screen sizes 13"-24" and certain other receiving devices, such as VCRs and digital video recorders, must include the capability to receive digital television signals.<sup>739</sup> The Commission also amended its rules to apply the DTV reception requirement to new receivers with screen sizes smaller than 13" on the same schedule.<sup>740</sup> The Commission made these changes to ensure greater commercial availability and better match the consumer electronics manufacturers' normal product introduction cycle.

211. **CableCARDS and Navigation Devices.** The development and deployment of CableCARDS continued in 2005. As of November 30, 2005, there were 375 certified or verified models of CableCARD products from 22 manufacturers,<sup>741</sup> up from 60 models from 11 manufacturers the previous year.<sup>742</sup> CableCARDS permit the reception of secured digital cable services without the addition of a set-top box. CableCARDS have been deployed to more than 90,000 subscribers by the 10 largest MSOs.<sup>743</sup> While consumers currently need a set-top box to receive two-way services (e.g. VOD, PPV),<sup>744</sup> efforts to develop multi-stream and two-way CableCARDS have continued. Multi-stream unidirectional CableCARDS will permit the development of multi-tuner DVRs without requiring the use of multiple CableCARDS to access each stream. Two-way digital television finally will permit full-featured interactivity without a set-top box. In August 2005, Samsung became the first manufacturer to gain CableLabs certification for a two-way digital television.<sup>745</sup> Additional manufacturers, including Panasonic, LG, Diego, Video Without Boundaries, and Thomson, signed the two-way Cable Host Interface License Agreement (CHILA) in late 2005, enabling them to develop two-way products.<sup>746</sup>

<sup>736</sup> See *Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television*, 17 FCC Rcd 15978 (2002).

<sup>737</sup> See *Requirements for Digital Television Receiving Capability*, 20 FCC Rcd 11196 (2005).

<sup>738</sup> See *id.* ¶ 1. Previously, the deadline for 100 percent compliance was July 1, 2006. The date for 50 percent compliance for TV receivers with screen sizes 25"-36" remained July 1, 2005.

<sup>739</sup> See *Requirements for Digital Television Receiving Capability*, 20 FCC Rcd 18607 (2005). Previously, the deadline for small sets (13"-24") and for other TV receiving devices was July 1, 2007.

<sup>740</sup> See *id.* ¶ 1.

<sup>741</sup> NCTA Comments, CS Docket No. 97-80, filed Dec. 29, 2005; see also NCTA Comments, CS Docket No. 97-80, filed Oct. 3, 2005.

<sup>742</sup> See *2004 Report*, 20 FCC Rcd at 2852 ¶ 187.

<sup>743</sup> NCTA Comments, CS Docket No. 97-80, filed Dec. 29, 2005.

<sup>744</sup> *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices; Compatibility Between Cable Systems and Consumer Electronics Equipment*, 18 FCC 20885 (2003). Video-on-demand and pay-per-view each require two way communications to function properly, VOD for ordering and program control and PPV for ordering. With unidirectional CableCARDS, VOD will not function and PPV requires a separate ordering method. Some interactive electronic program guides (EPGs) also require two-way communication.

<sup>745</sup> CableLabs, *Samsung Electronics Gains CableLabs Certification on 2-Way Digital Television* (press release), Aug. 23, 2005.

<sup>746</sup> See Alan Breznick, *NCTA Unveils Downloadable Conditional Access Plan*, CABLE DIGITAL NEWS, Jan. 1, 2006.



212. In March 2005, the Commission issued a *Second Report and Order* maintaining the ban on cable operator deployment of integrated set-top boxes, but deferring the effective date of the ban by 12 months from July 2006 to July 2007.<sup>747</sup> In doing so, the Commission allowed time for the development of software-based downloadable conditional access and established a December 1, 2005, deadline for the cable industry to report to the Commission on the feasibility of deploying such a conditional access solution.<sup>748</sup> Downloadable conditional access relies upon development of a common hardware platform capable of securely downloading software from any cable operator that will then mimic the cable operator's existing hardware-based conditional access. If a subscriber removes the set-top box and uses it with a different cable operator, the new cable operator downloads a new security system compatible with its conditional access system and erases the previous software-based conditional access code. In July 2005, Comcast, in conjunction with Motorola, Scientific-Atlanta, and NagraVision, demonstrated early development units capable of downloadable conditional access.<sup>749</sup> In November 2005, Comcast hosted a second demonstration in which Motorola, Scientific-Atlanta, and Samsung demonstrated new prototypes capable of more advanced downloadable conditional access functions.<sup>750</sup> On November 30, 2005, NCTA submitted to the Commission the required downloadable security report, which contained a detailed timeline for the development and deployment of downloadable conditional access.<sup>751</sup> NCTA stated that it expected cable operators nationwide to deploy downloadable conditional access by July 1, 2008.<sup>752</sup>

213. Verizon urges the Commission to adopt technology-neutral standards to ensure that FTTP and other modes of video delivery can emerge and compete with traditional cable technology. Verizon contends that CableLabs serves the needs of the cable industry, and it cannot be relied upon to make impartial determinations on technologies that affect competitors to traditional cable operators. Verizon indicates that the International Electrical and Electronic Engineers (IEEE), the Alliance for Telecommunications Industry Solutions (ATIS), the Multimedia over Coax Alliance (MOCA), and other neutral, standards-setting bodies are developing open, competitively neutral standards to govern a variety of other technical issues, such as the transport of digital content over home networks and IPTV.

214. Specifically, Verizon states that the Commission should consider technology-neutral standards in proceedings such as the so-called Plug and Play docket.<sup>753</sup> It argues that the Commission should not adopt DOCSIS 2.0 or any other standard centered on technology only used by traditional cable

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<sup>747</sup> *Implementation of Section 304 of the Telecommunications Act of 1996: Commercial Availability of Navigation Devices*, 20 FCC Rcd 6794 (2005) (*Second Report and Order*). "Integrated" set-top boxes are those that have not separated conditional access and security functions from the tuning, navigation, and other features of the box. To ensure cable compliance with the third-party compatibility requirements of separated security, the Commission has determined a date on which cable operators must rely on separated security. Currently, the Commission plans to ban the "integration" of set-top box functionality and security after July 1, 2007.

<sup>748</sup> *Id.* Conditional access is the means by which cable operators restrict access to their programming. It is generally considered to consist of an encryption technology, which makes digital content inaccessible, and an access provisioning system by which access is granted.

<sup>749</sup> Letter from James L. Casserly, Counsel for Comcast, to Marlene H. Dortch, Secretary, FCC, CS Docket 97-80 (July 18, 2005).

<sup>750</sup> Letter from James L. Casserly, Counsel for Comcast, to Marlene H. Dortch, Secretary, FCC, CS Docket 97-80, (Nov. 30, 2005).

<sup>751</sup> Letter from Daniel L. Brenner, Senior Vice President for NCTA, to Marlene H. Dortch, Secretary, FCC, CS Docket 97-80 (Nov. 30, 2005).

<sup>752</sup> *Id.*

<sup>753</sup> "Plug and Play" refers to *Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices, Compatibility Between Cable Systems and Consumer Electronics Equipment*, 18 FCC Rcd 20885 (2003) (*Plug and Play Rules*), recon. pending.

operators when it considers standards for two-way digital television receivers. Verizon observes that the DOCSIS 2.0 specifications do not address the needs of competing technologies, such as FTTP and digital broadcast satellite.<sup>754</sup> Verizon contends that acceptance of CableLabs' standards, such as DOCSIS 2.0, would lead to the development of equipment (e.g., connectors, set-top boxes, and interfaces built into the television sets) that would impose additional costs on competitors that need to connect to FTTP or digital broadcast satellite infrastructures. Verizon recommends that the Commission adopt the IEEE 802.3i framework, or an alternative that will work with all competing technologies, as the two-way standard.

215. **OCAP and Interactive Television.** The development and deployment of CableLabs' Open Cable Application Platform (OCAP) middleware solution continued in 2005,<sup>755</sup> with 28 firms demonstrating hardware platforms, middleware implementations, interactive TV applications, and network equipment that is OCAP compatible in August 2005.<sup>756</sup> Once a manufacturer adapts OCAP to a specific device, no further customization is required of the application developers. Operators have access to a simplified development, testing, and support environment by limiting the number of versions of each piece of software deployed to customers. Further, manufacturers can develop products that will support all services (including bi-directional services) delivered by cable operators as well as future Interactive Television (ITV) applications and services.

216. As reported earlier, ITV is a service that supports subscriber-initiated choices or actions that are related to one or more video programming streams (e.g., t-commerce, data enhancements, and interactive gaming).<sup>757</sup> Cable operators, DBS operators, application developers, and consumer electronics manufacturers continue to explore a variety of ITV services in order to increase revenue and subscribership. ITV services may also reduce subscriber churn (i.e., subscriber loss). The development and deployment of ITV services will advance as OCAP is implemented and developers create programs capable of running on OCAP platforms and reaching different types of audiences. In their October 14, 2005 update, CEA and NCTA agreed to incorporate support for OCAP in interactive Digital Cable Ready (iDCR) devices, although the two organizations continue to negotiate technical details.<sup>758</sup>

217. In January 2005, Samsung entered into an agreement with three major MSOs, Time Warner, Bright House Cable, and Charter Cable, to implement bi-directional OCAP software in cable set-top boxes.<sup>759</sup> Bi-directional OCAP is a necessary component to allow third parties to produce two-way capable third party set-top boxes. In January 2006, several MSOs announced they would begin trials of

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<sup>754</sup> Specifically, that DOCSIS 2.0 specifies an upstream path that is not consistent with the IP over Ethernet (IEEE 802.3i) alternative for upstream transmission.

<sup>755</sup> Middleware is a term of art for software that acts as an interpretation layer between the operating system and specific devices of a piece of hardware and software. OCAP is related to the more familiar Java platform developed by SUN Microsystems. For each operating system (such as Microsoft Windows or Apple Mac OS), a version of the Java Virtual Machine must be adapted. Once this is done, any program written in Java will run properly. Once OCAP has been tested and certified on a platform (or set-top box, television, or other consumer electronics device), application developers, including the MSOs themselves, may write a single version of their application and test it on one OCAP implementation and be assured it will run on all OCAP implementations.

<sup>756</sup> CableLabs, *Twenty-eight Firms Demonstrate Interoperability on OCAP and eTV Platforms at CableLabs Event* (press release), Aug. 17, 2005.

<sup>757</sup> See 2003 Report, 19 FCC Rcd at 1712-5 ¶¶ 187-192. See also *Nondiscrimination in the Distribution of Interactive Television Services Over Cable*, 16 FCC Rcd 1321 (2001) (ITV NOI).

<sup>758</sup> Letter from Neal M. Goldberg, General Counsel, NCTA, to Marlene H. Dortch, Secretary, FCC, CS-Docket 97-80, (Oct. 14, 2005).

<sup>759</sup> Rodolfo La Maestra, *2005 HDTV Report, Part 4: Satellite, Cable, Broadcasting*, HDTV MAGAZINE, Oct. 14, 2005, at [http://www.hdtvmagazine.com/articles/2005/10/2005\\_hdtv\\_repor\\_2.php?page=1](http://www.hdtvmagazine.com/articles/2005/10/2005_hdtv_repor_2.php?page=1), at 3 (visited Dec. 8, 2005).

OCAP in select markets: Comcast in Philadelphia, Denver, Boston, and Union, New Jersey; Time Warner in New York, Milwaukee, Green Bay, Lincoln and Waco; Advance/Newhouse in Indianapolis. Cox, Cablevision, and Charter made similar announcements, but did not specify the markets where the trials would occur.<sup>760</sup> Samsung also recently achieved certification status and began testing an OCAP-enabled interactive digital television set, thereby becoming the first consumer electronics manufacturer to build a two-way integrated digital television capable of handling interactive digital cable content and services, including VOD.<sup>761</sup> Panasonic and LG also have joined Samsung in entering into agreements with CableLabs, allowing them to implement OCAP middleware on cable-ready digital TVs, set-top boxes, and other products to support two-way, interactive cable services.<sup>762</sup> Panasonic has announced it will become the first major manufacturer to supply OCAP based set-top boxes in an agreement with Comcast.<sup>763</sup>

218. In addition, the Advanced Television Systems Committee (ATSC) recently approved the Advanced Common Application Platform (ACAP), which synchronizes the ATSC DTV Application Software Environment (DASE) Standard with OCAP. The new standard provides consumers with advanced interactive services, while providing content creators, broadcasters, cable operators and consumer electronics manufacturers with the technical details necessary for the development of services and products interoperable with both cable and broadcast.<sup>764</sup> The cost and complexity of design, implementation, and support decrease by having a common application platform on which to develop services.

## B. Emerging Technologies

219. ***Fiber Optic Delivery of Video.*** Fiber to the Premises (FTTP) and Fiber to the Node (FTTN) are emerging as competitive methods for the delivery of voice, video, and data. Both Verizon and SBC are deploying Broadband Passive Optical Networks (BPON). In September 2005, Verizon launched FiOS TV, which was expected to offer video programming to an anticipated three million homes passed by their FTTP plant by the end of 2005.<sup>765</sup> Verizon delivers video programming from two national super-headends to regional video hub offices via its Sonet network. Verizon inserts local broadcast signals and public, educational, and government channels at the hub offices, and then transmits the signals to the central offices (COs) for distribution to customer premises. All VOD content and the interactive program guide are sent using the Internet Protocol (IP).<sup>766</sup> Video entering as an IP stream will

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<sup>760</sup> CableLabs, *Cable Television Industry Voices Support for OCAP and Two-Way Digital Cable-Ready Product Deployments* (press release), Jan. 11, 2006.

<sup>761</sup> CableLabs, *Samsung Electronics Gains CableLabs Certification on 2-Way Digital Television* (press release), Aug. 23, 2005. Samsung, *Samsung and Time Warner Cable Deploy World's First Interactive OCAP TV* (press release), Jan. 11, 2006.

<sup>762</sup> *Panasonic Signs CableLabs Licenses for Two-Way Digital Cable Products*, SPECS NEWS AND TECHNOLOGY VOL. 17 NO. 2, March/April 2005, at [http://www.cablelabs.com/news/newsletter/SPECS/MarApr\\_2005](http://www.cablelabs.com/news/newsletter/SPECS/MarApr_2005) (visited Dec. 8, 2005).

<sup>763</sup> Panasonic, *Panasonic and Comcast Announce Industry-First Agreement for Enhanced OCAP HD-DVR Set-Top Boxes and OCAP Software License* (press release), Jan. 4, 2006.

<sup>764</sup> Advanced Television Systems Committee, *ATSC Publishes "ACAP" Standard For Interactive Television* (press release), Sept. 6, 2005.

<sup>765</sup> Linda Haugsted, *Verizon, FiOS TV Launch is "Seismic,"* MULTICHANNEL NEWS, May 22, 2005, at <http://www.multichannel.com/article/CA6259344.html> (visited Sept. 22, 2005).

<sup>766</sup> Vince Vittore, *Verizon Uses RF for FiOS TV*, Telephony Online, Sept. 26, 2005, at [http://telephonyonline.com/ftp/marketing/telecom\\_verizon\\_uses\\_rf/index.html](http://telephonyonline.com/ftp/marketing/telecom_verizon_uses_rf/index.html) (visited Sept. 26, 2005).

be sent to the set-tops using Multimedia over Coax (MoCA) technology.<sup>767</sup> Verizon is expected to use MoCA for set-top upstream capabilities. Currently, Verizon plans deployment of its high-speed data, voice, and video networks in 15 states.<sup>768</sup> SBC projects it will pass nearly 18 million households in 13 states by the end of 2007 with its FTTN Project Lightspeed.<sup>769</sup> Both Verizon FiOS and SBC Project Lightspeed will offer data speeds in excess of current average broadband speeds and will provide video services competitive with existing offerings from the major MSOs.<sup>770</sup>

220. Other FTTP deployments also are occurring. Developers of active FTTP architectures are entering into agreements primarily with smaller telephone companies, municipalities, and utilities. Active networks use active electronic devices (*e.g.*, amplifiers, splitters), and the platform enables sending only the channel the subscriber is watching, providing more efficient use of spectrum and preventing signal theft through compromised or unauthorized set-top boxes. For example, the Utah Telecommunications Open Infrastructure Agency (UTOPIA) and iProvo are using active FTTP architecture. UTOPIA connects 140,000 homes and businesses in Salt Lake City.<sup>771</sup> iProvo is building out a network that reaches 27,000 homes and 4,100 businesses and has recently completed Phase 5 of its deployment.<sup>772</sup>

221. ***Distributed Transmission of Digital Television (DTS/DTx)***. A DTV distributed transmission system employs multiple synchronized transmitters spread around a television station's service area. Each transmitter broadcasts the station's DTV signal on the same channel, relying on the performance of "adaptive equalizer" circuitry in DTV receivers to cancel or combine the multiple signals plus any reflected signals to produce a single signal. Such distributed transmitters are considered to be similar to analog TV booster stations, a secondary, low-power service used to "fill in" gaps in the parent station's coverage area, but DTV technology has the potential to enable this type of operation more efficiently than its analog predecessor.<sup>773</sup>

222. In the *Second DTV Periodic Report and Order*, the Commission approved, in principle, the use of distributed transmission system (DTS) technologies but deferred to a separate proceeding the development of rules for DTS operation and the examination of several policy issues related to its use.<sup>774</sup> In November 2005, the Commission issued a *Notice of Proposed Rulemaking* to examine the issues related to the use of DTS and proposed rules for future DTS operation.<sup>775</sup> The proposed rules would permit an existing authorized broadcast station to use DTS after the new, post-transition DTV Table of Allotments is established and the current freeze on the filing of most applications is lifted. This would

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<sup>767</sup> *Id.* See paras. 224-5 *infra*.

<sup>768</sup> *Id.* at 18.

<sup>769</sup> *Id.* at 21.

<sup>770</sup> Verizon, *Verizon FiOS FAQ*, at <http://www2.verizon.com/FiOSforhome/channels/FiOS/root/faq.asp> (visited Oct. 19, 2005).

<sup>771</sup> Utah Telecommunications Open Infrastructure, at <http://www.utopianet.org/> (visited Oct. 19, 2005).

<sup>772</sup> Provo City Telecom, *iProvo General Information*, at [http://www.iprovo.net/modules/xoopsfaq/index.php?cat\\_id=1](http://www.iprovo.net/modules/xoopsfaq/index.php?cat_id=1) (visited Oct. 19, 2005).

<sup>773</sup> The Commission's Spectrum Policy Task Force has recommended that digital television broadcasters be permitted to operate single frequency low power distributed transmission systems within their present service areas. See *Spectrum Policy Task Force Report*, ET Docket No. 02-135 (Nov. 2002), available at <http://www.fcc.gov/sptf/reports.html>.

<sup>774</sup> *Second Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television*, 19 FCC Rcd 18279, 18283, 18355-57, ¶¶ 9, 174-78 (2004) (*Second DTV Periodic Report and Order*).

<sup>775</sup> *Digital Television Distributed Transmission System Technologies*, 20 FCC Rcd 17797 (2005).

afford stations the opportunity to apply to maximize their service areas. In addition, the Commission issued a *Clarification Order* with respect to the interim rules established in the *Second DTV Periodic Report and Order*.<sup>776</sup> Those rules continue to be available for stations that wish to apply to use DTS technology during the pendency of the rulemaking proceeding.

223. **Enhanced-VSB (E-VSB).** Enhanced-VSB or E-VSB is an amendment to the ATSC A/53C standard for DTV. E-VSB provides an option to broadcasters to trade off data-rate for a lower carrier-to-noise threshold for a portion of their data stream. This portion can be more resistant to interference and low signal strength conditions. One potential application is for a “fallback audio” stream that could be heard even if the video picture is unavailable. Another could be a small video stream for mobile handheld devices or data transfer to mobile devices. The ATSC has published a number of related Candidate Standards that support the E-VSB System. CS/T3-608 and CS/T3-609 provide transport specifications, and CS/T3-606 provides enhancements to the ATSC PSIP Standard (A/65). Enhancements to AC-3 audio (E-AC-3) are contained in documents CS/T3-613 and CS/T3-614.<sup>777</sup>

224. **Home Networking and Wi-Fi.** Home networking allows consumers to connect multiple devices in the home (e.g., set-top boxes, television sets, personal computers) with each other. Currently, the most common application for home networking is to connect multiple PCs to cable modems. Within the context of video competition, home networks may also be used to transmit video such as downloaded VOD movies. MoCA, the Multimedia over Coax Alliance, was formed to develop specifications for networking over existing in-home coaxial cables.<sup>778</sup> By allowing devices connected to the same set of coax cables to network at high speeds (over 100 Mbps), programming recorded by one PVR in the house can be accessed by any other set-top device in the house.<sup>779</sup> The Digital Living Network Alliance (DLNA), a consortium including Fujitsu, IBM, Intel, Microsoft, and other consumer electronics manufacturers,<sup>780</sup> also is seeking to standardize the interaction of various networked devices in the home to enable the seamless transfer and management of content among enabled devices.<sup>781</sup> In addition, Comcast, Time Warner, and Cox offer home networking using a wireless system based on CableLabs’ CableHome.<sup>782</sup> Another example of home networking is TiVo Corporation’s TiVo ToGo service, which permits consumers to view programming recorded on one TiVo device in the home on other TiVo devices, on home computers, and on portable media players.<sup>783</sup>

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<sup>776</sup> *Id.*

<sup>777</sup> Advanced Television Systems Committee, *ATSC Approves Enhancements to DTV Standard* (press release), July 20, 2004.

<sup>778</sup> Multimedia over Coax Alliance, at <http://www.mocalliance.org/en/index.asp> (visited Oct. 20, 2005). *See also* *Digital Entertainment without Compromise*, CABLENET, at <http://www.cablenet.org/participants/demos/MoCA.pdf> (visited Oct. 20, 2005).

<sup>779</sup> Multimedia over Coax Alliance, *MoCA Concludes Successful Field Trials for Home Networking of Digital Entertainment Using Coax* (press release), Apr. 4, 2005.

<sup>780</sup> DLNA Promoter Members are: Fujitsu, Hewlett Packard, Huawei, IBM, Intel, Kenwood, Lenovo, Microsoft, Motorola, NEC, Nokia, Panasonic, Philips, Pioneer, Samsung, Sharp, Sony, ST, Texas Instruments, Thomson, and Toshiba. For the complete list of member companies, *see* Digital Living Network Alliance, *DLNA Member Companies*, at <http://www.dlna.org/about/roster/> (visited Nov. 7, 2005).

<sup>781</sup> Digital Living Network Alliance, at <http://www.dlna.org/home> (visited Nov. 7, 2005).

<sup>782</sup> CableLabs CableHome, at <http://www.cablelabs.com/projects/cablehome/> (visited Oct. 20, 2005).

<sup>783</sup> TiVo, *TiVoToGo Transfers*, at <http://www.tivo.com/4.9.19.asp> (visited Oct. 20, 2005).

225. Cable operators also are forming alliances with wireless hotspot<sup>784</sup> providers to offer subscribers high-speed data access via Wi-Fi hotspots.<sup>785</sup> For example, Comcast offers its high-speed Internet subscribers owning Wi-Fi enabled laptops the T-Mobile subscription “HotSpot” service.<sup>786</sup> Cox has joined Qwest, Intel, and Arizona State officials to offer a Wi-Fi hotspot service known as Public Online Wireless Electronic Resource (POWER), which provides free wireless broadband service to members of the public in Arizona. Time Warner is deploying its own wireless network in large, heavily trafficked commercial establishments, and Charter is using a Wi-Fi wholesaler to deliver roaming coverage to its cable modem subscribers.<sup>787</sup> Cable operators believe the hotspot coverage will enable additional services and increase revenue streams.

226. **WiMAX and Municipal Wi-Fi.** WiMAX continues to develop as a wireless standard that is expected to become a last mile solution for cable operators, broadband providers, and others.<sup>788</sup> The technology, embodied in IEEE Standard 802.16, has the potential to reach rural customers outside the range of today’s infrastructure and also can be used to provide entire metropolitan areas with high-speed data access. With speeds up to 75 Mbps and ranges up to 30 miles, WiMAX technology is a step in the transition to IP communication entirely without wires.<sup>789</sup> Among the potential applications for WiMAX is the delivery of high-quality video to handheld or portable devices. Development of WiMAX has continued, with the creation of a certification program in April 2005<sup>790</sup> and the opening of an official testing laboratory in July 2005.<sup>791</sup> While the primary proponent of WiMAX has been the Intel Corporation, Nokia also has begun significant investment in the technology.<sup>792</sup> Some analysts do not expect widespread availability of WiMAX before 2010.<sup>793</sup>

227. Closer on the horizon than WiMAX deployment is the provision of wireless broadband by various municipalities, often offered for free.<sup>794</sup> At least six major cities, including Philadelphia, San

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<sup>784</sup> A hotspot is a place where the public can access Wi-Fi service, either for free or for a fee. Hotspots are available at coffee shops, airport lounges, train stations, convention centers, hotels and many other public meeting areas. Corporations, campuses, and local governments also are implementing hotspots to provide wireless Internet access to their visitors and guests. Wi-Fi Alliance, *Glossary of Terms*, at <http://www.wi-fi.com/OpenSection/glossary.asp?TID=2> (visited Jan. 14, 2005).

<sup>785</sup> Wi-Fi is an interoperability certification for wireless local area network (LAN) products based on the Institute of Electrical and Electronics Engineers (IEEE) 802.11 standard.

<sup>786</sup> Alan Breznick, *MSOs Seek Winning Wi-Fi Formula*, CABLE DIGITAL NEWS, Apr. 1, 2005.

<sup>787</sup> *Id.*

<sup>788</sup> Intel Corporation, *WiMAX – Broadband Wireless Access Technology*, at <http://www.intel.com/netcomms/technologies/WiMAX> (visited Oct. 20, 2005).

<sup>789</sup> Intel Corp., *Broadband Wireless Access: IEEE 802.16 and WiMAX White Paper*, Aug. 2003, at <http://www.intel.com/technology/magazine/standards/st08031.pdf> (visited Dec. 8, 2005).

<sup>790</sup> WiMAX Forum, *WiMAX Forum Launches Certification Program, Expects First Equipment in Market by Year-end* (press release), Apr. 18, 2005.

<sup>791</sup> WiMAX Forum, *The WiMAX Forum Showcases Equipment and Breadth of Applications, Opens Test Lab* (press release), July 13, 2005.

<sup>792</sup> Simon Hendery, *WiMAX Not Up To Billing*, NEW ZEALAND HERALD, Oct. 18, 2005, at [http://www.nzherald.co.nz/section/story.cfm?c\\_id=5&objectid=10350750](http://www.nzherald.co.nz/section/story.cfm?c_id=5&objectid=10350750) (visited Oct. 20, 2005).

<sup>793</sup> Marsha Walton, *Is Wifi on Steroids the Next Big Thing?*, CNN, Oct. 17, 2005, at <http://www.cnn.com/2005/TECH/10/17/wireless.WiMAX/index.html> (visited Oct. 20, 2005).

<sup>794</sup> Michael Grebb, *Cities Unleash Free Wi-Fi*, WIRED NEWS, Oct. 19, 2005, at [http://www.wired.com/news/technology/wireless\\_special/0,2914,68999,00.html](http://www.wired.com/news/technology/wireless_special/0,2914,68999,00.html) (visited Oct. 20, 2005).

Francisco, Chicago, Denver, Miami Beach, and Portland, Oregon, have begun developing or announced plans to deploy municipal Wi-Fi networks, either free or at low cost to local residents.<sup>795</sup> In general, municipalities deploy Wi-Fi as a mesh network covering an entire, large area with wireless data access based on IEEE Standard 802.11.<sup>796</sup> Traditional public wireless access has followed the hotspot model already deployed.<sup>797</sup> Some municipalities, including Philadelphia, have partnered with an existing service provider, such as Earthlink, to offer this new network at wholesale rates to competitive ISPs.<sup>798</sup> In some cases incumbent providers and other competitors have sought and continue to seek local and national government prohibitions on publicly funded data networks.<sup>799</sup>

228. **Next Generation Network Architecture.** NGNA is an undertaking by Comcast, Cox, and Time Warner to advance cable operators' transition to all-digital networks without expensive rebuilds. While encompassing many aspects of cable service, including advanced video and audio compression technologies (codecs), such as MPEG-4 and Windows Media 9, a primary goal of NGNA has been the development in 2005 of an alternative software-based conditional access system which continues to support cable operators' existing security. Comcast and Motorola have begun development of a solution based on Motorola's MediaCipher technology.<sup>800</sup> The companies demonstrated this technology to the Commission at a Comcast-hosted event in July 2005.<sup>801</sup>

229. **Advanced Compression.** The use of advanced codecs in place of MPEG-2 can significantly decrease the amount of bandwidth required to transmit digital video. Although advanced compression technologies require significant investment in new hardware, MVPDs have embraced the reduction in bandwidth that advanced compression allows. Existing video delivery services are able to provide more programming and new entrants face decreased barriers to entry into the competitive video marketplace.<sup>802</sup> MVPDs have focused on two codecs – MPEG-4/H.264 (also known as AVC) and Microsoft's VC-1 (formerly Windows Media 9/VC-9). Both AVC and VC-1 are included in the HD-DVD and Blu-ray BD-ROM high-definition disc specifications along with MPEG-2, which provides at least one new pipe into the home for HD programming.<sup>803</sup> The ATSC has several candidate standards

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<sup>795</sup> *Id.*

<sup>796</sup> A mesh network is a network that provides a direct connection between each site and every other site. Through the use of intelligent internetworking devices, each transmission might be routed over an alternative path should the primary (direct) path between the two sites be either congested or in a state of failure. See Harry Newton, NEWTON'S TELECOM DICTIONARY (CMP Books, 17<sup>th</sup> ed., 2001), at 434.

<sup>797</sup> Jay Wrolstad, *Cities Take on Wi-Fi Challenge*, CIO TODAY, Oct. 5, 2005, at [http://www.cio-today.com/news/Cities-Take-on-Wi-Fi-Challenge/story.xhtml?story\\_id=011000UKI4MH](http://www.cio-today.com/news/Cities-Take-on-Wi-Fi-Challenge/story.xhtml?story_id=011000UKI4MH) (visited Oct. 19, 2005).

<sup>798</sup> Leslie Cauley, *Debate Swirls over City Wi-Fi Networks*, USA TODAY, Oct. 4, 2005, at [http://www.usatoday.com/tech/products/services/2005-10-04-wifi-networks\\_x.htm](http://www.usatoday.com/tech/products/services/2005-10-04-wifi-networks_x.htm) (visited Oct. 19, 2005).

<sup>799</sup> *Id.*

<sup>800</sup> Jeff Baumgartner, *Blowing It Up*, CED MAGAZINE, June 2005, at 38-46.

<sup>801</sup> Letter from Neal M. Goldberg, General Counsel, NCTA, to Marlene H. Dortch, Secretary, FCC, CS Docket 97-80, (Oct. 14, 2005).

<sup>802</sup> DBS providers DIRECTV and EchoStar are turning to MPEG-4 as a way to increase their video offerings within the limited bandwidth available through their existing satellites. New entrants, such as SBC, are using advanced codecs as a way to maximize the benefits of their initial investments by carrying the greatest number of channels in the minimum amount of bandwidth.

<sup>803</sup> At least one affordable HD-DVD player will be available by the end of the year. JVC, *JVC Unveils Affordable, High Definition DVD Player* (press release), June 8, 2005. Playstation 3 will have a Blu-ray player and is due out in early 2006. See Tony Smith, *Sony Unveils PS3*, THE REGISTER, May 17, 2005, at [http://www.theregister.co.uk/2005/05/17/sony\\_unveils\\_ps3/](http://www.theregister.co.uk/2005/05/17/sony_unveils_ps3/) (visited Oct. 20, 2005).

under consideration that could include AVC and VC-1 for limited use in terrestrial digital broadcasting.<sup>804</sup> In January 2005, DIRECTV announced that it has begun to transition its operation to AVC, with the intent to provide local HD channels nationwide by 2007.<sup>805</sup>

230. **Mobile Video.** Several technologies have emerged to offer broadcast television to mobile telephones. Digital Video Broadcast-Handheld (DVB-H) and QUALCOMM's proprietary MediaFLO technology are the two most prominent mobile video platforms. Tower operator Crown Castle has deployed a single-frequency DVB-H test site in Pittsburgh, Pennsylvania, using spectrum in the 1440-1790 MHz band.<sup>806</sup> The service will provide video at 24-30 frames per second. Crown Castle plans to launch commercially in select major markets, including New York, in 2006 and to deploy nationwide to the top 30 markets throughout 2007.<sup>807</sup> Verizon Wireless plans to use Crown Castle's network to send live television to its phones in the first quarter of 2006.<sup>808</sup> MediaFLO transmissions are expected to use 700 MHz TV channels.<sup>809</sup> On September 27, 2005, QUALCOMM announced the first live, over-the-air demonstration of the FLO (Forward Link Only) Technology delivered to a wireless handset.<sup>810</sup>

231. Mobile phone companies also are beginning to deliver video programming to cellular telephones and other portable devices via 3G data services. Verizon Wireless launched a 3G multimedia service called VCAST in February 2005. Transmitting at a maximum speed of 300 to 500 kbps, VCAST offers on-demand content, as well as 3D games to phones compatible with the next-generation network.<sup>811</sup> Sprint began streaming live Fox News on wireless phones in April 2005 through its Sprint TV service.<sup>812</sup> Satellite radio providers are also testing mobile video. In January 2005, On2 Networks announced that XM Satellite Radio will use On2 Networks' VP6.2 codec for streaming video to mobile receivers in vehicles.<sup>813</sup>

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<sup>804</sup> Currently, the ATSC Technology and Standards Group is considering the possibility of specifying one or two advanced video codecs for the E-VSB mode. CS/TSG-658 and CS/TSG-659, developed by the Specialist Group on Video and Audio Coding (TSG/S6), define the video system characteristics for VC-1 and AVC, respectively.

<sup>805</sup> Robert Heron, *DirectTV's HD Future is MPEG-4*, PC MAGAZINE, Jan. 6, 2005, at <http://www.pcmag.com/article2/0,1759,1748991,00.asp> (visited Oct. 20, 2005).

<sup>806</sup> Junko Yoshida, *Cell Phone Video Gets Real*, EE TIMES, Sept. 20, 2004.

<sup>807</sup> Texas Instruments, *Texas Instruments Brings Live Digital TV to Your Cell Phone* (press release), Oct. 21, 2004. See also Crown Castle, *Crown Castle Mobile Media Becomes Modeo: Showcases Live Mobile TV at International Consumer Electronics Show* (press release), Jan. 4, 2006.

<sup>808</sup> *Verizon Wireless Seen Offering TV via Crown Castle*, EWEK.COM, Oct. 4, 2005, at <http://www.eweek.com> (visited Oct. 20, 2005).

<sup>809</sup> Doug Lung, *Broadcasting to Cell Phones*, TV TECHNOLOGY, Sept. 7, 2005, at <http://www.tvtechnology.com> (visited Sept. 7, 2005).

<sup>810</sup> QUALCOMM, *QUALCOMM Conducts First Live Demonstration of FLO Technology on a Wireless Handset* (press release), Sept. 27, 2005.

<sup>811</sup> Ed Oswald, *Verizon Wireless VCast Goes Live*, BETANEWS.COM, Feb. 1, 2005, at [http://www.betanews.com/article/Verizon\\_Wireless\\_VCAST\\_Goes\\_Live/1107259065](http://www.betanews.com/article/Verizon_Wireless_VCAST_Goes_Live/1107259065) (visited Dec. 12, 2005). See also NCTA Comments at 10-11.

<sup>812</sup> David Hayes, *Sprint Presents Live TV on Phone*, KANSAS CITY STAR, Apr. 19, 2005, at <http://www.kansascity.com/mld/kansascity/business/technology/11428413.htm> (visited Oct. 20, 2005). Viewers see the broadcast at just under 15 frames per second, the minimum required for humans to perceive continuous motion. See also NCTA Comments at 11.

<sup>813</sup> On2 Technologies, Inc., *XM Satellite Radio Selects On2 True Motion VP6* (press release), Jan. 5, 2005.



232. MobiTV launched live broadcast television service beginning in November 2003, although the initial service deployment frame rate was only one frame per second.<sup>814</sup> The first MobiTV service allowed consumers to access some 13 channels in real time.<sup>815</sup> MobiTV today is providing about 36 channels to 500,000 subscribers.<sup>816</sup> The service is available to customers of Sprint PCS, Cingular, and several regional carriers.<sup>817</sup> Other startups, such as GoTV, PacketVideo, and SmartVideo, are delivering video content to phones. Chip manufacturers continue to improve the speed and quality of mobile video.

233. Consumer electronics manufacturers are beginning to offer portable video players. Computer manufacturer Apple recently unveiled a new version of the iPod capable of carrying 75-150 hours of downloaded video.<sup>818</sup> Disney offers programming through the iTunes store that consumers can view on the iPod, including Pixar short films and hit television shows for \$1.99 per download.<sup>819</sup> In March 2005, Sony released the Playstation Portable, a combination portable gaming device and media player that can display full-length movies from a Sony proprietary Universal Media Disc (UMD).<sup>820</sup> CinemaNow offers movie downloads that consumers can view on PCs and on several portable video players from a variety of manufacturers.<sup>821</sup> The Commission will monitor these nascent technologies as their services develop.

234. **DOCSIS 3.0.** CableLab's Data Over Cable Service Interface Specification or DOCSIS continues to be the dominant standard used to provide high-speed Internet service for cable operators. As the throughput to operators increases, their ability to deliver additional and more complex services, including video over IP, increases.<sup>822</sup> As noted in our *2004 Report*,<sup>823</sup> CableLabs will not pursue a new DOCSIS 2.x specification<sup>824</sup> and will instead use routine "Engineering Change Requests"<sup>825</sup> to add many

<sup>814</sup> Jefferson Graham, *With MobiTV, It's Television on the Go*, USA TODAY, Oct. 9, 2005 (*Graham Article*), at <http://www.indystar.com/apps/pbcs.dll/article?AID=/20051009/BUSINESS/510090347/1003/BUSINESS> (visited Dec 12, 2005).

<sup>815</sup> MobiTV, *Watch Live TV Content On Your Sprint Mobile Phone* (press release), Nov. 13, 2003.

<sup>816</sup> Jefferson Graham, *TV on Cellphones? Funny but Profitable*, USA TODAY, Sept. 27, 2005, at [http://www.usatoday.com/tech/products/services/2005-09-27-mobitv\\_x.htm](http://www.usatoday.com/tech/products/services/2005-09-27-mobitv_x.htm) (visited Dec 12, 2005). See also MobiTV, *MobiTV Channel Lineup*, at <http://www.mobitv.com/channels/index.html> (visited Oct. 20, 2005).

<sup>817</sup> *Graham Article*. See also NCTA Comments at 11.

<sup>818</sup> Apple, *Apple Unveils the iPod; Fifth Generation iPod Now Play Music, Photos & Video* (press release), Oct. 12, 2005.

<sup>819</sup> *Apple's Wide-Ranging Video Visions*, IPMediaMonitor, Oct. 17, 2005, at [http://www.ipmediamonitor.com/subscribers/index.htm?article\\_id=46&sid=1](http://www.ipmediamonitor.com/subscribers/index.htm?article_id=46&sid=1) (visited Oct. 20, 2005).

<sup>820</sup> Sony, *Most Anticipated Consumer Product Launch of 2005, PSP [Playstation Portable] Ushers in a New Era In Portable Entertainment* (press release), Mar. 24, 2005.

<sup>821</sup> MediaNow, *CinemaNow is First to Add Download-To-Own Video Option to Online Service* (press release), Jan. 15, 2004.

<sup>822</sup> "Throughput" is the actual amount of useful and non-redundant information which is transmitted or processed. See Harry Newton, *NEWTON'S TELECOM DICTIONARY* (CMP Books, 17<sup>th</sup> ed., 2001), at 697.

<sup>823</sup> *2004 Report*, 20 FCC Rcd 2859 ¶ 209.

<sup>824</sup> Alan Breznick, *CableLabs Drops DOCSIS 2.x Plans, Eyes DOCSIS 3.0 Spec*, CABLE DATACOM NEWS, Sept. 2004.

<sup>825</sup> An Engineering Change Request (ECR) is the first step in the procedure to change CableLabs specifications. CableLabs posts the proposed change to their website and sends the ECR to a subject area working group mail list for work on the proposed change. CableLabs then posts an Engineering Change Order (ECO) to their website with indication of an ECO Comment Deadline. The final step in the procedure to change specifications is called an Engineering Change Notice (ECN), in which the proposed change is officially considered to be part of the (continued...)

of the planned features to the existing DOCSIS 2.0 specification, saving other changes for a future DOCSIS 3.0 specification.<sup>826</sup> DOCSIS 3.0 will enable advanced services, such as Internet video, by supporting delivery of hundreds of Mbps to a single DOCSIS device.<sup>827</sup> CableLabs has selected "packet bonding" over "MPEG bonding"<sup>828</sup> for wideband<sup>829</sup> capabilities in the emerging DOCSIS 3.0 specification.<sup>830</sup> This is partly based on the fact that packet bonding gives operators a faster time to market because the technique can be deployed with existing technologies. Legacy cable modem termination systems (CMTSs), for example, can support packet bonding with a software revision. DOCSIS 3.0 enables channel bonding, a technique that will allow cable operators to offer speeds of 100 Mbps and greater, allowing them to better compete against new fiber-to-the-home (FTTH) technologies.<sup>831</sup> The next-generation of CMTSs under the emerging DOCSIS 3.0 specification may also set the technical groundwork for more IP video in the future.<sup>832</sup>

235. **PacketCable.** PacketCable, another CableLabs project, is the specification standard developed for delivering advanced real-time multimedia services over two-way cable plant.<sup>833</sup> PacketCable uses IP technology to enable a wide range of services, including IP telephony, multimedia

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specification that it modifies. CableLabs, *Glossary*, at <http://www.cablelabs.com/news/glossary.html#E> (visited Sep. 17, 2004).

<sup>826</sup> Alan Breznick, *CableLabs Drops DOCSIS 2.x Plans, Eyes DOCSIS 3.0 Spec*, CABLE DATACOM NEWS, Sept. 1 2004, at <http://www.cabledatcomnews.com/sep04/sep04-3.html> (visited Oct. 20, 2005).

<sup>827</sup> Douglas Shapiro, *CableLabs Financial Analyst Day*, Banc of America Securities, May 20, 2004, at 3.

<sup>828</sup> Packet bonding virtually welds together the multiple channels by breaking down and spreading the MPEG data packets over two or more QAM channels. The cable modem, which already operates in terms of packets, then recombines the packets. Packet Bonding is easier to implement than MPEG bonding because it is compatible with current Cable Modem Termination Service (CMTS, located in the cable headend) architecture. See Alan Breznick and Michael Harris, *Packet Bonding Picked for DOCSIS 3.0*, CABLE DIGITAL NEWS, May 1, 2005, at <http://www.cabledatcomnews.com/may05/may05-1.html> (visited Nov. 17, 2005). MPEG bonding, another form of channel bonding, virtually fuses together multiple 6 MHz channels, thereby creating one larger bandwidth and higher speed channel. See Jeff Baumgartner, *Drilling for Bandwidth: A Pipeline Full of Options Can Help MSOs Keep Pace*, CED MAGAZINE, Mar. 1, 2005, at [http://www.bigbandnet.com/news/inTheNews/2005/news\\_030105b.php](http://www.bigbandnet.com/news/inTheNews/2005/news_030105b.php) (visited Nov. 17, 2005).

<sup>829</sup> The wideband protocol spreads the DOCSIS frames, consisting of the access control and payload increments associated with each IP data flow, "vertically" across the multiple QAMs so that each frame is delivered in a fraction of the time it would take to deliver it in standard DOCSIS single-channel mode. Because DOCSIS frames are transported in the larger framework of 188-byte MPEG transport frames, the actual breaking up of the flow into vertically stacked fragments is done at the MPEG transmission convergence layer, leaving intact the DOCSIS physical and media access control (MAC) layers. See *Cisco Unveils Gig-IP Path Uniquely Suited for Cable*, SCREENPLAYS, Sept. 1, 2005, at <http://www.screenplays.bz/sp105k.html>, (visited Nov. 17, 2005).

<sup>830</sup> Alan Breznick and Michael Harris, *Packet Bonding Picked for DOCSIS 3.0*, CABLE DIGITAL NEWS, May 1, 2005, at <http://www.cabledatcomnews.com/may05/may05-1.html> (visited Oct. 28, 2005).

<sup>831</sup> Jeff Baumgartner, *"Packet Bonding" to be Part of DOCSIS 3.0 and the Modular CMTS*, CED BROADBAND DIRECT, Apr. 18, 2005, at <http://www.cedmagazine.com/article/CA6264575.html> (visited Dec. 12, 2005).

<sup>832</sup> See High-Speed Service Report at Table 3; Alan Breznick and Michael Harris, *Cable Operators, Baby Bells See Big Drop in Data Gains for Q2, (but MSOs Regain Quarterly Market Share Edge as Telcos Fall Faster*, CABLE DIGITAL NEWS, Sept. 1, 2005, at <http://www.cabledatcomnews.com/sep05/sep05-1.html> (visited Dec. 12, 2005).

<sup>833</sup> CableLabs, *PacketCable Home*, at <http://www.packetcable.com> (visited Oct. 19, 2005). See *Availability of Advanced Telecommunications Capability in the United States, Fourth Report to Congress*, 19 FCC Rcd at 20554; Letters from Paul Glist, Cole, Raywid & Braverman, Counsel for CableLabs, to Marlene Dortch, Secretary, FCC, July 28, 2004 and July 29, 2004, at 7-8, 25, respectively.

conferencing, interactive gaming, and general multimedia applications.<sup>834</sup> As of September 2005, 35 PacketCable-embedded multimedia terminal adapter devices were certified by CableLabs.<sup>835</sup> In addition, 31 DOCSIS certified modems also contain PacketCable capabilities. PacketCable Multimedia is an evolution of PacketCable that expands the realm of applications supported. It provides opportunities for better bandwidth management and the deployment of a variety of IP-based services by enabling dynamic bandwidth requests, managing shared edge network resources and integrating noncable specific applications in the DOCSIS environment. PacketCable Multimedia also provides a general, all-purpose quality-of-service (QoS) framework for multimedia applications.<sup>836</sup> PacketCable Multimedia allows MSOs to use its quality-of-service feature to provide better, more consistent VoIP service, which is a critical part of the triple play (*i.e.*, video, voice, data) business model for cable operators, as competing VoIP services, such as Vonage, gain ground.<sup>837</sup>

## V. FOREIGN MARKETS

236. In the *Notice*, the Commission invited comment on the status of competition in foreign markets for the delivery of video programming that would provide insights regarding the nature of competition in the United States and the relative efficiency of market structures and regulations within the United States. In last year's report, we reviewed several countries' experiences with the digital television transition; broadcast, cable and satellite competition; and developments in video over broadband, now more commonly referred to internationally as IPTV.<sup>838</sup> This year we focus on developments in IPTV.

237. The advent of IPTV is a response by both incumbent operators and new entrants to the growth of competition in the provision of broadband services.<sup>839</sup> Although the rates of growth vary worldwide, a number of countries have seen stagnant growth in the fixed line market, due in part to saturation, such as in Western Europe, and due in part to the ubiquity and density of mobile telephone service in Asia and Europe generally, which has led to substitution of mobile telephone service for fixed line service.<sup>840</sup> Incumbents have responded by upgrading their facilities to deliver more advanced services, such as broadband Internet. Similarly, competitive providers have taken advantage of regulatory initiatives in some markets that open up incumbent operators' facilities to competition and, in the European Union, allow cross border competition.<sup>841</sup> Overall, this has led to lower prices, more

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<sup>834</sup> CableLabs, *PacketCable Home*, at <http://www.packetcable.com> (visited Oct. 19, 2005).

<sup>835</sup> CableLabs, *PacketCable Certified Products*, at [http://www.cablemodem.com/downloads/Certified\\_Products.pdf](http://www.cablemodem.com/downloads/Certified_Products.pdf) (visited Oct. 20, 2005). An embedded multimedia terminal adapter (E-MTA) is a device used to enable voice services over a cable modem.

<sup>836</sup> Ellacoya Networks, *Ellacoya Multimedia Service Manager (MSM) PacketCable Multimedia-based Application*, at <http://www.ellacoya.com/products/multimediaMgr.shtml> (visited Dec 12, 2005).

<sup>837</sup> Kurt Dobbins, *The Advantages of PacketCable Multimedia Technology Beyond Voice*, SCTE CABLE-TEC EXPO 2005 PROCEEDINGS, June 14-17, 2005.

<sup>838</sup> *See 2004 Report*, 20 FCC Red at 2860-62 ¶¶ 213-17.

<sup>839</sup> Organization for Economic Co-Operation and Development, *OECD Communications Outlook 2005*, 2005, at 96-97, 124-28.

<sup>840</sup> *See, e.g.*, International Telecommunications Union, *Europe & CIS's Telecommunications/ICT Markets and Trends (ITU European Trends 2005)*, 2005, at 2, at [http://www.itu.int/ITU-D/ict/statistics/at\\_glance/Europe\\_RPM\\_2005.pdf](http://www.itu.int/ITU-D/ict/statistics/at_glance/Europe_RPM_2005.pdf).

<sup>841</sup> For example, in Europe, Telecom Italia operates in France, Netherlands and Germany; BT Group has operations in Italy, Spain, Germany and other countries; and Deutsche Telekom has high-speed Internet operations in France, Spain, Austria, and Switzerland. *ITU European Trends 2005*, at 10.

competition, and increased use of broadband infrastructure to deliver a bundle of services that include voice, data, and video.<sup>842</sup>

238. In Europe, recent developments suggest a measured rollout of IPTV over DSL<sup>843</sup> by incumbents and new entrants.<sup>844</sup> In the United Kingdom, the unbundling of local telephone loop connections prompted several companies to introduce IPTV, in conjunction with telecommunications and Internet access services. As we reported last year, Homechoice has been providing service primarily to residential areas of London, and now passes 2.4 million homes.<sup>845</sup> It recently announced that, beginning in 2006, it will expand its network to 10 million homes passed.<sup>846</sup> Within its present footprint, Homechoice, which reports approximately 34,000 subscribers, is adding new pay-TV customers at a faster rate than either cable or satellite operators.<sup>847</sup> Approximately 55 percent of Homechoice's customers subscribe to all three of its services – video, telephony and Internet access service. The leading telecommunications carrier in the United Kingdom, BT, announced that it would enter the IPTV market in late summer 2006.<sup>848</sup> BT's service will be delivered at a minimum connection speed of 1.5 Mb, and will include a set-top box with an integrated digital over-the-air broadcast receiver and wireline broadband receiver, as well as a DVR capable of storing up to 80 hours of programming and capable of displaying HD content.<sup>849</sup> BT's service also will include VOD services characterized as “catch-up TV,” in which programs from the previous seven days' broadcast schedule will be available on demand without the need to record; 30 digital over-the-air TV channels; communications services, including instant messaging, chat, and video telephony on TV; and interactive services.<sup>850</sup>

239. Italy's FastWeb, one of Europe's first IPTV providers, which launched in 2001, reported that it has approximately 644,000 subscribers as of September 2005.<sup>851</sup> FastWeb's network covers 85

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<sup>842</sup> For example, according to the ITU, competition to European incumbent operators is common, with approximately 85 percent of local markets, 73 percent of long distance markets, and 74 percent of international markets open to other operators. *ITU European Trends 2005*, at 1. See e.g., Gerry Blackwell, *IPTV: The Big Picture*, ISP Planet, Apr. 15, 2005; Robert Clark, *Going for the Treble*, Telecom Asia, June 2005; Evan Ramstad, *Triple Play*, WALL STREET JOURNAL, Oct. 24, 2005; *IPTV Builds Momentum in Several Markets*, Point Topic.com, Feb. 22, 2005.

<sup>843</sup> Approximately 90 percent of broadband Internet connections in Europe rely on ADSL infrastructure. *ITU European Trends 2005*, at 10.

<sup>844</sup> By one estimate, one percent of Western European households subscribed to IPTV services in 2004. IDC, Inc., *European Telcos Become Entertainment Providers Through Launch of IPTV Services* (press release), Aug. 24, 2005. IDC projects that, by 2009, approximately six percent of Western European households will subscribe to IPTV services.

<sup>845</sup> See *2004 Report*, 20 FCC Rcd at 2861 ¶ 216.

<sup>846</sup> *Video Networks to Roll-Out Homechoice Nationally*, IPTV NEWS, Nov. 3, 2005. Homechoice provides end-to-end customer service and installed its own network work equipment in 137 BT central office facilities.

<sup>847</sup> *Video Networks to Roll-Out Homechoice Nationally*, IPTV NEWS, Nov. 3, 2005.

<sup>848</sup> *BT IPTV Launch By Summer 2006*, THE REGISTER (UK), Sept. 28, 2005.

<sup>849</sup> *BT Select Philips as Set Top Box Provider for Broadband Services*, IPTV NEWS, Oct. 26, 2005. In the UK, Freeview is the principal over-the-air digital television service, allowing the reception of 30 digital broadcast channels, and accounts for 5.178 million of the UK's 15.7 million total digital television households. See Ofcom, *Digital Television Update – 2005 Q2*, Sept. 15, 2005.

<sup>850</sup> *BT Select Philips as Set Top Box Provider for Broadband Services*, IPTV NEWS, Oct. 26, 2005.

<sup>851</sup> FastWeb SpA, *FastWeb Files Q3 Prelims* (press release), Oct. 7, 2005. Last year, we reported that FastWeb had 151,000 customers as of June 2004. See *2004 Report*, 20 FCC Rcd at 2861 ¶ 214. One factor contributing to the sharp increase in FastWeb subscribers was a promotion in which premium channels showing professional soccer games were given away for free with new subscriptions. Gerry Blackwell, *IPTV Grows in Europe*, ISP Planet, June (continued....)

cities and population centers in Italy, passing a total of 7.5 million homes.<sup>852</sup> FastWeb plans to extend its network to 30 million homes passed by the end of 2006. FastWeb is the only Italian operator offering a triple play service package of video, voice, and data service. For approximately \$30 a month, FastWeb's basic package offers metered broadband service of 300 minutes of voice and Internet access, including Internet access of 10 Mbps download for subscribers with a fiber optic connection and 6 Mbps download for subscribers with a DSL connection; and a package of television programming that includes four national Italian broadcast channels, a collection of thematic and international channels (e.g., CNN, Cartoon Network, Disney Channel); VOD; and a network-based DVR.<sup>853</sup> Beyond the included video programming, FastWeb offers a range of thematic programming tiers, such as Sports and Movies, and also offers programming on an a la carte basis.<sup>854</sup> Approximately 40 percent of FastWeb's subscribers choose to subscribe to a la carte channels and subscription packages.<sup>855</sup> In addition, FastWeb resells on an a la carte basis some of the programming of its principal video programming competitor, Sky Italia. In July 2005, Telecom Italia launched free trials of its IPTV over ADSL service in Rome, Milan, Bologna, and Palermo and was expected to introduce the service in 21 Italian cities by the end of 2005. The service will feature live TV, including exclusive Italian football matches, top Italian basketball, and VOD. Telecom Italia is using Microsoft TV IPTV Edition software.<sup>856</sup>

240. France has three national operators providing IPTV service. France Telecom's MaLigne TV, a DSL-based service, passes approximately 8.5 million homes and has approximately 142,000 subscribers as of September 2005.<sup>857</sup> France Telecom will extend this service to the carriers it owns in the United Kingdom, the Netherlands and Poland by mid-2006.<sup>858</sup> In addition, France Telecom is planning to introduce a set-top box, called "LiveBox," which will be capable of supporting a range of service offerings in addition to home networking.<sup>859</sup> Neuf Telecom launched its IPTV over DSL service in late 2004 and offers a triple play service for approximately \$35 per month, featuring 46 channels and more than 150 additional channels that can be purchased a la carte or in bundles.<sup>860</sup> The third provider, Iliad,

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30, 2005. FastWeb's network is a combination of fiber optic cable and DSL. FastWeb expanded its network following a 2001 Italian anti-trust decision that required Telecom Italia, the incumbent telephone company, to provide access to cable ducts and rights of way that it had built for a cable television network but subsequently abandoned. In addition, the Italian government has subsidized the purchase of the FastWeb set-top box as part of its effort to foster the development of interactive television in Italy. *Id.*

<sup>852</sup> FastWeb SpA, *FastWeb Files Q3 Prelims* (press release), Oct. 7, 2005.

<sup>853</sup> FastWeb SpA, *FastWeb's TV Options*, at [http://www.fastweb.it/principale.php?PAGEST=4\\_family.php](http://www.fastweb.it/principale.php?PAGEST=4_family.php).

<sup>854</sup> For example, FastWeb offers Roma Channel, Milan Channel, and Inter Channel for \$9.45 each per month; Disney Channel and Cartoon Network for approximately \$4.75 each per month; and CNN and ESPN Classic Sport for approximately \$2.40 each per month. FastWeb's VOD service is also available a la carte for approximately \$9.45 per month. See FastWeb SpA, *FastWeb's TV Options*, at [http://www.fastweb.it/principale.php?PAGEST=4\\_family.php](http://www.fastweb.it/principale.php?PAGEST=4_family.php). In addition, FastWeb charges a one time activation fee of approximately \$112.

<sup>855</sup> Gerry Blackwell, *IPTV Grows in Europe*, ISP Planet, June 30, 2005.

<sup>856</sup> *Telecom Italia Readies "Superphone" and IPTV Launch*, CONVERGE NETWORK DIGEST, Oct. 27, 2005.

<sup>857</sup> France Telecom, *Revenues Up By 3.8% in the Third Quarter of 2005* (press release), Oct. 27, 2005.

<sup>858</sup> *France Telecom Outlines NExT – New Experience in Telecom Services*, CONVERGE NETWORK DIGEST, June 30, 2005.

<sup>859</sup> France Telecom, *France Telecom Launches NExT : A Three-Year Transformation Programme to Make France Telecom the Operator of Reference for New Telecom Services in Europe* (press release), June 29, 2005.

<sup>860</sup> See Neuf Telecom, at <http://www.neuf.com/fr/index.html>; Ray Le Maistre, *Neuf: Time is Right for IPTV*, Light Reading, Jan. 31, 2005, available at [http://www.lightreading.com/document.asp?doc\\_id=66872](http://www.lightreading.com/document.asp?doc_id=66872).

markets its triple-play service through its “Free” broadband service provider. At a cost of approximately \$35 per month, in addition to Internet access and telephone service, Free provides 80 free television channels and offers approximately 170 subscription video channels on an a la carte basis or in thematic packages, such as sports and music.<sup>861</sup> As of June 2005, Free had approximately 1.18 million subscribers to its triple-play package, 130,000 of whom choose to subscribe to a la carte video programming.<sup>862</sup>

241. Elsewhere in Europe, in June 2005, Finland’s Alcom, the primary DSL provider for the Aland Islands, launched that country’s first commercial IPTV over DSL service and now serves approximately 1,000 subscribers.<sup>863</sup> Alcom offers 26 channels for approximately \$11 per month.<sup>864</sup> Broadband and telephone service are separate subscriptions and range in price from approximately \$35-\$64 per month, depending on the speed of service.<sup>865</sup> In May 2005, Russian company Sistema Multimedia launched its IPTV service Stream TV, which offers Internet access, VOD, and 80 Russian and international television channels, with a basic service package costing approximately \$9.95 per month. The service, which is available to approximately 3.3 million Moscow homes, allows subscribers to add new video channels or packages on an a la carte basis.<sup>866</sup>

242. In Asia, a number of countries have seen the introduction of IPTV services by both incumbent operators and new entrants. One analyst argues that Asia is “fertile ground” for IPTV services given incumbent operators’ extensive existing wireline networks, high population density of urban areas, leadership of Asian countries in broadband penetration growth, widespread deployment throughout Asia of ADSL networks supporting at least 6 Mbps to residential areas, and government policies encouraging aggressive broadband implementation through a combination of regulatory flexibility and financial incentives.<sup>867</sup> PCCW of Hong Kong launched its IPTV service Now Broadband TV (NOW) in 2003 and had over 441,000 subscribers as of June 2005.<sup>868</sup> The service is offered on a stand-alone basis or in combination with PCCW’s Netvigator broadband Internet access service. NOW offers customers 15 free video channels and 57 subscription video channels, 22 of which are exclusive to the provider.<sup>869</sup> NOW allows its customers to subscribe to individual channels on a month-to-month, six-month, or 12-month basis, in addition to annually based subscriptions to packages of programming offered by other providers. At present the service does not support any DVR functionality, nor can any content be recorded by any other means.<sup>870</sup> In China, despite aggressive deployment of broadband infrastructure, the rollout of IPTV

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<sup>861</sup> See Iliad Group, at <http://www.iliad.fr/en/activities/internet.html>. For example, Free’s music pack, consisting of three MTV channels and two VH1 channels, costs approximately \$2.30 per month.

<sup>862</sup> Iliad Group, *Leading Voice over IP and TV over ADSL Operator in Europe* (press release), Aug. 2, 2005.

<sup>863</sup> *Alcom Launches First IPTV Over DSL Service in Finland Using Paradyne’s Broadband Access Solutions*, Business Wire, June 13, 2005.

<sup>864</sup> Alcom Datakommikation, Aland.tv – Digital TV Over Broadband, at [http://www.alcom.aland.fi/index.php?page=produkter/aland\\_tv.php](http://www.alcom.aland.fi/index.php?page=produkter/aland_tv.php).

<sup>865</sup> *Id.*

<sup>866</sup> *Stream TV IPTV Service Launches in Russia*, Informatv, May 13, 2005; Sistema Multimedia, *Sistema Multimedia Launches Interactive Television* (press release), May 11, 2005.

<sup>867</sup> See Jeffrey Soong, *Why is Asia Leading the Global IPTV Revolution?*, CONVERGE NETWORK DIGEST, June 23, 2005.

<sup>868</sup> PCCW Limited, *PCCW Reports 2005 Interim Results* (press release), Aug. 18, 2005.

<sup>869</sup> Individual channels cost approximately \$0.80 per month; movie channels, such as HBO, cost approximately \$6 per month. Bundles of channels cost approximately \$15 per month. Evan Ramstad, *Triple Play*, WALL STREET JOURNAL, Oct. 24, 2005.

<sup>870</sup> NOW employs three-layered content protection comprising network-based conditional access, digital copyright protection, and analog copyright protection, resulting in no instances of piracy, compared to the 15 percent piracy (continued....)

has been very slow and is limited to trials at the present time, as China's major telecommunications operators await the issuance of IPTV licenses by the State Administration of Film, Radio, and Television.<sup>871</sup> Four companies in Japan provide IPTV service, and a new service was expected to launch in South Korea before the end of 2005.<sup>872</sup>

## VI. ADMINISTRATIVE MATTERS

243. This *2005 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).

244. It is ORDERED that the Office of Legislative Affairs shall send copies of the *2005 Report* to the appropriate committees and subcommittees of the United States House of Representatives and the United States Senate.

245. *Accessible Formats.* To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to [fcc504@fcc.gov](mailto:fcc504@fcc.gov) or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (TTY). *Ex Parte Rules.* There are no *ex parte* or disclosure requirements applicable to this proceeding pursuant to 47 C.F.R. § 1.1204(b)(1).

246. Pursuant to Sections 1.415 and 1.419 of the Commission's rules, 47 C.F.R. §§ 1.415, 1.419, interested parties may file comments on paragraphs 31-36 in MB Docket No. 05-255 on or before April 3, 2006, and reply comments on or before April 18, 2006. Comments may be filed using: (1) the Commission's Electronic Comment Filing System (ECFS), (2) the Federal Government's eRulemaking Portal, or (3) by filing paper copies. *See* Electronic Filing of Documents in Rulemaking Proceedings, 63 FR 24121 (1998).

- *Electronic Filers:* Comments may be filed electronically using the Internet by accessing the ECFS: <http://www.fcc.gov/cgb/ecfs/> or the Federal eRulemaking Portal: <http://www.regulations.gov>. Filers should follow the instructions provided on the website for submitting comments.
  - For ECFS filers, if multiple docket or rulemaking numbers appear in the caption of this proceeding, filers must transmit one electronic copy of the comments for each docket or rulemaking number referenced in the caption. In completing the transmittal screen, filers should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions, filers should send an e-mail to [ecfs@fcc.gov](mailto:ecfs@fcc.gov), and include the following words in the body of the message, "get form." A sample form and directions will be sent in response.

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

rate of other pay TV operators in Hong Kong. This triple layer of digital content protection is credited with enabling PCCW to obtain exclusive programming rights from programmers concerned with the piracy of their programming on IP-based video networks. Jeffrey Soong, *Why is Asia Leading the Global IPTV Revolution?*, CONVERGE NETWORK DIGEST, June 23, 2005. PCCW is expected to introduce a network-based DVR functionality. Entone Technologies, *Entone Selected for World's Largest IPTV VOD Deployment* (press release), Oct. 3, 2005.

<sup>871</sup> Ray le Maistre, *China Mulls IPTV Licenses*, Light Reading, Jan. 13, 2005, available at [http://www.lightreading.com/document.asp?doc\\_id=65985](http://www.lightreading.com/document.asp?doc_id=65985).

<sup>872</sup> *See* Evan Ramstad, *Triple Play*, WALL STREET JOURNAL, Oct. 24, 2005; Ginny Parker Woods, *In the Fast Lane*, WASHINGTON POST, Oct. 24, 2005.

- *Paper Filers:* Parties who choose to file by paper must file an original and four copies of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail). All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- The Commission's contractor will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, NE., Suite 110, Washington, DC 20002. The filing hours at this location are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail should be addressed to 445 12<sup>th</sup> Street, SW, Washington DC 20554.
- In addition, parties must serve the following with either an electronic copy via e-mail or a paper copy of each pleading: (1) the Commission's duplicating contractor, Best Copy and Printing, Inc., Portals II, 445 12<sup>th</sup> Street, S.W., Room CY-B402, Washington, D.C. 20554, telephone 1-800-378-3160, or via e-mail at [www.bcpiweb.com](http://www.bcpiweb.com); (2) Marcia Glauber, Media Bureau, 445 12<sup>th</sup> Street, S.W., Room 2-C264, [Marcia.Glauber@fcc.gov](mailto:Marcia.Glauber@fcc.gov); (3) Anne Levine, Media Bureau, 445 12<sup>th</sup> Street, S.W., Room 2-A864, [Anne.Levine@fcc.gov](mailto:Anne.Levine@fcc.gov); and (4) Timothy May, Media Bureau, 445 12<sup>th</sup> Street, S.W., Room 2-C315, [Timothy.May@fcc.gov](mailto:Timothy.May@fcc.gov).

247. *People with Disabilities:* Contact the FCC to request materials in accessible formats (Braille, large print, electronic files, audio format, etc.) by e-mail at [fcc504@fcc.gov](mailto:fcc504@fcc.gov) or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (TTY).

248. The Media Bureau contacts for this proceeding are Anne Levine at (202) 418-7027, [Anne.Levine@fcc.gov](mailto:Anne.Levine@fcc.gov), and Timothy May at (202) 418-1463, or [Timothy.May@fcc.gov](mailto:Timothy.May@fcc.gov).

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch  
Secretary



**APPENDIX A****LIST OF COMMENTERS****Initial Comments**

Alcatel  
American Cable Association (ACA)  
The America Channel (TAC)  
Association of Public Television Stations (APTS)  
BellSouth Corporation and BellSouth Entertainment, LLC (BellSouth)  
Broadband Service Providers Association (BSPA)  
CenturyTel, Inc.  
Cincinnati Bell Inc.  
City of Ontario, California  
Comcast Corporation (Comcast)  
Community Broadcasters Association (CBA)  
Consumer Electronics Association (CEA)  
Consumers for Cable Choice  
DIRECTV, Inc.  
EchoStar Satellite L.L.C. (EchoStar)  
Media General, Inc.  
National Association of Broadcasters (NAB)  
National Cable & Telecommunications Association (NCTA)  
National Rural Telecommunications Cooperative (NRTC)  
National Telecommunications Cooperative Association (NTCA)  
Network Domain, LLC  
Qwest Communications International Inc. (Qwest)  
RCN Telecom Services, Inc. (RCN)  
SBC Communications, Inc. (SBC)  
Telecommunications Industry Association (TIA)  
United States Telecom Association (USTA)  
Verizon Communications Inc. (Verizon)  
The Walt Disney Company (Disney)  
W.A.T.C.H. TV Company (W.A.T.C.H. TV)

**Reply Comments**

ABC, CBS and NBC Television Affiliate Associations (Affiliates Associations)  
BellSouth Corporation and BellSouth Entertainment, LLC (BellSouth)  
Comcast Corporation (Comcast)  
Consumer Electronics Association (CEA)  
DIRECTV, Inc.  
EchoStar Satellite L.L.C. (EchoStar)  
iN DEMAND L.L.C.  
Joint Cable Commenters (Advance/Newhouse Communications, Cox Communications, Inc.,  
and Insight Communications)  
National Association of Broadcasters (NAB)

National Cable & Telecommunications Association (NCTA)  
Organization for the Promotion and Advancement of Small Telecommunications Companies (OPASCO)  
Paxson Communications Corporation (Paxson)  
Qwest Communications International Inc. (Qwest)  
SBC Communications, Inc. (SBC)  
Time Warner Cable Inc. (Time Warner)  
The United States Telecom Association (USTA)  
Verizon Communications Inc. (Verizon)

**APPENDIX B**  
**TABLE B-1**  
**Assessment of Competing Technologies**

Technology Used	June 01	June 02	June 03	June 04	June 05
(1) TV Households Percent Change	102,184,810 1.37%	105,444,330 3.19%	106,641,910 1.14%	108,410,160 1.66%	109,590,170 1.09%
(2) MVPD Households <sup>(i)</sup> Percent Change Percent of TV Households	86,062,074 3.72% 84.22%	87,562,641 1.74% 83.04%	88,312,191 0.86% 84.18%	92,295,766 4.51% 85.14%	94,226,357 2.09% 85.98%
(3) Cable Subscribers Percent Change Percent of MVPD Total	66,732,000 0.73% 77.54%	66,472,000 -0.39% 75.91%	66,050,000 -0.63% 73.58%	66,100,000 0.08% 71.62%	65,400,000 -1.06% 69.41%
(4) MMDS Subscribers Percent Change Percent of MVPD Total	700,000 0.0% 0.81%	490,000 -30.00% 0.56%	200,000 -59.18% 0.22%	200,000 0.00% 0.22%	100,000 -50.00% 0.11%
(5) PCO Subscribers Percent Change Percent of MVPD Total	1,500,000 0.0% 1.74%	1,600,000 6.67% 1.83%	1,200,000 -25.00% 1.34%	1,100,000 -8.33% 1.19%	1,000,000 -9.09% 1.06%
(6) HSD Subscribers Percent Change Percent of MVPD Total	1,000,074 -32.28% 1.16%	700,641 -29.94% 0.80%	502,191 -28.32% 0.56%	335,766 -33.14% 0.36%	206,358 -38.54% 0.22%
(7) DBS Subscribers Percent Change Percent of MVPD Total	16,070,000 23.74% 18.67%	18,240,000 13.50% 20.83%	20,360,000 11.62% 22.68%	23,160,000 13.75% 25.09%	26,120,000 12.78% 27.72%
(8) OVS Subscribers <sup>(ii)</sup> Percent Change Percent of MVPD Total	60,000 0.00% 0.07%	60,000 0.00% 0.07%			
(9) BSP Subscribers <sup>(iii)</sup> Percent Change Percent of MVPD Total			1,460,000 N/A 1.63%	1,400,000 -4.11% 1.52%	1,400,000 0.00% 1.49%

**Notes:**

- (i) The total number of MVPD households given on this table is the sum of the subscribers to each of the MVPD services listed. The actual total number of MVPD households is likely to be somewhat less than the given figure since some households subscribe to the services of more than one MVPD. *See 1994 Report, 9 FCC Rcd at 7480.* However, the number of households subscribing to more than one MVPD is expected to be low. Hence, the total can be seen as a reasonable estimate of the number of MVPD households.
- (ii) Beginning in 2003, we combined OVS subscribers with BSP subscribers. We are no longer, therefore, reporting a separate number for OVS subscribers.
- (iii) This number includes some, if not all, OVS subscribers, and may double count some cable subscribers from newer cable overbuild systems. We started reporting this number two years ago and thus we do not have subscribers for years prior to 2003.

**Sources:**

- (1) Television households: All years, *Nielsen Media Research*.
- (2) Total MVPD households: The sum of the total number of subscribers listed under each of the categories of the various technologies. See note (i) above.
- (3) Cable subscribers: All years, Kagan Research, LLC, *Kagan's 10-Pay TV Subscriber History*, Broadband Cable Financial Databook 2005, July 2005, at 11.
- (4) MMDS subscribers: 2001 from NCTA Comments for the *2001 Report* at 7; 2002 from NCTA Comments for the *2002 Report* at 12; 2003 from NCTA Comments for the *2003 Report* at 8; 2004 from NCTA Comments at 7, n.12; 2005 from NCTA, *Analysis of MVPDs: March 2005*, Cable Developments 2005 at 15.
- (5) PCO (SMATV) subscribers: 2001 subscribers from NCTA Comments for the *2001 Report* at 9; 2002 subscribers from NCTA Comments for the *2002 Report* at 12; 2003 subscribers from NCTA Comments for the *2003 Report* at 8; 2004 subscribers from NCTA Comments at 7, n.12; 2005 from Kagan Media Research, *Media Trends 2005*, at 69.
- (6) HSD subscribers: 2001 from SBCA Comments for the *2001 Report*, Table 1 at 4; 2002 from SkyReport.com at [http://www.skyreport.com/dth\\_us.htm](http://www.skyreport.com/dth_us.htm); 2003 from SBCA Comments for the *2003 Report* at 4; 2004 from *2004 Report*, 20 FCC Rcd at 2798 ¶ 64; 2005 from *C-Band Decline Continues*, Satellite Business News FAXUpdate, July 6, 2005.
- (7) DBS subscribers: 2001 from SBCA Comments for the *2001 Report*, Table 1 at 4; 2002 from SkyReport.com at [http://www.skyreport.com/dth\\_us.htm](http://www.skyreport.com/dth_us.htm); 2003 from SBCA Comments for the *2003 Report* at 4; 2004 from *2004 Report*, 20 FCC Rcd at 2792 ¶ 54; 2005 from The DIRECTV Group, Inc., *SEC Quarterly Report Form 10-Q Pursuant to Section 13 or 15(d) of the Securities Act of 1934 for the Quarterly Period Ended June 30, 2005*, at 40, and EchoStar Communications Corp., *SEC Quarterly Report Form 10-Q Pursuant to Section 13 or 15(d) of the Securities Act of 1934 for the Quarterly Period Ended June 30, 2005*, at 25.
- (8) BSP subscribers: 2003 subscribers from NCTA Comments for the *2003 Report* at 8; 2004 subscribers from BSPA Comments at 6 for the *2004 Report* and Commission estimates; 2005 subscribers from Commission estimates.

**TABLE B-2**  
**Number and Subscriber Size of Major Cable System Clusters**  
**(Cumulative Figures)**

Range of Clustered Subscribers (thousands)	2001		2002		2003		2004	
	Clusters	Subscribers (millions)	Clusters	Subscribers (millions)	Clusters	Subscribers (millions)	Clusters	Subscribers (millions)
100-199	30	4.3	31	4.5	34	4.9	46	5.4
200-299	17	4.2	18	4.4	18	4.4	18	6.3
300-399	18	6.1	21	7.1	17	5.7	17	6.6
400-499	10	4.4	10	4.4	10	4.4	8	3.5
>500	32	33.3	29	31.0	29	34.3	29	29.7
<b>Total</b>	107	52.3	109	51.3	108	53.6	118	51.5

**Sources:**

2001 from Kagan World Media, *Major Cable TV Systems/Clusters*, Broadband Cable Financial Databook 2002 at 38; 2002 from Kagan World Media, *Major Cable TV Systems/Clusters*, Broadband Cable Financial Databook 2003, at 39; 2003 from Kagan Research, LLC, *Major Cable TV Systems/Clusters*, Broadband Cable Financial Databook 2004, at 39-40; and 2004 from Kagan Research, LLC, *Major Cable TV Systems/Clusters*, Broadband Cable Financial Databook 2005, at 39-40. Since last year, Kagan World Media's methodology for counting clusters has changed, leading to difficulties in directly comparing the numbers for 2004 with those for previous years, which causes year-to-year comparisons to be uninformative. In previous years, all of Comcast's subscribers in the Northeast and Mid-Atlantic were counted as part of one "supercluster." Beginning this year, those subscribers were broken out into separate clusters. This is probably a more accurate approach, but causes direct year-to-year comparisons to be uninformative.

**TABLE B-3**  
**2005 Concentration in the National Market for Purchase of Video Programming<sup>(1)</sup>**

Rank	Company	Percent of Subscribers <sup>(2)</sup>
1	Comcast	22.99
2	DirecTV	15.72
3	EchoStar	12.27
4	Time Warner	11.69
<b>Top 4</b>		62.67
5	Cox	6.73
6	Charter	6.37
7	Adelphia	5.50
8	Cablevision	3.22
<b>Top 8</b>		84.50
9	Bright House	2.34
10	Mediacom	1.55
<b>Top 10</b>		88.39
<b>Top 25</b>		94.00
<b>Top 50</b>		95.73
	<b>HHI</b>	1201 <sup>(3)</sup>

**Notes:**

- (1) MSO subscriber totals as of June 2005, and reported in Top Cable System Operators as of March 2004, Kagan World Media, *Cable TV Investor*, July 29, 2004, at 16-17. There is no double counting of subscribers. If a cable operator is partially owned by more than one MSO, its subscribers are assigned to the largest MSO. Subscribers for DIRECTV and EchoStar are based on the company's SEC 10-Q filings.
- (2) The total number of MVPD subscribers used to calculate the HHI is 94,226,357 from Table B-1.
- (3) The HHI is calculated on the basis of market shares for the top 65 companies. Because all of the remaining MVPDs have very small shares of the market, an HHI calculation that included all cable system operators could only be slightly higher (no more than 2-3 points) than the given HHI.

**TABLE B-4**  
**Concentration in the National Market for the Purchase of Video Programming**  
**2002-2005**

Market Share	Percent of MVPD Subscribers			
	2002	2003	2004	2005
Top Share	14.75	22.69	23.37	22.99
Top 2	29.04	35.01	35.47	38.71
Top 3	41.03	46.63	47.34	50.99
Top 4	50.48	55.98	57.97	62.67
Top 10	84.44	81.95	84.72	88.39
Top 25	90.26	87.45	90.41	94.00
Top 50	92.05	89.29	92.32	95.73
HHI	884	1031	1097	1201

**Sources:**

Data for 2002 through 2004 were taken from *Reports, 2002-2004*. Data for 2005 are from Table B-3. Reported statistics for 2004 were based on March data since June data comparable to that used in previous years were unavailable. For 2005, June data were available, and were used.

## APPENDIX C

**TABLE C-1**  
**National Video Programming Services**  
**Affiliated with One or More Cable MSO**

Programming Service	Launch Date	MSO Ownership (%)	Ownership by Other Media Entity (1)
<b>Rainbow Media Group</b>			
American Movie Classics (AMC)	Oct. 84	Cablevision (60)	
Fuse	Jul. 94	Cablevision (60)	
Independent Film Channel	Sep. 94	Cablevision (60)	
WE: Women's Entertainment	Jan. 97	Cablevision (60)	
<b>Turner Broadcasting System Group</b>			
Boomerang	Apr. 00	Time Warner (100)	
Cartoon Network	Oct. 92	Time Warner (100)	
CNN	Jun. 80	Time Warner (100)	
CNN En Español	Mar. 97	Time Warner (100)	
CNN Headline News	Jan. 82	Time Warner (100)	
CNN International	Jan. 95	Time Warner (100)	
TBS (Turner Broadcasting System)	Dec. 76	Time Warner (100)	
Turner Classic Movies (TCM)	Apr. 94	Time Warner (100)	
Turner Network Television (TNT)	Oct. 88	Time Warner (100)	
TNT HD		Time Warner (100)	
Court TV	Jul. 91	Time Warner (50)	Liberty Media
<b>HBO Group</b>			
Home Box Office (HBO)	Nov. 72	Time Warner (100)	
HBO 2	Oct. 98	Time Warner (100)	
HBO Comedy	May 99	Time Warner (100)	
HBO Family	Oct. 98	Time Warner (100)	
HBO Latino	Nov. 00	Time Warner (100)	
HBO Signature	Oct. 98	Time Warner (100)	
HBO Zone	May 99	Time Warner (100)	
HBO HD		Time Warner (100)	



Programming Service	Launch Date	MSO Ownership (%)	Ownership by Other Media Entity
Cinemax	Jun. 98	Time Warner (100)	
Cinemax HD		Time Warner (100)	
Action Max (Cinemax multiplex)	Aug. 80	Time Warner (100)	
@Max (Cinemax multiplex)	May 01	Time Warner (100)	
5StarMax (Cinemax multiplex)	May 02	Time Warner (100)	
MoreMAX (Cinemax multiplex)	Jun. 98	Time Warner (100)	
OuterMax (Cinemax multiplex)	May 01	Time Warner (100)	
Thriller Max (Cinemax multiplex)	Jun. 98	Time Warner (100)	
WMAX (Cinemax multiplex)	May 01	Time Warner (100)	
<b>Comcast Corp. Networks</b>			
E! Entertainment	Jun. 90	Comcast (60.5)	Disney
G4 VideogameTV (formerly G4 tech TV)	Jun. 02	Comcast (83.5)	EchoStar
Golf Channel	Jan. 95	Comcast (99.85)	
Outdoor Life Network (OLN)	Jul. 95	Comcast (100)	
Style	Oct. 98	Comcast (60.5)	Disney
TV One	Jan. 04	Comcast (32.8)	News Corp.
AZN Television	Jul. 90	Comcast (100)	
PBS Kids Sprout	Oct. 05	Comcast (40)	PBS
<b>Discovery Communications, Inc.</b>			
Discovery Channel	Jun. 85	Cox (25), Advance Newhouse (25)	Liberty Media
Discovery En Español	Oct. 98	Cox (25), Advance Newhouse (25)	Liberty Media
Discovery Health	Jul. 98	Cox (25), Advance Newhouse (25)	Liberty Media
Discovery HD Theatre	Jun. 02	Cox (25), Advance Newhouse (25)	Liberty Media
Discovery Home	Oct. 96	Cox (25), Advance Newhouse (25)	Liberty Media
Discovery Kids	Oct. 96	Cox (25), Advance Newhouse (25)	Liberty Media
Discovery Times	Oct. 96	Cox (12.5), Advance Newhouse (12.5)	Liberty Media New York Times
Animal Planet	Oct. 96	Cox (25), Advance Newhouse (25)	Liberty Media
BBC America	Mar. 98	Cox (25), Advance Newhouse (25)	Liberty Media
FiT TV	Jan. 04	Cox (25), Advance Newhouse (25)	Liberty Media

Programming Service	Launch Date	MSO Ownership (%)	Ownership by Other Media Entity
Military Channel	Jul. 98	Cox (25), Advance Newhouse (25)	Liberty Media
The Learning Channel (TLC)	Nov. 80	Cox (25), Advance Newhouse (25)	Liberty Media
Travel Channel	Feb. 87	Cox (25), Advance Newhouse (25)	Liberty Media
Science Channel	Oct. 96	Cox (25), Advance Newhouse (25)	Liberty Media
<b>Joint Ventures and Other Vertically Integrated Networks</b>			
iN DEMAND (60 multiplexed channels)	Nov. 85	Comcast (54.1), Time Warner (30.3), Cox (15.6)	
iN DEMAND HD1 (also called iNHD)	Sep. 03	Comcast (54.1), Time Warner (30.3), Cox (15.6)	
iN DEMAND HD2 (also called iNHD2)	Sep. 03	Comcast (54.1), Time Warner (30.3), Cox (15.6)	

(1) "Other" media entity is defined as a DBS operator, broadcast network, or broadcast television station licensee. Liberty Media's programming interests are listed because of Liberty's ownership interest in News Corp.

**Sources:**

*2004 Report*, 20 FCC Rcd at 1723-1742.

Cablevision Systems Corp., *Corporate Information, Programming, Rainbow Media*, at <http://www.cablevision.com/index.jhtml?pageType=rainbow> (visited Oct. 21, 2005).

Time Warner, Inc., *Businesses, Turner Broadcasting System*, at [http://www.timewarner.com/corp/businesses/detail/turner\\_broadcasting/index.html](http://www.timewarner.com/corp/businesses/detail/turner_broadcasting/index.html) (visited Oct. 21, 2005).

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TABLE C-2

**National Video Programming Services  
Not Affiliated with a Cable MSO  
(By Affiliation)**

Programming Service	Launch Date	Ownership by "Other" Media Entity (1)
A&E (Arts & Entertainment)	Feb. 84	Disney, NBC-Universal, Hearst
ABC Family	Apr. 77	Disney
America's Store	Sep. 86	
American Life (formerly Goodlife Television Network)	Feb. 85	
Angel One		Dominion Video Satellite
Angel Two		Dominion Video Satellite
Anime Network	Dec. 02	
Auction Network		
Black Entertainment Television (BET)	Jan. 80	Viacom
BET Gospel	Jul. 02	Viacom
BET Hip Hop	Jul. 02	Viacom
BET on Jazz	Jan. 96	Viacom
Beauty & Fashion		
Biography Channel	Nov. 98	Disney, NBC-Universal, Hearst
Black Family Channel	Nov. 99	
Bloomberg Television	Jan. 95	
B Mania	Nov. 00	
Bravo	Dec. 80	NBC-Universal
Bridges TV	Nov. 04	
Buzztime Entertainment	1994	
BYUTV	Jan. 00	
Catalog TV		
Celtic Vision	1995	
Church Channel	Jan. 02	Trinity Broadcasting Network
Classic Arts Showcase	May 94	
Country Music Television (CMT)	Mar. 83	Viacom
CNBC	Jul. 89	NBC-Universal
CNBC World	Apr. 89	NBC-Universal
Comedy Central	Apr. 91	Viacom
C-SPAN	Mar. 79	(2)

Programming Service	Launch Date	Ownership by "Other" Media Entity
C-SPAN2	Jun. 86	(2)
C-SPAN3	Sep. 97	(2)
CSTV (College Sports Television)	Apr. 03	Viacom
Colours TV	Dec. 01	
Cornerstone Television	Apr. 79	
Current TV	Aug. 05	
Daystar Television Network	Dec. 98	Daystar Television Network
Deep Dish TV	Jan. 86	
Disney Channel	Apr. 83	Disney
DIY (Do-It-Yourself Network)	Dec. 94	EW Scripps
Encore	Apr. 91	Liberty Media
Encore HD	Mar. 04	Liberty Media
Encore Action	Sep. 94	Liberty Media
Encore Drama	1994	Liberty Media
Encore Love	Jul. 94	Liberty Media
Encore Mystery	Jul. 94	Liberty Media
Encore WAM!	Sep. 94	Liberty Media
Encore Westerns	Jul. 94	Liberty Media
Epic Sports	2005	
ESPN	Sep. 79	Disney, Hearst
ESPN Classic	May 95	Disney, Hearst
ESPN2	Oct. 93	Disney, Hearst
ESPN HD	Mar. 03	Disney, Hearst
ESPNNews	Nov. 96	Disney, Hearst
ESPN2 HD		Disney, Hearst
ESPNU	Mar. 05	Disney, Hearst
Eternal Word Television Network (EWTN)	Aug. 81	
Faith Television Network	Jul. 02	
Familyland Television Network	Nov. 99	
Family Net	May 00	
Fine Living	Mar. 02	EW Scripps
Flix (a Showtime Network)	Aug. 92	Viacom
Food Network	Nov. 93	EW Scripps
Fox Movie Channel	Nov. 94	News Corp.

Programming Service	Launch Date	Ownership by "Other" Media Entity
Fox News Channel	Oct. 96	News Corp.
Fox Reality	May 05	News Corp.
Fox Sports Net	Nov. 97	News Corp.
Fox Soccer Channel (formerly Fox Sports World)	Nov. 97	News Corp.
FX	Jun. 94	News Corp.
Fuel	Jul. 03	News Corp.
Free Speech TV (FSTV)	Jun. 95	
Game Show Network (GSN)	Dec. 94	Liberty Media
Golden Eagle Broadcasting	Nov. 98	
Great American Country	Dec. 95	EW Scripps
Good Samaritan Network	2000	
Guardian Television Network	1976	
Hallmark Channel	Sep. 98	Liberty Media
Hallmark Movie Channel	Jan. 04	
HDNET	Sep. 01	
HDNET Movies	Jan. 03	
Healthy Living Channel	Jan. 04	
Here! TV	Oct. 04	
History Channel	Jan. 95	Disney, NBC-Universal, Hearst
History International (also called History Channel International)	Nov. 98	Disney, NBC-Universal, Hearst
Home & Garden Television (HGTV)	Dec. 94	EW Scripps
Home Shopping Network (HSN)	Jul. 85	
Home Preview Channel		
Horse Racing TV	Dec. 02	
Hot Net (also called The Hot Network)	Mar. 99	
Hot Net Plus	2001	
Hot Zone	Mar. 99	
Hustler TV	Apr. 04	
i - Independent Television (formerly PaxTV)	Aug. 98	NBC-Universal, Paxson
ImaginAsian TV	Aug. 04	
Inspirational Life Television (I-LIFETV)	Jun. 98	
Inspirational Network (INSP)	Apr. 90	
i Shop TV	Feb. 01	
JCTV	Nov. 02	Trinity Broadcasting Network

Programming Service	Launch Date	Ownership by "Other" Media Entity
Jewelry Television	Oct. 93	
KTV – Kids and Teens Television		Dominion Video Satellite
Liberty Channel	Sep. 01	
Lifetime Movie Network	Jul. 98	Disney, Hearst
Lifetime Real Women	Aug. 01	Disney, Hearst
Lifetime Television	Feb. 84	Disney, Hearst
Link TV	Nov. 96	
Logo	Jun. 05	Viacom
Mav TV - Mav'rick Entertainment Network	Oct. 04	
Mall TV (also called Outlet Mall TV)		
Men's Channel	Jan. 01	
Military History Channel	Apr. 05	Disney, NBC-Universal, Hearst
MoviePlex	Oct. 94	Liberty Media
MSNBC	Jul. 96	NBC-Universal
MTV Hits	May 02	Viacom
MTV Jams	May 02	Viacom
MTV	Aug. 81	Viacom
MTV 2	Dec. 98	Viacom
NASA Television	Jul. 91	
National Geographic Channel	Jan. 01	News Corp.
NBA TV	Nov. 99	
NFL Network	Nov. 03	
Nick 2 (also called Nick Too)	May 98	Viacom
Nickelodeon-Games & Sports (also called GAS)	Mar. 99	Viacom
Nickelodeon/Nick at Nite	Apr. 79	Viacom
Nicktoons	Jan. 99	Viacom
Noggin/The N	Feb. 99	Viacom
Oasis TV	Sep. 97	
Ovation: The Arts Network	Apr. 96	New York Times (6)
Oxygen	Feb. 00	(3)
Outdoor Channel	Apr. 93	
Outdoor Channel 2HD		
Pentagon Channel	May 04	
Playboy TV	Nov. 82	

Programming Service	Launch Date	Ownership by "Other" Media Entity
Playgirl TV	Mar. 05	
Pleasure	Jun. 99	
PIN (Product Information Network)	Apr. 94	
QTN (Q Television Network)	Jul. 04	
QVC	Nov. 86	Liberty Media
Research Channel	2000	
RFD TV		
Safe TV		
Sci-Fi Channel	Sep. 92	NBC-Universal
Shop at Home	Jun. 86	EW Scripps
Shop NBC	Oct. 91	NBC-Universal
Short TV	Jan. 99	
Showtime	Jul. 76	Viacom
Showtime HD		Viacom
Showtime Beyond	Sep. 99	Viacom
Showtime PPV (formerly Showtime Event Television, SET)	1979	Viacom
Showtime Extreme	1998	Viacom
Showtime Family (also called Showtime Family Zone)	Mar. 01	Viacom
Showtime Next	Mar. 01	Viacom
Showtime Showcase	Jul. 01	Viacom
Showtime Too	2001	Viacom
Showtime Women	Mar. 01	Viacom
SOAPNet	Jan. 00	Disney
Speed Channel	Jan. 96	News Corp.
Spice 1	May 89	
Spice 2	1999	
A Taste of Spice		
Spice Platinum (formerly Vivid TV)	2000	
Spice HD	2004	
Spice Live	2003	
Spice Hot	2002	
Spice Ultimate	2004	
Spike TV	Mar. 83	Viacom
SPIRIT Television		



Programming Service	Launch Date	Ownership by "Other" Media Entity
Sportsman Channel	Apr. 03	
Starz!	Mar. 94	Liberty Media
Starz! Cinema	May 99	Liberty Media
Starz! Kids & Family	May 99	Liberty Media
Starz! HD	Dec. 03	Liberty Media
Starz! Comedy	Mar. 94	Liberty Media
Starz! Edge	Mar. 96	Liberty Media
Starz! In Black (formerly Black Starz!)	Feb. 97	Liberty Media
Stuff TV		
Sundance Channel	Feb. 96	Viacom, NBC-Universal
Trinity Broadcasting Network (TBN)	May 73	Trinity Broadcasting Network
TBN Enlace USA	May 02	Trinity Broadcasting Network
Three Angels Broadcasting Network	Nov. 86	
The Erotic Network (TeN)	Sep. 98	
TeN Blox	Jan. 03	
TeN Blue	Jan. 03	
TeN Clips	May 00	
TeN Xtasy	Feb. 98	
The Tennis Channel	May 03	
The Movie Channel (TMC)	Dec. 79	Viacom
TMC HD	Dec. 03	Viacom
TMC XTRA	1997	Viacom
Toon Disney	Apr. 98	Disney
Total Living Network		
TR!O (5)	Sep. 94	NBC-Universal
TVU/TVU Live		
TV Games Network – TVG Interactive Horse Racing	Jul. 94	News Corp.
TV Guide Channel	Jan. 88	News Corp.
TV Guide Interactive	Oct. 96	News Corp.
TV Land	Apr. 96	Viacom
TVN Entertainment PPV (previously 33 PPV networks, now 1 PPV network)	Feb. 98	
Universal HD (formerly Bravo HD+)	Dec. 04	NBC-Universal
USA Network	Apr. 80	NBC-Universal
VH1	Jan. 85	Viacom

Programming Service	Launch Date	Ownership by "Other" Media Entity
VH1 Classic	May 00	Viacom
VH1 Soul	Aug. 98	Viacom
VH1 Country	Aug. 98	Viacom
VTV: Varsity Television	Jan. 03	
Weather Channel	May 82	Landmark Communications
Weatherscan Local	Oct. 99	Landmark Communications
Weather Plus		NBC-Universal
WGN Superstation	Nov. 78	Tribune Company
Wisdom Television	Jul. 97	
The Word Network	Feb. 00	
The Worship Network	1992	
World Harvest Television	Aug. 92	
Xy.tv	Dec. 03	
<b>Spanish Language Spanish/Latin American Cultures</b>		
AYM Sports	Nov. 03	
Bandamax	May 03	Univision
Azteca America	Aug. 04	
Canal 24 Horas	Jun. 99	
Cine Latino	Jun. 94	
Canal 52 MX		
Canal Sur		
Casa Club	Jul. 97	
Caracol TV		
CCTV-E&F		
Centroamerica TV		
CNC Columbia	May 99	
De Pelicula	May 03	Univision
De Pelicula Clasico	May 03	Univision
ESPN Deportes	Jan. 04	Disney, Hearst
Ecuavisa Internacional		
EWTN en Español		
Fox Sports en Español	Nov. 96	News Corp.
HITN	Jul. 87	
Galavision	Oct. 79	Univision

Programming Service	Launch Date	Ownership by "Other" Media Entity
Gol TV	Mar. 03	
Mexicanal		
Grandes Documentales	1996	
MTV Español	Aug. 98	Viacom
Mun2	Oct. 01	NBC-Universal
Once Mexico		
History Channel en Español	May 04	Disney, NBC-Universal, Hearst
Playboy en Español		
Ritmoson Latino	May 03	Univision
Puma TV	1997	
HTV (Hispanic TV)	Aug. 95	
La Familia Network	May 02	
SiTV	Feb. 04	(4)
Sorpressa	Mar. 03	
Sur	Aug. 91	
Telefe Internacional	Apr. 90	Univision
Telefutura	Jan. 02	Univision
Telehit	May 03	Univision
Telemundo	Jan. 87	NBC-Universal
Telemundo Puerto Rico	Mar. 00	NBC-Universal
Toon Disney en Español		Disney
TV Internacional	2003	
Univision	Sep. 96	Univision
Utilisima	Mar. 96	
VH Uno	Nov. 99	Viacom
Mexico 22		
NDTV Color Vision		
Sur Peru		
Television Española Internacional		
TV Chile		
TV Columbia		
TyC Sports		
Video Rola	1998	
WAPA America		

Programming Service	Launch Date	Ownership by "Other" Media Entity
<b>Chinese</b>		
CCTV-4 (China Central Television)	1995	
CTI Zhong Tian Channel	1995	
ATV Home Channel America		
Beijing TV		
CCTV-9		
CCTV		
CCTV Entertainment		
CCTV Opera		
China Movie Channel		
CYRTV		
Dragon TV	Oct. 03	
Fujian Southeast TV		
Guandong Southern TV		
Hunan Satellite TV		
Jiangsu International Channel		
Pacvia TV		
Phoenix Info News		News Corp.
Phoenix North American Chinese Channel		News Corp.
CTS		
CTV		
PTS		
TTV		
Videoland		
The Jade Channel		
Jadeworld Super		
TVBS		
The Chinese Movie Channel		
The Chinese Channel	Dec 04	
Chinese Prime		
Chinese Cinema		
ET China		
ET Drama		
ET Global		

Programming Service	Launch Date	Ownership by "Other" Media Entity
ET News		
JET TV International		
YoYo TV		
<b>Korean</b>		
MBC (Munhwa Broadcasting Corp.)	2002	
tvK 24 (Korean)	Sep. 04	
Arirang TV		
JSTV		
KBS World		
MBN		
Korean Channel		
Media Korea		
<b>Tagalog-Filipino</b>		
Filipino Channel	Feb. 98	
The Mabuahy Channel		
GMA Pinoy		
ABS-CBN News Channel		
Cinema One Global		
Pinoy Central TV		
<b>South Asian</b>		
Saigon Broadcasting Television Network	Feb. 02	
TV Asia	Jul. 91	
AAJTAK		
B4U		
Headlines Today		
Sahara One		
Sahara Samay		
Set Max		
Sony Entertainment Television Asia		
Zee Cinema		
Alpha ETC Punjabi		
Gemini TV		
Channel-I		
Star Plus		News Corp.

Programming Service	Launch Date	Ownership by "Other" Media Entity
Star One		News Corp.
Star News		News Corp.
MTV Desi		
Vijay		News Corp.
Sun TV (International)		
EAASTHA Broadcasting Network		
NTV Bangla		
ETV Gujarati		
ETV Telegu		
Bangladesh Channel		
American Desi		
South Asian World		
Surya TV		
Tara Muzik		
Teja TV		
Zee Gujarati		
Kairali TV		
KTV		
ZEE TV	1999	
<b>Japanese</b>		
TV Japan	Jul. 91	
<b>Urdu</b>		
Ary Digital		
Ary One		
GeoTV		
PTV Prime		
<b>Middle Eastern Language and Culture</b>		
National Iranian Television (NITV)	2003	
ART (Arab Radio & Television America)	1999	
Rang-a-Rang (Iranian)	2003	
ANA Television Network (Iranian)	Dec. 91	
ART Movies		
ART Music		
Al Arabiaya		

Programming Service	Launch Date	Ownership by "Other" Media Entity
Al Jazeera		
Al Zikr		
Dubia Satellite Channel		
ESC-1'		
Future TV		
Kuwait TV		
LBC		
Middle East Broadcasting Company		
NBN		
New TV		
Nile Drama		
Melody Arabia		
IQRAA		
Noursat		
National Iranian Television		
<b>Farsi</b>		
NITV (Farsi)		
Channel One Television		
T2		
Tapesh		
<b>Hebrew</b>		
The Israeli Network		
<b>Polish</b>		
TV Polonia	2003	
Kino Polska		
Polsatz International		
TVN 24		
ITVN		
<b>Armenian</b>		
Armenia TV		
<b>Russian</b>		
Channel One Russia	2003	
Russian TV Network of America (RTN)	Aug. 00	
NTV America		

Programming Service	Launch Date	Ownership by "Other" Media Entity
RTVI		
RTVI Plus		
<b>Italian</b>		
RAI International	1999	
Leonardo World		
Video Italia		
Sky TG24		
<b>French/African</b>		
TV5 (French)	Jan. 98	
3A Telesud		
Trace TV		
RFI		
ABN America		
AIT (African Independent Television)	2003	
<b>German</b>		
Prosiebensal.1 Welt		
German TV	Apr. 02	
<b>Greek</b>		
Antenna Satellite		
ERT-SAT		
Mega Cosmos		
Alter Globe		
Greek Channel & NGTV		
TV Globo Internacional		
<b>Portuguese</b>		
SPT		
Record International		
RPTI		
<b>Multinational</b>		
SCOLA	Aug. 87	

**Notes:**

(1) Other media entity is defined as a DBS operator, broadcast network, or broadcast television station licensee. Liberty Media programming interests are listed because of Liberty's ownership interest in News Corp.

(2) The National Cable Satellite Corporation (C-SPAN) derives 97 percent of its revenues from affiliate fees (*i.e.*, subscriber fees from MVPDs). The remaining three percent is provided by various investments. Affiliates have no ownership or program control interests in C-SPAN.



(3) Both Charter Communications' parent company Vulcan Ventures and Time Warner, Inc. subsidiary AOL have equity interests in Oxygen Media. Time Warner holds more than a five percent equity share in Oxygen; however, we have no information with regard to the voting status of that investment. For purposes of the channel occupancy rules (47 C.F.R. §76.504), nonvoting stock is not attributable to an MSO. For purposes of the program access rules (47 C.F.R. §§76.1000-1200), nonvoting stock is attributable to an MSO if the company holds more than a five percent equity interest. See Vulcan Capital, *Other Portfolio Holdings*, <http://capital.vulcan.com/Template.aspx?contentId=7> (visited Nov. 2, 2005); AOL Time Warner, *Oxygen Media And AOL Time Warner Expand Strategic Alliance*, Apr. 3, 2001; Clarity Partners, *Portfolio: Oxygen Media*, at <http://www.claritypartners.net/portfolio.html#> (visited Oct. 31, 2005).

(4) Time Warner Investments has more than a five percent equity interest in SiTV. However, we have no information with regard to the voting status of that equity investment, thus we list it as nonvertically integrated. See note (3); see also Time Warner Inc., at [http://www.timewarner.com/corp/businesses/detail/tw\\_investments/index.html](http://www.timewarner.com/corp/businesses/detail/tw_investments/index.html) (visited Nov. 28, 2005).

(5) NBC-Universal plans to migrate Trio to "online only" format in 2006. Abbey Klaasen, *Trio Cable Operation to Relaunch in Broadband Format*, ADVERTISING AGE, Nov. 21, 2005.

(6) In the 2004 Report, we reported that Time Warner held a 5.1 percent equity interest in Ovation. Currently, Time Warner holds less than five percent equity in Ovation, and thus is listed as an unaffiliated network this year. See 2004 Report, 20 FCC Rcd at 2875 Appendix C, Table C-1.

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TABLE C-3

**Regional Video Programming Services  
By Affiliation**

Programming Services	Launch Date	MSO Ownership (%)	Other Media Entity Ownership
Altitude Sports & Entertainment	Sep. 04		
Arabic Channel	Apr. 91		
Arizona News Channel	Nov. 96	Cox (50)	
Bay News 9	Sep. 97	Bright House (Advanced/Newhouse)	
Boston Kids and Family			
Bravesvision (Atlanta)	Jul. 03	Comcast (100)	
California Channel	Feb. 91		
Capital News 9-Albany New York		Time Warner (100)	
Central Florida News 13 (CFN 13)	Oct. 97	Bright House (Advanced/Newhouse)	
ChicagoLand Television News (CLTV)	Jan. 93		
Chicagoland Korean TV	2005		
CN8-The Comcast Network	Oct. 97	Comcast (100)	
Comcast Entertainment TV (Denver)	Jun. 04	Comcast (100)	
Comcast Local (Detroit)	Aug. 04	Comcast (100)	
Comcast SportsNet (Philadelphia)	Oct. 97	Comcast (84.1)	
Comcast SportsNet Chicago	Oct. 04	Comcast (30)	
Comcast SportsNet Mid Atlantic	Apr. 84	Comcast (100)	
Comcast SportsNet West	Nov. 04	Comcast (100)	
Comcast / Charter Sports Southeast (CSS)	Apr. 84	Comcast (70.2), Charter (23)	
County Television Network San Diego	Jul. 96		
Cowboys TV (Dallas)	Sep. 04	Comcast (100)	
Cox Sports Television	Oct. 02	Cox (100)	
Ecumenical Television Channel	1983		
Denver Channel 207			
Falconvision (Atlanta)	Sep. 04	Comcast (100)	
Fox College Sports Atlantic			
Fox College Sports Central			
Fox College Sports Pacific			

Programming Services	Launch Date	MSO Ownership (%)	Other Media Entity Ownership
Fox Sports Net Arizona	Sep. 96		News Corp.
Fox Sports Net Bay Area	Apr. 90	Cablevision (60)	News Corp.
Fox Sports Net Chicago	Jan. 84	Cablevision (100)	
Fox Sports Net Detroit	Sep. 97		News Corp.
Fox Sports Net Florida	1989		News Corp.
Fox Sports Net Midwest	Sep. 97		News Corp.
Fox Sports Net New England	Jan. 88	Cablevision (50) Comcast (50)	News Corp.
Fox Sports Net New York	1989	Cablevision (100)	
Fox Sports Net North	Mar. 89		News Corp.
Fox Sports Net Northwest	Nov. 88		News Corp.
Fox Sports Net Ohio	Feb. 89		News Corp.
Fox Sports Net Pittsburgh	Apr. 86		News Corp.
Fox Sports Net Rocky Mountain	Nov. 88		News Corp.
Fox Sports Net South	Aug. 90		News Corp.
Fox Sports Net Southwest	Jan. 83		News Corp.
Fox Sports Net West	Oct. 85		News Corp.
Fox Sports Net West 2	Jan. 97		News Corp.
Gwinnett News & Entertainment Television	May 97		
International Television Broadcasting (ITV)	Apr. 86		
Kansas 22 Now			
Las Vegas One News	Apr. 98		
Local News on Cable (LNC) – Hampton	Feb. 97		
Madison Square Garden Network (MSG)	Oct. 69	Cablevision (100)	
MetroSports – Kansas City, Mo.	Feb. 04	Time Warner (100)	
Michigan Government Television	Jul. 96		
New England Cable News (NECN)	Mar. 92	Comcast (50)	Hearst
New England Sports Network (NESN)	Mar. 84		
New York 1 News (NY1 News)	Sep. 92	Time Warner (100)	
NY 1 Noticias	Jun. 03	Time Warner (100)	
News 10 Now – Syracuse, N. Y.	Nov. 03	Time Warner (100)	
News 12 Connecticut	Jun. 95	Cablevision (75)	
News 12 Bronx	Jun. 97	Cablevision (75)	

Programming Services	Launch Date	MSO Ownership (%)	Other Media Entity Ownership
News 12 Brooklyn	2005	Cablevision (75)	
News 12 Hudson Valley	2005	Cablevision (75)	
News 12 Long Island	Dec. 86	Cablevision (75)	
News 12 New Jersey	Mar. 96	Cablevision (75)	
News 12 Traffic & Weather (formerly Metro Traffic & Weather)	2005	Cablevision (75)	
News 12 Westchester	Nov. 95	Cablevision (75)	
News 8 Austin	Sep. 99	Time Warner (100)	
News Channel 5+	Sept. 96		
News 14 Carolina (Charlotte)	Mar. 02	Time Warner (100)	
News 14 Carolina (Raleigh)	Mar. 02	Time Warner (100)	
News Channel 3 Anytime			
News Now 53 (Oklahoma City)	Jun. 97	Cox (50)	
News Now 53 (Tulsa)	Jun. 97	Cox (50)	
News on One	Oct. 97	Cox (50)	
News Watch 15 (New Orleans)	Oct. 99		
News Channel 8	Oct. 91		
NGTV (National Greek Television)	Dec. 87		
Nippon Golden Network	Jan. 82		
North West Cable News (NWCN)	Dec. 95		
Ohio News Network (ONN)	May 97		
Pennsylvania Cable Network (PCN)	Sep. 79		
Pittsburgh Cable News Channel (PCNC)	Jan. 94	Comcast (30)	
Regional News Network (RNN)	Dec. 95		
Rhode Island News Channel	Sep. 98	Cox (50)	
R News – Rochester, N. Y.	Jul. 95	Time Warner (100)	
San Diego's News Channel 15	Jan. 97		
Six News Now	Jul. 95		
Soundtrack Channel (STC)	Mar. 02		
SunSports (formerly Sunshine Network)	Mar. 88		News Corp.
10 News 2			
Texas Cable News	Jan. 99		
Turner South (STC)	Oct. 99	Time Warner (100)	



Programming Services	Launch Date	MSO Ownership (%)	Other Media Entity Ownership
TV33	Dec. 95		
24/7 News Channel			
Washington Korean TV (WKTV)	1985		
Yankee Entertainment Sports Network (YES)	Mar. 02		

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TABLE C-4

## Planned Programming Services

Programming Service	Planned Launch Date, If Announced
Africast Television Network	Available for carriage
America Channel	Available for carriage
American David	
America National Network	
AMC's American Pop	
Anti-Aging Network	
Asia Channel	
Auto Channel	
BET World Music Beat	
Bingo TV	
Black Belt TV	
Black Education Network	Sept. 2006
Black Entertainment Network	
Blue Highways TV	
Boating Channel	
BOB: Brief Original Broadcasts	
Booknet	
Box TV	
Career Entertainment Television	
Casino & Gaming Television	
Classified Channel TV	
Collectors Channel	
The Crime Channel	
Crime & Investigation	
CSN (Cable Science Network)	
Destiny Channel	
Documentary Channel	
Edge TV	
Election Channel	
Employment Channel	1Q06
Fad TV (Fashion & Design Television)	
Fifth Avenue Channel	

Programming Service	Planned Launch Date, If Announced
Film Festival Channel	
Florida Channel	
Fox Enhanced TV	
Gambling Channel	
GETV Program Network	
Global Village Network	
Government Channel	
Home Improvement Channel	
Honey Vision	
The Horror Channel	
Ice Channel	
Investment TV	
JTV (Jewish TV)	
Las Vegas Channel	
Local News Network	
Local News TV	
Local Sports TV	
Major League Baseball	
Moore TV Network	
Mountain West TV	4Q06
Moviewatch	
Native American Nations Program Network	
New York Channel	
New York Mets	2006
Orb TV	
Premiere Horse Network	
Puppy Channel	
RadioTV Network	

Programming Service	Planned Launch Date, If Announced
Real Estate Channel	
Real Estate Network (TREN)	
Reality 24-7	
Reality Central	
Scream Channel	
SCTV (Stand-Up Comedy Television)	
Senior Citizens Television Network	
Simulation Channel	
Sundance Documentary Channel	
Theater Channel	
Tickets On Demand (The Ticket Channel)	
Tourist Channel	
U.S. Military Television Network	
Vegas Channel	
Voy Network	Available for carriage
Wheels TV	
Wicked TV	
Wine Network TV	
World Cinema	

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TABLE C-5

## Top 20 Programming Services by Subscribership

Rank	Programming Network	Number of Subscribers (Millions)*	Ownership Interest in Network
1	Discovery Channel	90.1	Cox, Advance/Newhouse, Liberty Media
2	ESPN	90.0	Disney, Hearst
4	CNN	89.6	Time Warner
4	TNT	89.6	Time Warner
6	USA Network	89.4	NBC-Universal
6	C-SPAN	89.4	National Cable Satellite Corporation **
9	TBS	89.3	Time Warner
9	Spike TV	89.3	Viacom
9	Nickelodeon	89.3	Viacom
11	A&E	89.2	Disney, Hearst, NBC-Universal
11	Lifetime Television	89.2	Disney, Hearst
13	The Weather Channel	89.0	Landmark
13	ESPN2	89.0	Disney, Hearst
15	QVC	88.9	
15	TLC	88.9	Cox, Advance/Newhouse, Liberty Media
18	MTV	88.6	Viacom
18	Home & Garden TV	88.6	
18	Headline News	88.6	Time Warner
20	ABC Family Channel	88.5	Disney
20	Home Shopping Network	88.5	

**Note:**

\* - In addition to cable systems, other MVPDs such as DBS (direct broadcast satellite) systems, wireless cable (or MMDS) systems, PCOs (private cable operators or SMATV) services, and HSD (home satellite dish) program providers may distribute these signals. Subscriber figures may include these noncable services.

\*\* - The National Cable Satellite Corporation (C-SPAN) derives 97 percent of its revenues from affiliate fees (*i.e.*, subscriber fees from MVPDs). The remaining three percent is provided by various investments.

**Source:**

Kagan Research, LLC, *Network Census: July 31*, Cable Program Investor, August 31, 2005, at 14.



**TABLE C-6**  
**Top 15 Programming Services by Prime Time Rating**

Rank	Programming Service	Ownership Interest in Network
1	Nickelodeon	Viacom
2	TNT	Time Warner
3	Nick at Nite	Viacom
4	USA Network	NBC-Universal
5	Disney	Disney
6	Lifetime	Disney, Hearst
7	Toon Disney	Disney
8	TBS	Time Warner
9	Spike TV	Viacom
10	Fox News Channel	News Corp.
11	History Channel	Disney, Hearst, NBC-Universal
12	ESPN	Disney, Hearst
13	MTV	Viacom
14	Discovery Channel	Cox, Advance/Newhouse, Liberty Media
15	Sci Fi Channel	NBC-Universal

**Source:**

Kagan Research, LLC., *Prime Time Ratings Averages: April*, CABLE PROGRAM INVESTOR, June 29, 2005, at 16.

**STATEMENT OF  
CHAIRMAN KEVIN J. MARTIN**

*Re: Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, MB Docket No. 05-255*

In enacting the Cable Television Consumer Protection and Competition Act of 1992, Congress sought to promote video competition. Competition in the market for video programming serves to improve quality and customer service, increase consumer choice, decrease prices, and promote innovation.

As this year's report reflects, we are seeing wired competitors to cable trying to enter the market. The Commission should facilitate this entry, not only because it furthers video competition, but also because it promotes the deployment of the broadband networks over which the video services are provided. The widespread deployment of these networks is critical to the United States' international competitiveness. Further, it will help improve Americans' lives through applications such as distance learning and remote medical diagnostics.

Given all of the benefits that additional competition offers for consumers, we will continue to closely monitor the progress of all new entrants and seek to eliminate any unreasonable barriers to entry and to address other issues that we find impede such progress.

**STATEMENT OF  
COMMISSIONER MICHAEL J. COPPS**

Re: *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*

I commend Chairman Martin for holding this Commission meeting outside of Washington. This is something I have long advocated us doing. We can learn so much more from getting outside the Beltway to hear directly from those on the ground who are working to make video competition a reality. Yesterday and this morning, we have had the opportunity to see and learn first-hand about a whole new range of video services that are becoming reality for America's consumers. These visits in Texas will help us make better decisions as we go about our work in Washington. Equally important, hearings like this bring the FCC to the American people, giving them a closer look at issues that inevitably affect them. I look forward to more such meetings in communities across the country that can provide greater perspective and information as we address the complex and difficult issues in front of us. I believe, in fact, that a regulatory commission like ours has an obligation to do regularly what we are doing here this week.

Today's report grows out of our duty to report to Congress annually on the status of competition in the market for the delivery of video programming. Here, as throughout the Communications Act, Congress recognized and emphasized that competition in the delivery of services is the surest road for bringing significant benefits to consumers. When people have more options, they reap big rewards—better services, higher technology, lower prices and more varied content.

Today's report shows an enormous potential for increased competition in the video programming market. We are seeing large investments not only from existing participants in the market, but also from telephone companies and others that are expanding their efforts to deliver video programming. Cable and telephone companies are beginning to compete to offer consumers the much-heralded triple play—bundles of telephone, video and Internet services. The erosion of old industry boundaries can give way to a more consumer-friendly future, but arriving at that future will demand not only creative entrepreneurship and considerable investment, but also FCC policy founded foursquare on advancing the public interest—our primary charge from Congress.

I am happy that this year's report is more rigorous than some of its predecessors. For example, we admit the limitations of the data we have received and we go in search of additional comment. We also build on the discussion in last year's report by, for example, considering what is happening in certain other countries and including a separate section that focuses specifically on video program distribution in rural areas. But we must always look for ways to improve these reports to provide a more solid foundation for Commission and Congressional actions. For our next report, I hope we will undertake more pro-active and comprehensive information gathering efforts in order to obtain independent, verified data. I also believe we need to conduct some audits of the data we receive because we need to be sure of its accuracy.

This is an especially important report this year because it delves into issues relevant to numerous other pending Commission proceedings. These include horizontal and vertical cable ownership rules, an area where Commission action is overdue.

I note with concern that last year—and this seems to be an annual story—cable rates rose again, out-stripping inflation by a significant margin. Different interests cite different reasons for these never-ending consumer cost increases. I know two things. First, consumers are feeling the pain and paying the cost and not liking it. And, secondly, we need to better understand what's going on here. We need to

determine which factors are primarily responsible for these escalating consumer bills, and I would like to see us get a handle on this important issue in time for the next annual report on cable rates.

In another area still requiring work, we need to nail down the percentage of U.S. households which receive their programming from cable. Congress instructed us in the statute to be attentive to this because of our obligation to ensure diversity of information sources. Finally, in the months ahead, I believe we need to understand more clearly how such things as program access, retransmission consent, and vertical and horizontal integration affect the state of video competition. Congress seems to be turning its attention to these interactions and it is important for us to develop the data and analysis Congress needs for its consideration and that the Commission requires for its proceedings.

So this is a major report and we need to ensure that we use it well in the months ahead because it can help us in so many other proceedings. The world of program delivery is going through such wide-ranging, even staggering, changes that the Commission cannot afford to miss a beat as we attempt to exercise our responsibilities.

My thanks to the Bureau for this report and for its many improvements, and I look forward to being able to cite next year's annual report as even better than this year's.

**STATEMENT OF  
COMMISSIONER JONATHAN S. ADELSTEIN**

*Re: Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*

I want to thank Chairman Martin for taking this meeting outside of Washington, D.C. I have been attending hearings across the country over the past three years and I have learned that nothing tops the experience of getting out into the public and meeting with local officials, company employees, and consumers to hear their thoughts about media and telecommunications. Today, we are getting a better sense of what is happening on the ground with video competition. The effort by some of the Nation's largest telecommunications companies to provide a competitive alternative for video services is one that deserves our attention and encouragement, and we are giving it both through our visit to Texas as a Commission.

I vote to approve this twelfth annual report on the state of competition in the video marketplace because it is a promising improvement over previous years. It attempts, albeit in a limited fashion, to provide at least more of a semblance of analysis that the Commission should provide Congress.

While this *Report* continues to simply recite information submitted by private parties rather than conduct its own in-depth analysis of the state of competition, it is commendable that, in one significant respect, we seek comment on whether the criteria set forth in section 612(g) of the Communications Act (generally referred to as the "70-70 test") has been met and, if so, whether the Commission should promulgate additional rules to achieve the statutory goal of providing diversity of information sources in video programming. I welcome this inquiry and look forward to working on it with my colleagues to fulfill the goals of competition, diversity and localism in U.S. media markets.

As the Report shows, competition in video distribution and programming markets is intensifying. From 2001 to 2005, the number of cable subscribers, as a share of total MVPD subscribers, has decreased from 77 percent to 69 percent. Commensurately, DBS subscribership has increased from 18 percent to 27 percent. Local exchange carriers, electric and gas utilities, and cellular phone companies have all announced plans to upgrade their systems to offer video services and, in some cases, are already offering multimedia programming. Moreover, while 14 percent of U.S. television households continue to rely solely on over-the-air broadcast signals, the sale of digital television sets has skyrocketed, a trend certain to continue as prices are steadily decreasing. The digital television transition is also supported by the fact that more than 1,537 stations nationwide are broadcasting digitally.

Of particular significance is the entry of some of the largest local exchange companies into the video marketplace. LECs are upgrading their facilities to fiber-based platforms in many areas across the country so that these carriers can offer a suite of video, voice and data services. This investment could bring the most substantial new competition into the video marketplace that this country has ever seen. Equally significant is the potential for this new revenue stream to drive broadband deployment, which can benefit consumers and the free flow of information beyond the video marketplace.

Consumers will benefit not only from more choice, better service and lower prices, but also stand to gain from a more robust exchange in the marketplace of ideas. I have long expressed grave concerns about the negative effects of media consolidation in this country, and have focused on the problems raised by growing vertical integration of programming and distribution. Vast new distribution networks promise to limit the ability of any vertically integrated conglomerates from imposing an economic, cultural or

political agenda on a public with few alternative choices. I truly believe the benefits of this new competition extend beyond the normal ones that accrue to consumers, and can actually improve the health of our overall democracy.

Notwithstanding these healthy competitive indicators, the Report highlights areas of serious concern that will likely require our careful examination and possible action. While the competitive presence of DBS has reduced cable's dominance, concentration remains a concern: the top four MVPDs serve 63 percent of all MVPD subscribers, up five percent from 2004. Vertical integration and program access are also areas of growing concern. Of the 96 regional networks providing local sports and news, almost half are vertically integrated with at least one MSO. Several commenters, particularly small and rural cable operators and LECs, have raised concerns about securing access to programming at competitive, nondiscriminatory terms and rates.

The findings discussed in this Report should serve as the factual foundation to inform future Commission decision as well as providing Congress with information that can inform the national policy debate.

**STATEMENT OF  
COMMISSIONER DEBORAH TAYLOR TATE**

*Re: Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, MB Docket No. 05-255*

First, I would like to applaud the Chairman for holding this meeting in Keller, Texas. I also wish to thank Mayor Tandy and Mayor Moncrief for not only participating in our open meeting but also their leadership in championing competition and consumer choice. I want to specifically acknowledge Commissioner Barry Smitherman from the Texas Public Utilities Commission, my friend and former colleague, for joining us. I look forward to our continuing relationship with state and local officials on these issues which are crucial not only to our nation, but to communities like Fort Worth and Keller. Finally, thank you for the warmth and hospitality that has been shown to us while we've been here in the Great State of Texas.

As stated by the Chairman, I feel it is important for the Commission to take opportunities such as this to travel outside of Washington, D.C. Sometimes getting out into wide open spaces just helps put the issues into perspective; to talk with real people about the innovative products and services that are transforming the way they work, live, and play. And, also, to see areas which may not have access to exciting new services like those we've seen on this trip. I believe that it is critical that we, as policymakers, do not lose touch with how communications technology, and the decisions we make in this arena, affect the lives of all Americans, impact both the local and global economies, and influence investment decisions in the communications marketplace.

And so I am delighted to be here, not simply to talk about video competition in the abstract, but to actually see first-hand the efforts of new entrants into this market and to hear from consumers, local government representatives, and the entities actually providing such services. For example, yesterday we saw a working demonstration of Broadband over Power Line (BPL) in a neighborhood in Dallas. Current Communications Group, LLC and TXU are using this innovative new technology both to provide broadband and to help the electric grid work smarter and more efficiently. At their model home I was able to talk to my assistant, Teri, using a Voice over Internet Protocol (VoIP) phone while watching high-quality video streamed over the Internet. All the while, the electric company is able to use that same technology to monitor exactly how much electricity is being used and identify immediately when and where the power goes out.

This beautiful, new community center in which we are meeting provides more than just a wonderful setting for our open meeting; it also serves as an excellent example of the concept of "bundling." Here, under one roof, the citizens of Keller can enjoy a variety of sports and exercise options, games, a swimming pool, and childcare – all in a family friendly atmosphere. In a similar vein, we are here today to discuss the fact that an increasing number of entities are providing a bundle of communications services that can include voice, data, video, and even wireless. And just as is the case with this community center, many of us would like to enjoy those bundles – the so-called "triple play" and "grand slam" – in a family friendly atmosphere.

Tennesseans are used to hearing me say this, but since I find myself today in Texas, I will say it again: I am a strong supporter of competition. Efficiently operating competitive markets do a much better job of ensuring that the needs of consumers are met than we could ever hope to accomplish through unnecessary regulatory intervention. Competitive markets force rivals to be more responsive to the needs of consumers; to provide lower prices; to innovate; to offer more choices; and to provide better customer service. To summarize: whatever the concern may be, robust competition is, in virtually every case, the preferred solution to government regulation.

The marketplace for the delivery of video programming provides a perfect example of this point. The significance of video competition cannot be overstated – because it has the ability to play a critical role in a number of high-priority areas:

**Cable TV Prices:** Competition from Direct Broadcast Satellite (DBS) operators and, as we have witnessed here in Texas, and now traditional phone companies will continue to drive down prices for consumers.

**Indecency:** In a fully competitive marketplace, there is every reason to be confident that consumers' concerns about the programming that enters their homes would be met. Unfortunately, however, the video programming marketplace – while much more competitive today than when the 1992 Cable Act was passed, as this year's Video Competition Report makes plain – so far has been unable to adequately address this issue. But as the number of competitors increases, we are beginning to see signs of progress in this area. Indeed, the recent announcements by cable operators and DBS providers regarding the offering of family tiers, as well as the public statements by AT&T and EchoStar indicating an interest in providing their customers with programming on an a la carte basis, could well represent the initial steps in that very process. But they are only that – initial first steps.

Competition should be not only about more choices, but about **better** choices for our families. I am hopeful that, as competition continues to expand, parents – and concerned viewers generally – will be able to choose from a range of programming options that they find appropriate. In that regard, I am encouraged by the ability of the video delivery platforms we have seen on this trip to provide video programming in customized packages *based on what customers want*. This new technology will eliminate any technical hurdles that may have been asserted in the past as a reason not to allow customer choice.

**Broadband Deployment:** Greater video competition also can play an important role in ensuring that the benefits that broadband can offer are made available to **all** Americans. Modern telecommunications networks are capable of providing the so-called “triple play” of voice, data, and video – and, when bundled with wireless offerings, the “grand slam.” As a result, the ability to offer video programming services holds the promise of an additional revenue stream from which the substantial capital investment required for broadband deployment can be recovered. In many cases, including in rural and higher cost areas the additional revenue provided by video programming hopefully will provide the extra push needed to justify the decision to deploy broadband facilities.

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So it seems clear that full and vibrant competition in the delivery of video programming can provide a wide range of benefits. This leads logically to two follow-up questions: (1) how competitive is the multichannel video programming distribution market today, not only here in Texas but throughout the United States?, and (2) what can we do to make it even more competitive?

This year's video competition report describes the current state of the MVPD marketplace. I commend Bureau Chief Gregg and Ms. Glauber and their colleagues in the Media Bureau's Industry Analysis Division for their good work. We must rely upon your expertise along with real-world experience – like we are obtaining here today – in order to make the best possible decisions. And based upon this report, it appears that although incumbent cable operators remain the leading provider of multichannel video programming, their market shares continue gradually to decline. And while I applaud the DBS providers for the competitive inroads they have made, particularly in rural areas not served by cable, I believe that wireline competition should be encouraged as well.



Which leads me to my second question: what can policymakers do to foster greater video competition envisioned by Congress? Here in Texas, legislation passed last year to facilitate the entry of new providers established a streamlined process by which new entrants can obtain state-issued certificates of franchising authority. Other states are considering enacting similar laws, and franchising reform also is being considered at the federal level. Representative Marsha Blackburn from my home state of Tennessee last June introduced the Video Choice Act of 2005, which would have eliminated cable franchise requirements for companies already authorized to access public rights-of-way.

Meanwhile, the FCC initiated an investigation into the local cable franchising process for competitive entrants last November, prior to my arrival. This Section 621 rulemaking seeks to determine whether the franchising process serves as an unreasonable barrier to entry for new providers and, if so, what remedial steps the Commission might take. Comments are due on Monday, February 13<sup>th</sup>. I look forward to working with my fellow Commissioners on this proceeding in the months ahead. I also look forward to hearing from consumers and others here today, and interested parties everywhere, regarding what we can do to increase investment, innovation, and deployment of multi-use broadband networks throughout the United States.

Thank you.