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

In the Matter of	)	
	)	
Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming	)	MB Docket No. 03-172

TENTH ANNUAL REPORT

Adopted: January 5, 2004 **Released: January 28, 2004**

By the Commission: Chairman Powell issuing a separate statement; Commissioners Copps and Adelstein concurring and issuing a joint statement.

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I. INTRODUCTION

1. This is the Commission's tenth annual report ("*2003 Report*") to Congress on the status of competition in the market for the delivery of video programming.[1] Section 628(g) of the Communications Act of 1934, as amended ("Communications Act"), requires the Commission to report annually to Congress on the status of competition in the market for the delivery of video programming.[2] Congress imposed this annual reporting requirement in the Cable Television Consumer Protection and Competition Act of 1992 ("1992 Cable Act")[3] 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. In previous years, we have focused only on the current state of competition and changes in the competitive environment since the prior year's *Report*. This year, however, represents a landmark, as we present the tenth report. Thus, in the *2003 Report,* we have decided to take a broader view of the video marketplace, and to examine changes in the industry over the year since the last report, and in the

[1] 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); and *2002 Report*, 17 FCC Rcd 26901 (2002).

[2] Communications Act of 1934, as amended, § 628(g), 47 U.S.C. § 548(g).

[3] Pub. L. No. 102-385, 106 Stat. 1460 (1992).

period since the first report in 1994. We offer information and analysis regarding changes in the market since the *2002 Report,* over the last five years (*i.e.,* since 1998), and in the decade since 1994. We report on trends in the market and on the factors that have facilitated or impeded changes in the competitive environment over these time periods. The information and analysis provided in this report are based on publicly available data, filings in various Commission proceedings, and information submitted by commenters in response to a *Notice of Inquiry* (*"Notice"*) in this docket.[4] We do not require data submissions nor do we audit data provided. We report data and anecdotes as submitted by the commenters and note that we did not receive information on a number of issues raised in the *Notice* (*e.g.*, data on the benchmarks specified in Section 612(g) of the Communications Act, also known as the 70/70 Rule, and information on non-English programming).

3. In Section II, we examine the cable television industry, existing multichannel video programming distributors ("MVPDs") and other program distribution technologies and potential competitors to cable television. Among the MVPD systems or techniques discussed are direct broadcast satellite ("DBS") services and home satellite dishes ("HSD" or "C-band"), broadband service providers ("BSPs"), wireless cable systems using frequencies in the multichannel multipoint distribution service ("MMDS"), private cable or satellite master antenna television ("SMATV") systems as well as broadcast television service. We also consider other existing and potential distribution technologies for video programming, including the Internet, home video sales and rentals, local exchange carriers ("LECs"), and electric and gas utilities. In Section III of this report, we examine market structure and competition. We evaluate horizontal concentration in the multichannel video marketplace and vertical integration between cable television systems and programming services. We also address technical issues, including cable modems, navigation devices, and emerging services.

B. Summary of Findings

1. Overview of the Past Decade: 1993-2003

4. The *2003 Report* examines the status of competition in the market for the delivery of video programming, over the past ten years and at various intervals in between. We discuss changes that have occurred in the competitive environment over the last year, the last five years and the last decade, explain these changes to the extent possible, and describe barriers to competition that existed at the time of our first *Report* and those that continue to exist. Competition provides consumers with choice, better services, higher quality, and greater technological innovation. Overall, due, in part, to Congressional efforts made over the past decade, technological advances and investment in new platforms for delivering video programming, the vast majority of Americans enjoy more choice, more programming and more services than any time in history.[5] In addition to an increase in the number of video channels, cable operators and other MVPDs also now offer advanced video services and many non-video advanced services. Cable television, however, remains the predominant technology for the delivery of video programming. Ten years ago, cable operators served almost 100% of the nation's subscribers. Today, cable's share has fallen to approximately 75% of all MVPD subscribers. Competitive alternatives to

[4] *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, 18 FCC Rcd 16042 (2003) ("*Notice"*). Appendix A provides a list of commenters and the abbreviations by which they are identified herein.

[5] We do not propose to make any determinations in this *Report* as to the amount of source or viewpoint diversity available.

incumbent cable operators have been available throughout this period to varying degrees and continue to develop, although not always as envisioned. For example, Congress and the Commission expected LEC video systems to become the primary competitors to cable systems. In 1992, the Commission established the video dialtone framework that permitted LEC entry into the video marketplace consistent with statutory prohibitions. Subsequently, Congress amended the Communications Act to permit LEC entry in their telephone service areas under one of four statutory frameworks, including the open video system ("OVS") framework.[6] Despite these efforts to foster competition, significant LEC entry into the video marketplace has failed to materialize.

5. On the other hand, DBS, which was first authorized by the Commission in 1988, and took until 1993 to begin offering MVPD services, has become the most significant national competitor to cable. Today, most consumers have the additional choice of at least two national DBS providers. As DBS equipment prices have declined and DBS offerings have become more comparable to cable service (including the provision of advanced video and non-video services), and pursuant to Congress's authorization of the retransmission of local broadcast signals, DBS subscribership has grown rapidly. DBS now serves the second largest share of MVPD subscribers. Today, other delivery technologies (*i.e.,* private cable systems, wireless cable systems, overbuilders) continue to serve small numbers of subscribers in limited areas with competitive alternatives to cable systems as they have over the last ten years. In 1998, for example, competing franchises had been awarded to broadband service providers with the potential to pass 7.2 million homes. In the five years since we began reporting on BSPs, competing franchises have grown, and today BSPs hold franchises that authorize them to serve over 17.7 million homes with state of the art facilities offering voice, video, and data. BSPs cite barriers to entry and, thus, their service is limited to a few markets, as noted in a recent GAO study.[7] Also, while some LECs (such as Ameritech) have exited the business, other LECs are still providing services (including those co-marketing with DBS providers), but are not expanding much beyond limited local areas.

2. General Findings

6. As was the case ten years ago, most MVPD subscribers continue to receive their video programming from a franchised cable operator, although cable's market share has declined steadily over this period. At year-end 1993, 94.89% of MVPD subscribers received their video programming from a franchised cable operator, and by June 2003, 74.87% of MVPD subscribers received their video programming from a franchised cable operator. The decline over the past ten years has been fairly steady with a 9.5 percentage point decrease in the first five years of our *Report* and an additional 10.5 percentage point decrease in the second five years since our *1994 Report*.

7. The total number of subscribers to both cable and non-cable MVPDs has increased significantly over the last ten years and continues to increase incrementally each year. A total of 60.3 million households subscribed to multichannel video programming services as of year-end 1993, where as of June 2003, 94.1 million households subscribed to MVPDs, an increase of more than 56% over the last ten years. Five years ago, 76.6 million households subscribed to MVPDs, an increase of more than 27% over 1993. This subscriber growth over the last five and ten years accompanied 14.2 and 21.26 percentage point increases respectively in MVPDs' penetration of television households to 88.29% as of

[6] Pub. L. No. 104-104, 110 Stat. 56 (1996).

[7] *See* U.S. General Accounting Office, *Issues Related to Competition and Subscriber Rates in the Cable Television Industry*, GAO-04-8 (Oct. 2003) at 10 ("*2003 GAO Report*").

June 2003.[8] MVPD penetration of television households was at its highest in June 2001, when 86.42% of television households subscribed to an MVPD.

8. Since our first *Report*, the number of cable subscribers continues to grow, reaching almost 65.9 million subscribers as of June 2003, up from the 57.2 million cable subscribers at year-end 1993, and up from the 65.4 million cable subscribers at June 1998. In the last several years, however, cable subscribership has declined such that as of June 2003, there were approximately the same number of cable subscribers as there were at year-end 1999. Over the last five years, subscribership has only grown by half a million subscribers. Despite recent declines in subscribership, cable subscriptions have increased 2.5% in the past year. The total number of non-cable MVPD subscribers grew from 3.1 million as of year-end 1993, to 11.23 million as of June 1998, to 23.7 million as of June 2003, a significant increase over 1993. DBS subscribership has grown significantly since its introduction ten years ago in 1993, and now represents 21.63% of all MVPD subscribers. Since its introduction, the DBS growth rate has exceeded the growth rate of cable by double digits in every year except in the past year, when DBS growth exceeded cable growth by 9.16 percentage points. Between June 2002 and June 2003, the number of DBS subscribers grew from about 18.2 million households to more than 20.4 million households. The most significant growth for DBS came between June 1997 and 1998, when DBS grew more than 42.6% over the prior year. The continued growth of DBS is still, in part, attributable to the authority granted to DBS operators to distribute local broadcast television stations in their local markets by the Satellite Home Viewer Improvement Act of 1999 ("SHVIA"), and an increase in the number of markets where such service is offered. Since its introduction, DBS has attracted former cable subscribers as well as consumers not previously subscribing to an MVPD.

9. Over the last year, the number of subscribers to MMDS and large dish satellite service (HSD) continued to decline, the participation of incumbent local exchange carriers in the distribution of video programming also continued to decline, and the number of subscribers to open video systems ("OVS") and private cable has remained relatively stable, although their market share remains small. We reported in our *1994 Report* that as of year-end 1993, subscribers to HSD services were nearly 2.7% of all MVPD subscribers, and subscribers to MMDS services were almost one percent of all subscribers. At its peak at year-end 1995, subscribers to HSD services were nearly 3.5% of all MVPD subscribers, and at its peak at year-end 1996, subscribers to MMDS services were more than 1.6% of all MVPD subscribers. By June 2003, MMDS subscribers comprised only about 0.2% of all MVPD subscribers while HSD comprised only about 0.5% of all MVPD subscribers. Although subscribership to these services have been steadily declining over the last several years, the deployment and use of these services has contributed significantly to the early acceptance of non-wireline alternatives to traditional MVPD service, and has inspired current iterations of all-digital, wireless DBS services.

10. During the period under review, cable rates have risen significantly.[9] According to the Bureau of Labor Statistics, between year-end 1993 and the end of June 2003, the Consumer Price Index

[8] The number of MVPD households reported here, and the associated percentages, may overstate actual values because a household that subscribes to more than one MVPD (*e.g.*, cable and DBS) is included as a subscriber to both services. *See 2001 Report*, 17 FCC Rcd at 1247 n.6.

[9] While the components of cable and satellite prices differ and direct comparisons cannot be made, it appears that the average price difference between cable and satellite television service has narrowed significantly over the past five years, with average monthly expenditures for satellite service falling below cable for the first time. A study by J.D. Power and Associates found that "average monthly expenditures for satellite television service is $48.93 – (continued….)

("CPI"), which measures general price changes, increased approximately 25.5%, while cable prices, also measured as a subcategory of the CPI, rose approximately 53.1%. Between June 2002 and June 2003, the cable price component of the CPI rose 5.1% compared to a 2.1% increase in the overall CPI.[10] Concurrently with these rate increases, however, the number of video and non-video services offered increased, including a substantial increase in the number of video channels, increased use of cable (as measured by a substantial increase in cable viewership), and the addition of advanced service offerings, which, of course, are paid for separately by consumers. Cable operators attribute rising costs to increased programming costs and higher labor costs that have risen faster than inflation, as cable operators have increased the size and proficiency of their customer service workforce. GAO found that several additional factors are putting upward pressure on cable rates. The primary cost factors found by GAO are programming costs (which GAO observed, are partially recouped through the sale of advertising), and the costs associated with infrastructure investments. Increased spending by cable operators on customer service was also found to be a factor. GAO notes that industry representatives believe that certain factors related to the nature of ownership affiliations may also indirectly influence cable rates through their influence on cable operators' choice of which cable networks to carry. As suggested by GAO, some of the increase in cable prices is the result of costs to operators from system upgrades. Upgraded systems allow cable operators to provide improved video services (*i.e.*, an increased number of channels on analog tiers, and advanced video services such as digital tiers, video on demand, and interactive television), and non-video advanced services such as telephony and high-speed Internet access, so the costs associated with upgrades are joint costs that support a variety of services.[11] NCTA has posited that high rates of growth in cable prices do not infer market power. In addition, NCTA believes that while overall cable rates have increased, price per viewing hour has actually declined over time and consumers are receiving more for their money than they were ten years ago.

11. We note that in certain locales, cable operators' pricing decisions may be affected by direct competition. Also, available evidence indicates that when an incumbent cable operator faces "effective competition," as defined by the Communications Act, it responds in a variety of ways, including lowering

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up 8% from 1998," but "cable spending has increased 41% in the same time period, moving from an average of $35.15 per month in 1998 to $49.62 per month in 2003."

[10] Using a different methodology and covering a different mix of cable services and a different time period, the Commission's annual survey of cable industry rates found that the monthly rate for basic service, the most highly subscribed cable programming service tier (often referred to as expanded basic or CPST), and equipment (consisting of an addressable analog set-top box and a remote control) rose by 8.2% between July 1, 2001, and July 1, 2002. *Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992*, *Statistical Report on Average Rates for Basic Service, Cable Programming Service, and Equipment*, 18 FCC Rcd 13284, 13296-98, Tables 9, 10, and 11 (2003) ("*2002 Price Survey Report*"). BLS bases the cable CPI on a survey of items on consumers' monthly cable bills, and includes such items as premium services (i.e., pay-per-channel) and installation costs, which are not included in the Price survey's methodology. Also, when an item shows a significant change in price, and there is a concomitant change in the nature of the product or service, BLS attempts to make a quality adjustment. BLS may increase or decrease the observed price of an item, depending on whether the change deteriorated or improved the quality of the particular product or service. In the case of cable service, the addition of channels is sometimes perceived as an improvement in quality, but not always, and thus sometimes lowers the reported percentage increase in the price index.

[11] Even though all of these advanced services are offered to and paid for separately by consumers, in many cases they are also offered as bundled services and as such, may provide some discount on basic or expanded basic service.

prices or adding channels without changing the monthly rate, as well as improving customer service and adding new services such as interactive programming. For example, a recent GAO study found that where wire-based competition is available, cable rates are lower by about 15%. GAO further found that in markets where DBS companies provide local broadcast stations, rates are only slightly lower, but cable operators are more likely to improve the quality of their service in response to DBS competition.[12]

12. Cable television has, in fact, greatly evolved since the first report, providing more choice, greater flexibility, and more control. Ten years ago, cable television was an analog transmission, but as a result of the introduction of the all-digital DBS technology and its widespread acceptance by the public, cable television operators began replacing much of their original coaxial cable infrastructure with hybrid fiber and coaxial cable ("HFC") networks. This migration to digital transmission has not only enabled cable operators to transmit high-quality video signals to their customers and to offer such additional enhancements as HDTV, but it also has enabled cable operators to provide vastly more channels of video programming to consumers. Digital technology also has furthered the ability of cable operators to offer more service options, including advanced two-way services[13] such as high-speed Internet access, cable telephony, and video-on-demand. Many of these services enable consumers to maintain more control over what, when, and how they receive information.

13. We first noted in our *1997 Report* that several cable multiple system operators ("MSOs") were beginning to offer resale, and in some cases, facilities-based telephone service. The Commission anticipated that telephone service offered by cable operators would become a significant source of competition to incumbent LECs. The most promising indication of which was the merger of cable company TCI Communications and telephone company AT&T Corp. Today some cable MSOs are offering circuit switched telephony. Most cable MSOs, however, are waiting for IP technology to become widely available before accelerating their rollout of telephone service. Some of these cable operators are currently offering, or continuing to test, IP telephony products.

14. The most significant convergence of service offerings continues to be the pairing of Internet access services with video programming services. We first reported in our *1997 Report* that cable operators were beginning to offer a bundle of services to include high-speed access to the Internet via cable modem. By year-end 1998, there were approximately 500,000 subscribers.[14] Some cable operators offered access to the Internet through the subscriber's television and a specially designed set-top box, but the most popular way to access the Internet over cable was, and still is, through the use of a cable modem and personal computer. A very small number of users continue to access the Internet through television-based services. Today, virtually all of the major MSOs offer Internet access services via cable modems in large portions of their service areas and about one half of all mid-sized and small cable operators provide this service. As of June 2003, there were more than 13.8 million cable modem high-speed Internet access subscribers. Like cable, the DBS industry is continuing to develop ways to bring advanced services to their customers. For example, DirecTV currently offers one-way and two-way satellite-delivered Internet

[12] *See 2003 GAO Report* at 3-4. *See also* U.S. General Accounting Office, *Telecommunications: The Effect of Competition From Satellite Providers on Cable Rates,* GAO/RCED-00-164 (July 2000).

[13] The advanced broadband services discussed here include cable telephony and Internet Protocol ("IP") telephony, Internet access through cable modems, digital video, video-on-demand ("VOD") and near-video-on-demand ("NVOD"), and interactive guides/interactive programming. *2000 Report,* 16 FCC Rcd at 6015, n.11.

[14] Figures represent primarily residential subscribers, though may also include some small business. *See* fn. 135 *infra.*

service under the brand name DirecWay. DirecTV has also entered into a strategic marketing alliance with BellSouth to explore the integration of digital satellite and DSL technology. In fact, 3 of the 4 major ILECs have partnered or are planning to partner with DBS providers. EchoStar, which had offered satellite-based Internet services through its investment in Starband, no longer provides a satellite-based broadband solution. Many MMDS and private cable operators also offer Internet access services. In addition, BSPs continue to build advanced systems specifically to offer a bundle of services, including video, voice, and high-speed Internet access.

15. Since our first *Report*, non-cable MVPDs have described regulatory and other barriers to entry that limit their ability to compete with incumbent cable operators. These non-cable MVPDs continue to report that many of the same barriers to entry noted in the *1994 Report* are still experienced today. For example, in our *1994 Report*, we noted that non-cable MVPDs experienced some difficulties in obtaining programming from vertically-integrated cable programmers and from unaffiliated programmers which make exclusive agreements with cable operators. In response to the *Notice*, many non-cable MVPDs report the same difficulties. Others described problems accessing vital sports and regional news programming as a result of exemptions to the program access rules, most notably, the terrestrial delivery of programming to distributors. In our *1998 Report*, we noted that in multiple dwelling units ("MDUs") potential entry was discouraged or limited because an incumbent video programming distributor has a long-term and/or exclusive contract. This remains a concern for commenters today. In addition, as described in previous *Reports*, non-cable wireline MVPDs report problems obtaining franchises from local governments and difficulties in gaining access to utility poles needed to build out their systems. These concerns also remain.

16. More specific findings as to particular distribution technologies operating in the market for the delivery of video programming include the following:

- *Cable Systems*: Since the *1994 Report*, subscribership to cable television services has increased steadily (between year end 1993 and June 2003, there was a 15.2% increase in subscribership from 57.2 million subscribers to 65.9 million subscribers). In recent years, some specific cable operators have experienced decreases in subscribership, but the industry on a whole has experienced average year-to-year increases of about 2% each year. The industry has also continued to grow in terms of revenue (an approximately 125% increase between year-end 1993 and year-end 2002), all-day audience shares for cable networks (which rose from an average 29 share during the 1993-1994 television season to an average 55 share during the 2002-2003 season), and expenditures on programming.

- Over the last decade, the cable industry has invested more than $75 billion to upgrade and improve cable plant. As a result, digital compression technology has been implemented, resulting in significant increases in channel capacity over the last ten years, as well as the introduction of such non-video services such as Internet access and telephony.

- *Direct-to-Home ("DTH") Satellite Service (DBS and HSD)*: Since 1994, video service has been available from high power DBS satellites that transmit signals to small DBS dish antennas installed at subscribers' premises (DBS service). Video service using low power satellites and larger antennas (HSD service) has been available since 1979. DBS currently has over 20 million subscribers, an increase of approximately 11.6% since the *2002 Report*. There are currently a little more than 500,000 subscribers to HSD services, as measured by the number of HSD

users that actually purchase programming packages. This is down significantly from its peak subscribership of 2.4 million in 1995. DirecTV and EchoStar are each among the five largest providers of multichannel video programming service. In 1993, DBS was not available to consumers. As of June 2003, DBS represented a 21.6% share of the national MVPD market. Currently HSD represents another 0.53% of the MVPD market. At its peak, HSD represented almost 3.5% of MVPD service subscribers.

- *Broadband Service Providers*: In our *1994 Report*, we identified municipal and independent overbuilders. At that time, video distribution was the sole focus of overbuilding activity. In our *2001 Report* we addressed a new class of providers called BSPs, entities that compete with existing cable systems using state-of-the-art systems that offer a bundle of telecommunications services, including video, voice, and high-speed Internet access. As of June 2003, BSP served approximately 1.4 million subscribers, representing 1.49% of all MVPD households. RCN is the largest BSP, serving approximately 460,000 subscribers. WideOpenWest ("WOW") is the second largest BSP with cable systems serving about 290,000 subscribers. The third largest BSP is Knology, which currently serves approximately 130,000 subscribers.

- *Wireless Cable Systems*: Currently, the wireless cable industry ("MMDS") provides competition to the cable industry in limited areas. At year-end 1993, there were approximately 400,000 subscribers to MMDS service. At its peak in mid-1998, MMDS systems provided video service to approximately one million customers. MMDS subscribership declined over the last year from approximately 490,000 subscribers in June 2002 to 200,000 subscribers in June 2003. With the advent of digital MMDS and the Commission's authorization of two-way MMDS service, it appears that most MMDS spectrum eventually will be used to provide high-speed data services. Wireless cable represented an approximately 0.66% share of the MVPD market at year-end 1993, and approximately 0.21% share of the national MVPD market in June 2003. At its peak, MMDS has represented only 1.3% of the MVPD market.

- *Private Cable Operators*: Private cable operators, also known as SMATV operators, use some of the same technology as cable systems, but do not use public rights-of-way, and focus principally on serving subscribers living in MDUs. At year-end 1993, there were about one million subscribers to SMATV services, representing 1.67% of the MVPD market and today, there are a little more than 1.2 million subscribers, representing approximately 1.27% of the MVPD market. Subscribership has declined over the last year, from its peak subscribership in mid-2002, when there were approximately 1.6 million reported subscribers to SMATV services, representing 1.78% of the MVPD market.

- *Broadcast Television*: Broadcast stations and networks, and non-broadcast networks alike, must either produce programming or purchase programming from third-party producers. Broadcast networks and stations also are suppliers of content for distribution by MVPDs. In addition, they supply video programming directly to those television households that are not MVPD subscribers and to television sets in MVPD households that are not connected to such service. Since the *1994 Report*, the broadcast industry has continued to grow in the

number of operating stations (from 1,518 as of November 1993 to 1,726 as of June 2003), adding about 1.3% more stations on average each year over the last ten years. Broadcast stations and networks, like MVPDs and non-broadcast networks, derive revenue from advertising. Advertising revenues averaged an annual six percent increase since the *1994 Report*, but fell dramatically during the general economic recession of 2001, when advertising revenues declined about 12% from the prior year. Audience levels continue to decline as they have for many years. During the 2002-2003 television season, broadcast television stations collectively (network affiliates, independent stations and public broadcast stations) accounted for an average 49 share of prime time viewing for all television households, compared to an average 74 share ten years earlier. During the 2002-2003 television season, broadcast television stations collectively accounted for an average 45 share of all-day viewing for all television households, compared to an average 71 share ten years earlier. Broadcast television stations continue to deploy digital television ("DTV") service. As of September 2003, all but two of the 40 stations that make up the top-four network affiliates in the top ten television markets were broadcasting DTV service. Virtually all of the more than 1,300 commercial television stations have been granted DTV construction permits or licenses and 1,038 are on the air with DTV operation, or nearly 80%.

- *LEC Entry*: LEC involvement into the video market over the last ten years has been lackluster. We previously reported that the largest incumbent LECs have largely exited the video business. This remains true today. The most notable exception is BellSouth, which currently operates overbuild cable systems in 14 franchise areas, passing 1.4 million homes. In addition, a few incumbent LECs offer, or are preparing to offer, MVPD service over existing telephone lines. Qwest Communications International (formerly US West), for example, offers video service in several markets, high-speed Internet access, and telephone service over existing copper telephone lines using very high-speed digital subscriber line ("VDSL"). Currently, BSPs, many of which also operate incidentally as competitive LECs, are the primary OVS certification holders. In fact, over the last ten years, Ameritech (now owned by SBC) made the most significant entry of any incumbent LEC into the video programming distribution market, purchasing and building facilities-based services such that by 1998, it held 111 cable franchises with the potential to pass more than 1.7 million homes, and had nearly 250,000 subscribers. But Ameritech (SBC) eventually sold all of its interests in video program distribution systems, and no longer remains involved in the video business.

- *Internet Video*: In 1994, Internet video was not yet in use. The World Wide Web was a nascent technology. Despite increasing interest in the medium, near broadcast-quality streaming video requires a high-speed broadband connection. As of June 2003, an estimated 59 million Americans subscribed to an Internet access service, and 20 million of those subscribed to a high-speed Internet access service, or about one-third of all subscribers. Nevertheless, real-time and downloadable video accessible over the Internet continues to become more widely available and the amount of content is increasing. Yet, despite the evidence of increased interest in Internet video deployment and use, the medium

is still not seen as a direct competitor to traditional video services. In our *Cable Modem NPRM*, we invited comment on whether the threat that subscriber access to Internet content or services could be blocked or impaired is sufficient to justify some form of regulatory intervention at this time,[15] and whether a finding of such blocking or impairment in the future should trigger regulatory intervention.[16] We are presently reviewing comments on these and other issues as part of that proceeding.

- *Home Video Sales and Rentals*: We consider the sale and rental of home video, including videocassettes, DVDs, and laser discs, part of the video marketplace because they provide services similar to the premium and pay-per-view offerings of MVPDs. In 1994, VCR penetration was 84% of TV households. In 2003, Nielsen Media Research estimates VCR penetration at 91% of TV households. Our *1998 Report* was the first *Report* in which we reported that DVD technology, introduced in 1997, would likely replace laser disc technology as another means to view video programming. The number of homes with DVD players has grown rapidly since their introduction, and DVDs have made significant impact on the home video market. In the first half of 2003 alone, equipment manufacturers sold 10.3 million DVD players. The newest home video technology is the personal video recorder ("PVR"). Introduced in 1999, this device is capable of pausing, recording and rewinding live television in digital form on an internal hard drive instead of videotape. PVRs may be purchased from and subscription obtained through an MVPD or directly from a PVR service operator. Currently, there are approximately 2.1 million PVRs in use, as measured by PVR subscriptions.
- *Electric and Gas Utilities*: In 1994, some utilities were engaged in the provision of video services through overbuilding incumbent cable systems, though such activity was very limited. Section 103 of the Communications Act, enacted as part of the 1996 Act, removed a significant regulatory barrier that had deterred registered public utility holding companies' entry into video markets. Today, many utilities continue to move forward with ventures involving multichannel video programming distribution. Though their services are still not widespread, utilities do, provide competition in scattered localities. Some of their characteristics, such as ownership of fiber optic networks and access to public rights-of-way, make them competitively significant. Some utilities offer telecommunications services on their own, while others partner with broadband service providers, such as Starpower, RCN's joint venture with PEPCO. It also appears that utilities, particularly municipal utilities in rural areas, are willing to build advanced telecommunications networks to offer a full range of services where incumbent cable operators and telephone companies are not. Reports indicate that 105 public power entities offer video services.

17. We also find that:

[15] *See Inquiry Concerning High-Speed Access to the Internet over Cable and Other Facilities*, 17 FCC Rcd 4798, 4845 ¶ 87 (2002) ("*Cable Modem NPRM*").

[16] *Id.* at 4846 ¶ 92.

- Although cable operators continue to acquire and trade systems, consolidation of the top cable operators appears to have declined slightly over the past year, after many years of rapid consolidation and concentration. For example, the four largest operators served about 51.7% of all U.S. cable subscribers in June 2002, and in June 2003, that number was down to about 50.5% of all U.S. cable subscribers. In terms of one traditional economic measure, national concentration among the top MVPDs has increased since last year as the largest MSOs have grown larger over the past year, and current levels are above levels reported since the *1994 Report*.[17] DBS operators DirecTV and EchoStar rank among the five largest MVPDs in terms of nationwide subscribership along with three cable MSOs. In 1994, DBS was a new technology. As of year-end 2002, slightly more than 51 million of the nation's cable subscribers were served by systems that are included in 109 regional clusters. At year-end 1994, only about 20 million subscribers were served by systems that were included in 97 regional clusters.
- The number of satellite-delivered programming networks has increased significantly over the last ten years. As of year-end 1994, there were approximately 106 non-broadcast programming networks available for carriage by MVPDs. As of June 2003, there were more than 339 national non-broadcast programming networks. During the same period, vertical integration of national programming services between cable operators and programmers has decreased from 53% at year-end 1994 to 33% as of June 2003. As the number of vertically-integrated networks has increased, the total number of networks also has increased such that the percent of vertically-integrated networks has steadily declined (from over 50% in 1994 to 30% in 2002) until this year when the percent rose to 33%. In 2003, four of the top six cable MSOs, ranked by subscribership, held ownership interests in satellite-delivered programming services. In 1994, five of the top six cable MSOs held ownership interests in satellite-delivered programming services. Sports programming warrants special attention because of its widespread appeal and strategic significance for MVPDs. The *2003 Report* identifies at least 84 regional networks, 28 of which are sports channels**,** many owned at least in part by MSOs. There are also 37 regional and local news networks that compete with local broadcast stations and national cable news networks.

- The program access rules adopted pursuant to the 1992 Cable Act, and recently extended by the Commission, were designed to ensure that other MVPDs can access vertically-integrated satellite delivered programming on non-discriminatory terms. We recognize that the terrestrial distribution of programming, including in particular regional sports programming, remains an important issue and could have an impact on the ability of alternative MVPDs to compete in the video marketplace.

[17] Traditional economic measures (e.g., the Herfindahl-Hirschman Index or HHI) are based on market shares or the squaring of market shares such that large companies are weighed more heavily than small companies. The HHI (and apparent levels of concentration) decline with rising equality among any given number of companies in terms of market shares even if these firms individually have larger shares of the markets. *See* fn. 577 *infra.*

- In 1994, most technical efforts were focused on the development and use of digital compression and modulation technologies. The cable industry was just beginning to accelerate the upgrade of its wired networks to increase capacity and enhance the capabilities of their transmission platforms to include such advanced services as voice, data transport (later known as Internet access services), and advanced video services such as video-on-demand ("VOD"). Today, many advanced services are available to subscribers, but many more are still evolving. Digital compression technology is now in widespread use by cable and non-cable MVPDs, as are many of the services operating on these platforms such as telephony and high-speed Internet access services. MVPDs are now focusing on deployment of VOD and other emerging interactive television services.
- There have been numerous significant technical developments regarding cable modems and other technologies used to access a wide range of services offered by MVPDs. At the time of our first *Report* in 1994, the Internet was still a nascent technology. By June 2003, there were approximately 13.4 million cable modem subscribers in the U.S. Although cable modems were not available for residential use at the time of our *1994 Report*, a group of cable operators, joined together in December 1996 to issue a Request for Proposal ("RPF") that resulted in the development of the DOCSIS standard. As of September 2003, 365 DOCSIS modems have received certification and 54 Cable Modem Termination Systems ("CMTSs") have gained qualified status under DOCSIS. In addition, most operators continue to improve their high-speed Internet access service, offering higher speeds and special features. PacketCable, another CableLabs project, began in 1997, and is the standard developed for delivering advanced, real-time multimedia services over two-way cable plant. PacketCable enables a wide range of services, including IP telephony, multimedia conferencing, interactive gaming, and general multimedia applications.

- There also have been numerous significant technical developments regarding the navigation devices used to access a wide range of services offered by MVPDs. In 1998, the Commission adopted rules, pursuant to Section 629 of the Communications Act, so that consumers could obtain "navigation devices" from commercial sources other than their cable providers. In 2003, the Commission further adopted rules to permit television sets to be built with "plug-and-play" functionality for one-way digital cable services, without the need for a set-top box. The cable and consumer electronics industries continue to work on the development of an agreement for two-way "plug-and-play" receivers. The Commission also extended the date for the ban on cable operators provision of integrated set-top boxes from January 1, 2005 until July 1, 2006. In addition, the Commission also adopted rules to assure that DTV broadcast content will not be indiscriminately redistributed. Specifically, content protection will be signaled via the Redistribution Control Descriptor, as set forth in ATSC Standard A/65B, Program and System Information Protocol for Terrestrial Broadcast and Cable. Content marked by the descriptor may only be output or recorded through to analog outputs, protected digital outputs, and a small class of unprotected digital outputs at a lower resolution. Through the OpenCable project, CableLabs has developed hardware specifications as well as specifications for the software interface that a host device needs to accommodate these changes.

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

A. Cable Television Service

18. Ten years ago, cable operators served almost 100% of the nation's MVPD subscribers.[18] Today, most consumers have the additional choice of two national DBS providers, and cable's share of the MVPD market has fallen to approximately 75% of all MVPD subscribers.[19] Competition in the MVPD market has been accompanied by technological innovation and the introduction of new products and services. In 1994, most cable operators offered 30 to 53 analog video channels.[20] Today, after investing tens of billions of dollars to rebuild and upgrade cable systems, cable operators offer, on average, 70 analog video channels, 120 digital video channels, high-definition television programming, video-on-demand, and non-video services, such as high-speed Internet access service, and telephone service.

19. This section provides a snapshot of the cable industry five and ten years ago, and addresses the performance of franchised cable system operators during the past year.[21] We address four different areas of performance. First, we report on the general performance of the industry, including subscriber levels, availability of basic services, and viewership. 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, including the amount of funds raised, and how these funds are being used to upgrade physical plant and to acquire new systems. Lastly, we address the growth of advanced broadband services, including high-speed Internet access services, digital video services, video-on-demand, and cable telephony that are offered in conjunction with, and over the same facilities as, video service.

1. General Performance

20. Since our last *Report*, the cable industry has grown in terms of basic tier cable viewership, channel capacity,[22] and premium service subscriptions.[23] Homes passed[24] continues to increase. Basic

[18] NCTA Comments at 2. In the *1994 Report*, the Commission found that "for most households, cable television is the only provider of multichannel video programming." *1994 Report*, 9 FCC Rcd at 7449 ¶ 13.

[19] NCTA Comments at 7.

[20] *1995 Report*, 11 FCC Rcd at 2162, Table 3.

[21] A franchise is an authorization supplied by a federal, state, or local government entity to own or construct a cable system in a specific area. 47 U.S.C. §§ 522(9), 522(10). 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).

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

[23] Premium services are cable networks provided by a cable operator on a per channel basis for an extra monthly fee. Pay-per-view ("PPV") services are cable networks provided on a per program basis. PPV service is a separate category from premium service.

tier cable subscribership[25] and basic tier cable penetration, the ratio of the number of basic cable subscribers to the number of residential cable homes passed, declined in 2002 and is estimated to have declined further in the first half of 2003. Deployment of digital video programming, HDTV programming, video-on-demand, and non-video services, such as high-speed Internet access service and telephone service continued to increase during 2002 and the first half of 2003.

21. ***Cable's Capacity to Serve Television Households***. The most widely used industry measurement of cable availability is the number of homes passed expressed as a percentage of the number of U.S. homes with at least one television ("TV households").[26] The calculation of cable availability has been a subject of controversy.[27] 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.[28] NRTC argues that approximately 23 million households in smaller and rural markets do not have access to cable services, and only have access to DBS for MVPD services.[29] In contrast, the cable industry argues that cable operators serve all but the most sparsely populated areas.[30] Thus, there remains a disagreement regarding the number of households where there is competition between cable and DBS. NRTC asserts that the benefits of competition between DBS and cable are not yet available in many smaller and rural markets because households in these markets do not have access to cable service.[31] The cable industry contends that the MVPD market is "fully competitive" since consumers nationwide have a choice among several

(Continued from previous page)

[24] Homes passed is the total number of households capable of receiving cable television service.

[25] We refer to all cable programming networks offered as a part of program packages or tiers as "basic cable networks." The primary level of cable television service is commonly referred to as "basic service" ("BST") and must be taken by all subscribers. The content of basic service varies widely 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 programming services. One or more expanded tiers of service, known as cable programming service tier ("CPST") for purposes of rate regulation, and often known as expanded basic, also may be offered to subscribers. These expanded tiers of service usually include additional video programming channels. 47 U.S.C. § 543(b)(7); 47 U.S.C § 543 (k)(2).

[26] *2002 Report*, 17 FCC Rcd at 26909 ¶ 17; Nielsen Media Research, U.S. Television Household Estimates, Sept. 2003, at 1.

[27] *2002 Report*, 17 FCC Rcd at 26910 ¶ 18; *See also 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).

[28] 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 may vary from 4% to 21.28% depending on the estimation methods. *EchoStar-Hughes HDO*, 17 FCC Rcd at 20612 ¶ 124 and n.356.

[29] NRTC Comments at 4; NRTC Reply Comments at 2. *See also EchoStar-Hughes HDO*, 17 FCC Rcd at 20612 ¶ 124 and n.356.

[30] NCTA Comments at 25.

[31] NRTC Reply Comments at 2.

fully competitive facilities-based MVPD alternatives.[32] Comcast argues that consumers in almost every corner of America have a choice of three or more facilities-based MVPDs (*i.e.*, at least two DBS systems and a cable system).[33] Because cable systems differ in their capacities and capabilities, there has also been disagreement as to whether low-capacity and analog cable systems are good substitutes for DBS or whether only high-capacity cable systems should be considered as good substitutes for DBS.[34] For purposes of this *Report*, we continue to use, as we have in the past, data derived from Kagan World Media and Nielsen Media Research for historical consistency. We present these data to indicate trends, rather than an absolute measure of cable availability. As shown in Table 1 below, over the past ten years, the number of homes passed by cable systems grew from 91.6 million in 1994 to 95.6 million in 1998, and to an estimated 103.5 million in June 2003. Cable availability was estimated to be approximately 96.3% of TV households at year-end 2002.

22. 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% of households within the United States and are subscribed to by 70% of those households, the Commission may promulgate any additional rules necessary to promote diversity of information sources.[35] Previously, it was argued that the benchmark had not yet been met.[36] Based on the most current figures from Warren Publishing, as of December 1, 2003, there were 82,506,311 homes passed by cable systems with 36 or more channels. The Census Bureau estimates that, as of July 2002, there were 119.3 million households in the United States. The figure for December 2003 is likely to be greater than 119.3 million. Thus, cable systems with 36 or more channels are available to at most 69.2% of households in the United States. In addition, according to Warren Publishing, 56,859,607 households subscribe to cable systems with 36 or more channels. Thus, about 68.9% of households to which 36 or more channels are available actually subscribe.

[32] NCTA Reply Comments at 7. NCTA states that "alternatives to cable television are virtually universally available to consumers." *Id*. at 1.

[33] Comcast Comments at 12; NCTA Comments at 24-27.

[34] *EchoStar-Hughes HDO*, 17 FCC Rcd at 20606-8 ¶¶ 108-112.

[35] 47 U.S.C. § 532(g).

[36] *See 2000 Report*, 16 FCC Rcd 6084 ¶ 193.

TABLE 1: Cable Television Industry Growth: 1994 - June 2003 (in millions)[37]

Year	TV Households ("TH")[38]		Homes Passed ("HP")[39]		Basic Subscribers ("Subs")[40]		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			
1994	95.4	1.3%	91.6	1.1%	59.5	4.0%	96.0%	62.4%	65.0%
1998	99.4	1.4%	95.6	1.7%	65.1	1.4%	96.2%	65.5%	68.1%
1999	100.8	1.4%	97.6	2.1%	65.9	1.2%	96.8%	65.4%	67.5%
2000	102.2	1.4%	99.1	1.5%	66.6	1.1%	97.0%	65.2%	67.2%
2001	105.4	3.1%	100.6	1.5%	66.9	0.5%	95.4%	63.5%	66.5%
2002	106.7	1.2%	102.7	2.1%	66.1	-1.2%	96.3%	61.9%	64.4%
June 2003	106.7	0.0%[41]	103.5	0.8%[42]	65.9	-0.3%[43]	97.0%	61.8%	63.7%

23. ***Subscribership***. Over the past decade, the number of cable subscribers grew from 58.4 million in 1994 to 65.1 million in 1998, peaked with 66.9 million subscribers in 2001, and then declined to an estimated 65.9 million in June 2003, as shown in Table 1 above. The number of subscribers first declined in 2002 and is estimated to fall further in 2003. For example, Cablevision lost 15,552 basic

[37] Historical data in this table may differ from those previously reported because some data have been updated by the source.

[38] The 2002 and estimated June 2003 TV Household numbers are reported by Kagan World Media as total U.S. TV households. The numbers are derived from Nielsen Media Research and Kagan estimates. Kagan World Media, Broadband Cable Financial Databook, Aug. 2003, at 11 ("Cable Databook").

[39] The 1994 through 2002 homes passed numbers are reported by Kagan as residential cable homes passed. The June 2003 homes passed estimate is an average calculated from the 2002 and 2003 projection of occupied cable homes passed. Cable Databook at 9, 11.

[40] The 1994 through 2002 basic subscriber numbers are reported by Kagan as basic subscribers. The June 2003 basic subscriber estimate is an average calculated from the 2002 and 2003 projection of total basic cable subscribers. Cable Databook at 9, 11. According to NCTA, there were 70.49 million cable subscribers at the end of June 2003. NCTA Comments at 8. NCTA's estimate of cable subscribers is more than the number of basic subscribers reported in Table 1 above. This is likely due to differing measurement methodologies and data.

[41] Percentage change from December 2002 to June 2003.

[42] *Id.*

[43] *Id.*

subscribers between year-end 2002 and September 30, 2003,[44] Charter lost 149,500 basic subscribers over the same 12 month period,[45] and Time Warner lost 10,000 basic subscribers in the third quarter of 2003.[46] Recent declines in the total number of cable subscribers have been attributed to the number of cable subscribers switching to DBS and changes in reporting by MSOs.[47] As the number of homes passed increased, and the number of subscribers declined, cable penetration (*i.e.*, subscribers as a percentage of homes passed) continued to decline in 2002, and is estimated to decline further in the first half of 2003. As the number of homes passed and number of TV households increased, and the number of subscribers declined, the percentage of TV households subscribing to cable also continued to decline in 2002, and is estimated to decline further in the first half of 2003.

24. The number of homes subscribing to premium cable services increased from 27.7 million in 1994 to 32.9 million in 1998, peaked at 36 million in 2001, and declined to 35.3 million in 2002, as shown in Table 2 below. Thus, at the end of 2002, approximately 53% of cable's 66.1 million subscribers also subscribed to premium services. It is reasonable to assume that a majority of the cable subscribers that switched to DBS also subscribed to premium cable services. This may explain the recent decline in the number of homes subscribing to premium cable services. The number of homes subscribing to premium cable services was projected to increase, however, to 35.4 million in June 2003, as shown in Table 2. The expected increase in 2003 will come from fewer basic subscriber losses and an increase in the sale of premium services to the approximately 30 million basic cable subscribers that do not subscribe to premium services. The number of premium services to which homes are subscribing (also known as "pay units") has risen steadily over the past ten years from 46.5 million in 1994, to 58.6 million in 1998, to 81.1 million in 2002, to an estimated 82 million in June 2003. Although cable systems are selling premium cable services to fewer homes, the average number of subscriptions per remaining premium subscriber increased, from an average 1.8 subscriptions per subscriber at year-end 2001 to an average 2.3 subscriptions per subscriber at year-end 2002.[48]

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[44] *Cablevision Reported a 3rd-Quarter Loss of Nearly $104.6 Million*, COMMUNICATIONS DAILY, Nov. 13, 2003, at 13.

[45] Charter Communications, Inc., *Charter Communications Reports Third Quarter 2003 Results* (press release), Nov. 3, 2003.

[46] Mike Farrell, *Mixed Results at Time Warner*, MULTICHANNEL NEWS, Oct. 17, 2003.

[47] NCTA Comments at 7. *See also* Caroline Wilbert, *Cable Takes Aim at Satellite Customers*, THE ATLANTA JOURNAL-CONSTITUTION, June 12, 2003, at E3. Adelphia lowered its subscriber counts for basic cable, digital cable, and high-speed Internet service reported in 2002 following a review of company accounting practices. Holly M. Sanders, *Adelphia's Restatement Reduces Number of Subscribers*, BLOOMBERG NEWS, May 28, 2003, at http://www.philly.com/mld/philly/business/5955785.htm. Charter Communications also reduced the number of subscribers it counts in its subscriber base in response to an investigation of the its method for counting subscribers. *See Charter Communications Under Investigation*, REUTERS, Aug. 16, 2002, at http://www.usatoday.com/money/media/2002-08-16-charter-probe_x.htm.

[48] Cable Databook at 8.

TABLE 2: Premium Cable Services: 1994 - June 2003 (in millions) [49]

Year	Premium Cable Service Subscribers (Pay HH)[50]		Premium Cable Service Subscriptions (Pay Units)[51]	
	Total	% Change Over Prior Yr	Total	% Change Over Prior Yr
1994	27.7	4.9%	46.5	7.6%
1998	32.9	3.5%	58.6	6.0%
1999	34.3	4.3%	60.2	2.7%
2000	35.7	4.1%	65.9	9.5%
2001	36.0	0.8%	75.4	14.4%
2002	35.3	-1.9%	81.1	7.6%
June 2003	35.4	0.3%[52]	82.0	1.1%[53]

25. ***Channel Capacity***. In 1994, 78% of all cable systems had the bandwidth to provide 30 or more analog video channels.[54] By 1998, 84.6% of all cable systems had the bandwidth to provide thirty or more analog video channels, and 20.7% of all cable systems had the bandwidth to provide 54 or more analog video channels.[55] Subsequent investments by cable operators in hybrid fiber/coaxial transmission lines and digital technologies increased both the bandwidth and versatility of cable systems. Although each analog video channel requires six MHz bandwidth, digital technologies facilitate the delivery of multiple digital video channels using six MHz bandwidth. The Commission's *2002 Price Survey Report* provides figures on the cable system bandwidth and the number of analog and digital video channels being delivered by cable systems responding to a Commission survey (see Table 3).[56] It shows that

[49] Historical data included in this table may differ from those previously reported because some data have been updated by the source.

[50] The 1994 through 2002 premium cable service subscribers ("Pay HH") numbers are reported by Kagan as pay subscribers. The June 2003 premium cable service subscribers estimate is an average calculated from 2002 and 2003 projections of average pay TV households. Cable Databook at 9, 11.

[51] The 1994 through 2002 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 8 hours per day). The June 2003 premium cable service subscriptions estimate is an average calculated from 2002 and 2003 projections of total pay TV units, including mini-pay. Cable Databook at 9, 11.

[52] Percentage change from December 2002 to June 2003.

[53] *Id*.

[54] *1995 Report*, 11 FCC Rcd at 2162, Table 3.

[55] *1999 Report*, 15 FCC Rcd at 990 ¶ 22.

[56] *2002 Price Survey Report,* fn. 10 *supra,* 18 FCC Rcd 13284, 13296-98, Tables 9, 10, and 11. Section 623(k) of the Communications Act requires the Commission to publish annually a statistical report on cable prices, or more (continued….)

approximately 73% of the sampled cable systems (both competitive and non-competitive systems)[57] have facilities with bandwidth of 750 MHz or above.[58] The average bandwidth of systems in the Survey is approximately 680 MHz. Although the increased cable system bandwidth may be allocated among video and non-video services, some of the increased bandwidth has been used to increase the amount of video channels, especially the number of digital video channels.[59] The systems in the Survey devoted an average of approximately 507 MHz bandwidth to video service.[60] Today, cable operators are choosing to provide, on average, 70 analog video channels and approximately 120 digital video channels, with enough additional bandwidth to provide high-definition television, video-on-demand, and Internet access services. As shown in Table 3, from July 2001 to July 2002, the total number of video channels (analog plus digital) increased from 178 to approximately 199 for the competitive group, and from approximately 171 to 189 for the noncompetitive group.

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specifically, average rates for the delivery of basic cable service, cable programming service, and equipment. *See* 47 U.S.C. § 543(k). Basic cable service includes local television broadcast signals. *See* 47 U.S.C. § 543(b)(7). Cable programming service includes any video programming other than video programming carried on the basic service tier, and video programming offered on a per channel or per program basis. *See* 47 U.S.C. § 543(k)(2). Equipment refers to a converter box, remote control, and other equipment necessary to access programming. *See* 47 U.S.C. § 543(b)(3).

[57] *2002 Price Survey Report*, 18 FCC Rcd at 13298, Table 11. The Survey enables the Commission to compare prices charged by samples of two groups of cable operators: (1) operators that are deemed to face effective competition (referred to as the "competitive group") and (2) operators that do not face effective competition (the "non-competitive group"). Within the non-competitive group, information was collected from both regulated and unregulated operators. Operators in the competitive group are limited to those operators that have sought and obtained a Commission finding of effective competition. As a result, within the non-competitive group, there may be, and likely are, operators that face competition but have not filed a petition with the Commission seeking a finding of effective competition. Similarly, there may be operators within the competitive group that may have met the criteria for a finding of effective competition at the time the finding was made, but because of changed circumstances, may not meet the statutory criteria currently. *See id.* at 13285.

[58] According to NCTA, by year-end 2002, 79 million homes were passed by systems with 750 MHz or higher capacity and approximately 86 million households were passed by systems that provided two-way services, such as cable modem, interactive television, and IP telephony. NCTA Comments at 44-45. If we assume that there were 102 million occupied TV households passed by cable systems, NCTA's reported numbers for June 2003 suggest that approximately 77.4% of these homes had access to cable systems with 750 MHz or higher and 84.3% of these homes had access to activated two-way plant. NCTA's calculations for homes passed by 750 MHz cable systems differ from data reported in the *2002 Price Survey Report*. This is likely due to differing measurement methodologies and data.

[59] Comcast reports that a typical Comcast upgraded 750 MHz plant is designed to provide 84 analog video channels, 216 digital video channels, eight HDTV channels, VOD service for 400 digital video customers at any one time, high speed data service for 400 subscribers, and telephone service for 300 customers. Comcast Comments at 15.

[60] Each analog channel requires six MHz bandwidth, so it takes approximately 420 MHz bandwidth to deliver the 70 analog channels. Multiple digital channels, however, can be delivered on six MHz bandwidth. We assume that an average of 8.6 digital channels are delivered for each six MHz bandwidth. The average number of digital channels in the survey is 124, so it takes approximately 87 MHz of bandwidth to deliver the 124 digital channels (124/8.6 x 6 MHz = 86.5 MHz). It would take more bandwidth if some of the digital channels were delivering HDTV programming.

TABLE 3: Channel Capacity[61]

	Competitive Group		Noncompetitive Group	
	July 2001	**July 2002**	**July 2001**	**July 2002**
Average system capacity (MHz)	650.3	677.3	656.5	695.7
Percent of systems with capacity of:				
330 MHz and below	9.8%	8.1%	7.8%	5.8%
331 through 749 MHz	24.8%	19.2%	29.4%	20.8%
750 MHz	65.4%	72.7%	62.8%	73.4%
Total number of channels[62]	178	198.6	170.9	189.0
Total number of analog channels	72.0	70.3	69.9	70.1
Total number of digital channels	106.0	128.3	101.0	118.9

26. ***Viewership.*** The combined audience share[63] for total day viewing of all cable networks[64] was 29 in the 1993-1994 television season.[65] The share grew to 42 by the 1997-1998 television season.[66] Since then, cable networks have increased their combined audience, such that by the 2002-2003 television season, all cable networks combined received higher total day and prime time audience shares than broadcast television. Audience share statistics for total day viewing indicate that all cable networks combined increased their audience share from 53 in the 2001-2002 television season to a 55 share in the 2002-2003 television season. The total day viewing audience share of broadcast television[67] fell from a 47 share in the 2001-2002 television season to a 45 share in the 2002-2003 television season. Audience share statistics for prime time[68] show that all cable networks combined increased their share from 50 in the 2001-2002 television season to a 51 share in the 2002-2003 television season. The prime time viewing share of broadcast television fell from a 50 share in the 2001-2002 television season to a 49 share in the 2002-2003 television season. Although the most popular cable networks receive a lower audience share for total day viewing and prime time than any of the major broadcast television networks, there are

[61] *2002 Price Survey Report*, 18 FCC Rcd at 13296-98, Tables 9, 10, and 11.

[62] In previous years, we have reported the total number of channels in terms of the bandwidth (specifically, the estimated number of six MHz channels) needed to carry the analog and digital channels. *See* fn. 60 *supra*.

[63] A share is the percent of all households using television during the time period that are viewing the specified station(s) or network(s). Nielsen reports audience shares that exceed 100% when totaled due to simultaneous multiple set viewing. We have normalized audience shares to equal 100%.

[64] Cable network shares include basic (BST and CPST), premium, and PPV cable networks. As discussed in paras. 141-142 *infra*, the number of nationally delivered cable networks available for delivery by cable operators and other MVPDs went from 99 in 1993, to 187 in 1998, to 339 in June 2003.

[65] Nielsen Media Research, *Broadcast Calendar (TV Season) Share of Audience Report, Primetime and Total Day, 1984-85 to 2002-03,* Sept. 2003.

[66] *Id*.

[67] "Broadcast" shares include network affiliates, independent, and public television stations.

[68] Prime time viewing is Monday through Saturday, 8 pm-11 pm, and Sunday, 7 pm-11 pm.

a growing number of cable networks and their popularity is increasing, such that all cable networks combined have higher audience shares than all broadcast networks combined.[69]

27. ***Cable Industry Revenue***. Despite the decline in cable subscribers in recent years, cable industry revenue increased in every year of the past decade. Ten years ago, almost all revenue came from the provision of video services. In 2003, over 12% of revenue will come from Internet access and other non-video services.[70] The cable industry generated $22.9 billion total revenue in 1993, $32.7 billion in 1998, and is estimated to generate $51.3 billion in 2003, with high-speed Internet access service a principal driver of revenue growth.[71] As Table 4 shows, annual cable industry revenue grew 6.5% during 2002, reaching $46.8 billion in total revenue. Not all revenue categories increased. Revenue from premium tiers, pay-per-view, and equipment/miscellaneous fell during 2002. These declines were offset by growth in revenue from local advertising, home shopping, advanced digital tiers, and high-speed Internet access and other non-video services.

28. ***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 capital intensive companies.[72] Cash flow from operations is the net result of cash inflows from operations (revenue) and cash outflows from operations (expenses). Cash flow from operations

[69] For the 2002-2003 TV season, Nielsen Media Research reports that the top-rated cable network for all-day audience was Nickelodeon/Nick-At-Nite with a 4 share compared to a 7 share for Fox affiliates, the lowest rated of the four major networks during the 2002-2003 TV season. ABC, CBS, and NBC affiliates received all-day shares greater than 7 for the 2002-2003 TV season. Similarly, the top-rated cable network in primetime was TNT with a 3 share compared to the Fox's primetime share of 8. On a January through December basis, ad-supported cable networks combined received a 50.3 share through December 14, 2003, while the seven broadcast networks combined received a 44.6 share. Allison Romano, *Basically, Cable Wins '03*, BROADCASTING & CABLE, Dec. 22, 2003, at 4. Although broadcast networks ratings tend to be large compared with any single cable channel, it is getting more common for a cable show to garner audiences similar to broadcast network shows. For example, five *Sunday Night Football* telecasts on ESPN attracted more than 10 million viewers each. In addition, shows like *Trading Spaces, The O'Reilly Factor* and *SpongeBob SquarePants* have attracted more than 7 million viewers. *Id*.

[70] Cable Databook at 7. High-speed data service now generates 18% of Cablevision's revenues. John M. Higgins, *Cablevision Rolling Out IP Phone Service*, BROADCASTING & CABLE, Nov. 17, 2003, at 12.

[71] Jessica Reif Cohen and Keith Fawcett, *Cable Television*, Merrill Lynch, July 2, 2003, at 1.

[72] For close to twenty years, the cable industry has used a cash flow valuation model. Cash flow valuation has been 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 proffered 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. Tom Kerver, *Happy (?) Anniversary to the Followers of Cash-Flow Valuation*, MULTICHANNEL NEWSDAY, Sept. 30, 2002, at 3. Richard Bilotti, Scott Babka, and Kay Sheils, *The Six Degrees of Separating Free Cash Flow*, Morgan Stanley, Jan. 2, 2003, at 2-3 and 8-9. Douglas S. Shapiro, Michael L. Savner, and Jeffrey R. Toohig, *Free Cash Flow, Revisited*, Banc of America Securities, Apr. 28, 2003, at 20-1.

indicates a firm's ability to meet its net finance and investment obligations and thus does not include non-cash charges to net income such as depreciation and amortization. As Table 4 shows, cash flow from operations increased during 2002.[73] Table 4 also shows that revenue per subscriber is expected to grow from $705 in 2002 to $778 in 2003. In addition, cash flow as a percentage of revenue (cash flow margin) increased over the same period. That is, cash flow increased at a greater rate than revenue, indicating that revenues grew faster than operating expenses during 2002.

TABLE 4: Cable Industry Revenue and Cash Flow: 1994 – 2003[74]

	1994	1998	2001	2002	01-02	2003	02-03
	Total	Total	Total	Total	% Change	Estimated Total	% Change
Basic Subscribers (mil.)	57.2	65.1	66.9	66.1	-1.2%	65.7	-0.6%
Revenue Segments (mil.)							
Basic Service and CPST Tiers	$15,173	$21,574	$26,324	$27,690	5.2%	$28,926	4.5%
Premium (Pay) Tiers	$4,680	$4,521	$5,201	$5,226	0.5%	$5,192	-0.7%
Pay –Per-View	$484	$514	$993	$793	-20.1%	$887	11.9%
Local Advertising	$1,077	$1,675	$2,430	$2,978	22.6%	$3,246	9.0%
Home Shopping	$127	$175	$260	$289	11.2%	$308	6.6%
Total Digital Tier	$0	$98	$1,980	$2,764	39.6%	$3,408	23.3%
High-speed Internet	$0	$103	$1,878	$4,494	139.3%	$6,362	41.6%
Installation	$328	$400	$433	$426	-1.6%	$437	2.6%
Miscellaneous[75]	$698	$1,217	$1,893	$2,202	16.3%	$2,529	14.9%
Total Revenue (mil.)	**$22,567**	**$30,277**	**$41,392**	**$46,862**	**13.2%**	**$51,295**	**9.5%**
Revenue Per Subscriber	$394.53	$465.08	$618.71	$708.96	14.6%	$780.75	10.1%
Operating Cash Flow (mil.)	**$10,549**	**$14,176**	**$16,553**	**$18,610**	**12.4%**	**$21,050**	**13.1%**
Cash Flow per Subscriber	$184.42	$217.76	$247.43	$281.54	13.8%	$320.40	13.8%
Cash Flow/Total Revenue	**46.7%**	**46.8%**	**40.0%**	**39.7%**	**-0.8%**	**41.0%**	**3.3%**

29. ***Programming Costs***. Programming costs have increased at double digit rates in recent years.[76] Yearly programming expenses, on a per-subscriber basis increased from $122 in 1999 to $180 in

[73] Kagan World Media reports that it was high-margin, high-speed-data service that drove operating cash flow growth in 2002. Cable Databook at 7.

[74] Pay-per-view, local advertising, and home shopping data for 1994, 1998 and 2001 come from the *1995*, *1999*, and *2002 Reports*. All other data come from the Cable Databook at 8-13 and 142. Historical data included in this table may differ from those previously reported because some data have been updated by the source.

[75] Miscellaneous revenue include: advanced analog, equipment charges, residential cable phone service, and new services. Cable Databook at 8.

[76] Richard Bilotti, Benjamin Swinburne, and Megan Lynch, *Cable & Satellite: The Copernicus Theorem*, Morgan Stanley, July 2, 2003, at 48 ("*Copernicus Theorem*"); NCTA Comments at 36–37.

2002, a 48% increase.[77] Sports programming appears to be a major contributor to higher programming costs.[78] The average license fees for a sports network increased by 59% in the three years between 1999 and 2002, while the average license fees for a non-sports network increased 26% over the same three year period.[79] In addition, the average license fees for the sports networks were substantially higher than the average license fees for non-sports networks.[80] Some of the increase in sports programming costs is attributable to competition among sports networks and the rising players' salaries that lead to increased television rights fees.[81] Other reasons for increasing programming costs include: more intense competition among networks which has bid up the cost of key inputs (such as writers and producers), an increase in the amount of original content shown on cable networks, the addition of new cable networks, and improved quality of programming generally.[82]

30. Cable operator programming expenditures[83] were $4.4 billion in 1994 and $7.5 billion in 1998.[84] Programming costs for 2003 will exceed $9 billion. Between 1998 and 2002, analysts estimate programming expenditures for cable operators grew an average of 11-13%.[85] Part of this increase was from fee increases paid to cable networks and part was from the addition of channels.[86] Analysts expect programming expenditures to continue to increase at a slower rate than in recent years.[87]

31. Expenditures by basic cable networks for original programming and program acquisition increased from approximately $7.9 billion in 2001 to approximately $9.2 billion in 2002.[88] Expenses for

[77] *2003 GAO Report,* fn. 7 *supra,* at 21.

[78] *Id.* at 22.

[79] *Id.*

[80] *Id.*

[81] NCTA Comments at 36-37. *See also* para. 171 *infra.*

[82] NCTA Comments at 23.

[83] Programming expenditures include analog, premium, pay-per-view, and digital programming costs.

[84] NCTA, *Industry Statistics*, Cable Developments *2003*, at 13.

[85] *Copernicus Theorem* at 48.

[86] NCTA Comments at 34-37.

[87] The projected decline in the rate of growth of programming expenditures is based on an assumed shifting in the balance of power from programmers to cable operators. *See* Douglas Shapiro and Michael Savner, *Cable Industry Quarterly: 3Q03 Preview and Industry Outlook*, Banc of America Securities, Oct. 22, 2003, at 32-3; and *Copernicus Theorem* at 47. Morgan Stanley expects programming costs to increase 6–8% annually. *Copernicus Theorem* at 47. Smith Barney reports that Cox's total programming costs will increase by 11.5% in 2004. Niraj Gupta, *Cable: MultichannelBeat: Fox Deal Looks Good for Cox*, Citigroup-Smith Barney, Dec. 8, 2003, at 1. USB reports that Comcast's recently signed multi-year agreement with Viacom cable networks provides for annual rate increases of 6-8%, well below USB's 2004 estimated programming expense increase of 9.2% for Comcast. Aryeh B. Bourkoff, *Cable TV/Satellite News & Views*, UBS, Dec. 19, 2003, at 1-2.

[88] NCTA Comments at 35.

copyright fees for broadcast signal carriage pursuant to Section 111 of the Copyright Act[89] fell 0.9% from $121.9 million in 2001 to $120.8 million in 2002.[90]

32. ***Cable System Transactions***. The aggregate value of cable systems sold in any year depends on the number of transactions, the size of the entities involved, and the price paid. As such, the aggregate value of cable systems sold will vary from year to year. The aggregate value of cable systems sold was about $14 billion in 1994 and $64.6 billion in 1998, as shown in Table 5 below. One analyst explained that had it not been for the AT&T-Comcast merger, "2001 would have been the slowest year for cable deals" since 1982.[91] With the AT&T-Comcast merger, however, the aggregate value of cable systems sold peaked at $87.5 billion.[92] As shown in Table 5, the number of system acquisitions and exchanges between MSOs slowed in 2002 and the aggregate value of cable systems sold was only $1.4 billion. Through June 2003, there have been only 21 cable systems sales valued at approximately $422 million. According to one analyst, that is the lowest deal volume since 1982.[93] Several mergers among large operators which involve the transfer and exchange of numerous systems, however, are not reflected in Table 5.[94] One reason given for the recent slowdown in cable system transactions is that debt reduction has become a high priority for cable companies.[95] Another reason given for the slowdown is that cable stocks have fallen from their peaks and cable buyers do not want to use their shares to finance acquisitions, while cable sellers still hope to receive prices similar to those being paid in the late 1990s.[96]

33. The "average value per subscriber" was $1,869 in 1994, and remained fairly constant until 1998 when it grew to $2,877, as shown in Table 5. The value per subscriber continued to increase until 2000 when it reached a peak of $5,755.[97] By 2002, it had fallen to $2,357 and was approximately $2,500 for systems sold in the first half of 2003, as shown in Table 5. The rise and subsequent decline in the

[89] Copyright Act, 17 U.S.C. § 111 *et seq.*

[90] Copyright Office, Library of Congress, *Licensing Division Report of Receipts*, Oct. 9, 2003. Copyright fees are due on a specific date, but are collected on a rolling basis. We report the most current figures reported by the Copyright Office.

[91] Kagan World Media, Broadband Cable Financial Databook, July 2002, at 177.

[92] *Id*.

[93] *Id*. at 5.

[94] Merger transactions are not reflected in Table 5. Mergers over the last couple of years, however, have involved the transfer of many cable systems. *See e.*g., *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from MediaOne Group, Inc., Transferor, to AT&T Corp., Transferee,* 15 FCC Rcd 9816 (2000); *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and America Online, Inc., Transferors, to AOL Time Warner Inc., Transferee*, 16 FCC Rcd 6547 (2001) ("*AOL Time Warner Order*"); *Applications for Consent to the Transfer of Control of Licenses, Comcast Corporation and AT&T Corp., Transferors, to AT&T Comcast Corporation, Transferee,* 17 FCC Rcd 23246 (2002) ("*AT&T-Comcast Merger Order*").

[95] Cable Databook at 5.

[96] John M. Higgins, *A Pause in Consolidation*, BROADCASTING & CABLE, Nov. 10, 2003, at 32.

[97] Cable Databook at 179.

value per subscriber parallels the rise and decline in the cash flow multiple paid for systems sold. In 1994, systems were selling for 10.3 times cash flow, as shown in Table 5. It hit a low in 1997 at 9.2, then began to rise and peaked in 2000 at 19.5.[98] By 2002, systems were selling for 11.6 times cash flow, and 11.0 times cash flow in the first half of 2003, as shown in Table 5. In the late 1990s, the increase in prices paid for subscribers parallels the consolidation of the cable industry and the clustering of cable systems.[99]

TABLE 5: System Transactions: 1994 - June 2003[100]

	1994	1998	2001	2002	01-02 % Change	Jan-Jun 2003
Number of Systems Sold	64	114	36	23	-36.1%	21
Total Number of Subscribers Sold	7,504,177	22,458,157	17,958,375	607,446	-96.6%	168,748
Average Number of Subscribers per System Sold	117,253	197,001	498,844	26,411	-94.7%	8,036
Total Number of Homes Passed Sold	12,492,997	36,387,196	31,657,221	1,158,765	-96.3%	298,723
Average Number of Homes Passed per System Sold	195,203	319,186	879,367	50,381	-94.3%	14,225
Total Dollar Value (mil.)	$14,025	$64,608	$87,499	$1,432	-98.4%	$421.8
Average Dollar Value (mil.) of System Sold	$219	$567	$2,431	$62.3	-97.4%	$20.1
National Average Dollar Value Per Subscriber[101]	$1,869	$2,877	$4,872	$2,357	-51.6%	$2,500
Dollar Value Per Home Passed	$1,123	$1,776	$2,764	$1,236	-55.3%	$1,412
Cash Flow Multiple	10.3	13.1	19.3	11.6	-39.9%	11.0

34. ***Stock Prices***. Cable stock prices, as measured by the Kagan Cable MSO Average, declined 54.7%, in 2002, whereas the S&P 500 declined 23.4% and the NASDAQ declined 31.5%.[102] Analysts reported that having invested billions to rebuild and upgrade cable plant, investors appeared to be

[98] *Id*.

[99] S*ee* paras. 132-134 *infra* for a discussion of consolidation and clustering in the cable industry.

[100] Data for 2002 come from Kagan World Media, Cable TV Investor, Jan. 31, 2003, at 9. Data for January-June 2003 come from Kagan World Media, Cable TV Investor: Deals & Finance, July 30, 2003, at 20 ("Deals & Finance July 2003"). Historical data included in this table may differ from those previously reported because some data have been updated by the source.

[101] The value per cable subscribers is not uniform nationwide, but instead varies by system. Subscribers in certain systems are more valuable based on considerations such as the capacity of the system, the average number of services purchased by subscribers in a given system, or the cash flow generated by the operations of a given system. System sale prices also vary from year to year based on supply and demand factors as well as industry access to capital and the relative cost of such capital.

[102] Percentage changes are derived from 2001 and 2002 year-end closing prices. Cable Databook at 89.

concerned about the ability of cable operators to prosper against DBS.[103] Analysts also reported that cable stocks were depressed in 2002 because of accounting irregularities and legal challenges.[104] In the first half of 2003, the Kagan Cable MSO Average increased 25.5%, the S&P increased 11.0% and the NASDAQ increased 21.7%.[105] Analysts reported that cable stock prices climbed on news of moderating basic subscriber losses, encouraging trials of new technologies, strong revenue growth, and strength in the local cable advertisement market.[106]

2. Capital Acquisition and Disposition

35. ***Industry Financing***. The cable industry typically has relied on combinations of private and public financing, with the distribution of these combinations varying greatly from year to year. These year-to-year fluctuations in financing sources appear to be based on the availability of acceptable financing rates through private investors or capital lending institutions, and the attractiveness of debt and equity offerings. Table 6 shows the amount raised per year by source.

[103] Kagan World Media, Cable TV Investor, December 20, 2002, at 1.

[104] Kagan World Media, Cable TV Investor, May 30, 2003, at 1; Cable TV Investor, June 30, 2003, at 1. Kagan World Media states that cable operators spent 2002 "mired in a sea of investor distrust." Cable Databook at 4.

[105] Percentage changes are derived from 2002 year-end and June 27, 2003, closing prices. Deals & Finance July 2003 at 23. Kagan World Media states that "The provision of new services driving cash flow growth, declines in upgrade spending, and a refreshing lack of major corporate financial/managerial scandals have helped cable shares recover from their dishonor-driven depths of 2002." Cable Databook at 5.

[106] Kagan World Media, Cable TV Investor: Deals & Finance, June 30, 2003, at 1.

TABLE 6: Acquisition of Capital: 1994 - June 2003 ($ in millions)[107]

	Private Debt		Net New Public Debt		Private Equity (Pvt. Placement/VC)		Public Equity (Common/Preferred)		
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	Total Capital Raised in Year
1994	$7,454	91.2%	$155	1.9%	$100	1.2%	$461	5.6%	$8,170
1995	$9,688	51.5%	$4,495	23.9%	$1,191	6.3%	$3,419	18.2%	$18,793
1996	$5,837	58.0%	$2,355	23.4%	$49	0.5%	$1,818	18.1%	$10,059
1997	$2,933	27.4%	$6,252	58.4%	$1,292	12.1%	$230	2.1%	$10,707
1998	$5,421	39.1%	$6,299	45.5%	$250	1.8%	$1,927	13.9%	$13,897
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%	$21,250
2002	$2,545	25.2%	$3,942	39.0%	$15	0.1%	$3,608	35.7%	$10,110
June 2003	$1,791	41.8%	$2,376	55.5%	$116	2.7%	$0.0	0%	$4,283
Total Raised: 1994-June 03	**$83,950**	**47.9%**	**$59,450**	**33.9%**	**$9,122**	**5.2%**	**$22,924**	**13.1%**	**$175,444**
Avg Raised Per Year	**$8,837**		**$6,258**		**$960**		**$2,413**		**$18,468**

36. ***Capital Expenditures/Capital Investment***. In the mid-1990s cable companies began accelerating investments to rebuild and upgrade their cable systems.[108] Since 1996, cable operators have spent approximately $74 billion on capital expenditures.[109] Approximately $40 billion was invested to: (1) extend cable systems; (2) rebuild cable systems by replacing coaxial cable with fiber optics;[110] and (3) upgrade cable systems by adding digital capabilities.[111] Approximately $22 billion was invested in set-top

[107] Data for 2002 come from Cable Databook at 147. Data for January-June 2003 come from Deals & Finance July 2003 at 21. Historical data included in this table may differ from those previously reported because some data have been updated by the source.

[108] Comcast argues that these capital investments have been in response to the emergence of DBS. Comcast Comments at 9. *See also* Cox Comments at 6; Time Warner Comments at 2; NCTA Comments at 9.

[109] Kagan World Media, Cable TV Investor: Deals & Finance, Aug. 28, 2003, at 8 ("Deals & Finance Aug. 2003"). Major capital expenditure categories include new builds, rebuilds, upgrades, and consumer premise equipment.

[110] NCTA Comments at 42.

[111] Deals & Finance Aug. 2003 at 8. "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. "Digital capabilities" include Internet services as well as digital television capabilities.

boxes, modems, converters, and inventory.[112] These investments make possible premium movie services, pay-per-view programs, high-definition programming, high-speed Internet access services, CD-quality music, and cable telephony.[113] In 2002, NCTA estimated that the rebuilding of cable plant was nearly 80% complete.[114] This year, NCTA estimates that the rebuilding is nearly 83% complete.[115] As the rebuilding of analog cable systems into advanced broadband platforms nears completion, capital expenditures for most cable operators continue to be reduced. In addition, falling prices for converters and modems are contributing to lower capital expenditures.[116]

37. Capital expenditures peaked in 2001, when cable operators spent an estimated $16 billion.[117] Capital expenditures declined in 2002 to approximately $14.5 billion, and are estimated to fall again in 2003 to $11.1 billion.[118] For 2003, analysts estimate that approximately 25% of capital outlays will be spent for maintenance; 27% for plant build out, rebuild, and upgrade; 34% for set-tops, modems, converters, inventory, and scalable infrastructure; 12% for support; and 2% for commercial (*i.e.*, non-residential) purposes.[119]

38. Comcast reported capital expenditures of $2.2 billion in 2001 and $2 billion in 2002.[120] For the first six months of 2003, Comcast reported $724 million in capital expenditures.[121] Comcast reports that, prior to the acquisition of AT&T Broadband, over 95% of its systems were already upgraded.[122]

[112] *Id*.

[113] NCTA Comments at 42.

[114] 2002 *Report*, 17 FCC Rcd at 26917-18 ¶ 33 and n. 69.

[115] Staff conversation with Gregory L. Klein, Senior Director, Economic & Policy Analysis, NCTA, Nov. 12, 2003. Kagan World Media states that "With capital upgrade programs in their waning years, and some operators already free cash flow-positive, attention is shifting to what cable's $75 billion in capital expenditures since 1996 can deliver, vs. what it cost." Cable Databook at 4.

[116] Deals & Finance Aug. 2003 at 5.

[117] *Id*. at 7-8.

[118] *Id*. Morgan Stanley reports that the cable industry's total residential capital expenditures were $18.3 billion in 2001, $15.3 billion in 2002, and estimates $12.2 billion in 2003. Although Morgan Stanley's numbers are higher than those reported by Kagan, the general decline in capital expenditures, and percentage allocation of total capital expenditures to rebuilding and upgrading, is similar. *Copernicus Theorem* at 11.

[119] Deals & Finance Aug. 2003 at 8.

[120] Comcast Corp., *SEC Form 10-K for the Year-Ended December 31, 2002*, at 40.

[121] Comcast Corp., *SEC Form 10-Q for the Period Ending June 30, 2003*, at 4. In its comments, Comcast says that for 2003 the company expects to spend approximately $4 billion on capital improvements, with $1.3 billion dedicated to upgrading cable systems. In the second quarter of 2003, Comcast says that the company spent $1.1 billion in capital improvements, so that more than 89% of Comcast's networks have been upgraded to provide two-way digital and high-speed Internet services. Comcast Comments at 14. Comcast uses the term "capital improvements" which may differ from "capital expenditures" reported in the company's quarterly and annual reports to the SEC.

[122] Comcast Comments at 14, n.27.

When Comcast acquired the AT&T Broadband systems in 2002, only 66% of those systems had a capacity of 750 MHz or greater. Currently, 85% of the acquired systems have a capacity of 750 MHz or greater and have been upgraded to provide two-way digital cable and high-speed Internet access service.[123] Cox reports that over 90% of its cable infrastructure currently has capacity of 750 MHz or more, and approximately 96% of the homes passed by Cox are able to receive two-way digital video services and high-speed Internet access.[124] Cox reported capital expenditures of $2.2 billion in 2001 and $1.9 billion in 2002.[125] As of June 2003, Cox had spent approximately $662.9 million on capital expenditures.[126] Time Warner reported cable-related capital expenditures of $1.8 billion in 2001 and 2002 and $773 million in the first half of 2003.[127] Time Warner has upgraded virtually all of its cable architecture with hybrid fiber-coax cable plant capable of supporting two-way, digital communications and anticipates a decrease in capital expenditures during the full year 2003 as compared to 2002.[128] Cablevision reported cable-related capital expenditures of $934 million in 2001, and $945 million in 2002.[129] For the first six months of 2003, Cablevision reported cable-related capital expenditures of $374 million.[130] Cablevision reports that all of its upgraded cable systems utilize fiber optic cable and expects that by the end of 2003, 100% of its cable systems will be 750 MHz capable two-way interactive.[131] Charter reported cable capital expenditures of $3 billion in 2001, and $2.2 billion during 2002.[132] As of June 30, 2003, Charter spent $264 million in capital expenditures.[133] Charter expects to spend between

[123] *Id*. at 19.

[124] Cox Comments at 4.

[125] Cox Communications, Inc., *SEC Form 10-K for the Fiscal Year Ended December 31, 2002*, at 55.

[126] Cox Communications, Inc., *SEC Form 10-Q for the Quarterly Period Ended June 30, 2003, at 5.*

[127] AOL Time Warner, Inc., *SEC Form 10-K for the Fiscal Year Ended December 31, 2002*, at F-35. AOL Time Warner, Inc., *SEC Form 10-Q Quarterly Report for the Period Ended June 30, 2003*, at 27.

[128] Time Warner Comments at 3; AOL Time Warner, Inc., *SEC Form 10-Q Quarterly Report for the Period Ended June 30, 2003*, at 27.

[129] Cablevision Systems Corp., *Cablevision Systems Corporation Reports Fourth Quarter 2002 Financial Results* (press release), Feb. 11, 2003.

[130] Cablevision Systems Corp., *Cablevision Systems Corporation Reports Second Quarter 2003 Results* (news release), August 5, 2003.

[131] Cablevision Systems Corp., *SEC Form 10-K for the Fiscal Year Ended December 31, 2002*, at 6.

[132] Charter Communications, Inc., *SEC Form 10-K405 for the Year-Ended December 31, 2001*, at 46. Charter Communications, Inc, *Charter Announces 2002 Operating Results and Restated Financial Results for 2001 and 2000; Company Will Extend Filing of Form 10-K* (news release), April 1, 2003, at 2.

[133] Charter Communications, Inc., *Charter Communications Reports Second Quarter 2003 Financial Results* (news release), July 31, 2003, at 40.

$800 million and $925 million in 2003 and reports that the significant decline in capital expenditures in 2003 compared to 2002 is the result of its network being upgraded and rebuilt in prior years.[134]

3. Provision of Advanced Services[135]

39. A decade ago, cable operators provided only analog video services. Today, most cable operators offer subscribers a number of advanced services, including digital video, high-speed Internet access, video-on-demand ("VOD"), high-definition television ("HDTV"), and Internet protocol ("IP") telephony over cable. Mid-sized and smaller cable operators also are deploying advanced services.[136] A December 2002 survey of mid-sized and smaller cable operators shows that more than half were providing digital cable and high-speed cable Internet service, and most of the other half planned to launch the services in the near term.[137] The advanced services provided, or planned, by mid-sized and smaller cable operators appear to be similar to those offered by large cable operators.[138]

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[134] Charter Communications, Inc., *Charter Communications Reports Second Quarter 2003 Financial Results* (news release), July 31, 2003, at 40.

[135] Subscription data for advanced services shown in this *Report* are primarily for residential service, but may also 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 businesses with up to five computers called Comcast Pro. Similarly, Time Warner also offers a business Internet service called Road Runner Business Class to small and medium-sized businesses and telecommuters. Subscribers to these services are included in the reported numbers.

[136] American Cable Association, *ACA Members Say High-End Services Key to Future Growth, but Programming Problems Must be Resolved Promptly* (press release), June 30, 2003. *See also* NCTA, *Operators of Mid-Size, Small and Rural Cable Systems Detail Broadband Deployment for FCC* (press release), Feb. 4, 2003.

[137] *Id*. *See also* The Carmel Group, *The Telecom Future of Independent Cable*, Survey of American Cable Association Concerns and Issues, June 30, 2003, at 16. Some respondents to the survey plan to provide advanced services in 3-5 years. For example, 14% plan to provide digital cable in 3-5 years, 5% plan to provide high-speed Internet access in 3-5 years, 33% plan to provide HDTV in 3-5 years, 32% plan to provide VOD in 3-5 years, and 22% plan to provide DVR in 3-5 years. Some respondents to the survey have no plans to provide advanced services. For example, 7% have no plans to deploy digital cable, 22% have no plans to deploy high-speed Internet access, 11% have no plans to deploy HDTV, 19% say they will never deploy VOD, and 28% say they will never deploy DVR. *Id*.

[138] For example, Buckeye Cable System serves approximately 151,000 subscribers and advertises a "state-of-the-art fiber optic network," with digital cable including HDTV, and high-speed Internet access with 2 Mbps download speed. Buckeye Cable System, at http://www.buckeyecablesystem.com. Sunflower Broadband, which serves Lawrence, Eudora, and Douglas County, Kansas, provides digital cable with HDTV, high-speed internet access, and digital telephony. Cebridge Connections, which serves approximately 350,000 subscribers in primarily suburban, small-town, and rural communities in nine states, states that it "is committed to bringing these customers a level of service that matches what their urban-based counterparts enjoy." Cebridge Connections, *Classic Communications Becomes Cebridge Connections: Name Change is Part of Large Makeover for Small-System Operator* (news release) Oct. 6, 2003. Cebridge expects to begin deploying cable telephony in early 2004. Cebridge Connections, *Net2Phone to Provide Cable Telephony Services for Cequel III's Cebridge Connections* (news release), Nov. 18, 2003.

40. ***Digital Video Services***. In 1997, several cable operators were beginning to provide digital video, data, and voice services over their cable systems.[139] Today, all major cable operators offer digitally-compressed video channels to cable subscribers on a "digital tier."[140] Digital compression technologies allow anywhere from four to 12 video channels to be compressed into the capacity previously used to provide just one standard six MHz analog channel. The programming available on digital tiers includes a variety of genres, such as sports, movies, children's, and foreign-language programming.

41. In 1998, 740,000 cable homes subscribed to digital cable service.[141] At the end of 2001, approximately 15.2 million cable homes subscribed to digital cable service.[142] At the end of 2002, the number of subscribers grew to 19.2 million.[143] The cable industry reports that at the end of June 2003, digital cable service was available to approximately 90% of all cable subscribers and the number of subscribers to digital video service grew to 20.6 million.[144]

42. As of June 30, 2003, Comcast offered digital cable service to all of its 21.4 million subscribers and had seven million digital cable subscribers.[145] Comcast offers two digital tiers (not including movie tiers or pay-per-view).[146] Comcast also offers two Spanish-language tiers in markets with large Hispanic populations.[147] As of June 30, 2003, Cox digital cable was available to 98% of its 6.3 million basic cable subscribers and had 1.9 million digital cable subscribers.[148] Cox offers several digital tiers from which a subscriber may pick and choose, including, for example, a movie tier, a variety tier, a sports and information tier, a TeleLatina tier, and a Discovery tier.[149] Cox also offers a series of multiplexed premium digital tiers, including HBO, Showtime, and international premium services, such as TV Asia and Washington Korean TV.[150] As of June 30, 2003, Time Warner had 11.1 million basic

[139] *1997 Report*, 13 FCC Rcd at 1063-64 ¶¶ 45-46. The MSOs beginning to offer digital video service included Cablevision, Comcast, Cox, and Time Warner. *Id.*

[140] The digital tier offers programming that is digitally compressed for efficient delivery. The programming is then demodulated from digital to analog format for display on subscribers' analog television receivers. This so-called "digital tier" does not provide programming for display on subscribers' digital receivers with 16 by 9 format or high-definition resolution.

[141] Cable Databook at 8.

[142] NCTA Comments at 52.

[143] *Id*.

[144] *Id*. at 51-52.

[145] Comcast Comments at 15.

[146] *Id*. at 23.

[147] *Id*. at 24.

[148] Cox Comments at 8; Cox Communications, Inc., *Cox Communications Announces Second Quarter Financial Results for 2003* (press release), July 30, 2003.

[149] Cox Comments at 8.

[150] *Id*.

cable subscribers and over 4.1 million digital cable subscribers.[151] Time Warner's digital cable service offers up to 200 video and audio channels.[152] By year end 2002, Cablevision had approximately 3.0 million basic cable service subscribers and 216,500 digital video subscribers.[153] At the end of June 2003, the number of Cablevision's digital video subscribers had grown to 597,600.[154] Charter provided digital video service to approximately 2.7 million subscribers as of year-end 2002, and reported a loss of 31,700 digital video subscribers in the first quarter of 2003, and a loss of 47,200 digital video subscribers in the second quarter of 2003.[155]

43. Incentives to expand the provision of digital video services were recently furthered by the Commission's approval of rules to implement an agreement between consumer electronics companies and cable operators that will provide consumers with digital television sets that connect to digital cable without a set-top box.[156] The potential availability of a single "plug and play" standard between digital television and digital cable systems is expected to help speed the transition from analog to digital television.[157]

44. ***Video-on-Demand***. Time Warner launched a commercial trial of video on demand ("VOD") service in 1994, but abandoned the operation in 1997.[158] In 1999, cable operators began market trials of video-on-demand through digital set-top boxes.[159] Today, most of the major cable operators, including Cablevision, Charter, Comcast, Cox, Insight, Mediacom, and Time Warner are testing or actively deploying video on demand services.[160] One analyst estimates that about seven million homes had access to VOD at the end of 2002, up from three million in 2001.[161] Unlike pay-per-view services, VOD allows consumers to order video programming from a central server at any time of the day, and to fast-forward,

[151] Time Warner Comments at 5; Time Warner, *AOL Time Warner Reports Second Quarter 2003 Results* (press release), July 23, 2003.

[152] Time Warner Comments at 6.

[153] Cablevision Systems Corp., *Cablevision Systems Corporation Reports Fourth Quarter 2002 Financial Results* (press release), Feb. 11, 2003.

[154] Cablevision Systems Corp., *Cablevision Systems Corporation Reports Second Quarter 2003 Results* (press release), Aug. 5, 2003.

[155] Charter Communications, Inc., *SEC Form 10-K for the Year-Ended December 31, 2002*, at 12; *Charter Communications Reports First Quarter 2003 Operating Results* (press release), May 7, 2003; *Charter Communications Reports Second Quarter 2003 Financial Results* (press release), July 31, 2003.

[156] *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).

[157] NCTA Comments at 50. *See* paras. 101, 184 *infra*.

[158] For a discussion of the 1994 Time Warner VOD trial *see* para. 191 *infra*.

[159] *1999 Report*, 15 FCC Rcd at 1002 ¶ 52.

[160] NCTA Comments at 53.

[161] *Id*.

rewind, and pause the programming.[162] In addition to VOD, some cable operators offer subscription video-on-demand ("SVOD"), in which the subscriber pays one monthly fee for unlimited access to a library of pre-selected programming.[163]

45. Comcast's VOD service, ON DEMAND, is available to 20% of Comcast's subscribers.[164] Comcast expects to make it available to 50% of its subscribers by the end of 2003.[165] Time Warner provides VOD service in all of its cable operating divisions.[166] Time Warner provides three different VOD services: (1) iControl Movies allows subscribers to select from a collection of more than 120 movies, with about one-third of the selection changed each month; (2) iControl Premiums is a SVOD for premium channels, including Cinemax, HBO, Showtime, and the Movie Channel, allowing subscribers to view programs shown on these channels; and (3) iControl Favorites provides subscribers with access to select programming on a number of popular channels, including Biography, Comedy Central, and the Food Channel.[167] Cox's Entertainment on Demand is available in four markets.[168] The service gives subscribers access to more than 250 hours of movies and allows the customer to control the content using full VCR-like functionality.[169] Another example of VOD service is Cablevision's Interactive Optimum ("iO"), which is the first VOD service to make high-definition programming available to iO subscribers.[170]

46. ***High-Definition Television ("HDTV")***. In 2001, Comcast announced the launch of an HDTV service to more than 1.3 million customers.[171] Also in 2001, Time Warner agreed to carry the HDTV signals of broadcast television stations in its operating areas, and the HDTV versions of HBO and

[162] Pay-per-view is pay television programming for which cable subscribers pay a one time fee for each program viewed. The programming is generally available at pre-set times and in some cases is time shifted across several channels to increase the opportunity for viewing. Once initiated, the program cannot be paused, rewound or fast-forwarded. The programming is cablecast from the operator's headend to all subscribers but only descrambled for those who order the programming. *See* CableLabs, at http://www.cablelabs.com/news/glossary.html#P (visited Oct. 9, 2003).

[163] *See 2002 Report,* 17 FCC Rcd at 26920-23 ¶¶ 39-41.

[164] Comcast Comments at 15.

[165] *Id*.

[166] Each of Time Warner's cable operating divisions is a cluster of cable franchises, *see* http://www.timewarner.com/companies/time_warner_cable_index.adp (visited Dec. 8, 2003) and http://www.timewarner.com/companies/clusters.adp (visited Dec. 8, 2003).

[167] Time Warner Comments at 7.

[168] Cox Comments at 9.

[169] SeaChange International, *Cox Communications Selects SeaChange for Video-on-Demand Rollouts Next Year* (press release), Oct. 15, 2003.

[170] Cablevision Systems Corporation, *Cablevision Introduces First High-Definition Video On Demand Service* (news release), Sept. 2, 2003.

[171] *2001 Report,* 17 FCC Rcd at 1265 ¶ 42.

Showtime in certain areas.[172] Today, cable operators are deploying HDTV nationwide.[173] Over 60 million television households are passed by cable systems offering HDTV, including 83 of the top 100 designated market areas and 39 markets beyond the top 100. Cable systems are carrying the digital signal of 231 broadcast television stations, as well as non-broadcast HD programming networks.[174]

47. Comcast offers at least five HDTV channels in markets such as Los Angeles, California; Chicago, Illinois; Philadelphia, Pennsylvania; San Francisco, California; the Washington, D.C., metropolitan area; Detroit, Michigan; and Atlanta, Georgia, and will soon launch HDTV service in Denver, Colorado.[175] In addition, Comcast and Best Buy have partnered to sell HDTV sets and Comcast Digital Cable in several major cities.[176] In Chicago, Comcast reached similar HDTV marketing deals with 20 local retailers including Abt Electronics.[177] Comcast has similar relationships with Tweeter, Staples, Gateway, RadioShack, and Circuit City.[178] Cox currently offers HDTV service to subscribers in Omaha, Nebraska; Las Vegas, Nevada; Phoenix, Arizona; Fairfax County, Virginia; San Diego California; Oklahoma City, Oklahoma; and Cleveland, Ohio.[179] Time Warner has introduced HDTV in most of its markets, including New York, New York; Houston, Texas; Raleigh, North Carolina; Orlando, Florida; and Minneapolis, Minnesota.[180] Time Warner's HDTV service has attracted over 120,000 subscribers.[181] In 2003, Cablevision began offering HDTV set-top boxes to most of its New York-area subscribers.[182] Charter Communications offers HDTV in 14 markets.[183]

48. In addition to the larger markets, cable operators are providing HDTV in some mid-sized and smaller markets and rural areas including Austin, Texas; Portland, Maine; Raleigh-Durham, North Carolina; Omaha, Nebraska; Green Bay, Wisconsin; Las Vegas, Nevada; Little Rock, Arkansas; Toledo, Ohio; Louisville, Kentucky; Indianapolis, Indiana; Fresno, California; and Columbus, Ohio.[184] Smaller

[172] *Id*.

[173] Comcast Comments at 26; NCTA Comments at 46.

[174] NCTA Comments at 46.

[175] *Id*. at 47.

[176] Comcast Comments at 17. Cities include Philadelphia, Pennsylvania; Baltimore, Maryland; Knoxville, Tennessee; Nashville, Tennessee; and Washington, D.C.

[177] Comcast Comments at 17.

[178] *Id*. at 17-18.

[179] Cox Comments at 8; NCTA Comments at 47.

[180] Time Warner Comments at 9; NCTA Comments at 46.

[181] Time Warner Comments at 10.

[182] NCTA Comments at 47.

[183] *Id*.

[184] *Id*.

and rural markets where HDTV is available include Batavia, New York; Fargo, North Dakota; Palm Desert, California; Sherman, Texas; Waco, Texas; Twin Falls, Idaho; Pittsfield, Massachusetts; Biloxi, Mississippi; New Ulm, Minnesota; Lima, Ohio; Idaho Falls, Idaho; East Cartage, New York; Greenwood, Mississippi; and Youngstown, Ohio.[185]

49. NCTA states that cable networks are the leading producers of HDTV content.[186] HBO, for example, provides 70% of its programming in HDTV, and Showtime provides most original movies and many original series in HDTV.[187] Discovery HD Theater offers Discovery's most popular programming in HDTV.[188] A&E Television Networks[189] is producing original series and specials in HDTV.[190] In July 2003, Bravo launched Bravo HD+, featuring music concerts, ballet, theater, and opera in HDTV.[191] A new HDTV channel is also being introduced by Starz Encore.[192] Cinemax HD also is scheduled to offer HDTV before the end of 2003.[193] In 2003, iN DEMAND began providing some movies in HDTV, and plans to launch two new HDTV channels (iNHD and iNHD2) featuring movies, sports and general entertainment.[194] HDNet provides a 24 hour movie network called HDNet Movies and a 24 hour general entertainment network called HDNet, exclusively in high-definition.[195]

50. The amount of HDTV sports programming continues to increase. In March 2003, ESPN launched an HDTV channel to carry 100 baseball, hockey and football games in the next year, and it plans to convert all of ESPN's other programming to the technical equivalent of HDTV.[196] Madison Square Garden Network offers many of the New York teams' home games in HDTV.[197] In the Philadelphia and Baltimore/Washington, D.C., markets, Comcast SportsNet is offering more than 200 professional sporting events in HDTV annually.[198] FoxSportsNet produces over 150 games each year in

[185] *Id*. at 47-48.

[186] *Id*. at 48.

[187] *Id*.

[188] *Id*. at 49.

[189] These include The History Channel, The Biography Channel, and History Channel International.

[190] NCTA Comments at 49.

[191] *Id*.

[192] *Id*.

[193] *Id*. at 50.

[194] *Id*.

[195] Mark Cuban, HDNet Presentation, Chairman's Distinguished Speaker Series, FCC, June 12, 2003.

[196] NCTA Comments at 50.

[197] *Id.* at 49.

[198] Comcast Comments at 26.

HDTV.[199] In 2003, USA Network carried the U.S. Masters Tournament (Golf) and the U.S. Open Tournament (Tennis) in HDTV.[200]

51. ***Internet High-Speed Data Services***. In 1996, cable operators were beginning to combine their video service offerings with Internet access.[201] Also in 1996, a number of cable operators had announced large orders for cable modems.[202] Today, cable's high-speed Internet access service is the principal driver of industry growth – contributing approximately half of cable operators' revenue growth.[203]

52. Dial-up Internet access remains the most widely-used mode of accessing the Internet.[204] As of year-end 2002, approximately 74% of all Internet households were accessing the Internet using dial-up modems.[205] It is projected that telephone dial-up will remain the principal means of accessing the Internet until 2005, when it is estimated that 49% will use dial-up access, with the remaining 51% accessing the Internet through cable modem, DSL, and other broadband facilities.[206]

53. Cable modem access, however, remains the primary means of accessing the Internet over broadband networks. DSL remains the most significant broadband competitor to cable modem service. The cable industry expects industry-wide upgrades enabling the provision of broadband Internet access to residential customers will be completed soon.[207] As of year-end 2002, high-speed Internet access services provided over cable were available to 87.5 million homes.[208] As of year-end 2002, there were 11.6 million subscribers to cable's high-speed internet access service, and at the end of June 2003, there were

[199] NCTA Comments at 49.

[200] *Id*.

[201] *1996 Report* 12 FCC Rcd at 4416 ¶ 108.

[202] *Id*.

[203] Jessica Reif Cohen and Keith Fawcett, *Cable Television*, Merrill Lynch, July 2, 2003, at 1. Kagan World Media asserts that in 2003, they expect high-speed data service "to contribute 12.4% to total residential revenue, the largest piece of the revenue pie after basic service." Cable Databook at 7.

[204] Dial-up Internet access does not refer to high-speed Internet access. For an overview of networks and technologies used to deploy advanced telecommunications services, including high-speed Internet services, *see Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable And Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, 17 FCC Rcd 2844 (2002).

[205] *Copernicus Theorem* at 43.

[206] *Id.* at 44. Broadband technologies include cable modem, telephone company digital subscriber line ("DSL"), broadband wireless, and broadband satellite. Broadband technologies allow users to access the Internet at much greater speeds than are available over traditional dial-up connections. *See 1999 Report*, 15 FCC Rcd at 1003-04 ¶¶ 55-56.

[207] NCTA Comments at 56.

[208] *Copernicus Theorem* at 38.

an estimated 13.8 million subscribers.[209] This compares with 5.8 million residential DSL subscribers at the end of 2002, and an estimated 7 million DSL subscribers at the end of June 2003.[210] In addition to cable modem and DSL, there were nearly two million subscribers to other broadband technologies, including satellite and wireless, at year-end 2002.[211] Over the past few years, the cable industry's share of all high-speed Internet access subscribers has been fairly consistent, with 63-65% of all high-speed Internet access subscribers using cable modems.[212]

54. Some cable operators offer one Internet service provider ("ISP") to customers in a given system.[213] For example, Cablevision offers high-speed Internet access service under the brand Optimum Online, Charter offers this service under the Charter Pipeline brand, and Cox offers this service under the Cox High Speed Internet brand. Other cable operators offer consumers a choice among multiple ISPs. For example, Time Warner's cable modem subscribers may select from Road Runner, AOL for

[209] NCTA Comments at 57. Morgan Stanley reports 11.1 million high-speed cable modem subscribers at year-end 2002 and estimates 13.4 million subscribers by June 30, 2003. *Copernicus Theorem* at 38.

[210] *Id.* at 43.

[211] *Federal Communications Commission Releases Data on High-Speed Services for Internet Access*, News Release, June 10, 2003, at 2. *See also* NCTA Comments at 58.

[212] *Copernicus Theorem* at 31-34.

[213] Many cable providers offer cable modem service through proprietary ISPs. *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. In a previous case, the U.S. Court of Appeals for the Ninth Circuit concluded that cable broadband service was not a "cable service" but instead was part "telecommunications service" and part "information service." *AT&T v. City of Portland*, 216 F.3d 871 (9th Cir. 2000). In a more recent case, the U.S. Court of Appeals for the Ninth Circuit found that the Commission's Declaratory Ruling agreed with the Court's conclusion that cable broadband service is not "cable service," but disagreed with the Court's conclusion that it is in part "telecommunications service." As such, the Court affirmed in part, vacated in part, and remanded to the Commission for further proceedings the *High-Speed Access Declaratory Ruling and NPRM*. *Brand X Internet Services v. FCC*, 345 F.3d 1120 (9th Cir. 2003) [No. 02-70518, Oct. 6, 2003].

Broadband, Earthlink, and in many areas several smaller ISPs as well.[214] Comcast has agreed to deals with a total of six ISPs,[215] including Earthlink for distribution in Seattle and Boston,[216] AOL for

[214] Time Warner Comments at 11-12. Time Warner explains that its "provision of the AOL For Broadband service and its obligation to make multiple ISP services available to its customers are subject to compliance with the terms of the FTC Consent Decree and the FCC Order entered in connection with the regulatory clearance of the AOL-Time Warner Merger." AOL Time Warner Inc., *SEC Form 10-K for the Fiscal Year Ended December 31, 2002*, at 10-11. The capability to use multiple ISPs is only available in certain Time Warner systems.

[215] These deals were entered into while seeking, and following, the regulatory approval of Comcast's merger with AT&T Broadband. Christopher Stern, *Cable's Closed Connections*, THE WASHINGTON POST, Oct. 11, 2003, at E1 and E2. *AT&T-Comcast Merger Order*, 17 FCC Rcd at 23296-97 ¶ 130.

[216] Christopher Stern, *Cable's Closed Connections*, THE WASHINGTON POST, Oct. 11, 2003, at E1 and E2.

Broadband,[217] and Microsoft.[218]

55. As of year-end 2002, Comcast had 3.6 million high-speed Internet access subscribers, and by June 2003, Comcast had nearly 4.4 million high-speed Internet access subscribers.[219] Cox had approximately 1.4 million high-speed Internet access subscribers at the end of 2002, and nearly 1.7 million subscribers by June 2003.[220] Time Warner had 2.5 million high-speed Internet subscribers at year-end 2002, and 2.9 million subscribers by June 2003.[221] As of year-end 2002, Cablevision had 770,100 high-speed Internet access subscribers, and by June 2003, Cablevision had 921,100 subscribers.[222] Charter had 1.1 million high-speed Internet access subscribers at the end of 2002, and 1.3 million subscribers at the end of June 2003.[223]

56. In previous reports, we have reported that a few cable operators offered Internet access services delivered through a television receiver rather than a personal computer.[224] Some of these

[217] AT&T and Comcast have entered into a three-year non-exclusive agreement with Time Warner under which AOL for Broadband is being made available on AT&T Comcast cable systems. The AOL ISP agreement between AT&T Comcast and AOL Time Warner was made in connection with a restructuring agreement by and among AOL Time Warner, Inc., AT&T Corp. and Comcast Corp., Aug. 20, 2002. For a discussion of the AOL ISP agreement, *see AT&T-Comcast Merger Order*, 17 FCC Rcd at 23296-99 ¶¶ 130-134. For a discussion of the restructuring agreement, *see id.* at 23273-75 ¶¶ 73-77. *See also* AT&T Corp. and Comcast Corp., *AOL Time Warner, AT&T and Comcast Agree to Restructure Time Warner Entertainment Partnership* (press release), Aug. 21, 2002. Although the terms of the AOL ISP agreement have not been made public, news reports indicate that AOL will pay Comcast roughly $38 per subscriber; AOL will not compete with Comcast's digital cable content, such as streaming video; and AOL's ISP will have access to a limited number of Comcast's cable systems. *See* Diane Mermigas, *Comcast makes out: AOL TW works it out*, ELECTRONIC MEDIA, Sept. 16, 2002 at http://www.tvweek.com/deals/091602dicolumn.html (visited Nov. 21, 3003). Currently, AOL charges $54.95 per month for its AOL for Broadband-Cable/DSL Plan. America Online, *Choose by Plan: Select the Right Price Plan,* at http://free.aol.com/microsite/choose_plan.adp?promo=456341&session_id=496004268 (visited Nov. 21, 2003).

[218] *AT&T-Comcast Merger Order*, 17 FCC Rcd at 23296-97 ¶ 130. Comcast has agreed to offer Microsoft an access agreement on terms no less favorable than those provided to other ISPs with respect to specified cable systems. *See also* Comcast Corporation, *SEC Form 10-K, for the Fiscal Year Ended December 31, 2002*, at 8.

[219] Comcast Holdings Corp., *SEC Form 10-K for the Fiscal Year Ended December 31, 2002*, at 4; *Comcast Reports Second Quarter 2003 Results* (press release), July 31, 2003.

[220] Cox Communications, Inc., *SEC Form 10-K for the Year-Ended December 31,* 2002, at 6; *Cox Communications Announces Second Quarter Financial Results for 2003* (press release), July 30, 2003. Cox data subscribers can establish up to seven different e-mail addresses.

[221] AOL Time Warner, Inc., *SEC Form 10-K for the Fiscal Year Ended December 31, 2002*, at 8; *AOL Time Warner Reports Second Quarter 2003 Results* (press release), July 23, 2003.

[222] Cablevision Systems Corp., *SEC Form 10-K for the Fiscal Year Ended December 31, 2002, at 5; Cablevision Systems Corporation Reports Second Quarter 2003 Financial Results* (press release), Aug. 5, 2003.

[223] Charter Communications, Inc., *SEC Form 10-K for the Year-Ended December 31, 2002*, at 12; *Charter Communications Reports Second Quarter 2003 Financial Results* (press release), July 31, 2003.

[224] *2002 Report*, 17 FCC Rcd at 26926 ¶ 48.

products were available on a stand-alone basis and could be used independently of a cable television subscription. Others, however, were co-marketed through the cable television provider. Using the television as an Internet device has not always been commercially successful.[225] For example, American Online announced that effective November 30, 2003, it would no longer offer the AOLTV television-based Internet access service;[226] and WorldGate sold its interactive television property rights to TVGateway which focuses on interactive programming guides, rather than Internet access services.[227] Microsoft's MSN-TV (formerly WebTV) continues to offer Internet access services using a television.[228]

57. ***Telephone Services Offered by Cable Operators***. Some cable companies, which currently serve 2.5 million residential subscribers with traditional circuit-switched telephony, are pursuing IP telephony.[229] These companies include Comcast, Cox, Time Warner, Cablevision, Charter, Insight Communications, and Armstrong Cable.[230] To ensure interoperability between vendors of IP telephony equipment, CableLabs created PacketCable to develop an open architecture that would manage delivery of IP services over cable modem networks.[231] Cable operators differ as to whether their telephone service will be a primary service with back-up powering in case of a power outage, or a secondary line service without back-up powering.[232] Analysts expect these cable companies will begin to position the service as a primary line service using battery back-up powering, rather than network powering.[233]

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[225] For example, in 2001, Charter was using WorldGate television-based internet access service to provide service to 9,000 TV-based Internet subscribers. Charter Communications, Inc., *SEC Form 10-K for the Year Ended December 31, 2001*, at 15. At the end of 2002, however, Charter reported that it offered television-based Internet access service in a very limited number of markets. Charter Communications, Inc., *SEC Form 10-K for the Year Ended December 31, 2002*, at 14.

[226] *AOLTV Shutdown Notice*, at http://www.aoltv.com (visited Nov. 17, 2003).

[227] For a summary of WorldGate's business plans, s*ee* http://www.wgate.com/company/about_Wgate/. For a description of TVGateway's services, *see TVGateway releases upgraded version of its IPG*, July 10, 2002, http://www.indiantelevision.com/tec/y2k2/july/julytec7.htm (visited Nov. 17, 2003).

[228] For a description of the MSN TV service, *see* http://www.msntv.com/pc/default.aspx.

[229] NCTA Comments at 22. A circuit-switched cable telephony voice call and an IP telephony voice call 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 traditional "circuit switched" processing, while IP telephony eventually turns the call over to the Internet for IP processing. IP telephony processes voice telephone calls much like data are processed on the Internet; that is, digitized pieces of data are divided into discrete packets and are transported over the Internet following any path that does not resist transfer.

[230] *Id*.; *Copernicus Theorem* at 45.

[231] *Id*. During 2003, PacketCable has focused on testing and certifying IP telephony products. *See* para. 182 *infra*.

[232] Richard Bilotti, Megan Lynch, Benjamin Swinburne, and Simon Flannery, *Cable/Satellite & Telecom: Cross-Industry Insights: IP Telephony*, Morgan Stanley, Oct. 9, 2003, at 4 ("*Cross-Industry Insights*").

[233] *Id*. Some believe the ubiquity of wireless phones reduces the need for a back-up powered landline service and the cost of a battery for back-up power has declined. *Id.* Battery back-up powering is less expensive than (continued….)

58. Cox began offering local circuit-switched telephone service in 1997 to 1,500 subscribers in Orange County, California.[234] As of June 30, 2003, circuit-switched telephone service was available to nearly 4.6 million subscribers, and over 800,000 subscribed.[235] Cox Digital Telephone is facilities-based and network powered, offering backup in the event of power outages.[236] With more than one million residential access lines in 11 markets, Cox is the 12th largest local telephone company, the third largest in California, and the second largest in many of the states in which it operates.[237] Cox averages 18.4% penetration in areas where the company's telephone service has been marketed, and processes 29 million calls a day.[238] Cox also offers a long-distance package and at the end of March 2003, 77% of Cox Digital Telephone subscribers chose Cox's long distance service.[239] As of June 30, 2003, Comcast offered circuit switched telephone service to 9.2 million homes and had 1.4 million subscribers.[240] In some areas, Comcast uses its upgraded cable network to provide circuit-switched local telephone service and to resell third-party long distance service to its telephone subscribers.[241] Cablevision sells its Cablevision Optimum Telephone Service to approximately 11,700 residential subscribers in New York City, Long Island, and Connecticut. Charter has approximately 23,700 cable telephony subscribers.[242]

59. Although most cable operators are testing IP telephony, a few cable operators have made the service commercially available on part or all of their cable systems.[243] Cablevision began testing its Optimum Voice service in Nassau County in January 2003, started selling the service on Long Island, New York, in September 2003, and made the service available to all its cable broadband subscribers in metropolitan New York in November 2003.[244] Cablevision's IP telephony service is tied to its Optimum

(Continued from previous page)
network powering, and the latter requires that the cable operator commit the entire footprint to telephony. *Copernicus Theorem* at 45.

[234] Cox Comments at 11.

[235] *Id*.

[236] *Id*. at 11–12.

[237] *Id*. at 11.

[238] *Id*.

[239] *Id*. at 12.

[240] Comcast Comments at 15.

[241] Comcast Corporation, *SEC Form 10-K for the Fiscal Year Ended December 31, 2002*, at 6.

[242] NCTA Comments at 23.

[243] Jessica Cohen and Keith Fawcett, *Cable Television,* Merrill Lynch, July 2, 2003, at 1. With the exception of Cablevision, Morgan Stanley does not expect cable operators to make IP telephony widely available in their cable systems until late 2004 at the earliest. *Copernicus Theorem* at 45.

[244] Ben Charny, *Cablevision Adds VoIP to Broadband Menu*, CNET NEWS.COM, Nov. 11, 2003, at http://news.com.com/2100-7352-5106133.html (visited Nov. 25, 2003); Yuki Noguchi, *Identity Crisis: Internet Services Challenge Definition of 'Phone Company'*, THE WASHINGTON POST, Oct. 23, 2003, at E1; John H. Higgins, *Cablevision Rolling Out IP Phone Service*, BROADCASTING & CABLE, Nov. 17, 2003, at 12.

Online high-speed Internet service, which 33% of its basic subscribers currently take.[245] Time Warner began deploying a commercial IP telephony service, which it markets as Digital Phone service, in Portland, Maine, in May 2003.[246] Time Warner recently announced an agreement with Sprint and WorldCom Inc. to offer IP telephony to all its subscribers. Sprint and WorldCom Inc. will assist Time Warner in providing Digital Phone, termination of IP telephony to the public switched telephone network, delivery of enhanced 911 service, local number portability, and carrying long distance traffic.[247] In December 2003, Cox introduced IP telephony in Roanoke, Virginia.[248] Cox explains, however, that its telephone offerings will remain a hybrid, with circuit switches serving as a backbone for a national architecture and IP telephony serving smaller markets.[249] Comcast is testing IP telephony in Philadelphia and plans to offer IP telephony in three markets in 2004[250] Charter began an IP telephony technical trial in Wausau, Wisconsin, in early 2003 and plans to test the service in other markets later this year.[251] Analysts, however, do not expect Charter to commercially deploy IP telephony for at least a couple of years.[252]

60. ***Digital Video Recorders***. Digital Video Recorders ("DVRs"), also called Personal Video Recorders ("PVRs"), allow video programming to be stored on a hard disk, which can then be played back at any time. DVR features include fast-forward, pause, and the ability to pause live television. Stand-alone DVRs are available.[253] Cable operators are integrating DVR functionality into digital set-top boxes. Time Warner is the most aggressive at deploying DVR service, will have 250,000 subscribers by the end of September 2003, and expects to have 500,000 subscribers by the end of 2003.[254] Comcast is testing DVR capabilities in Philadelphia and markets around Washington, D.C., and plans to integrate

[245] For $34.95, subscribers get unlimited local and long distance minutes, call waiting, caller ID, call forwarding, call return, and three-way calling. The service, however, is not life-line service since it will fail if the power goes out in a subscriber's home. John H. Higgins, *Cablevision Rolling Out IP Phone Service*, BROADCASTING & CABLE, Nov. 17, 2003, at 12.

[246] Time Warner has signed up 5,500 subscribers. Yuki Noguchi, *Identity Crisis: Internet Services Challenge Definition of 'Phone Company'*, THE WASHINGTON POST, Oct. 23, 2003, at E1.

[247] Brigitte Greenberg, *Time Warner Cable Rolling Out VoIP with Help from MCI, Sprint*, COMMUNICATIONS DAILY, Dec. 9, 2003, at 1-2.

[248] Brigitte Greenberg, *Cox Switches from Circuit-Switch to VoIP in New Telephony Debut*, COMMUNICATIONS DAILY, Dec. 16, 2003, at 3.

[249] *Id.*

[250] Brigitte Greenberg, *Wall St. Analysts Told of Cable's New Push into Telephony*, COMMUNICATIONS DAILY, Dec. 12, 2003, at 1-2.

[251] NCTA Comments at 23.

[252] *Cross-Industry Insights* at 2.

[253] TiVo and Replay TV both offer stand-alone DVR services that are compatible with cable, broadcast, and DBS. Time Warner Comments at 8-9.

[254] Alex Zavistovich, *DVRs Integrated with Set-Tops to Bloom by 2007*, CT PIPELINE, Nov. 4, 2003, at http://www.broadband-pbimedia.com/pipeline/previous/pipe110403.html (visited Nov. 21, 2003).

DVR capabilities into its VOD service.[255] Comcast plans to begin offering DVR service in the fourth quarter of 2003 and to have DVR service available to all subscribers by the end of 2004.[256] Comcast's DVR service will priced at $9.95 per month. Cox has launched its DVR service in Gainesville, Florida and Northern Virginia and will begin offering in San Diego, Santa Barbara and Humboldt, California; Phoenix, Arizona; Las Vegas, Nevada; and Cleveland, Ohio.[257] This will make Cox's DVR service available to 35% of Cox's subscribers by year-end 2003.[258] Cox's DVR service will cost $9.99 plus lease price of the integrated DVR digital set-top box.[259] In July 2003, Charter ordered 100,000 digital media center boxes with DVR capability.[260] DVR penetration is projected to reach 24.7 million homes by 2007, with 10.9 million homes subscribing to cable-based DVR service.[261]

B. Direct-to-Home Satellite Services

1. Direct Broadcast Satellite

61. DBS service is a nationally distributed subscription service that delivers video and audio programming via satellite to a small parabolic "dish" antenna located at the subscriber's residence. The Commission first authorized DBS service in 1988.[262] DBS service was not introduced until 1990 when PrimeStar launched a medium power satellite and began offering 11 channels in 1991.[263] In 1993, Hughes launched the first U.S. high power DBS service, and in 1994 began marketing its service under the DirecTV brand name, distributing over 50 channels of subscription and pay-per-view programming.[264]

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[255] Comcast Comments at 30.

[256] *Comcast Adds 472,000 Cable Modem Subscribers in Q3*, CONVERGE NETWORK DIGEST, Oct. 30, 2003, at http://www.convergedigest.com/DSL/lastmilearticle.asp?ID=9252 (visited Nov. 24, 2003).

[257] Cox Comments at 8; Jeff Baumgartner, *Cox Bullish on the DVR*, CED Broadband Direct, Oct. 24, 2003, at http://www.cedmagazine.com/cedailydirect/1003/cedaily031024.htm#3 (visited Nov. 21, 2003).

[258] Jeff Baumgartner, *Cox Bullish on the DVR*, CED Broadband Direct, Oct. 24, 2003, at http://www.cedmagazine.com/cedailydirect/1003/cedaily031024.htm#3 (visited Nov. 21, 2003).

[259] *Id*.

[260] Digeo Newsletter, August 2003, at http://www.digeo.com/newsroom/newsletter.jsp (visited Nov. 21, 2003).

[261] DBS-based DVR service and consumer electronics' retail sales of DVRs are projected to account for the remaining 13.8 million homes with DVR service. Alex Zavistovich, *DVRs Integrated with Set-Tops to Bloom by 2007*, CT PIPELINE, Nov. 4, 2003, at http://www.broadband-pbimedia.com/pipeline/previous/pipe110403.html (visited Nov. 21, 2003).

[262] For a chronology of DBS developments, *see* Kagan World Media, *The State of DBS 2002*, Nov. 2001, at 39-72 (*"Kagan State of DBS 2002"*).

[263] PrimeStar initially offered seven "superstations" (FCC licensed, non-network broadcast stations), three pay-per-view stations, and one foreign language station. *See Implementation of Section of the Cable Television Consumer Protection and Competition Act of 1992, Direct Broadcast Satellite Public Service Obligations*, 8 FCC Rcd at 1591 (1993). PrimeStar was a joint venture between six cable MSOs and GE American Communications. In 1994, PrimeStar began using digital technology to provide approximately 70 channels to subscribers, and by 1997 it began offering 160 channels.

[264] *1994 Report*, 9 FCC Rcd at 7474 ¶63.

USSB later entered the market using transponders on Hughes' satellite, but sold only premium subscription content, such as HBO and Cinemax. In 1996, EchoStar initiated its digital service using a single satellite. DirecTV acquired PrimeStar in April 1999 and USSB in May 1999. Presently, DirecTV provides service from a fleet of seven satellites, and EchoStar provides service from a fleet of nine satellites.[265]

62. Currently, four operators hold licenses to provide DBS service: EchoStar (marketed as the DISH Network), DirecTV, Dominion Video Satellite, Inc. (marketed as Sky Angel), and Cablevision's Rainbow DBS (marketed as Voom).[266] All four currently offer subscription services.[267] Voom initiated its commercial service on October 15, 2003.[268] The service is delivered from the 61.5° degree orbital slot, which will allow it to cover the easternmost part of the continental United States.[269] Voom is attempting to distinguish itself from its competitors by accentuating its high-definition programming. Voom will include 39 high-definition channels, 28 cable channels and over-the-air local digital channels.[270] Voom's

[265] DirecTV Comments at 1. For information regarding EchoStar's satellite fleet, *see* Dish Network, at http://www.dishnetwork.com/content/aboutus/satellites/index.shtml.

[266] Last year, we reported that Compass Systems, Inc., a company 100% owned by Northpoint Technologies, Ltd., filed an application for a construction permit for a DBS system and for authorization for a terrestrial platform in the DBS frequencies. On May 30, 2003, Compass Systems' application was found unacceptable for filing and was dismissed without prejudice. *See* Letter from Don Abelson, Chief, International Bureau, FCC, and John Muleta, Chief, Wireless Telecommunications Bureau, FCC, to Antoinette Cook Bush, Vice President, Compass Systems, Inc. (May 30, 2003).

[267] Dominion holds licenses for eight channels at 61.5° W.L. orbital location. Under a 1996 agreement, Dominion leased capacity on EchoStar's EchoStar III satellite for its eight licensed channels, six of which it has sub-leased to EchoStar, which uses them for Dish Network programming, and two of which it uses to transmit its Sky Angel services. *See Dominion Video Satellite, Inc. Application for Minor Modification of Authority to Construct and Launch and to Continue Construction and Launch of Planned Satellite at 61.5° W.L.; Application for Additional Time to Construct and Launch Direct Broadcast Satellites; Application for Launch Authority*, 14 FCC Rcd 8182 (1999) (granting Dominion authority to commence operation of a DBS service using EchoStar's EchoStar III satellite in the 61.5° W.L. orbital location).

[268] Cablevision, *Cablevision's Rainbow DBS Introduces Voom – Nation's First Television Service Designed to Meet Demand of Growing Underserved HDTV Market* (press release), Oct. 15, 2003 (*"Voom Press Release"*).

[269] Cablevision launched its Rainbow 1 DBS spot-beam satellite on July 17, 2003. Cablevision asserts that by using spot-beam technology, the satellite can reach 143 DMAs, including 76 of the top 100 and 67 of the remaining 110. *See also* Mavis Scanlon and Shirley Brady, *Cablevision Calls It Voom*, CABLE WORLD, Sept. 15, 2003, at http://www.cableworld.com/ar/cablevision_calls_voom (visited Oct. 6, 2003).

[270] Voom states that 21 of these channels are exclusive commercial free channels supplied by Cablevision's Rainbow Media subsidiary. In addition to the HD channels, Voom will offer several cable channels, including Disney Channel, A&E, FX, and AMC, as well as over-the-air digital local broadcast channels delivered in standard definition. Voom states that by February 2004 its programming will include 39 HD channels and 88 standard definition channels. *See Voom Press Release*.

equipment package costs $750, which includes a satellite dish, set-top receiver, remote control, digital off-air antenna, and installation charge. Monthly service fees begin at $40 per month.[271]

63. ***Foreign-licensed Satellites Operators Seeking Access to the U.S. Market for DBS and DTH***. On May 7, 2003, the International Bureau granted the application of Digital Broadband Applications Corp. ("DBAC") to provide two-way broadband video and data services from two Canadian DBS satellites and one American fixed satellite service ("FSS") satellite.[272] The Commission's approval of this application is the first authorization for DBS service in the United States from Canadian satellites. The Commission declared that it hoped to stimulate competition in the U.S. DBS and FSS markets, reduce prices and further technological innovation.[273] As a condition of its authorization, DBAC may not provide DBS programming to U.S. customers that it obtains through exclusive agreements entered into with Canadian space station operators, program suppliers, and/or program distributors.[274] WSNet Holdings, Inc. also proposes to uplink programming from an earth station in New York to two Canadian DBS satellites to provide services to approximately one million subscribers in the United States.[275] This application remains pending.

64. On August 14, 2003, the International Bureau authorized SES Americom to provide DTH service using its existing FSS satellites.[276] SES Americom also has pending a Petition for Declaratory Ruling, filed April 25, 2002, to provide DBS services in the U.S. market from a satellite at 105.5° W.L. licensed by Gibraltar.[277] SES Americom seeks to offer satellite capacity for third party direct-to-home services to consumers in the United States. The petition is pending.

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[271] Voom is waiving these fees until February 2004. *See* Bill Lammers, *New Satellite Service Promises More Choices for HDTV Owners*, THE PLAIN DEALER, Dec. 4, 2003.

[272] *See Digital Broadband Applications Corp. Consolidated Application for Authority to Operate U.S. Earth Stations with a U.S.-Licensed Ku-Band FSS Satellite and Canadian-Licensed Nimiq and Nimiq 2 Satellites to Offer Integrated Two-Way Broadband Video and Data Services Throughout the United States (Call Sign E020010)*, File No. SES-LIC-20020109-00023, 18 FCC Rcd 9455 (2003). DBAC network is expected to consist of one hub earth station and one million satellite home terminals that will access the Canadian Nimiq and Nimiq 2 satellites and the U.S. FSS satellite Galaxy XI.

[273] *Id.* at 18 FCC Rcd 9463-64 ¶ 18.

[274] *Id.* at 9464 ¶ 19. The Commission prohibits exclusive service arrangements made by both U.S. and non-U.S. satellite operators providing any services in the United States. *See Amendment of the Commission's Regulatory Policies to Allow Non-U.S. Licensed Satellites Providing Domestic and International Services in the United States*, 12 FCC Rcd 24094 (1997).

[275] WSNet Holdings, Inc., Application for a Fixed Transmit/Receive Earth Station, File No. SES-LIC-20011121-02186 and Call Sign E010320 (Nov. 21, 2001), and Amendment, File No. SES-AMD-20020102-00029 (Jan. 2, 2002); Application for Receive Only Earth Stations, File No. SES-LIC-20020111-00075 and Call Sign E020022, and One Request for Waiver, File No. SES-MSC-20020111-00074 (Jan. 11, 2002).

[276] *See SES AMERICOM, Inc. Applications for Modification of Fixed-Satellite Service Space Station Licenses and Columbia Communications Corporation Applications for Modifications of Fixed-Satellite Service Space Station Licenses*, Order and Authorization, 18 FCC Rcd 16589 (2003).

[277] *Satellite Space Applications Accepted for Filing*, Public Notice, Report No. SAT-00100 (rel. May 17, 2002).

65. ***Subscribership.*** As of June 30, 2003, approximately 20.4 million households in the U.S. subscribed to DBS services.[278] This represents an increase of 12% over the 18.2 million DBS subscribers we reported last year.[279] DBS comprises approximately 20% of all MVPD subscribers.[280] These rates of growth are attributed to competitive pricing, wide programming selection, higher levels of customer service, expansion of local-into-local service, and the introduction of new products such as personal video recorders.[281] As a relatively new service, DBS continues to attract consumers who never subscribed to MVPD services, as well as consumers switching from cable service. DirecTV states that according to its internal subscriber data, approximately 70% of its customers were cable subscribers at the time that they first subscribed to DirecTV.[282]

66. Historically, DBS has experienced very strong growth. At the end of its first calendar year of service, DBS service had approximately 600,000 subscribers.[283] One year later, there were more than 2.2 million subscribers.[284] In 1996, EchoStar attracted over 350,000 subscribers within its first year of operation.[285] In 1998, there were 8.7 million DBS subscribers.[286]

67. Presently, DirecTV is the leading DBS operator and the second largest MVPD provider with 11.6 million subscribers as of June 2003, an increase of 8% from the 10.7 million subscribers as of June 2002.[287] EchoStar is the second largest DBS operator and fourth largest MVPD, with 8.8 million

[278] SBCA Comments at 4.

[279] *See 2002 Report*, 17 FCC Rcd at 26930 ¶ 58.

[280] SBCA Comments at 4.

[281] *See, e.g.*, Richard Bilotti, Benjamin Swinburne, and Megan Lynch, *The Shifting Winds of Pay-TV Market Share*, Morgan Stanley, Oct. 5, 2003; *New Selling Season, New Products*, SKY RESEARCH, June 2003; Seth Schiesel, *Cable or Satellite? Please Stay Tuned*, THE NEW YORK TIMES, July 31, 2003.

[282] DirecTV Comments at 11. With respect to former digital cable subscribers, DirecTV claims that much of its subscriber growth over the last year was from customers who had tried digital cable but were dissatisfied with it. According to DirecTV, its subscriber research finds that approximately 45% of its new customers have subscribed to digital cable. *See Despite Loss, DirecTV, Hughes Play Up Third Quarter Results*, SATELLITE BUSINESS NEWS, Oct. 15, 2003.

[283] *Kagan State of DBS 2002* at 34. At the end of 1994, DirecTV had 350,000 subscribers and PrimeStar had 231,000. Of DirecTV's subscriber count, approximately 118,000 also subscribed to USSB's service. *Id.*

[284] *Id*.

[285] *Id.*

[286] *Id*.

[287] DirecTV has entered into an exclusive distribution relationship in certain areas of the United States with the National Rural Telecommunications Cooperative ("NRTC"), which acquires and supports its own subscribers. The NRTC, its partner Pegasus, and several smaller resellers are reported to account for approximately 1.6 million rural households out of DirecTV's reported 10.7 million subscribers. *See* Hughes Electronics Corp., *SEC Quarterly Report Form 10-Q Pursuant to Section 13 of 15(d) of the Securities Act of 1934 for the Quarterly Period Ended June 30, 2003*, at 37 *("Hughes 2nd Quarter 2003 10-Q")*; NRTC Comments at 2.

subscribers as of June 30, 2003, an increase of almost 16% over last year's 7.6 million.[288] Sky Angel does not report its subscriber numbers on an annualized basis.[289]

68. ***Equipment Pricing***: To receive DBS service, subscribers require a satellite dish and a set-top box. In 1994, we reported that DirecTV sold its home receiving equipment for $699 and subscribers paid either $150-$200 for professional installation or they could purchase the installation equipment for $69.95.[290] Following EchoStar's entry into the marketplace in 1996, DBS equipment pricing dropped to as low as $199 plus installation costs.[291] In 1998, equipment and installation costs had dropped to $49.[292] Today, standard equipment and installation are generally offered free of charge, but usually with the requirement that the subscriber commit to a one year programming package contract.[293] DBS equipment has also incorporated more functionality, such as digital video recorders and HDTV, but this equipment is generally not offered for free.[294]

69. ***Availability of Local Broadcast Stations.*** Since 2000, DBS operators have been authorized to deliver local broadcast television stations in their local markets ("local-into-local service").[295]

[288] EchoStar Communications Corp., *SEC Quarterly Report Form 10-Q Pursuant to Section 13 of 15(d) of the Securities Act of 1934 for the Quarterly Period Ended June 30, 2003*, at 20.

[289] Last year we reported one analyst estimate that Sky Angel had approximately one million subscribers. *See 2002 Report*, 17 FCC Rcd at 26930 ¶59.

[290] *1994 Report*, 9 FCC Rcd at 7475 ¶65. The $699 DirecTV subscriber unit allowed a subscribing household to watch one channel at a time. In order to view two different channels on different television sets, a subscriber had to purchase an $899 unit and purchase a $649 decoder for the second television set. *Id.*

[291] *See 1997 Report,* 13 FCC Rcd at 1073-74 ¶60. EchoStar offered equipment for $199 to customers who signed up for a full year's programming at $300. In response to EchoStar's offer, DirecTV offered a $200 rebate to subscribers that purchased any brand of its equipment and a one-year subscription to its "Total Choice" programming package. *Id.*

[292] *See 1998 Report*, 13 FCC Rcd at 24330 ¶73**.**

[293] For example, as of October 15, 2003, DirecTV was running a promotion to provide a two or three room standard equipment installation and four months free of a programming package beginning at $39.99 or above for a new customer subscribing to DirecTV's NFL Sunday Ticket and a one year contract. DirecTV valued the promotion at $350. Similarly, EchoStar's Dish Network offers several promotions that center around free equipment.

[294] Dish Network offers its DISH 721 set-top box with two tuners, integrated digital video recorder and 120 GB hard drive for $600. It also offers a $700 high-definition television receiver. *See* Dish Network, at http://www.dishnetwork.com/content/products/receivers/dishpvr721/index.shtml (visited Oct. 15, 2003). DirecTV offers a $400 high definition television system and a $99 personal video recorder set-top box. *See* DirecTV, at http://www.directv.com/DTVAPP/imagine/Landing.dsp (visited Oct. 15, 2003).

[295] 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 Implementation of the Satellite Home Viewer Improvement Act 1999: Broadcast Signal Carriage Issues, Retransmission Consent Issues*, 16 FCC Rcd 1918 (2000); *Implementation of* (continued….)

According to SBCA, in 2000, approximately 19% of DBS subscribers received local signals via DBS.[296] As of December 2003, local-into-local service is offered by at least one DBS operator in 106 of 210 television markets (*i.e.*, designated market areas, or DMAs), which cover 86% of all U.S. television households. This represents an increase of 65% from last year's reported 64 markets. SBCA estimates that approximately 58% of DBS subscribers elect to receive broadcast signals from their DBS provider, either through local-into-local service or via distant network signals.[297] As of December 2003, EchoStar offered subscribers in 101 DMAs a package of local broadcast stations including commercial and non-commercial stations.[298] DirecTV offers local-into-local service in 64 DMAs.[299]

70. ***News Corp.-Hughes Transaction***. On May 2, 2003, General Motors Corporation ("GM"), Hughes Electronics Corporation ("Hughes") and The News Corporation Limited ("News Corp.") submitted a joint application to the Commission seeking consent to transfer control of various Commission licenses and authorizations, including its DBS and fixed satellite space station, earth station, and terrestrial wireless authorizations held by Hughes and its wholly- or majority-owned subsidiaries to News Corp.[300]

71. On December 19, 2003, the Commission adopted a Memorandum Opinion and Order ("Order") approving the joint application subject to several conditions designed to ensure the public interest benefits and remedy any potential public interest harms.[301] The transaction combines the News

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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).

[296] SBCA Comments at 9.

[297] *Id.* According to an SBCA DBS Subscriber Study completed in April 2003, approximately 54% of DBS subscribers obtain local broadcast stations, while seven percent receive distant network signals. According to SBCA, some subscribers receive both local-into-local and distant networks signals. *Id.* DirecTV states that, as of June 30, 2003, over 75% of its residential customers subscribe to the local programming packages in markets in which they are available. DirecTV Comments at 14.

[298] EchoStar Communications Corp., *Dish Network Satellite Television Brings Local TV Channels to Savannah, GA* (press release), Dec. 22, 2003. For a current list of markets where EchoStar offers local-into-local service, *see* http://www.dishnetwork.com/content/programming/locals/index.shtml. Where EchoStar delivers all available local channels offered by ABC, CBS, Fox, NBC, PBS, UPN, and WB, it charges $5.99 per month in addition to other subscriber package charges, and $4.99 in markets where one or more of the local stations is not available for retransmission. DirecTV prices its local broadcast packages similarly.

[299] DirecTV Comments at 2.

[300] *See General Motors Corporation and Hughes Electronics Corporation, Transferors, and The News Corporation Limited, Transferee, Consolidated Application For Authority to Transfer Control,* MB Docket No. 03-124 (May 2, 2003). The proposed transaction involved the split-off of Hughes from GM, with Hughes becoming a separate and independent company, followed by a series of transactions where News Corp., an Australian corporation, through its majority-held U.S. subsidiary, Fox Entertainment Group, would acquire a 34% interest in Hughes. The remaining 66% interest in Hughes would be held by three GM employee benefit trusts (managed by an independent trustee), which combined would hold an approximately 20% interest in Hughes, and by the general public, which would hold an approximately 46% interest in Hughes.

[301] The Commission approved the Application and imposed the conditions pursuant to Sections 4(i) and (j), 303(r), 309, and 310(d) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 154(j), 303(r), 309, (continued….)

Corp.'s programming assets with DirecTV's nationwide multichannel video programming distribution platform.[302] The Commission determined that the transaction would likely generate several public interests benefits, including the introduction of new services such as interactive television from DirecTV; that consumers should benefit from stronger competition in the MVPD market; and that the Commission's goals of promoting localism and competition would be furthered. Nevertheless, the Commission found that the transaction posed several potential public interest harms related to access to programming and discrimination against unaffiliated programmers and imposed the following conditions to mitigate those potential harms.

72. First, News Corp. is required to offer its existing and future cable programming services on a non-exclusive basis and non-discriminatory terms and conditions, for as long as the FCC's program access rules are in effect. Second, by the end of 2004, DirecTV must offer local broadcast television service packages in an additional 30 designated market areas beyond what had been previously funded, projected or planned.[303] Third, News Corp. must extend its commitments regarding non-discriminatory MVPD access to cable programming to any broadcast television station that News Corp. owns and operates, or on whose behalf it negotiates retransmission consent. In addition, the good faith and exclusivity requirements of the 1999 Satellite Home Viewer Improvement Act, due to sunset at the of 2005, are extended for as long as the program access rules are in effect. Fourth, News Corp. and DirecTV must enter commercial arbitration to resolve disputes with other MVPDs over retransmission consent of News Corp.'s broadcast stations and carriage of its regional sports networks ("RSNs").[304] Finally, the Commission established rules for MVPDs meeting the Commission's definition of "small cable company," allowing those entities to appoint an agent to bargain collectively on its behalf and that of other small MVPDs in negotiating for carriage of regional sports networks and retransmission consent for broadcast stations with News Corp.[305]

2. Home Satellite or Large Dish Service

73. The home satellite dish ("HSD") or large dish segment of the satellite industry is the original satellite-to-home service offered to consumers, and involves the home reception of signals transmitted by

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and 310(d). *See Subject to Conditions, Commission Approves Transaction Between General Motors Corporation, Hughes Electronics Corporation and The News Corporation Limited*, Public Notice, FCC 03-328 (rel. Dec. 19, 2003).

[302] Following approval of the transaction, on December 22, 2003, GM, Hughes, and News Corp. completed the split-off of Hughes from GM and the acquisition by News Corporation of 34 percent of the outstanding common stock of Hughes. *See* Hughes Electronics, *GM, Hughes, and News Corporation Complete Hughes Transactions* (press release), Dec. 22, 2003.

[303] Under this condition, an aggrieved MVPD may file a program access complaint for any alleged violation of the program access conditions.

[304] This condition applies to any RSN that News Corp. manages or in which it owns or holds a controlling interest. It also applies to retransmission consent agreements for any broadcast station in which News Corp. owns or holds an attributable interest, or independently-owned Fox network affiliates for which it negotiates retransmission consent. This condition will expire six years after the release of the final Order.

[305] When dealing with small MVPDs with fewer than 5,000 total subscribers, News Corp. must either elect "must-carry" status or negotiate retransmission consent for its owned and operated stations without any requirements for cash compensation or carriage of programming other than the broadcast signal.

satellites operating generally in the C-Band frequency.[306] Unlike DBS, which uses small dishes, HSD antennas are between four and eight feet in diameter and can receive a wide range of unscrambled (free) programming and scrambled programming purchased from program packagers that are licensed to facilitate subscribers' receipt of video programming.[307] There are approximately 30 satellites operating in the C-band, which carry over 500 channels of programming combined; approximately 350 channels are available free of charge and 150 are scrambled and require a subscription.[308]

74. In 1994, there were an estimated 4.5 million active HSD users, roughly half of whom subscribed to one or more programming services.[309] HSD subscribership peaked in 1995 at 2.4 million subscribers.[310] Over the past eight years, HSD has experienced a continued decline, with 502,191 households receiving C-band service as of June 30, 2003, a decrease of over 28% from the 700,641 we reported as of June 2002.[311] Overall, C-band has experienced a decline from a high of 2.3 million in 1995 to approximately 590,000 at the end of 2002.[312] In addition, approximately 3,500 hotels and 3,000 SMATV locations employ C-band dishes to receive programming.[313] The decline in subscribership is caused principally by HSD subscribers switching to DBS because of the smaller, less expensive and easier to use equipment,[314] and the advent of local-into-local programming following the enactment of the SHVIA. In addition, some popular programming is no longer offered to C-band subscribers. For

[306] Satellites in the C-band frequency are primarily used to transmit programming to cable operators via C-band receiving dishes at the cable operator's central technical facility or "headend."

[307] Subscribership is measured by the number of authorized VideoCipher modules, which provide subscribers with access to scrambled programming.

[308] For an overview of the type of programming and packages made available by C-band programmers, *see, e.g.*, National Programming Service, at http://www.dsinps.com; Motorola, at http://www.4dtv.com.

[309] *How Many DTH Households Are Out There Anyway?*, SKYREPORT, Oct. 1994, at 1.

[310] SBCA Comments at 15.

[311] *Id.* at 4.

[312] Despite the significant decline, a small number of consumers newly subscribe to C-band service every month. In September, although 13,324 VideoCipher modules were "de-authorized," 144 were newly authorized. *See C-band Slips Faster in September*, SATELLITE BUSINESS NEWS, Oct. 6, 2003.

[313] *See* Letter from Benjamin J. Griffin, Counsel, Coalition of C-band Constituents, to Marlene Dortch, Secretary, FCC, Attachment at 8 (June 30, 2003).

[314] 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. 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.

example, in May 2003, the National Football League informed C-band subscribers that its NFL Sunday Ticket programming package would no longer be made available to them.[315]

3. Satellite-Based Advanced Services

75. ***Broadband Satellite Services***: Last year, we reported that DirecTV and EchoStar offered two-way Internet access services to their subscribers. DirecTV continues to do so, but Hughes reports that it does not intend to increase the subscriber base aggressively for the DirecWay consumer business.[316] As of June 30, 2003, DirecWay had approximately 166,000 consumer subscribers in North America, compared to 123,000 as of June 30, 2002.[317] DirecWay costs $600 for the hardware ($400 for the equipment and $200 for installation) and $60 per month subscription fee with a 15-month service contract commitment.[318] DirecTV and BellSouth have entered into a strategic marketing alliance, part of which will explore the integration of digital satellite and DSL technology.[319] EchoStar, which had offered satellite-based Internet access services through its investment in Starband, no longer provides a satellite-based broadband solution.[320] It has entered into a co-marketing agreement with SBC, under which its video programming is sold in "bundled" packages with various SBC products and services, including its DSL services.[321] EchoStar is also pursuing satellite-based services via two separate initiatives. First, in March 2003, EchoStar entered into a satellite service agreement with SES Americom for all of the

[315] *See* National Football League, at http://ww2.nfl.com/ticket/letter.html. The NFL attributed its decision to the "substantial decline in the number of C-band dish owners overall, and that decline has been mirrored in a substantial decline in the number of C-band NFL Sunday Ticket subscribers." According to the NFL, at the time of its decision, C-band NFL Sunday Ticket subscribers had dropped to 10% of their original level. *Id.*

[316] *See Hughes 2nd Quarter 2003 10-Q* at 34. Hughes cites operating losses occurring over the last several years and the high cash requirements for subscriber acquisition costs.

[317] *Id.* at 38.

[318] *See* DirecWay, at http://www.getdway.com/htb_two.html. DirecWay also offers a $100 per month plan under a 15-month service contract allowing subscribers to spread out the cost of the equipment. This plan requires a $100 up front fee.

[319] BellSouth Corp., *BellSouth and DirecTV Announce Agreement to Sell Digital Satellite Television Service As Part of BellSouth Answers Bundle* (press release), Aug. 27, 2003. DirecTV and BellSouth plan to offer their joint services plans beginning in early 2004. *See also DirecTV, BellSouth Predict Good Things From Marketing Deal*, SATELLITE BUSINESS NEWS, Sept. 2, 2003.

[320] *See 2002 Report,* 17 FCC Rcd at 26934 ¶ 66. In 2002, EchoStar terminated its distribution agreement with StarBand. Starband has been in receivership since it declared bankruptcy in 2002, but on November 12, 2003, it received permission from the U.S. Bankruptcy Court in Delaware to emerge from Chapter 11 protection. It continues to support approximately 40,000 subscribers to its two-way, satellite delivered data services. *See Starband Moves Closer to Leaving Bankruptcy*, SATELLITE BUSINESS NEWS, Oct. 8, 2003. *See also* Starband Communications, Inc., *Starband Communications Inc. Cleared to Exit Bankruptcy* (press release), Nov. 12, 2003.

[321] *See* EchoStar Communications Corp., *SBC Communications, EchoStar Forge Strategic Partnership, Will Offer SBC Dish Network Television Service* (press release), July 21, 2003. As part of the agreement, SBC invested $500 million in EchoStar.

capacity on a FSS satellite to be located at the 105° W. orbital location.[322] Second, in August 2003, EchoStar launched its EchoStar IX satellite, which includes two Ka-band transponders, on which EchoStar will test the commercial viability of broadband services.[323] EchoStar also agreed to lease all of the capacity on an existing in-orbit FSS satellite at the 105° orbital location beginning August 1, 2003. EchoStar states that it intends to use the capacity on the satellites to offer a combination of video programming, including local broadcast television channels in additional markets and expanded high definition programming, together with satellite-delivered, high-speed Internet access services.[324]

76. ***Advanced Services***. EchoStar and DirecTV continue to provide a range of advanced services and products to their subscribers, with continued attention paid this year to increasing their digital video recorder ("DVR")[325] and HDTV offerings.[326] Although cable operators have introduced VOD in major markets, the spectrum capacity constraints and lack of two-way connectivity currently limit DBS operators' ability to offer video-on-demand services. Instead, EchoStar and DirecTV market digital video recorders as a competing service, principally by building the capability into the satellite receiver. EchoStar introduced this dual use set-top box under the name "Dish Video On Demand."[327] EchoStar states that it has sold approximately one million DVR equipped satellite receivers.[328] EchoStar plans to introduce a high definition DVR, capable of recording high definition programming.[329] DirecTV also

[322] *See* EchoStar Communications Corp., *SEC Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Act of 1934 for the Period Ended June 30, 2003*, at 19 (*"EchoStar 2nd Quarter 2003 SEC Report"*). SES Americom expects to launch this satellite during the second half of 2004. SES Americom, *SES Americom to Provide Satellite Capacity to EchoStar* (press release), Mar. 26, 2003. *See also* Peter Brown, *EchoStar Eases Back Into Broadband*, TV TECHNOLOGY, Sept. 3, 2003, at 24.

[323] *EchoStar 2nd Quarter 2003 SEC Report* at 19.

[324] *Id.* at 31.

[325] Digital video recorder ("DVR") and personal video recorder ("PVR") generally refer to consumer electronics devices which allow the user to record video and audio programming on a hard drive and to control that programming using VCR-like controls such as rewind, fast forward and pause. DVRs offer a range of additional features and recording functionality is usually managed through an electronic program guide, which allows the viewer to choose programming to record, up to 14 days in advance. DVRs have hard drives ranging in size from 20 GB to 80 GB of storage capacity, allowing users to record up to 80 hours of programming. *See also* paras. 111, 192 *infra*.

[326] *See* Seth Shiesel, *Cable or Satellite? Pleased Stay Tuned*, THE NEW YORK TIMES, July 31, 2003.

[327] *EchoStar to Offer New Dish Customers New 100-Hour DVR Free of Charge*, INTERACTIVE TV TODAY, Sept. 1, 2003. The set-top box is free of charge to new customers who commit to a one-year service contract with Dish Network and pay a $50 activation fee. *Id. See also* EchoStar Communications Corp., *Dish Network Introduces Dish Player* (press release), Aug. 25, 2003.

[328] EchoStar Communications Corp., *Dish Network First to Reach TV Industry Milestone: 1 Million Digital Video Recorders* (press release), Sept 24, 2003. DISH customers may receive the unit free or by paying up to $199 depending on the level of service and length of the subscriber's service contract. *See EchoStar Launches "Free" Digital VCR Offer*, SATELLITE BUSINESS NEWS, Aug. 27, 2003, at 2.

[329] Mike Snider, *Satellite TV Builds a Better Set-top Box, With High Definition*, USA TODAY, Sept. 30, 2003. The high definition DVR is expected to retail for $999. DirecTV is expected to introduce a similar HD DVR set-top box in early 2004. *Id.*

offers an integrated satellite receiver and DVR.[330] DirecTV expects higher revenues from DVR customers, expecting them to generate $10 to $20 in additional revenue per unit and lower churn rates.[331] DirecTV has approximately 500,000 digital video recorder subscribers.[332] Similar to EchoStar, DirecTV markets a DVR service as VOD with its premium subscription service "Starz on Demand," which allows subscribers to download up to five movies per week onto their DVR hard drive.[333]

77. With respect to HDTV, DirecTV and EchoStar continue to provide high definition television services and packages.[334] DirecTV offers seven national channels of HDTV programming and some HDTV special events and pay-per-view offerings.[335] EchoStar offers a similar package of HD channels.[336] EchoStar also introduced a new satellite dish capable of receiving signals from three EchoStar satellites at once, and providing EchoStar with the ability to offer subscribers using this dish up to 50 HD channels.[337]

C. Broadband Service Providers

78. In our first *Report*, we identified municipal and independent overbuilders. At that time, video distribution was the sole focus of overbuilding activity. In our *1998 Report*, we noted that municipal and independent overbuilders were beginning to offer local and long distance telephone service and Internet

[330] DirecTV Comments at 18. DirecTV DVR equipment ranges in price from $99 to $399. *Id.* DirecTV charges $4.95 per month for its DirecTV DVR service, except for subscribers to DirecTV's Total Choice Premier package, which receive the service free of charge. *See also* DirecTV, at http://www.directv.com/ DTVAPP/ imagine/ TIVO.dsp.

[331] *DVRs: The Key to Customer Satisfaction*, SKY RESEARCH, June 2003, at 4.

[332] *Despite Loss, DirecTV, Hughes Play Up Third Quarter Results*, SATELLITE BUSINESS NEWS, Oct. 15, 2003, at 2.

[333] DirecTV Comments at 18.

[334] *See, e.g.*, Leichtman Research Group, *HDTV Attracting A Growing Audience* (press release), June 6, 2003; Barry Willis, *DBS Delivering More HDTV*, STEREOPHILE, Sept. 29, 2003.

[335] DirecTV Comments at 18. DirecTV offers a package of HD programming that includes ESPN HD, Discovery HD Theater, HD Net, HD Net Movies, HBO HDTV, Showtime HDTV, and High Definition Pay-Per-View. *See* DirecTV, at http://www.directv.com/DTVAPP/imagine/HDTV_pricing.dsp. *See also* Naina Chernoff, *DirecTV Kicks Off With HD, Interactive NFL*, TV TECHNOLOGY, Sept. 3, 2003.

[336] EchoStar offers ESPN HD, Discovery HD Theater, HD Net, HD Net Movies, HBO HDTV, Showtime HDTV, and Dish On Demand Pay-Per-View movies. EchoStar Communications Corp., *Dish Network Expands High Def Offerings; HD Leader Packages Four Channels, Prepares Rollout of Receivers* (press release), Sept. 5, 2003. *See also* EchoStar Communications Corp., at http://www.dishnetwork.com/content/programming/hdtv/index.asp.

[337] *See* EchoStar Communications Corp., *DISH Network to Add HDNet, HDNet Movies; DISH Network Unveils New SuperDish Technology Capable of Providing Consumers Up to 50 HDTV Channels* (press release), May 1, 2003. Dubbed the "SuperDish" by EchoStar, it is an elliptical 66-centimeter dish. Beginning in late 2003, EchoStar plans to offer a "SuperDish HD Bundle" for approximately $1,500, which includes either a 34-inch-screen HDTV monitor or a 40-inch rear-projection HDTV monitor, plus a digital receiver and a satellite dish. HD monitors alone retail for between $1000-$2000. *See* Mark Koebrich, *EchoStar to Offer High Definition TVs in Satellite Package,* DENVERPOST.COM, Oct. 15, 2003, at http://www.denverpost.com/Stories/0,1413,36%2 57E3 3%257E1698702,00.html.

access services in order to compete with incumbent cable operators. At that time, CLEC overbuilders, which were already providing local telephone service as their core business, were beginning to provide Internet access services as well. In our *2001 Report* we addressed a new class of providers called BSPs.[338] Today, we recognize overbuilders (municipal, independent, and CLEC overbuilders alike) as BSPs because most, if not all, operate state-of-the-art networks capable of providing bundles of services (i.e., voice, advanced video, and data services). As we reported last year, some BSPs are now offering subscribers VOD and ITV services in addition to telephone and Internet access services.[339] In a recent study, GAO found that competition from wire-based technologies, such as BSPs, was the most effective means of reducing cable rates.[340] Even with the multi-service strategy, however, BSPs continue to face considerable challenges, many of which are discussed below.[341] As a result, competition from a wire-based competitor such as a BSP is limited to a very few markets.[342]

79. At the time of the 1994 Report, overbuilders were still a limited phenomenon, distributing only multichannel video programming.[343] Overbuilders at that time were either cable systems or LECs providing multichannel video services under the "video dialtone" framework.[344] By 1998 there were many more overbuilders, most offering a bundle of voice, video, and data services, which allowed them to compete more effectively with incumbent cable operators. As of June 1998, competing franchises had been awarded covering as many as 149 communities in 21 states with the potential to pass 7.2 million homes, though not all the franchises awarded as this time were in operation at the time of the 1998 Report.[345] Today, Broadband Service Providers Association ("BSPA") members serve over one million video subscribers, and they have franchises that authorize them to serve over 17.7 million homes with voice, video, and data.[346] BSPA members have deployed over 32,000 miles of fiber in order to provide a multitude of state-of-the-art services to subscribers, including VOD and interactive television.[347]

80. ***OVS***. In 1996, Congress abolished the VDT framework, and established the open video system ("OVS") framework, one of four statutorily-recognized options for provision of video programming services

[338] We define "broadband service providers" ("BSPs") here as, "newer firms that are building state-of-the-art facilities-based networks to provide video, voice and data services over a single network." The term BSP is not intended to imply anything with respect to Commission policy or proceedings that might involve broadband services. Usually, the services of a BSP can be purchased separately as well as in a bundle. *2001 Report*, 17 FCC Rcd at 1296-7 ¶ 3. *See also 2002 Report*, 17 FCC Rcd at 26948-52 ¶¶ 102-111.

[339] *2002 Report*, 17 FCC Rcd at 26950 ¶ 106. *See also* BSPA Comments at 27-30.

[340] *2003 GAO Report*, fn. 7 *supra,* at 3-4.

[341] BSPA Comments at iii-iv

[342] *2003 GAO Report* at 3-4.

[343] *See* BSPA Comments at 2.

[344] *See 1994 Report*, 9 FCC Rcd at 7495-7505 ¶¶ 103-120. *See* para. 112 *infra*.

[345] *1998 Report*, 13 FCC Rcd at 24308-9 ¶ 43.

[346] BSPA Comments at iii and 6. Not all overbuilders are members of BSPA.

[347] *Id.* at iii, 2, 8 and 10.

by LECs.[348] Most firms currently receiving certification from the Commission as OVS operators, however, are not LECs.[349] BSPs, primarily RCN, are the only significant holders of OVS certifications or local OVS franchises. BSPA reports that "BSPA members typically provide service under traditional cable franchises, although several BSPA members are using the OVS framework for a relatively few systems, and others may explore doing so in the future."[350] BSPA indicates that competitors and consumers have not been able to realize the full potential of OVS as a competitive alternative to the incumbent cable operators due in part to the *City of Dallas, Tex. v. FCC* decision of the 5th Circuit Court of Appeals, in which the court held that municipalities can require OVS operators to obtain a local franchise.[351]

81. ***BSP Overbuilders***. RCN Corporation is the nation's first and largest broadband overbuilder supplying voice, video and high-speed Internet access services to residential subscribers over its own network.[352] RCN also offers such advanced offerings as VOD and HDTV.[353] Currently, RCN is the 11th largest MVPD.[354] RCN provides competitive cable, telephone, and high-speed Internet services in eight

[348] 47 U.S.C. § 571(a)(3)-(4); *1996 Report*, 12 FCC Rcd at 4395-8 ¶ 68-71. Open video systems are subject to reduced regulation under Title VI. 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. Open video systems are subject to 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. In addition, while open video systems are exempt from local cable franchise requirements, localities are permitted to assess a fee on an open video system's gross revenues at a rate not exceeding the franchise fee imposed by that locality on the local cable operator. *Id.* Although OVS is one of four means for LEC entry into video, the OVS rules do not preclude other types of entities from using the OVS rules. BSPs continue to be the only significant holders of OVS certifications or local OVS franchises. *See 1998 Report,* 13 FCC Rcd at 24357-8 ¶ 117; *2001 Report*, 17 FCC Rcd at 1296 ¶ 113; *See also* para.113 *infra*.

[349] *Bell Atlantic-New Jersey, Inc. (Certification to Operate an Open Video System)*, 11 FCC Rcd 13249 (CSB 1996).

[350] BSPA Comments at 47. In those markets where local franchising authorities embrace the OVS concept as a means to facilitate market entry for competitors and introduce competition and its benefits to consumers, entities continue to consider OVS as a regulatory alternative to the traditional cable franchise and have employed the OVS model with some success. *Id* at 48. For a complete list of OVS certifications, *see* http://www.fcc.gov/mb/ovs/csovscer.html.

[351] BSPA Comments at 48. In *City of Dallas v. FCC*, 165 F.3d 341 (5th Cir. 1999), the court decided that cities may require local franchises for OVS operators.

[352] RCN Comments at i. *See* para. 120 *infra.*

[353] RCN Comments at 1. In September, RCN announced the launch of its HDTV service to subscribers in Philadelphia, Pennsylvania. RCN already offered HDTV service in Boston, Massachusetts; parts of New York City; Washington, D.C.; and Lehigh Valley, Pennsylvania. *Mass Media Notes*, COMMUNICATIONS DAILY, Sept. 19, 2003, at 7. RCN alleges that Comcast has entered into an exclusive arrangement with New England Sports Network ("NESN") to provide sports programming broadcasting using HDTV, but NESN has not provided this critical HDTV programming to RCN because of the exclusive agreement. RCN Reply Comments at 2-5.

[354] Kagan World Media, Cable TV Investor, Oct. 31, 2003, at 12.

states to approximately half a million subscribers.[355] At the end of June 30, 2003, RCN reported a total of 1.4 million homes passed and 462,953 video subscribers.[356] WideOpenWest ("WOW") is the second largest overbuilder. WOW is the 15th largest MVPD and, as of June 2003, served 290,000 subscribers.[357] WOW offers voice, video and high-speed Internet access services in over 100 communities in four states.[358] In 2003, the chairman and CEO of WOW resigned and formed another BSP, Champion Broadband.[359] Champion began its operations by purchasing WOW's Denver, Colorado, overbuild system which serves approximately 2,000 subscribers.[360] The third largest BSP is Knoxville, Tennessee-based Knology, which operates in the Southeast. As of June 2003, Knology was the 26th largest MVPD, and had 132,163 video subscribers.[361] Seren Innovations provides voice, video, and high-speed Internet access services through its subsidiary Astound in St. Cloud, Minnesota, and Concord, California.[362] As of September 2003, Astound had 40,000 customers.[363] Other overbuilders include Everest, which provides service in Kansas City, Kansas; Altrio, which provides service in the Los Angeles, California metropolitan area; Surewest, which provides service in Sacramento, California; and Grande, which provides service in seven locales in Texas.[364]

82. Last year we reported that many overbuilders were experiencing financial difficulties. This year we note that after restructuring in 2002, Knology once again continues to expand its operations, most notably through its purchase of broadband assets from Verizon Media Ventures, Inc., adding approximately

[355] RCN Corp., *RCN Announces Second Quarter 2003 Results* (press release), Aug. 11, 2003

[356] *Id.*

[357] Kagan World Media, Cable TV Investor, Oct. 31, 2003, at 12.

[358] For a full list of communities served, *see* http://www.wideopenwest.com/whatwedo_avail.html.

[359] *WOW CEO Forms New Cable Firm*, MULTICHANNELDAY NEWS, Apr. 11, 2003. Champion Broadband, *WideOpenWest to Sell Denver/Lakewood Cable System to Company Founders* (press release), Apr. 4, 2003.

[360] *Id.*

[361] Kagan World Media, Cable TV Investor, Oct. 31, 2003, at 12. Knology Inc., *Knology Reports Strong Revenue and EBITDA in Second Quarter* (press release), Aug 11, 2003. For a full list of communities served, *see* http://www.knology.com/services/cities.cfm.

[362] Seren Innovations, *Seren Innovations Reaches Another Milestone* (press release), Sept 5, 2003. Seren Innovations is a wholly owned subsidiary of Xcel Energy Inc. *Id.*

[363] *Id.*

[364] BSPA Comments at 15-16, 50. Altrio Communications provides high-speed Internet access, local and long-distance telephone service, and video services (including VOD) via a fiber optic communications network in the Los Angeles metropolitan area. Altrio offers 80 channels of basic television programming, nearly 150 channels of premium programming, 600 hours of video-on-demand programming, 75 channels of pay-per-view programming, and 45 CD-quality channels of digital music. Altrio Communications, *Altrio Communications Rated Best Television Provider* (press release), July 10, 2003. Like RCN and Seren Innovations, Everest is affiliated with an electric utility company. Steve Everly, *Utilicorp United Forms Partnership to Offer Telephone, High-Speed Internet and Cable TV Services*, THE KANSAS CITY STAR, Apr. 18, 2000. *See* para. 120 *infra.*

290,000 homes passed and 64,000 subscribers to its coverage area.[365] In addition, Knology experienced a 23% increase in revenues in the second quarter of 2003 over the second quarter of 2002.[366] Similarly, RCN experienced a 17% percent increase in average residential revenues per customer in the second quarter of 2003, over the second quarter of 2002.[367] Grande Communications secured an additional $45 million in financing, which will be used for expansion into additional markets.[368] Other overbuilders, such as McLeod USA, continue to face financial challenges.[369]

83. ***Competitive Responses***. In the *1994 Report*, the Commission stated that cable service rates in markets that were overbuilt were an average of 16% lower than the rates in markets that were not overbuilt.[370] In the *1998 Report*, we noted that where incumbent cable operators faced head-to-head competition from overbuilders, lower prices were often the result, as were additional channels at the same monthly rate, and improved service.[371] Today, BSPA states that BSPs bring new competition to all incumbent providers of video, telephone and high-speed data Internet access services, including satellite competitors.[372] BSPA believes that the impact of BSP competition includes the moderation of cable rate increases, increased total penetration of high-speed Internet access, increased penetration of enhanced digital television, acceleration of next generation service deployment, incumbent upgrade investments, improved customer satisfaction rates, expanded PEG and other public service capabilities, and rural market entry.[373]

84. ***Barriers to Competition***. In addition to difficulties with the OVS regime,[374] BSPs continue to report other barriers to competition in the MVPD market. BSPA alleges, among other things, that incumbent cable operators continue to leverage their vertical relationships to restrict competitive access to programming, and use their buying power to enforce exclusive agreements with unaffiliated programmers,

[365] Knology, Inc., *Knology Announces Agreement To Purchase Broadband Assets* (press release), July 18, 2003. Knology also took certain steps to reduce its debt, which according to Knology officials "significantly improves our balance sheet and liquidity position." Knology Inc., *Knology Completes $39 Million Private Placement Transaction* (press release), Nov. 7, 2002.

[366] Knology, Inc., *Knology Reports Strong Revenue And EBITDA In Second Quarter 2003* (press release), Aug 11, 2003.

[367] RCN Corp., *RCN Announces Second Quarter 2003 Results* (press release), Aug. 11, 2003.

[368] *Westward Expansion*, CABLEFAX DAILY, Oct. 9, 2003 at 2.

[369] *Mc Leod USA Board Shuffled*, COMMUNICATIONS DAILY, June 6, 2002

[370] *1994 Report*, 9 FCC Rcd at 7470 ¶ 57.

[371] *1998 Report*, 13 FCC Rcd at 24311 ¶ 47.

[372] BSPA Comments at 9.

[373] BSPA Comments at 9-11. *See also* RCN Comments at 5-6.

[374] *See* para. 80 *supra.*

especially sports programming.[375] BSPA and RCN also claim that cable operators are engaging in discriminatory pricing strategies, which have increased in frequency and aggressiveness; pricing video services in some cases below any estimate of variable cost.[376] Some cases of price discrimination, BSPA alleges, are only targeted at BSP existing and potential customers, allegedly violating various federal and local regulatory regulations.[377] BSPA also asserts its continued concern over the inapplicability of the Commission's program access rules to terrestrially delivered programming, which prevents it access to vital local and regional content, including sports programming.[378] BSPA contends that long-term exclusive MDU contracts not only block competitive entry by deterring BSP investment, but also serve to lock tenants and building owners into outdated networks and services.[379] BSPA also charges that BSPs (as well as incumbent cable operators) are denied access to utility poles and public rights of way necessary to build out their networks, and claims that the adjudication process for gaining such access is onerous.[380]

D. Wireless Cable Systems

85. Multipoint distribution service ("MDS") and instructional television fixed service ("ITFS") are authorized to operate in the 2.5-2.69 GHz band. In addition, MDS entities have licenses in the 2.15-2.162 GHz band. Wireless cable systems combine multiple MDS (*i.e.*, multichannel MDS) frequencies and ITFS frequencies to transmit video programming and high-speed Internet access to residential subscribers in limited areas using line-of-sight technology.[381] This delivery technology also is known as multichannel multipoint distribution service ("MMDS").

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[375] BSPA Comments at iv, 12, and 14-19; RCN Comments at 2 and 6-11. *See* paras. 151, 160 *infra*. Comcast notes that it was Congress' decision to permit programmers to offer volume discounts to their largest customers, and that volume discounts are common throughout the country. Comcast Reply at 19.

[376] BSPA Comments at iv and 34; RCN Comments at 2-3 and 11-14; *See* para. 124 *infra*.

[377] BSPA Comments at iv, 34, and 36-38. *See also* RCN Comments at 11-14. We have reported on similar complaints in several prior *Reports*. *See 2001 Report*, 17 FCC Rcd at 1297 ¶ 115; *2002 Report* 17 FCC Rcd at 26951 ¶ 110.

[378] BSPA Comments at 2, 13, and 16-18; s*ee* para. 149 *infra*. Comcast notes that Congress deliberately chose not to extend the prohibition on exclusive contracts for vertically integrated programming to programming that is terrestrially delivered, and that there is no evidence that programming has been migrated for purposes of evading the program access rules. Comcast Reply Comments at 12-14. NCTA notes that Congress has rejected the policy of extending the program access rules to terrestrially delivered programming. NCTA Reply Comments at 8. BSPA notes that VOD/SVOD services will be a major part of future revenue streams, and urges that the Commission's program access rules should apply to VOD/SVOD services. *See* BSPA Comments at 27.

[379] BSPA Comments at 39-41; RCN Comments at 2 and 16-17; *see* para. 129 *infra*. Comcast argues that if MDU exclusive agreements obtained by cable operators are objectionable, then they should be equally objectionable when obtained by BSPs. Comcast Reply Comments at 21.

[380] BSPA Comments at 44-47; RCN Comments at 2-3 and 15-16. According to BSPA, these difficulties result from lengthy proceedings, excessive fees, and slow action on the part of pole owners and local governments. BSPA Comments at 44-47.

[381] MMDS must have a "line-of-sight" path between transmitter and receiver. Technical limitations include signal strength and blockage by terrain.

86. In June 1994, the wireless industry served about 550,000 subscribers up from 300,000 subscribers in 1990.[382] The number of MMDS subscribers peaked at approximately 1.2 million subscribers in 1996 and has steadily decreased since then. As of June 2003, wireless cable systems served about 200,000 subscribers.[383] Thus, MMDS provides competition to incumbent cable operators only in limited areas. In 1998, the Commission released the *Two-Way Order* permitting MDS/ITFS licensees to construct digital two-way systems that could provide high-speed, high-capacity broadband service, including two-way Internet service via cellularized communication systems.[384] As a result, licensees of MDS and ITFS spectrum are turning to data delivery rather than video service. In 2001, the Commission adopted a *First Report and Order and Memorandum Opinion and Order* in the New Advanced Wireless Services proceeding, which made the spectrum used by MMDS services potentially available for advanced mobile and fixed terrestrial wireless services, including third-generation ("3G") and future generations of wireless systems.[385]

87. Last year, we reported on the top four companies holding MMDS/ITFS licenses, which hold more than half of the licenses - Worldcom, Nucentrix, Sprint and BellSouth.[386] WorldCom's MDS and MMDS licenses have tentatively been acquired by Nextel.[387] A U.S bankruptcy court approved the sale to Nextel for $144 million for the fixed wireless assets that WorldCom holds including an agreement that covers certain protection measures for ITFS licenses.[388] The Commission is currently considering the proposed transfer. The Commission is also considering a transfer of NextWave PCS licenses in 34 markets to Cingular Wireless for $1.4 billion, also a result of a bankruptcy court action.[389] In another bankruptcy action, Leap Wireless has sold 15 MHz blocks of spectrum in Idaho to Edge Communications for $3.25 million.[390] McLeodUSA, a company based in Cedar Rapids, Iowa, has signed a multi-year wholesale agreement with AT&T Wireless to offer wireless service along with its local and long distance

[382] *1994 Report,* 9 FCC Rcd at 7482 ¶ 79,

[383] NCTA Comments at 8.

[384] *Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, 13 FCC Rcd at 19112 (1998), *recon.,* 14 FCC Rcd at 12764 (1999), *further recon*., 15 FCC Rcd at 14566 (2000).

[385] *See Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems*, 16 FCC Rcd at 17222 ¶ 2 (2001). The 3G advanced wireless services may include new data and broadband services such as Internet access, electronic mail, and short messaging services. *Id*. at 17223-4 ¶ 5.

[386] *2002 Report*, 17 FCC Rcd at 26938 ¶ 74.

[387] *See Commission Seeks Comment on Applications to Assign Wireless License from WorldCom Inc. to Nextel Spectrum Acquisition Corp*., 18 FCC Rcd 19313 (2003).

[388] *Wireless*, COMM DAILY, Sept. 26, 2003, at 9.

[389] *Id.*

[390] *Wireless*, COMMUNICATIONS DAILY, Sept. 16, 2003, at 7.

services to its customers.[391] BellSouth continues to provide video programming in the areas where it holds MMDS and ITFS licenses.[392]

88. On April 2, 2003, the Commission released a *Notice of Proposed Rule Making* ("*MDS NPRM"*) initiating a comprehensive examination of the rules and policies governing the licensing of the ITFS, MDS, and MMDS services.[393] The proposed rule changes would facilitate the provision of high-speed data and voice services accessible to mobile as well as fixed users in channels that today are used primarily for one-way video delivery to fixed locations.[394] Specifically, the Commission: (1) sought comment on whether and how to reconfigure the 2500-2690 MHz band; (2) sought comment on the best means of ensuring the efficient utilization of unassigned ITFS spectrum, including geographic area licensing and unlicensed operation; (3) proposed to convert site-by-site licenses of MDS and ITFS incumbents to geographic service areas; (4) sought comment on how best to promote increased access to and efficient utilization of ITFS spectrum; (5) proposed technical rules to increase licensee flexibility and protect incumbent operations in the 2500-2690 MHz band; (6) proposed to simplify and streamline the licensing process for the services; (7) proposed application filing and processing procedures to facilitate implementation of the three services into the Universal Licensing System (ULS) administered by the Wireless Telecommunications Bureau; and (8) proposed to consolidate all service-specific rules for the ITFS, MDS, and MMDS services under Parts 27 and 101 but sought comment on alternatives. Pending resolution of the rulemaking proceeding, the Commission temporarily suspended acceptance of applications for new ITFS licenses and applications to amend or modify either ITFS or MDS stations in the 2500-2690 MHz band, subject to certain exceptions;[395] and similarly temporarily suspended the current construction deadline for MDS and ITFS authorization holders.[396] In this regard, W.A.T.C.H. TV,[397] one of the first commercial MDS/ITFS systems in the country to deploy digital wireless cable

[391] *Telecommunications*, THE NEW YORK TIMES, Sept. 4, 2003, at C-4.

[392] BellSouth Comments at 2.

[393] *See Amendment of Parts 1, 21, 73, 74, and 101 of the Commission's Rules to Facilitate Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands,* 18 FCC Rcd 6722 (2003). The Commission incorporated the two ongoing dockets into this proceeding because they pertain to these services. *See Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Licensing in the Multipoint Distribution Service and in the Instructional Television Fixed Service for the Gulf of Mexico,* 17 FCC Rcd at 8446 (2002) (proposing to establish a Gulf of Mexico service area); *see also Amendment of Parts 1, 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions,* 15 FCC Rcd at 14566 (2000).

[394] *See Amendment of Parts 1, 21, 73, 74, and 101 of the Commission's Rules to Facilitate Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands,* 18 FCC Rcd at 6725 ¶ 2.

[395] The Commission modified this temporary suspension in the *Amendment of Parts 1, 21, 73 ,74, and 101 of the Commission's Rules to Facilitate Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands,* 18 FCC Rcd 16848 (2003).

[396] The Commission clarified its action in the *Amendment of Parts 1, 21, 73, 74, and 101 of the Commission's Rules to Facilitate Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands,* 18 FCC Rcd 15087 (2003).

[397] W.A.T.C.H. TV serves more than 12,500 households in the Lima, Ohio, television market. W.A.T.C.H. TV Comments at 2.

service and high-speed Internet access service, states that the Commission should allow digital service providers like W.A.T.C.H. TV to continue to operate high-power, high-site facilities in the 2500-2690 MHz band. W.A.T.C.H. TV is concerned that a mandatory transition to a cellular architecture, as suggested in the *MDS NPRM*, will force W.A.T.C.H. TV to terminate its provision of video and audio programming to subscribers. W.A.T.C.H. TV claims that such services cannot be distributed economically over cellularized facilities.[398]

E. Private Cable Systems

89. Private cable operators ("PCOs"), also known as private communication operators or satellite master antenna television ("SMATV") systems, are video distribution facilities that use closed transmission paths without using any public right-of-way.[399] PCOs acquire video programming and distribute it via terrestrial wiring in urban and suburban multiple dwelling units ("MDUs"), such as apartments and condominiums, and commercial multiple tenant units ("MTUs"), including hotels and office buildings. Traditionally, PCOs received non-broadcast programming from resellers called aggregators using satellite master antenna systems atop the buildings they serve. Today, some PCOs obtain programming from DBS operators. PCOs usually combine this non-broadcast video programming with local broadcast television signals that they receive using analog master antennas. Thus, the packages PCOs provide their subscribers are comparable to those of cable systems, and they directly compete with franchised cable operators. In 1994, PCOs provided the same types of video programming that were offered by cable systems.[400] By 1998, some PCOs were offering telephone service, closed-circuit security monitoring, interactive TV, Internet access services, voice mail, paging, and other services.[401] Some PCOs now offer broadband access, through DSL technology, to consumers in addition to video services.[402]

90. Currently there are approximately 250 PCOs operating in the United States.[403] PCOs often serve approximately 3,000-4,000 subscribers, but the larger operations serve as many as 15,000-55,000 subscribers.[404] The number of subscribers to private cable systems appears to have fluctuated over the past ten years. In August 1994, PCOs served one million subscribers.[405] In June 1998, PCO

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[398] *Id*. at 3-5.

[399] 47 U.S.C. § 522(7).

[400] *1994 Report,* 9 FCC Rcd at 7488 ¶ 91.

[401] *1998 Report,* 13 FCC Rcd at 24342 ¶ 92.

[402] Amy Cravens, *Is The MTU Dead?,* BROADBAND PROPERTIES, March 2003, at 17.

[403] In 1994, we reported that there were 3,000 to 4,000 SMATV systems operating nationwide, and in 1998 we reported that there were hundreds of firms operating throughout the United States. *See 1994 Report,* 9 FCC Rcd at 7488 ¶ 92. *See also 1998 Report,* 13 FCC Rcd at 24341 ¶ 90. For a list of private communications operators, *see* Independent Multi-Family Communications Council's, at http://www.imcc-online.org/membership (visited Oct. 6, 2003).

[404] *See 1999 Report,* 15 FCC Rcd at 1023 ¶ 94. *See also Ten Largest Private Cable Operators/Multiple System Operators,* PRIVATE CABLE & WIRELESS CABLE, Dec. 1999, at 4.

[405] *1994 Report,* 9 FCC Rcd at 7540 ¶ 201, Table 5.1.

subscribership dropped to 940,000, a decrease of six percent from 1994.[406] As of June 2003, PCO subscribership reached 1.2 million, an increase of 260,000, or 27.7%, over 1998. This represents a decrease in PCO subscribership of 400,000 subscribers, or 25%, from the 1.6 million subscribers reported in 2002.[407] To some extent, these fluctuations result from the lack of a standardized data source, and not necessarily from changes in the actual number of subscribers.

[406] *1998 Report,* 13 FCC Rcd at Appendix C, Table C-1.

[407] NCTA Comments at 8. *See also 2002 Report,* 17 FCC Rcd at 26940 ¶ 77.

91. PCOs are not regulated in the same way as traditional cable operators.[408] Some PCO systems use microwave transmissions and wires to serve multiple buildings that are not commonly owned.[409] Where a PCO crosses public rights-of-way, that operator becomes a cable operator as defined by the Communications Act, including the franchising obligations of Section 621.[410] On May 16, 2002, the Commission adopted a Report and Order expanding eligibility for licenses in the Cable Television Relay Service ("CARS") to include all MVPDs, including PCOs. The Order also increased the number of frequencies available to PCOs by permitting the use of 12.70-13.20 GHz band ("12 GHz CARS band") by all MVPDs for delivering programming services to their subscribers.[411] In that proceeding, several commenters contended that use of the lower CARS band of 12.70-13.20 will help PCOs compete with cable MSOs.[412]

92. In January 2003, the Commission issued the *Second Report and Order* on inside wiring, which declined to restrict certain exclusive contracts for the provision of video services in MDUs because the record did not demonstrate a need for government intervention in the marketplace with privately negotiated contracts.[413] In that *Order,* the Commission also made four changes, or clarifications, to its cable inside wiring rules which could benefit property owners and PCOs in the long run. The changes

[408] 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.

[409] *Id.* In 1991, the Commission held that microwave transmissions do not "use" public rights-of-way and made 18 GHz technology available for the point-to-point delivery of video programming services, allowing operators to free themselves from large networks of coaxial or fiber optic cable and amplifiers. *Amendment of Part 94 of the Commission's Rules to Permit Private Video Distribution Systems of Video Entertainment Access to the 18 GHz Band,* 6 FCC Rcd 1270, 1271 ¶ 10 (1991). In 2000, the Commission adopted a *Report and Order* affirming the allocation of the 18 GHz band for SMATV providers, concluding that "private cable operators using the 18 GHz band, for both current and future operations, will not be able to compete effectively against franchised cable operators if we redesignate the 18.3-18.55 GHz band . . . ." *See Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.2-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional Spectrum in the 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands for Broadcast Satellite-Service Use,* 15 FCC Rcd 13450 (2000). Subsequently, the Commission allowed PCOs to use CARS for programming services delivery, and gave the 18 GHZ frequencies to Hughes Electronics Corporation. *See Second Order on Reconsideration,* 17 FCC Rcd 24248 (2002).

[410] *Entertainment Connections, Inc., Motion for Declaratory Ruling*, 13 FCC Rcd 14277 (1998).

[411] *Amendment of Eligibility Requirements in Part 78 Regarding 12 GHz Cable Television Relay Service,* 17 FCC Rcd 9930 (2002).

[412] *See, e.g.*, OpTel, Inc., Comments, CS Docket No. 99-250, at 2-3; RCN Telecom Services, Inc., Comments, CS Docket No. 99-250, at i, 3-4.

[413] *Telecommunications Services Inside Wiring, Customer Premises Equipment, Implementation of the Cable Television Consumer Protection and Competition Act of 1992; Cable Home Wiring,* 18 FCC Rcd 1342 (2003). On May 20, 2003, NCTA filed a Petition for Review in the U. S. Court of Appeals for the D.C. Circuit. *National Cable & Telecommunications Association v. FCC and USA,* No. 03-1140. *See also* Matthew C. Ames and Larry D. Kessler, *The FCC's New Cable Inside Wiring Rules: Property Owners and Private Operators Benefit,* BROADBAND PROPERTIES, March 2003, at 24.

are: (1) wiring located behind sheet rock is "physically inaccessible" for purposes of the home run wiring rules; (2) incumbent providers must allow access to their wiring before the termination of services; (3) incumbent operators must share space in molding with competitors; and (4) the rules apply to all programming providers, including both franchised cable operators and PCOs.

F. Broadcast Television Service

93. Broadcast networks and stations supply video programming directly over the air to consumers. Some consumers, who do not subscribe to an MVPD service, rely solely on over-the-air transmission of 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. The number of commercial and noncommercial television stations increased from 1,518 as of November 30, 1993, to 1,726 as of June 30, 2003.[414] Total television broadcast advertising revenue averaged an annual six percent increase[415] after the 1991 recession but fell dramatically during the 2001 recession with a decline in revenue of about 12% from 2000.[416] Total television broadcast advertising revenues rebounded in 2002, with a 9.4% increase from the $37.8 billion garnered in 2001 to $41.4 billion in 2002.[417] Advertising revenues for the four networks (ABC, CBS, Fox, and NBC) was $10.2 billion in 1993.[418] By 1998, the four networks' total advertising revenue had increased to $13.7 billion.[419] In 2002, the four networks had $15.3 billion in advertising revenue.[420] In contrast, cable programming networks collected $2.8 billion in advertising revenue in 1993. By 1998, cable programming networks' advertising revenue more than doubled to $7.2 billion, and by 2002, these networks earned $10.9 billion in advertising revenue.[421] Three new broadcast television networks have emerged since our *1994 Report*: UPN and WB in 1995; and PAXTV in 1997.[422] Advertising revenue for the seven most widely distributed broadcast networks (ABC, CBS, Fox, NBC, PAX, UPN, and WB) in 2002 was estimated at $22 billion, an 8.8% increase over the $20.3 billion earned in 2001.[423] Broadcast stations, traditionally viewed as having only

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[414] *Compare* Federal Communications Commission, *Broadcast Station Totals as of June 30, 2003*, FCC News Release (July 22, 2003) *with* Federal Communications Commission, *Broadcast Station Totals as of November 30, 1993,* FCC News Release (Dec. 10, 1993).

[415] Mark Fratrick, *State of the Television Industry: Television Revenues 2003: Is There Hope?* BIA Financial Network, Feb. 2003, at 9.

[416] *2002 Report,* 17 Rcd at 26940 ¶ 79.

[417] Television Bureau of Advertising, *2002 TV Ad Revenue Figures,* at http://www.tvb.org/rcentral/adrevenuetrack/ revenue/2002/ad_figures (visited Sept.24,2003).

[418] Robert J. Coen, Universal McCann, *U.S. Advertising Volume 1990-2001*, Jan. 1, 2001.

[419] *Id*.

[420] Robert J. Coen, Universal McCann, *U.S. Advertising Volume 2000-2003*, Mar. 11, 2003.

[421] NCTA, *Cable Advertising Revenue: 1984-2002 (In Millions)*, Cable Television Developments 2003, at 15.

[422] *The Rise of Mega-Media*, BROADCASTING & CABLE, Nov. 12, 2001, at 30.

[423] Television Bureau of Advertising, *2002 TV Ad Revenue Figures,* at http://www.tvb.org/rcentral/adrevenuetrack/ revenue/2002/ad_figures (visited Sept. 24, 2003).

advertising and not direct viewers payments as a revenue source, were given the opportunity through the retransmission consent provisions of the 1992 Cable Act, to obtain direct compensation or other economic benefits from MVPDs making use of their signals. Although the value of the retransmission consent rights have not be reported, some broadcasters, including in particular those with more significant audience ratings, now have two potential sources of revenue.

94. Broadcast television stations' audience shares have continued to fall as cable penetration, the number of cable channels, and the number of non-broadcast networks continue to grow. During the 1993-1994 television season, broadcast stations[424] collectively attained a 74 share of primetime viewing.[425] By the 1997-1998 television season, their share dropped to 60 and by the 2002-2003 television season, broadcast television stations accounted for a combined average 49 share of prime time viewing among all television households, compared to a 50 share in the previous season. Similarly, in the 1993-1994 television season, broadcast television stations accounted for a 71 share of all-day viewing. By the 1997-1998 season, the broadcast stations' share dropped to 58. This trend continues, with broadcast stations achieving a 45 share of all-day viewing during the 2002-2003 season, down from a 47 share the previous season. In contrast, non-broadcast channels' collective audience share has continued to grow. In the 1993-1994 television season, non-broadcast channels had a 26 share of primetime; by 1997-1998, that share had grown to 40. In the 2002-2003 television season, non-broadcast channels,[426] accounted for a combined average 51 share of prime time viewing among all television households, up from the 50 share in the previous season. For all-day (24-hour) viewing, non-broadcast channels accounted for a combined 29 share in the 1993-1994 television season; by 1997-1998, that share had grown to 42. By the recent 2002-2003 television season, non-broadcast channels had a 55 share of all-day viewing, also up from a 53 share in the previous season.

95. We previously reported on consolidation in the broadcast industry and on "repurposing," which continues to become more common. Programming is sometimes repurposed on commonly owned networks, although that is not always the case. For example, NBC has repurposed programming on its co-owned cable network Bravo, and vice versa; Fox has rerun its broadcast programming on its FX network; and ABC has repurposed its broadcast programming on commonly-owned Lifetime. Alternatively, NBC, ABC and Fox have repurposed programming on Viacom's networks, such as Comedy Central and VH-1. Repurposing deals between NBC and PaxTV, NBC with USA Network and Comedy Central, ABC with Lifetime, USA and VH-1, Fox with FX, and Fox and Warner Bros. with VH-1, were reported in last year's report.[427] This season, the Bravo cable network has replayed NBC's *Kingpin, The Restaurant* and *Fame*.[428] UPN's sitcoms *The Parkers* and *Girlfriends* will appear on Black

[424] Includes network affiliates, independent stations, and public broadcast stations.

[425] Nielsen Media Research, *Broadcast Calendar (TV Season) Share of Audience Report, Primetime and Total Day, 1984-85 to 2002-03,* September 2003. Nielsen reports audience shares that exceed 100% when totaled due to simultaneous multiple set viewing. We have normalized audience shares to equal 100%.

[426] Includes basic (BST and CPST) networks, as well as premium and PPV networks, distributed by MVPDs.

[427] *2002 Report*, 17 FCC Rcd at 26941 ¶ 81. "Repurposing" (virtually non-existent before 1999, *See 1999 Report* 15 FCC Rcd at 1027 ¶ 105) generally involves a re-run of broadcast content on a different network (cable or broadcast) shortly after it airs originally on network affiliate stations.

[428] *Coupling on Bravo,* BROADCASTING & CABLE, Sept. 29, 2003, at 8.

Entertainment Television.[429] Examples of reverse repurposing (*i.e.*, programming first distributed on non-broadcast networks and then shown on broadcast networks) include USA's *Monk* on ABC last season and Bravo's *Queer Eye for the Straight Guy*, a 2003 summer hit for NBC.[430]

96. As we previously reported, DTV could enhance the ability of broadcasters to compete in the video marketplace. DTV allows broadcasters to transmit an HDTV signal, several standard definition television ("SDTV") signals ("multicasting"), or ancillary services in addition to video programming.[431] Since the first DTV stations began operation in March 1998, the number has continued to grow. As of September 2003, all but two of the 40 stations that make up the top-four network affiliates in the top ten television markets were broadcasting DTV service.[432] In television markets ranked 11-30, 77 of 79 stations were broadcasting DTV service. Virtually all of the more than 1,300 commercial television stations have been granted a DTV construction permit or license, and 1,038 are on the air with DTV operation.[433]

97. Current use of DTV spectrum involves HDTV transmissions of programs that are also broadcast in standard NTSC analog format over paired analog facilities. For instance, ABC is broadcasting all of its prime time scripted comedies and dramas, theatrical movies, *Monday Night Football*, plus the NBA finals and NHL Stanley Cup finals in HDTV during the 2003-2004 TV season.[434] CBS states that all scripted prime time dramas, comedies, many Sunday night movies, the daytime drama *The Young and Restless* and several sporting events including the February 2004 *Super Bowl* will be broadcast in HDTV this television season.[435] NBC will provide a high-definition digital version for nearly two-thirds of its prime time schedule as well as *The Tonight Show with Jay Leno* and *Late Night with Conan O'Brien*.[436] PBS occasionally offers programs in HD but is planning to create and begin making available to stations a 24-hour-per-day digital television service comprised of high-definition and

[429] David Kronke, LOS ANGELES DAILY NEWS, *Sharing the Shows*, SOUTH FLORIDA SUN-SENTINEL, Sept. 21, 2003, at 41.

[430] *Id*.

[431] *2002 Report*, 17 FCC Rcd at 26941 ¶ 82.

[432] WABC-DT and WNBC-DT (New York) were on the air prior to September 11, 2001 but are now off the air due to the destruction of the World Trade Center. For an updated list on the status of DTV broadcasts, *see Summary of DTV Applications Filed and DTV Build Out Status,* at http://www.fcc.gov/mb/video/files/dtvonairsum.html.

[433] *Id*. While over 1,000 stations are providing a DTV signal, many consumers within those service areas are unable to view the DTV format either because they do not have DTV receivers or because they are subscribers to a MVPD that does not carry the DTV signal.

[434] Letter from Alex Wallau, President, ABC Television Network, to W. Kenneth Ferree, Chief, Media Bureau, FCC (June 25, 2003) at 2.

[435] Letter from Martin D. Franks, Executive Vice President, CBS, to W. Kenneth Ferree, Chief, Media Bureau, FCC (June 27, 2003) at 2-3.

[436] Letter from F. William LeBeau, Senior Regulatory Counsel, National Broadcasting Co., to W. Kenneth Ferree, Chief, Media Bureau, FCC (June 27, 2003) at 1.

digital widescreen programming drawn from PBS's growing library of digital programming.[437] The WB network is increasing its HDTV schedule from 5½ to 11½ hours of HDTV per week.[438] Fox currently provides an all-digital, 480P feed to affiliates which includes 15 hours of prime time, one hour of late night, one hour of *Fox News Sunday* and all sports.[439] Fox plans to transmit at least 50% of its prime time schedule in 720P by the 2004-2005 television season.[440] UPN hopes to begin HD broadcasts in prime time during the 2003-2004 season.[441]

98. On January 27, 2003, the Commission began the *Second Periodic Review* of the Commission's rules and policies affecting the conversion to Digital Television.[442] The *Second Periodic Review* seeks comment on issues essential to ensuring continued progress on the DTV transition. Among other things, the Commission is seeking comment on new channel election, replication, and maximization deadlines for broadcast television service. Questions regarding Section 309(j)(14) of the Communications Act are also raised.[443] This section states that the broadcast licenses for analog television service expire on December 31, 2006, and requires the Commission to reclaim the spectrum unless one of three conditions set forth in section 309(j)(14)(B) is met. As part of this review, the Commission asked questions regarding how we should interpret the extension criteria.

99. In August 2003, the Commission initiated a rulemaking to establish rules for digital low power television ("LPTV") and television translator stations.[444] LPTV stations bring television service, including local service, to viewers otherwise unserved or underserved by existing service providers. TV translator stations are intended to provide service to areas where direct reception of full-service broadcast stations is unsatisfactory because of distance or intervening terrain obstructions.

100. In *Digital Broadcast Copy Protection*, the Commission adopted rules to assure that DTV broadcast content will not be indiscriminately redistributed while protecting consumers' use and enjoyment of broadcast content.[445] Specifically, content protection will be signaled via the Redistribution

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[437] Letter from Wayne Godwin, Executive Vice President & CEO, PBS, to W. Kenneth Ferree, Chief, Media Bureau, FCC (June 23, 2003) at 2-3.

[438] *The WB Sees the Big Picture*, BROADCASTING & CABLE, Sept. 8, 2003, at 14.

[439] Letter from Peter Chernin, President & COO, News Corporation, to W. Kenneth Ferree, Chief, Media Bureau, FCC (June 24, 2003) at 1.

[440] *Id.*

[441] Letter from Martin D. Franks, Executive Vice President, CBS, to W. Kenneth Ferree, Chief, Media Bureau, FCC (June 27, 2003) at 2.

[442] *See Second Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television,* 18 FCC Rcd 1279 (2003).

[443] 47 U.S.C. § 309(j)(14).

[444] *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*, 18 FCC Rcd 18365 (2003).

[445] *Digital Broadcast Copy Protection,* 18 FCC Rcd 23550 (2003).

Control Descriptor, as set forth in ATSC Standard A/65B, Program and System Information Protocol for Terrestrial Broadcast and Cable. Content marked by the descriptor may only be output or recorded through analog outputs, protected digital outputs, and a small class of unprotected digital analog connectors, protected digital connectors, and a small class of unprotected digital connectors at a lower resolution. Implementing protection technology is intended to increase the availability of high-value content on digital broadcast television.

101. The Commission also adopted rules for digital "plug and play" cable compatibility.[446] In a "plug and play" world, consumers can plug their cable directly into their digital television set without the need of a set-top box. This will ease the transition to digital television by promoting competition, convenience and simplicity for consumers. The new rules will permit television sets to be built with "plug and play" functionality for one-way digital cable services, which include typical cable programming services and premium channels such as HBO and Showtime. Consumers will have to obtain a security card from their local cable operator, to be inserted into the television set. Consumers will still need a set-top box to receive two-way services such as video on demand, impulse pay-per-view and cable operator-enhanced electronic program guides.[447]

102. In 2001, the Commission adopted rules resolving a number of technical and legal matters related to the cable carriage of digital broadcast signals. In its *Report and Order*, it noted that MSOs are currently undertaking significant cable system upgrades, including digital build-outs.[448] It stated that a commercial or noncommercial digital-only television station can immediately assert its right to carriage on a cable system. The Commission also said that a television station that returns its analog spectrum and converts to digital operation must be carried by cable systems. The Commission stated that Section 614(b)(4)(A) of the Communications Act of 1934, as amended by the 1996 Act,[449] requires that cable operators shall provide the same "quality of signal processing and carriage" for broadcasters' signals as they provide for any other type of signal. A broadcast signal delivered in HDTV must be carried in HDTV.[450] Petitions to reconsider this decision are currently before the Commission.

103. CEA reports the sale of DTV products is gaining momentum. From their introduction in August 1998[451] through the second quarter of 2003, over six million HDTV-capable sets have been sold, but only about 700,000 of these have been purchased with a built-in tuner or add-on decoder box required for receiving an HDTV broadcast.[452] CEA predicts that DTV sales will continue to increase, with sales of 4.3 million units in 2003, 5.8 million in 2004, 8.3 million in 2005, 11.9 million in 2006 and over 16 million in 2007.[453] Manufacturers currently offer more than 500 models of digital monitors and

[446] *FCC Eases Digital TV Transition for Consumers* (press release), Sept. 10, 2003.

[447] *See* para. 184 *infra.*

[448] *Carriage of Digital Television Broadcast Signals*, 16 FCC Rcd 2598 (2001) ("*DTV Must Carry Order*").

[449] *Id.*; s*ee also* 47 U.S.C. § 534.

[450] *See DTV Must Carry Order*.

[451] *1998 Report,* 13 FCC Rcd at 24346 ¶ 99.

[452] CEA Comments at 4.

[453] *Id.*

integrated sets, up from about 100 models offered in 2000.[454] As a result, broadcasters continue to engage in tests of various DTV products, such as HDTV, multiple SDTV services, ancillary services, or some combination.[455] It is difficult to assess the competitive impact of DTV service on the MVPD market at this time, other than to continue to observe that the potential for a positive competitive impact remains.

G. Other Entrants

1. Internet Video

104. In 1994, Internet video was not yet in use. The World Wide Web was a nascent technology. By year-end 1994, there were only about 3,000 Web sites, and home-use modems were running at maximum data exchange speeds of 28.8 Kbps.[456] Five years later, the Web had expanded significantly to include more than two and a half million Web sites, and access to the Internet was available via broadband, with approximately 300,000 cable modem subscribers and approximately 25,000 DSL subscribers achieving access speeds between one and ten Mbps.[457] In our *1998 Report*, we noted the availability of software technologies that made real-time and downloadable audio and video from the Internet accessible through a personal computer.[458] We also noted that there were technologies available for the provision of Internet video over a television using a set-top box and the WebTV and Worldgate Internet access service packages.[459] Despite increasing interest in the medium, however, Internet video was still very poor quality in 1998, and the necessary hardware and software to enable Internet video was relatively hard to obtain. As a result, Internet video was still far from being a direct competitor to traditional video services.

105. For the last several years, streaming video has been marketed as an important new technology for the delivery of video, but near broadcast-quality streaming video requires a high-speed broadband connection.[460] As of June 2003, there were about 20 million broadband subscribers out of a total

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[454] *Id.* at 5.

[455] *2002 Report*, 17 FCC Rcd at 26943 ¶ 87.

[456] *See Introduction and History of Modems*, at http://www.ianxxi.com.ar/computers/history_modem.htm (visited Sept. 26, 2003).

[457] *The Web Contains 7 Million Sites in 2000*, Pandia Search, Oct. 2000, at http://www.pandia.com/searchworld/2000-39-oclc-size.html (visited Nov. 19, 2003). *See 1998 Report*, 13 FCC Rcd at 24313, 24316 ¶¶ 52; 55; *see also Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, 14 FCC Rcd at 2398 (1999).

[458] *1998 Report*, 13 FCC Rcd at 24348-50 ¶¶ 102-105.

[459] *Id.*

[460] Broadcast quality requires a broadband connection of about 300 Kbps or higher. *Streaming Video: If It's Pictures You Want, Then It's Bandwidth You'll Need!*, Realtor.org, July 2000, at http://www.realtor.org/webintell.nsf/0/3 6a eb06df63f6c0186256aa9006c1896?OpenDocument (visited Sept 23, 2003); *see also 2000 Report*, 16 FCC Rcd at 6054-5, n.382. *See also Sports Score Big Online,* BUSINESS WEEK ONLINE, Apr. 15, 2003; Walter S. Mossberg, *RealNetworks Builds Fans for Video Service with Host of Programs*, THE WALL STREET JOURNAL, Mar. 20, 2003, at B1.

59 million Internet subscribers.[461] Internet video, however, is not yet viewed in the same manner as is broadcast video, despite increased quality with high-speed connections. Nevertheless, the overall number of homes with access to the Internet continues to grow, as does the number of Americans who access video content via the Internet. As of June 2003, an estimated 59 million Americans subscribed to either a dial-up or a broadband Internet access service, compared with 55 million as of June 2002.[462] In addition, as of July 2003, an average of 12% of all Americans watched some form of Internet video in the past month, up from an average 8% as of July 2002.[463] As of July 2003, approximately 45% of all Americans and 57% of those with Internet access had accessed streaming audio or video at least once before, up from the approximately 51% who had accessed streaming audio or video at least once before as of July 2002.[464]

106. Today there is a significant amount of video available for downloading and for viewing in "real-time" (also known as "streaming video"),[465] and an increasing amount of video content is available over the Internet each year. For example, Movielink, a joint venture of five movie studios, Metro-Goldwyn-Mayer Inc., Paramount Pictures, Warner Bros, Sony Pictures Entertainment, and Universal Pictures, provides an online movie download service.[466] The service allows customers to download a movie for single-use viewing, though a new product allows a movie to be viewed multiple times without having to download it over again each time. Users are able to stop and restart a downloaded movie. In addition, as we have reported in the past, many traditional television programmers continue to offer Internet video versions of their programming as well as supplemental content.[467] As of March 2003, approximately 22% of the affiliates of ABC, CBS, and NBC operated websites offering streaming media.[468] ABC Network's ABCNews.com, for example, recently added a subscription-only Internet broadcast news network called "PoliticsLIVE" to its online video service.[469] Also, independent content producers (*e.g.*, sports leagues, independent film producers) provide their content to viewers on a per-program basis or through subscription streaming video provider services, such as the kind of service

[461] Richard Bilotti, Benjamin Swinburne, Megan Lynch, *Broadband Update*, Morgan Stanley, July 7, 2003, at 16.

[462] *Id.*

[463] Arbitron, Inc., *Internet and Multimedia 11: New Media Enters the Mainstream*, Sept. 3, 2003, at http://www.arbitron.com (visited Sept. 23, 2003).

[464] *Id.*

[465] Just as radio and television broadcasts are not downloaded and stored on radios and TVs, a streaming file is not actually stored on the local computer used to view it. Instead, the video player software on the viewer's computer continually requests video data from the host server computer, so the viewer does not have to wait for the entire file to download before viewing. *Streaming Video: If It's Pictures You Want, Then It's Bandwidth You'll Need!*, Realtor.org, July 2000, at http://www.realtor.org/webintell.nsf/0/36aeb06df63f6c0186256aa9006c1896?Open Document (visited Sept 23, 2003).

[466] *Movielink Updates Service, Plans New Ad Campaign*, Yahoo News, Sept 3, 2003, at http://news.yahoo.com/ news?tmpl+story2&cid=581&u=/nm/20030903/tc_nm/media_movielink_dc&printe… (visited Sept. 3, 2003).

[467] *2002 Report*, 18 FCC Rcd at 26944 ¶ 90.

[468] Kagan World Media, *Streaming Media*, Media Trends, Dec. 2002, at 251-253.

[469] *ABCNEWS.com's 24-Hour Web Newscasts Concern Affiliates*, COMMUNICATIONS DAILY, Sept. 8, 2003, at 6.

offered by Real Networks or Microsoft Media Player.[470] For example, Fox Sports Interactive Media and Real Networks are in partnership to provide out-of-market sporting events to Real Networks' SuperPass subscribers, Major League Baseball is in partnership with RealNetworks to provide Webcasts of Major League baseball games on a per-game basis, and AOL for Broadband has an alliance with the NFL, giving its subscribers access to NFL video content including game highlights, and clips from HBO's *Inside the NFL*. Sports and news programming remain the most common categories of streaming video programming currently available over the Internet, but other genres of video programming are also available. In April, 2003, steaming media provider RealNetworks surpassed one million subscribers.[471] Analysts expect that over the next several years, video streaming subscription services will increase significantly, reaching an estimated $4.7 billion in revenues by 2007.[472]

107. In our *Cable Modem NPRM*, we invited comment on several questions concerning Internet content, including whether the threat that subscriber access to Internet content or services could be blocked or impaired is sufficient to justify some form of regulatory intervention at this time,[473] and whether a finding of such blocking or impairment in the future should trigger regulatory intervention.[474] We are presently reviewing comments on these and other issues as part of that proceeding.[475]

2. Home Video Sales and Rentals

108. The sale and rental of home video, including videocassettes, DVDs, and laser discs, are part of the video marketplace because they provide services similar to the premium and pay-per-view offerings of MVPDs.[476] As such, they offer some level of competition to broadcast television, cable television and DBS for the consumer's time and money. Cable video-on-demand also has emerged as a competitive service to home video.[477]

109. In 1994, VCR penetration was 84% of TV households.[478] By 1998, that figure had increased to 88%.[479] In 2003, Nielsen Media Research estimates VCR penetration at 91% of TV

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[470] *College Football Fanatics Can Pay to Watch Over the Internet*, COMMUNICATIONS DAILY, Sept. 19, 2003 at 3; *Major League Drops the Price of Webcasts*, THE WALL STREET JOURNAL, Sept. 18, 2003. *Deals*, CABLEFAX DAILY, Aug. 27, 2003, at 2; *America Online Inks NFL Internet Deal*, REUTERS, Aug. 26, 2003.

[471] Real Networks, *RealNetworks Reports First Quarter Results and Announces One Million Subscribers to Real Networks' Subscription Services* (press release), Apr. 29, 2003.

[472] Stefanie Olsen, *Net Video Subscriptions To Go Prime Time*, CNET NEWS.COM, Sept. 23, 2003.

[473] *Cable Modem NPRM*, fn. 15 *supra*, 17 FCC Rcd at 4845 ¶ 87.

[474] *Id.* at 4846 ¶ 92.

[475] *See AT&T-Comcast Merger Order,* fn. 94 *supra,* 17 FCC Rcd 23246 ¶ 145.

[476] *See, 2002 Report,* 17 FCC Rcd at 26944 ¶ 91.

[477] *See* paras. 44-45 *supra*.

[478] *See 1994 Report,* 9 FCC Rcd at 7510 ¶ 135.

[479] *See 1998 Report*, 13 FCC Rcd at 24351 ¶ 106.

households.[480] In our *1998 Report* we addressed laser discs as another means to view video programming, and stated that DVD technology introduced in 1997 would likely replace laser disc technology.[481] DVDs have since made significant impact on the home video market. For the first six months of 2003, DVD sales were 57% higher than during the same period a year earlier.[482] Moreover, equipment manufacturers have sold 10.3 million DVD players so far this year, outpacing the 7.3 million sold in the first half of 2002. DVD players sell for less than $100 and can be found in close to 50% of all U.S. homes.[483] Rental spending on DVDs in 2002 doubled over the previous year to $2.9 billion.[484] Consumer spending on home video programming is expected to reach $23.3 billion in 2003, an increase of 11% over 2002. Of this amount, $14 billion will be spent on DVD and video cassettes, most coming from DVD sales. For the first time in 2003, DVDs will pass VHS cassettes in rentals.[485]

110. The influence of DVDs is growing. For example, Netflix, the leading online movie rental service with over 15,000 DVD titles, experienced a 71% increase in its subscriber base from 670,000 in June 2002 to 1,147,000 in June 2003.[486] Other companies have entered the online movie business, such as Wal-Mart; MovieLink, a joint Internet venture by five major studios; and CinemaNow.[487] Disney is now using the broadcast spectrum of ABC-owned stations and National Datacast's network of PBS stations to deliver movie rentals over the air and on demand. The service requires a MovieBeam receiver and a small antenna that is rented for $6.99 a month.[488]

111. Another home video technology gaining popularity is the personal video recorder ("PVR").[489] Introduced in 1999, this device is capable of pausing, recording and rewinding live TV in digital form on an internal hard drive instead of videotape.[490] PVRs allow users watching recorded programs to fast forward through commercials. PVR penetration is currently at about 2% of television

[480] Nielsen Media Research, *Television Audience 2002*, 2003, at 4.

[481] *See 1998 Report*, 13 FCC Rcd at 24351 ¶¶ 107-108.

[482] NCTA Comments at 27.

[483] *Id.*

[484] *Id.* at 28.

[485] *Id*.

[486] *Id.* at 29.

[487] Leslie Walker, *Web Watch*, THE WASHINGTON POST, Sept. 7, 2003, at F7.

[488] *Disney Is On The Beam,* BROADCASTING & CABLE TV FAX, Sept. 30, 2003, at 1.

[489] These devices also are referred to as digital video recorders ("DVRs").

[490] *See 1999 Report*, 15 FCC Rcd at 1035 ¶ 119.

households.[491] By 2007, about 20% of households are predicted to have PVRs.[492] Cable and DBS operators are beginning to incorporate PVR functionality into their set-top boxes.[493] PVR maker TiVo claims that users "skip over" between 70% and 80% of the commercials in the recorded programming last year.[494] Television and advertising executives are concerned about the long-term effects of this trend on the traditional 30-second commercials, and have started to consider alternative ways to promote products, such as product placement within programs.[495]

H. Local Exchange Carriers

112. Ten years ago, LEC entry into the MVPD industry was uncertain, but appeared promising. LECs were pursuing authorizations under a new regulatory regime that allowed them to enter as video dialtone ("VDT") operators, a commission regulatory framework that did not contravene the statutory prohibition on LEC entry into the MVPD market.[496] LECs were operating numerous market and technical trials, and had filed 24 applications for permanent VDT authority to offer service to as many as 8.5 million homes.[497] The VDT regime was abandoned, however, as were all pending and approved authorizations, with passage of the 1996 Act, which provided other means for LECs to enter the MVPD market.

113. The 1996 Act amended Section 651 of the Communications Act in order to permit telephone companies 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;[498] (2) provide transmission of video programming on a common carrier basis under Title II of the Communications Act;[499] (3) provide video programming as a cable

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[491] Steve McClellan, *And Another Thing About Those PVRs*, BROADCASTING & CABLE, Apr. 21, 2003, at 20. EchoStar Communications claims to have sold one million digital VCRs and TiVo claims 800,000 units sold. *See EchoStar Crosses 1 Million Digital VCR Mark,* SATELLITE BUSINESS NEWS, Sept. 26, 2003, at 2.

[492] *Mass Media Notes*, COMMUNICATIONS DAILY, Sept. 23, 2003, at 10.

[493] *See* paras. 60, 76 *supra*.

[494] Steve McClellan, *And Another Thing About Those PVRs*, BROADCASTING & CABLE, Apr. 21, 2003, at 20.

[495] *Id. See* Paul J. Gough, *Yet Another Study Deems PVRs A Death Knell For TV Ads*, MEDIA POST'S MEDIADAILY NEWS, Oct. 3, 2003, at http://mediapost.com/PrintFriend.cfm?articleId=221102 (visited Oct. 7, 2003); *Ad Experts Downplay Impact of Rapid PVR Rollout on Ads*, COMMUNICATIONS DAILY, Sept. 30, 2003, at 5; Anthony Crupi, *Will DVR Really Kill the 30-Second Ad?*, CABLE WORLD, Sept. 29, 2003, at http://cableworld.com /microsites/magazinearticle.asp?mode=print&magazinearticleid=183520&releaseid (visited Oct. 7, 2003).

[496] Under the VDT regulatory framework adopted by the Commission in 1992, a LEC was allowed to make available, on a nondiscriminatory common carrier basis, a platform capable of providing access to multiple video programmers and of delivering video programming and other services to consumers in its local telephone service area. *See 1994 Report,* 9 FCC Rcd at 7493-96 ¶¶ 106-108.

[497] *1994 Report*, 9 FCC Rcd at 7493 ¶ 104.

[498] 47 U.S.C. § 571(a)(1).

[499] 47 U.S.C. § 571(a)(2).

system under Title VI of the Communications Act;[500] or (4) provide video programming by means of an open video system ("OVS").[501]

114. As a result, the presence of LECs in the MVPD market grew. By 1998 the Commission indicated that "LECs are already or are becoming significant regional competitors."[502] Ameritech (later acquired by SBC) was a significant overbuilder in the midwest, BellSouth was an overbuilder and MMDS operator in the southeast, RCN was an expanding OVS and cable overbuild operator, and Bell Atlantic (now Verizon) and SBC were selling, marketing and installing DirecTV DBS video service.[503] Additionally, LECs briefly owned and operated two joint programming and packaging ventures, but by 1998 both of these efforts were ended or scaled back, and today no longer exist.[504]

115. Today, facilities-based cable franchise services provided by the large, former "baby bells" are much less prominent, continuing a trend from last year's *Report,* with only BellSouth and Qwest offering such services.[505] Some LECs have come full circle, however, and are marketing DBS service as they did in 1998. As with last year, Qwest and a number of smaller incumbent LECs, however, are offering, or preparing to offer, MVPD service over existing telephone lines using very high-speed digital subscriber line ("VDSL") or asymmetric digital subscriber line ("ADSL") technologies.[506]

116. ***In-Region Cable Franchises***. BellSouth holds 20 cable franchises with the potential to pass 1.4 million homes and provides cable service in 14 of its franchise areas. It is the only remaining large LEC to offer video service over franchised cable systems using traditional cable architecture.[507] This is unchanged from last year.[508]

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[500] 47 U.S.C. § 571(a)(3).

[501] 47 U.S.C. § 571(a)(3)-(4). *See also* para. 80 *supra.*

[502] *1998 Report*, 13 FCC Rcd at 24353-4 ¶ 111.

[503] *Id.*

[504] *Id.* at 24359-60 ¶ 119.

[505] *2002 Report*, 17 FCC Rcd at 26946 ¶ 96.

[506] *Id.* at 26947 ¶ 98.

[507] BellSouth Comments at 1-2. The active franchises are located in: Vestavia Hills, Alabama; St. John's County, Miami-Dade County, Davie, and Pembroke Pines, Florida; Counties of Cherokee, Cobb, Dekalb, and Gwinnett and Cities of Chamblee, Duluth, Lawrenceville, Roswell, and Woodstock, Georgia. BellSouth also states that it is restructuring its wireless video service, but that it continues to provide analog multichannel video service in areas where it holds licenses.

[508] We reported last year that Verizon, which inherited franchised cable systems in California and Florida when it purchased GTE, entered into purchase contracts with Adelphia to sell its video properties. Because of Adelphia's financial difficulties, however, some of those agreements were cancelled and subject to litigation. *2002 Report,* 17 FCC Rcd at 26946 ¶ 96 n.338. Subsequently, Verizon sold these systems to Knology, Inc., a broadband service provider. *See* Knology, Inc., *Knology Announces Agreement To Purchase Broadband Assets* (press release), July 18, 2003.

117. ***VDSL.*** 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, and over a hybrid fiber-coaxial system in Omaha, Nebraska.[509] Qwest serves 40,000 subscribers in Phoenix; 2,000 in Denver and Boulder; and 14,000 in Omaha.[510] Although Qwest indicates that its broadband services have been "well received," it states that regulatory uncertainty regarding which type of regulation will apply to its VDSL high-speed Internet access and asymmetric regulation vis-à-vis cable broadband services raises its costs of deployment and threatens facilities-based competition in these markets.[511] Small LECs continue to deploy VDSL for the purpose of video service delivery, but indicate that discriminatory practices, such as exclusive programming contracts, higher prices for programming, and discriminatory pricing, by incumbent cable operators and programmers impede competition in small, rural markets.[512]

118. ***Joint Ventures with DBS.*** BellSouth, SBC, and Qwest have all recently announced agreements to sell DBS service as part of a telecommunications bundle. BellSouth announced an agreement with DirecTV that will allow its customers to receive a bundle of high-speed Internet, local and long distance telephone, wireless telephone, and DirecTV video service on one bill with one order early next year,[513] and that will allow BellSouth to continue restructuring its MMDS video services.[514] SBC Communications, Inc. announced a similar service that will be co-branded with EchoStar as "SBC DISH Network," and includes a $500 million investment by SBC in EchoStar convertible debt.[515] Finally, Qwest announced agreements with both DirecTV,[516] and with EchoStar,[517] to offer bundled services in separate markets. While these agreements do not represent new, facilities-based competition, they may allow both LECs and DBS operators to become more competitive with cable operators' bundled offerings.

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[509] Qwest Comments at 3-4.

[510] *Id.* at 4.

[511] *Id.* at 1-2 and 5-8. Qwest also states that it pays higher prices for programming than incumbent cable operators due to its comparably small scale of video operations. *Id.* at 8-10.

[512] *See, generally*, RICA Comments. *See also* OPASTCO Reply Comments at 2-4.

[513] BellSouth Corp. and DirecTV, Inc., *BellSouth and DirecTV Announce Agreement To Sell Digital Satellite Television Service as Part of BellSouth Answers Bundle* (press release), Aug. 27, 2003.

[514] BellSouth Comments at 1.

[515] SBC Communications Inc. and EchoStar Communications Corporation, *SBC Communications, EchoStar Forge Strategic Partnership, Will Offer "SBC Dish Network" Television Service* (press release), July 21, 2003.

[516] The agreement with DirecTV covers single-family homes in Phoenix and Tucson, Arizona, and Seattle, Washington. Qwest expects to rollout these services to more markets throughout the remainder of 2003 and into 2004. *See* Qwest Communications International, Inc., *Qwest Forges Agreement with DirecTV to Offer Satellite Services as Part of Communications Bundle* (press release), July 21, 2003.

[517] The agreement with EchoStar covers single-family homes in Colorado and Nebraska. The company expects to rollout these services to more markets throughout the remainder of 2003 and into 2004. *See* Qwest Communications International, Inc., *Qwest Forges Agreement with EchoStar to Offer Satellite Services as Part of Communications Bundle* (press release), July 21, 2003.

I. Electric and Gas Utilities

119. Electric and gas utilities possess certain assets that have long made them good candidates as entrants into the MVPD market. Such assets include their 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. In 1994, some utilities were actively engaged in the provision of video services through overbuilding incumbent cable systems with fiber-optic infrastructure, though such activity was very limited.[518] Section 103 of the Communications Act, enacted as part of the 1996 Act, removed a significant regulatory barrier that had deterred registered public utility holding companies' entry into video markets.[519] By our *1998 Report*, many of these utility companies remained involved in the provision of video services, joined by a few additional entrants, though still, they were not considered significant or nation-wide competitors in the market for video distribution. Today, many utilities continue to move forward with ventures involving multichannel video programming distribution, though their services are still not widespread in either the telecommunications or video distribution markets. Utilities do, however, continue to provide competition in scattered localities, most beneficially in rural areas where cable operators and telephone companies may not be willing or able to provide the full range of advanced telecommunications services.[520]

120. As previously reported, utilities provide voice, video, and data services by overbuilding incumbent cable systems with fiber optic networks. Some utilities have built systems on their own, but the most prominent utilities involved in the video distribution market are engaged in joint ventures with other companies.[521] Starpower, for example, is a joint venture between RCN and Potomac Electric and Power Company ("PEPCO") operating in the Washington, D.C., area.[522] Municipalities, in many cases, provide broadband services on their own when others are unwilling to provide such services. Kurtztown, Pennsylvania, for example, built a fiber loop in 1999, hoping the private sector would step in and provide voice, video and data services, but when no providers expressed interest, the utility department established service for its residents.[523]

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[518] *See 1994 Report*, 9 FCC Rcd at 7508-09 ¶ 131-133.

[519] *See 1996 Report*, 12 FCC Rcd at 4410-11 ¶ 95-96. Specifically, prior to enactment of the 1996 Act, the Public Utility Holding Company Act of 1935 ("PUHCA") imposed strict "line of business" restrictions on registered public utility holding companies which sought to diversify into telecommunications or information services markets. Section 103 of the 1996 Act, which added a new Section 34 to PUHCA, now permits registered public utility holding companies to enter telecommunications industries without prior SEC permission through the acquisition or maintenance of an interest in an "exempt telecommunications company" or "ETC." Congress essentially eliminated disparate regulatory treatment among different types of utility companies by this action. *Id.*

[520] *See* para. 81 *supra*.

[521] *See 2002 Report*, 17 FCC Rcd at 26947-8 ¶ 100.

[522] *See* para. 81 *supra*.

[523] *Officials: Broadband Investments Pay Off For Localities*, TR DAILY, Sept. 26, 2003.

121. The American Public Power Association ("APPA") surveyed its members at the end of 2002, finding that 511 public power entities offer some kind of broadband services. Of those, 105 offered video service, 71 offered cable modem service, and 37 offered local telephone service.[524]

122. Several utility companies have been experimenting with a technology called broadband-over-power line ("BPL") service which uses power lines to carry high-speed data signals the "last mile" to the home.[525] BPL must use fiber optic lines or another traditional medium to deliver data to the power line. While the primary objective of this technology is to provide high-speed Internet access services, some companies have expressed plans to offer video streaming services, but not traditional video services.[526] In September 2003, a few utility companies announced their timelines for the commercial rollout of BPL services, including video streaming.[527]

III. MARKET STRUCTURE AND CONDITIONS AFFECTING COMPETITION

A. Horizontal Issues

123. As we explained in earlier reports, the video programming market is comprised of a downstream market for the distribution of multichannel video programming to households, and an upstream market for the purchase of video programming by MVPDs. In this section, we review changes in the market for the distribution of video programming, including changes in the level of competition in that market between June 2002 and June 2003, and over the past five and ten years. In our discussion of competition in the distribution of video programming to households, we also examine developments unique to MDUs, a significant sub-set of the market. We then review the market for the purchase of video programming by MVPDs, and examine the effects that changes in concentration among MVPDs at the regional and national levels have had on this market in the last year, five years, and ten years.

1. Competitive Issues in the Market for the Distribution of Video Programming

124. The market for the delivery of video programming to households continues to be highly concentrated in many local markets, with the majority of households in most franchise areas subscribing to cable. While this is still true, most consumers today have at least two additional MVPD service choices (EchoStar and DirecTV) than they did ten years ago, and others have even more MVPD choice from overbuilders and MMDS service. Additionally, the percentage of MVPD subscribers served by

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[524] APPA, *Public Power: Powering the 21st Century with Community Broadband Services* (fact sheet), May 2003, at 2.

[525] John Markoff and Matt Richtel, *Internet via the Power Grid: New Interest in Obvious Idea*, THE NEW YORK TIMES, Apr. 10, 2003. On April 23, 2003, the Commission initiated a Notice of Inquiry to obtain information on a variety of issues related to BPL. Use of BPL for video services was not anticipated or discussed. *Inquiry Regarding Carrier Current Systems, Including Broadband Over Power Line Systems*, 18 FCC Rcd at 8498 (2003).

[526] In September 2003, Ambient Corp. and IDACOMM announced that they jointly would conduct a test of BPL to include such offerings as video streaming. *New Technologies*, COMMUNICATIONS DAILY, Sept. 5, 2003, at 13. *See also* paras. 104-106 *supra.*

[527] *Utilities Unveil Time Lines For Commercial Broadband Deployment*, COMMUNICATIONS DAILY, Sept. 23, 2003, at 4-5. The City of Manassas Virginia, plans to commercially deploy BPL, as do Cinergy in Cincinnati, Ohio, and PEPCO in Potomac, Maryland.

cable operators has dropped steadily, both in national percentages, as well as in most local markets.[528] For most consumers the choices are over-the-air broadcast, one cable provider, two DBS providers, and, in limited cases, an overbuilder or other delivery technology.[529] According to commenters, certain barriers to full competition exist, including: (a) cable operator exclusive access to programming, especially sports programming; (b) anti-competitive conduct including "predatory pricing"; (c) cable operator technicians cutting the connections of competitors; and (d) manipulation of local and state regulations, resulting in delay for entrants in gaining access to local public rights-of-way and in getting cable franchises.[530] In response to the allegations concerning access to programming, Comcast responds that Congress deliberately chose not to extend program access regulations to non-vertically integrated programming or terrestrially-delivered programming and that there is no evidence that any video programming network has been migrated to terrestrial delivery to evade the program access regulations.[531]

125. During the past year, DBS has continued to make inroads in the MVPD market, as it has over the past ten years. DBS, the major wireless MVPD technology that is available to subscribers nationwide, saw its share of MVPD subscribers increase by nearly 1.5% between June 2002 and June 2003, to 21.6% of the market.[532] DirecTV reports that DBS has higher than 15% penetration in 35 states.[533] DBS's 2003 share of the market compares to 9.4% in 1998, and less than one percent in 1993, when the service had just launched.[534]

[528] *See* Appendix B, Table B-1. As of June 2003, approximately 75% of MVPD subscribers were served by cable operators. In June 2002, approximately 77% of MVPD subscribers were served by cable operators. Five years ago, in June 1998, roughly 85% of MVPD subscribers were served by cable operators, and at the end of 1993, almost 95% of MVPD subscribers were served by cable operators.

[529] Some sources indicate, however, that some percentage of households cannot receive one or both DBS providers due to line of sight issues. *See 2002 Report,* 17 FCC Rcd at 26952 ¶ 113 n.385.

[530] BSPA Comments at 14-47; RCN Comments at 6-18 and Reply Comments, *generally*; and DirecTV Comments at 9-11.

[531] Comcast Reply Comments at 14. *See also* para. 150 *infra,* and NCTA Reply Comments at 8-12. Comcast also states that the Commission has determined that the cases of terrestrially-delivered networks referenced by the commenters were not evasions of the program access rules, and were allowed under Commission rules. Comcast Reply Comments at 14. Comcast also states that some of RCN's statements concerning the availability to RCN of Comcast SportsNet are inaccurate, and that Comcast SportsNet has always been available for carriage by RCN. *Id.* at 15.

[532] *See* Appendix B, Table B-1. *See also* NCTA Comments at 8.

[533] DirecTV Comments at 11.

[534] *See* Appendix B, Table B-1.

Table 7: Summary of Competing Technologies, Percentage of MVPD Households Served			
	1993	**1998**	**2003**
Cable	94.89.%	85.34%	74.87%
DBS	0.12%	9.40%	21.63%
Other MVPDs	4.99%	5.26%	3.5%

126. Relatively few consumers have a second wireline alternative, such as an overbuild cable system, BSP or OVS, and this has been true for the entire history of this report. Of the 33,485 cable community units nationwide, 878, or approximately 2.6%, have been certified by the Commission as having effective competition[535] as a result of consumers having a choice of more than one wireline MVPD, or because DBS penetration was above 15%.[536] This compares to 57 cases of effective competition covering 60 community units based on overbuilds in 1998.[537]

127. In cases where incumbent cable operators faced competition from a new wireline entrant, BSPA reports benefits to consumers, such as restraint in cable price increases and increased access to advanced services.[538] Several other MVPD technologies, such as private cable systems or SMATV systems and MMDS offer consumers alternatives to incumbent cable services, but only in limited areas.

128. ***Competitive Developments in the MDU Market***. A significant segment of many local MVPD markets is multiple dwelling units ("MDUs"). Nationally, the Census Bureau reports that 24.6 million households, or 23% of the total, are in buildings with more than one unit. The Census Bureau further reports that 32% of U.S. households are renter occupied.[539] MDUs are comprised of a wide variety

[535] Under Section 76.907, a cable operator (or other interested party) may petition the Commission for a determination of effective competition pursuant to Commission's procedural rules in Section 76.7. *See* 47 C.F.R. §§ 76.7, 76.907. In its petition, a cable operator must provide evidence that it meets one of the statutory tests for the existence of effective competition. *See* 47 U.S.C. § 543 (1)(l)(A)-(D). *See also* 47 C.F.R. § 76.905(b). Based on the evidence provided in the petition and any opposition received, the Commission determines whether to grant effective competition status within a franchise area. Where effective competition exists, an LFA may not regulate basic service rates. *See* 47 C.F.R. § 76.905 (a). If a local franchising authority ("LFA") believes that a Commission finding of effective competition is no longer valid, it may file a petition for recertification pursuant to Section 76.916 of the Commission's rules. 47 C.F.R. § 76.916. If the Commission grants the petition, the LFA's certification to regulate basic service tier rates will be reinstated.

[536] Of the 878 communities where effective competition status was granted, 579 were based on DBS competition.

[537] *1998 Report,* 13 FCC Rcd at 1060 ¶ 46. Numbers for 1994 are not available because the effective competition certification process had just been implemented at the time of the *1994 Report,* and data about overbuilds were sketchy. *See 1994 Report,* 9 FCC Rcd at 7463-70 ¶¶ 48-60.

[538] BSPA Comments at 9-12.

[539] U.S. Census Bureau, *2001 American Housing Survey,* Table 2-1, at http://www.census.gov/hhes/www/housing/ahs/ahs01/tab21.html.

of high-density residential complexes, including high and low-rise rental buildings, condominiums, and cooperatives. Historically, cable and private cable operators were the primary providers of MVPD services to MDU residents. Non-incumbent MVPD commenters raise a number of issues that they contend adversely affect their ability to serve the MDU market.

129. 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 indefinite or very long period of time, or which have automatic renewal provisions (sometimes referred to as "evergreen"). Competitive entrants into the MVPD market have raised concerns with these kinds of contracts for the past five years. This year, BSPA states that these kinds of contracts block potential entry into MDUs, and lock tenants and building owners into outdated networks and services.[540] BSPA further argues that BSPs may be deterred from entering markets where MDUs comprise a significant portion of the franchise due to the exclusionary contracts in place, and that this was a factor in the demise of Carolina Broadband.[541] BSPA notes, however, that the existing home wiring rules have allowed a BSP access to MDUs in at least one instance.[542] While DirecTV states that the Commission's over-the-air-reception devices ("OTARD") rules have encouraged some MDU landlords and owners to use a single dish for reception to prevent "dish clutter," it reiterates its previous comment that the rule should be extended to renters and owners who do not have exclusive use of areas suitable for satellite reception.[543] In addition, DirecTV reports that "cable incumbents continue to control the market for provision of video programming services to MDUs" and that DirecTV's penetration has been adversely affected.[544]

2. Competitive Issues in the Market for the Purchase of Video Programming

130. Buyers in the market for the purchase of video programming are MVPDs, including cable operators and other video programming providers, and the sellers are primarily non-broadcast programming networks.[545] This market tends to be regional or national since programmers seek to reach a much broader audience than could be provided by a local franchise area. For example, some programming services are intended for a nationwide audience (*e.g.*, CNN, USA) while others seek a regional audience (*e.g.*, New England Sports Channel).

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[540] BSPA Comments at 39.

[541] *Id.* at 40.

[542] *Id.* at 40-41. BSPA cites a case in which the U.S. District Court held for Everest Communications in an inside wiring dispute with Time Warner. *See also Time Warner Entm't Co., L.P. v. Atriums Partners, L.P.*, 232 F. Supp. 2d 1257 (D. Kan. 2002), *appeal docketed,* No. 03-3005 (10th Cir. Jan. 7, 2003).

[543] DirecTV Comments at 22. *See also* SBCA Comments at 14-15. *See also 2002 Report,* 17 FCC Rcd at 26955 ¶ 123. The OTARD rules are at 47 C.F.R. § 1.4000.

[544] DirecTV Comments at 21-22.

[545] In this section, we refer to programming that is packaged as one or more 24-hour video programming network(s), rather than the individual shows and series that non-broadcast networks and broadcast networks purchase and package into 24-hour networks. Purchasing content and packaging it into networks represent two steps in the process of delivering programming to consumers which, when combined with a means of distribution, result in the programming choices consumers have. Video programming also is purchased from program producers and suppliers by non-broadcast networks as well as broadcast stations and networks, but we do not address that market here.

a. The Regional Programming Market

131. For the entire history of this report, cable operators have engaged in a regional strategy called "clustering." Many of the largest MSOs have concentrated their operations by acquiring cable systems in regions where the MSO already has a significant presence, while giving up other holdings scattered across the country. This strategy is accomplished through purchases and sales of cable systems, or by system "swapping" among MSOs.

132. ***Competitive Issues Related to Clustering***. In past years, we have noted both potential benefits and potential harms from clustering.[546] Cox contends that clustering of cable systems can create greater economies of scale and scope, and thus justify the investment necessary to transform its cable systems into "advanced broadband platforms."[547] Clustering creates efficiencies through scale and scope, and allows cable operators to serve geographically contiguous areas. This, in turn, may make provision of advanced services, creation of regional programming, and competition in the regional advertising market more economical. As competitive MVPDs have done for the past five years, several commenters assert harmful effects of clustering and regional concentration on program distribution with regard to vertically-integrated incumbent cable operators, and provide examples in which programming was denied to entrants.[548] Specifically, these commenters contend that cable operators have "migrated" programming from satellite delivery to terrestrial (fiber optic) delivery, and will do so to a greater extent in the future, because only satellite-delivered programming is subject to the program access rules.[549] NCTA and Comcast dispute the allegations that programming has been migrated to avoid program access requirements, and maintain that the Commission is correct in maintaining the exception for terrestrially

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[546] Potential benefits listed in the following sources include economies of scale and scope, potentially allowing a wider array of broadband services, and cost savings. *See 2000 Report,* 16 FCC Rcd at 6071 ¶ 153, citing AT&T Comments at 6-10, Comcast Comments at 21-29, and United States General Accounting Office Report to the Subcommittee on Antitrust, Business Rights, and Competition, Committee on the Judiciary, U.S. Senate; *Telecommunications: The Changing Status of Competition to Cable Television*; GAO/RCED-99-158, July 1999. A potential harm is the possibility that cost savings from clustering are not passed along to consumers. *See Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992, Statistical Report on Average Rates for Basic Service, Cable Programming Services, and Equipment*, Report on Cable Industry Prices, 16 FCC Rcd 4346, 4362 ¶ 39 (2001), and *Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992, Statistical Report on Average Rates for Basic Service, Cable Programming Services, and Equipment*, Report on Cable Industry Prices, 15 FCC Rcd 10927, 10943 ¶ 39 (2000). AT&T disputes this result, citing limitations in the methods and data of the *Price Survey Reports* in question. *See 2001 Report*, 17 FCC Rcd at 1305 ¶ 141, citing AT&T Comments at 19-20, and *2000 Report*, 16 FCC Rcd at 6071-73 ¶¶ 154-55, citing AT&T Comments at 13-16 and Appendices B and D; AT&T Reply Comments at 2. Another potential harm is the possible incentive and ability to foreclose unaffiliated regional programming. *See AT&T-Comcast Merger Order*, fn. 94 *supra,* 17 FCC Rcd at 23266-69 ¶¶ 57-65. In the case of the AT&T-Comcast merger, the Commission examined the possibility of foreclosure of unaffiliated regional programming, but concluded that such foreclosure was not likely in the case of the AT&T-Comcast merger. The merger order does, however, enumerate the conditions under which foreclosure is possible. *Id.* at 23266 ¶ 58.

[547] Cox Comments at 2-6.

[548] BSPA Comments at 14-19; DirecTV Comments at 9-11; RCN Comments at 6-11 and Reply Comments, *generally*.

[549] *Id.*

delivered content.[550] Comcast points out that DirecTV has its own exclusive arrangement for programming.[551]

133. ***System Mergers and Acquisitions, and Clusters***. In November 2002, Comcast and AT&T completed their merger.[552] No other large cable mergers occurred or were proposed over the past year. Between July 2002 and June 2003, a total of 29 small (by industry standards) transactions were announced having an aggregate value of approximately $996.2 million and involving 361,774 subscribers.[553] At the end of 2002, there were 109 clusters with approximately 51 million subscribers compared to 107 clusters and approximately 52 million subscribers at the end of 2001.[554] This compares to 106 clusters with 40.4 million subscribers at the end of 1998,[555] and 97 clusters with 20.1 million subscribers at the end of 1994, the first year we compiled clustering information.[556] In the largest cluster size category (over 500,000 subscribers), the number of clusters decreased between 2001 and 2002, from 32 to 29.[557] Over the past decade, both the number of clusters and the number of subscribers served by clusters has increased, with the number of subscribers served by clusters increasing by more than two-and-one-half times.

134. ***System Trades***. Little system trading, or swapping, occurred in the year since the last report. Between July 2002 and the end of 2002, three swaps occurred, between Mediacom and U.S. Cable Corp., between Insight and AT&T, and between CableOne and Time Warner.[558] Between the beginning of 2003 and the end of June 2003, no swaps occurred.

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[550] NCTA Reply Comments at 8-12; Comcast Reply Comments at 12-17.

[551] Comcast Reply Comments at 13.

[552] Comcast Corp., *Comcast Completes AT&T Broadband Transaction* (press release), Nov. 18, 2002. When announced in December 2001, the AT&T-Comcast deal involved 13.8 million subscribers at a value of more than $71 billion.

[553] Kagan World Media, *Cable System Sales Summary*, Cable TV Investor, Aug. 28, 2003, at 13; Jan. 31, 2003, at 9; and Aug. 29, 2002, at 8. The value of the AT&T-Comcast merger is not included in these totals because these are totals of announced deals and AT&T-Comcast was announced in December 2001.

[554] *See* Appendix B, Table B-2. We note that merging clusters can cause the total number of clusters to drop. Additionally, an analysis of these numbers indicates that the criteria for including subscribers in a particular cluster may have changed, giving a false impression of a shrinking number of clusters or subscribers within those clusters.

[555] *See 2002 Report,* 17 FCC Rcd at 26977, Table B-2.

[556] *See 1997 Report,* 13 FCC Rcd at 1202, Table E-2.

[557] *See* Appendix B, Table B-2. An analysis of these numbers indicates, however, that the criteria for including subscribers in a particular cluster may have changed, giving a false impression of a shrinking number of clusters or subscribers within those clusters. This compares to 21 clusters with over 500,000 subscribers in 1998 (*2002 Report,* 17 FCC Rcd at 26977, Table B-2) and 4 in 1994 (*1997 Report,* 13 FCC Rcd at 1202, Table E-2).

[558] Kagan World Media, *Cable System Exchanges*, Broadband Cable Financial Databook 2003, Aug. 2003, at 178.

b. The National Programming Market

135. ***Concentration Among Buyers of National Video Programming***. Cable operators still are the primary purchasers of multichannel video programming targeted to a national audience. As of June 2003, cable operators served approximately 74.9% of MVPD subscribers.[559] At the same time, non-incumbent MVPDs continued to increase their share of the MVPD market, which translates into increased purchasing in the programming market. For example, DirecTV's share of the MVPD market increased from 12.0% in 2002 to 12.3% in 2003. Similarly, EchoStar's share increased from 8.3% in 2002 to 9.4% in 2003.[560] Reversing a recent trend, the share of subscribers of the top four MVPDs has increased over the past year, mainly due to the AT&T-Comcast merger.[561] In 2003, the four MVPDs with the largest subscribership served 56% of all MVPD subscribers.[562] In 2002, the top four MVPDs served 50.5% of all MVPD subscribers nationwide.[563] This compares to 47.2% of subscribers served by the largest four in 1993, and 54.6 in 1998, indicating that recent merger activity has reversed a downward trend in this statistic that has held since 1998. The share of subscribers served by the top ten MVPDs, however, decreased from 84.4% in 2002 to 82% in 2003. This compares to 63.2 % in 1993 and 71% in 1998.

136. We note in this context that 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.[564] This provision directs the Commission to establish limits on the number of cable subscribers that may be reached through commonly owned or attributed cable systems and to prescribe rules limiting the number of channels that can be occupied by the cable system's owned or affiliated video programming. The Commission's horizontal limit barred a cable operator from having an attributable interest in more than 30% of nationwide subscribership of multichannel video programming, and the vertical limit barred a cable operator from carrying attributable programming on more than 40% of its channels up to 75 channels of capacity. In *Time Warner Entertainment Co. v. FCC* ("*Time Warner*"),[565] the United States Court of Appeals for the D.C. Circuit reviewed the Commission's

[559] *See* Appendix B, Table B-1.

[560] DirecTV is the second largest MVPD with 11.6 million subscribers; EchoStar is the fourth largest MVPD with 8.8 million subscribers. *See* para. 67 *supra.*

[561] The top four MVPD purchasers of video programming for distribution to the households or the MDU market are Comcast (with a share of 23.7% of all MVPD subscribers), DirecTV (with a share of 12.3%), Time Warner (with a share of 11.6%), and EchoStar (with a share of 8.8%). These percentages are derived from publicly-available data and are not the result of application of the Commission's attribution rules.

[562] *See* Appendix B, Table B-4.

[563] *Id*.

[564] 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).

[565] 240 F.3d 1126 (D.C. Cir. 2001).

cable television horizontal and vertical ownership limits,[566] and attribution benchmarks,[567] and reversed and remanded the rules. The Commission has an ongoing proceeding to respond to the ruling of the Court.[568]

137. NCTA submitted comments on the use of market share and price increases as indicators of market power, including a statement and an empirical study. The statement, prepared by Dr. Debra J. Aron, concerns cable pricing, market share, and their relationship to market power. Dr. Aron argues that high rates of growth in prices do not in general create an economic inference of market power, that market share is not determinative of market power, and it is not even the primary determinant. Rather, the availability of competitive alternatives is relevant to assessing competition.[569]

138. NCTA also submitted a study of cable pricing by Dr. Steven S. Wildman. Dr. Wildman studied cable prices and chose a method for adjusting for quality changes. Dr. Wildman examined a price per viewing hour ("PPVH"), defined as price paid for cable service divided by the number of hours spent watching basic cable networks.[570] The cable price is the subscription fee paid for the lowest tier of service (BST) plus additional tiers (CPSTs) above that containing satellite-delivered national cable networks.[571] The number of viewing hours is based on Nielsen estimates of average viewing hours for cable subscribers in its national audience sample, and is not divided into smaller geographic units such as county.[572] Dr. Wildman found that PPVH has dropped three percent between 1997 and 2003 because the ratings for basic cable networks have increased faster than the nominal increase in cable prices. Adjusted for inflation, PPVH has dropped 15%.[573]

139. We appreciate the NCTA's effort to examine the question of quality adjusted cable rates, although we reserve judgment as to whether PPVH is the appropriate measure. While cable rates have increased faster than the rate of inflation, the number of channels and advanced services available to consumers also have increased over the same time. Additionally, consumers now spend a higher proportion of their viewing hours watching cable networks partially at the expense of broadcast networks, indicating a substitution toward cable networks. Several studies have attempted to adjust for changes in cable quality over time and thus examine whether cable price increases can be explained by increases in quality. The

[566] The ownership rules in question were adopted in *Implementation of Section 11(c) of the Cable Television Consumer Protection and Competition Act of 1992 Horizontal Ownership Limits,* 14 FCC Rcd 19098 (1999).

[567] The attribution rules in question were adopted in *Implementation of the Cable Television Consumer Protection and Competition Act of 1992 Implementation of Cable Act Reform Provisions of the Telecommunications Act of 1996 Review of the Cable Attribution Rules*, 14 FCC Rcd 19014 (1999). The Commission's attribution rules serve to define the level of ownership interest implicated by the horizontal and vertical limits.

[568] *See Implementation of Section 11 of the Cable Television Consumer Protection and Competition Act of 1992,* 16 FCC Rcd 17312 (2001).

[569] NCTA Comments, Aron Statement, *generally*.

[570] The Nielsen measure for basic cable networks excludes over-the-air broadcast networks.

[571] E-mail from Dr. Steven S. Wildman, Michigan State University, Dec. 17, 2003.

[572] *Id.*

[573] NCTA Comments, Wildman Statement, *generally*.

Commission has in its past *Price Surveys* examined per channel rates to adjust for quality, which has shown considerably slower growth than the general rate of inflation.[574] Per channel rates, however, value all additional channels the same even if consumers do not want new channels that are added to cable systems. On the other hand, GAO found in a recent report that the price of system upgrades for the purpose of adding non-video services was a factor in cable price increases, meaning that the increasing cost of new and improved video services is not the only factor in rising cable prices.[575] PPVH, however, may adjust for consumer demand for the new channels they are receiving since it measures the amount they are watching them. The main weakness of PPVH, as identified by Dr. Wildman,[576] is that it measures total viewing of all basic cable networks, new and old, without distinguishing between the value added by the addition of new networks and the value added through quality increases in established networks. While PPVH lacks the precision to distinguish between quality additions (new channels) and quality increases (established channels), it has the potential to measure consumer perceptions of overall quality changes in cable service. We will continue to examine this issue, and will consider PPVH, as well as other measures of quality-adjusted price, in examining the effect of competition on rates.

140. To compare and assess the concentration in the market for the purchase of programming over a period of time, we employ the Herfindahl-Hirschman Index ("HHI"), using national MVPD subscriber shares.[577] We use the reported MVPD subscriber shares to calculate HHI figures. The HHI for the national market for purchase of programming is 1031 – considered "moderately concentrated" under the Merger Guidelines.[578] Due to the AT&T-Comcast merger, the larger firms in the calculation are now less equal in size, so that the HHI for 2003 is 147 points higher than the HHI of 884 reported last year. This increase marks a change in the gradual trend downward since 1998 (when the HHI was higher at 1096), and is also higher than the HHI of 880 in 1993. While this increase pushes the market into the moderately concentrated range, it is unclear whether this is a potential competitive problem, because the delivery market is local, not national, and because the main competitors to cable in both the upstream and

[574] *See, e.g, 2002 Price Survey Report*, 18 FCC Rcd at 13293, Table 2.

[575] *2003 GAO Report,* fn. 7 *supra*, at 3-5. The report notes, however, that the availability these new services benefit only those subscribers who choose them, but that all subscribers may be subsidizing new services through higher rates.

[576] NCTA Comments, Wildman Statement at 18-19.

[577] *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% of all subscribers and the two largest DBS operators. The addition of the shares of other cable operators and smaller MVPDs would add little to the total HHI. We do not include broadcast television or home video in the MVPD HHI because comparable penetration figures are not available.

[578] The United States Department of Justice and Federal Trade Commission consider markets with HHI below 1000 as "unconcentrated;" markets with an HHI between 1000 and 1800 as "moderately concentrated;" and markets with HHI above 1800 as "highly concentrated." *See 1998 Report*, 13 FCC Rcd at 24363 n.562.

downstream markets continue to grow in size. Nonetheless, this change is an important one, and we will continue to monitor it.

B. Vertical Integration and Other Programming Issues

1. Status of Vertical Integration

141. Vertical integration occurs when a video programming distributor has an ownership interest in a video programming supplier or vice versa. These vertical relationships may have beneficial effects,[579] or they may deter competitive entry in the video marketplace and/or limit the diversity of programming.[580] Since our last *Report*, the total number of national networks has increased, and cable operators continue to consolidate and develop new ownership interests. In 2003, we identified 339 satellite-delivered national programming networks, an increase of 31 networks over the 2002 total of 308 networks. Of the 339, 110 networks, representing approximately 33%, were vertically integrated with at least one cable MSO in 2003.[581] Last year, 92 networks were vertically integrated, or 30% of the 308 total.

142. The following table shows the number of national satellite-delivered networks, the number of vertically-integrated networks and the percent of vertically integrated networks since 1990.[582] As the table indicates, the number of national networks increased each year, with a slight decline from 283 in 1999 to 281 in 2000. In 1998, there were 245 national satellite-delivered networks, or a 131% increase over 1994, when there were 106 networks. In 2003, the 339 national satellite-delivered networks represent a 38% increase over 1998 and a 220% increase over the last ten years. The number of vertically-integrated networks increased steadily from 1990 to 1999. Since then the number of vertically-integrated networks has fluctuated from year to year. In 1998, there were 95 vertically-integrated national networks. This represents a 70% increase over 56 vertically integrated networks in 1994. In 2003, the 110 vertically integrated networks represent a 16% increase over 1998, and a 96% increase over the last ten years. As the number of vertically-integrated networks has increased, the total number of networks

[579] 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).

[580] *See 1995 Report*, 11 FCC Rcd at 2135 ¶158; *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).

[581] We count each unique programming service of a multiplexed package separately. 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. *See also 2000 Report*, 16 FCC Rcd at 6079. *See also* Appendix C, Table C-1.

[582] *Competition, Rate Deregulation and the Commission's Policies Relating to the Provision of Cable Television Service,* 5 FCC Rcd at 5109-5110 Appendix G, Tables IV and V (1990); *1994 Report,* 9 FCC Rcd at 7589 Appendix G, Tables 3 and 4; *1995 Report,* 11 FCC Rcd at 2132 ¶ 150; *1996 Report,* 12 FCC Rcd at 4430 ¶ 142; *1997 Report,* 13 FCC Rcd at 1122 ¶ 158; *1998 Report,* 13 FCC Rcd at 24376 ¶ 159; *1999 Report,* 15 FCC Rcd at 1057 ¶ 179; *2000 Report,* 16 FCC Rcd at 6078 ¶ 173; *2001 Report,* 17 FCC Rcd at 1309 ¶ 157; *2002 Report,* 17 FCC Rcd at 26959 ¶ 134.

also has increased such that the percent of vertically-integrated networks has steadily declined (from over 50% in 1994 to 30% in 2002) until this year when the percent rose to 33%.[583]

Table 8: National Network Growth

Year	Total Number of Networks	Number of Vertically Integrated Networks	Percent of Vertically Integrated Networks
1990	70	35	50
1994	106	56	53
1995	129	66	51
1996	145	64	45
1997	172	68	40
1998	245	95	39
1999	283	104	37
2000	281	99	35
2001	294	104	35
2002	308	92	30
2003	339	110	33

143. Four of the top six cable MSOs (*i.e.,* Comcast, Time Warner, Cox, and Cablevision) hold ownership interests in satellite-delivered national programming networks.[584] One or more of these companies has an interest in 50 of the 110 vertically-integrated national satellite-delivered programming networks.[585] Using the same methodology as in past *Reports*,[586] Time Warner has an ownership interest

[583] A significant decline in the percent of vertically-integrated networks occurred between 1995 and 1996 (from 51% to 45%) due to Viacom's sale of its cable systems. *See 1996 Report*, 12 FCC Rcd at 4429-30 ¶ 142.

[584] We derive our information concerning vertically-integrated networks from various sources, such as NCTA's listings in its *Cable Developments* publication, comments filed in this proceeding, various publications, and SEC filings. We recognize that our calculations may not be perfectly accurate because the ownership issue is complex. For example, our tables do not reflect that Vulcan Programming, Inc., an entity controlled by Paul Allen, owns a majority interest in Charter Communications and approximately 31% of Oxygen Network. We also note, as an example, that Liberty holds approximately 19% interest in News Corporation, which is the owner of cable networks operated by the Fox Cable Networks Group. *See* Letter from William M. Wiltshire, Counsel for News Corp., to Marlene H. Dortch, Secretary, FCC, MB Docket No. 03-124 (Oct. 6, 2003). In addition, Charter Holding Company will receive unregistered shares of Oxygen Media common stock on, or prior to, February 2, 2005. William Savoy, a director of Charter and Charter Holding Company sits on Oxygen Network's board of directors. Mr. Savoy is also an officer and director of Vulcan Programming and Vulcan Cable III.

[585] The top six MSOs are Comcast, Time Warner, Charter Communications, Cox Communications, Adelphia Communications, and Cablevision Systems. *See* NCTA, *Cable Operators,* Cable Developments 2003, at 28.

[586] Traditionally, the Commission has counted each channel of several multiplexed networks separately (*i.e.,* six channels for Canales ñ, 35 channels for iN DEMAND, and 33 channels TVN Entertainment Corporation) for the (continued….)

in 62, or 18% of all national programming networks (counting each of iN Demand's 35 multiplexed channels separately); Cox, holds an ownership interest in 48, or 14% of all national programming networks (counting each of iN Demand's 35 multiplexed channels separately); Comcast has an ownership interest in 41 programming networks, or 12% of all national programming networks (counting each of iN Demand's 35 multiplexed channels separately); and Cablevision, through its programming subsidiary, Rainbow Media, has an ownership interest in five national programming networks, or two percent of all national programming networks. Liberty Media is the only other cable operator that owns national programming networks.[587] It has interests in 41 national networks, or 12% of all national programming networks (counting each of Canales ñ's six multiplexed channels separately).[588] In 1994, Time Warner had ownership interests in 16, or 15% of the 106 national programming networks; TCI had ownership interests in 23, or 22% of all national programming networks; Comcast had ownership interests in four national networks, or four percent; Cox also had ownership interests in four national networks, or four percent; and Cablevision had ownership interests in 13, or 12% of all national programming networks.[589] In 1998, Time Warner had ownership interests in 20, or eight percent of the 245 national programming networks; TCI had ownership interests in 50, or 20% of all national networks; Comcast had ownership interests in seven, or three percent of all national networks; Cox had ownership interests in 18, or seven percent of all national networks; and Cablevision had ownership interest in six, or three percent of all national networks.[590]

(Continued from previous page)
total number of national networks and these calculations. *See* Appendix C, Tables C-1 and C-2. We use this methodology again this year for consistent comparisons over the last decade. We recognize, however, that an alternative methodology, which counts each multiplexed network once, may be more consistent with industry practice. Under this alternative method, the total number of national networks is 268. On this basis, Time Warner has an ownership interest in 28 networks, or 10% of all national networks; Cox holds an ownership interest in 14 networks or 5%; Comcast has an ownership interest in seven networks or 3%; and Cablevision holds an ownership interest in five networks or 2%.

[587] We include Liberty Media's programming networks in our determination of the share of national programming networks that are vertically integrated because it is covered by the provisions of the 1992 Act and the Commission's rules relating to program access, channel occupancy, and program carriage. *See* 47 U.S.C. § 548; 47 C.F.R. §§ 76.1000-76.1003. These rules apply to any party that owns a cable system and a satellite-delivered national programming network. Liberty Media remains a cable operator through its ownership of Cablevision of Puerto Rico and, as such, it is appropriate to include its networks in calculating the share of vertically-integrated national programming networks. If we did not count Liberty Media as being vertically integrated, the ratio of vertically-integrated networks would increase from 20.6% in 2002 to 24.8% in 2003. *See* Appendix C, Table C-5.

[588] If we only count multiplexed networks once, Liberty Media holds an ownership interest in 36 networks or 13% of all national networks.

[589] *1994 Report*, 9 FCC Rcd at 7256 Appendix G, Table 6.

[590] *1998 Report,* 13 FCC Rcd at 24445 Appendix D, Table D-5. We include TCI's ownership interests for 1994 and 1998 because on February 17, 1999, the Commission approved the transfer of control of TCI's licenses to AT&T in *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from Tele-Communications, Inc., Transferor to AT&T Corp., Transferee,* 14 FCC Rcd at 3160 (1999) and on November 13, 2002, the Commission approved the transfer of control of Licenses from Comcast and AT&T to AT&T-Comcast in *AT&T-Comcast Merger Order,* fn 94 *supra*. Subsequently, AT&T-Comcast dropped the AT&T from its name.

144. Vertical integration is not only associated with the largest cable system operators, but also the programming networks with the largest number of subscribers. Currently, nine of the top 20 non-broadcast video programming networks (ranked by subscribership) are vertically integrated with a cable MSO.[591] This figure represents a slight increase from 2002 when eight of the top 20 networks were vertically integrated.[592] In 1994, 14 of the top 20 companies were vertically integrated and, in 1998, nine of the top 20 networks were vertically integrated. Additionally, it appears that a significant amount of video programming is currently controlled by 13 companies, including cable MSOs, broadcasters, and other media entities.[593] Almost all (*i.e.*, 18) of the top 20 programming networks in terms of subscribership are owned by one or more of these 13 companies.[594]

145. Vertical integration is also associated with the largest cable system operators in terms of prime time ratings. Seven of the top 15 prime time non-broadcast video networks are vertically integrated with a cable MSO, with the other eight owned at least in part by one of the major broadcast networks.[595] This figure represents a slight increase since 2002, when six of the top 15 networks were vertically integrated.[596] In 1994, 12 of the top 15 companies were vertically integrated and, in 1998, nine of the top 15 companies were vertically integrated.[597]

146. This year, we found 61 programming services that have been planned but are not yet operational, an increase of one over the *2002* Report's count of 60 planned services.[598] 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 launch and initiation of service. Moreover, we

[591] *See* Appendix C, Table C-6.

[592] *See 2002 Report,* 17 FCC Rcd at 26998 Appendix C, Table C-6.

[593] The 13 companies are: Time Warner, Cablevision, Comcast, Cox, Disney, E. W. Scripps Co., General Electric, Hearst, Liberty Media, Advance Newhouse, News Corp., Viacom, and Vivendi. *See* http://www.cjr.org/tools/ owners (visited at Oct. 17, 2003). We note that Liberty Media owns approximately 19% of News Corp. and that General Electric and Vivendi have announced plans to merge. *See* Letter from William M. Wiltshire, Counsel for The News Corporation Limited, to Marlene H. Dortch, Secretary, FCC, MB Docket No. 03-124 (Oct. 6, 2003); Vivendi Universal, *General Electric and Vivendi Universal Sign Agreement To Merge NBC and Vivendi Entertainment* (press release), Oct. 8, 2003, at http://www.vivendiuniversal.com/vu/en/press_2003/ 20031008_General_Electric_and_Vivendi_Sign_Agreement_To_Merge_NBC_and Vive.cfm.

[594] C-SPAN and the Weather Channel are the two programming networks among the top 20 not affiliated with one of the 13 companies. C-SPAN was created by the cable industry and currently derives 97% of its revenues from affiliate fees (*i.e.*, per subscriber fees from MVPDs). The remaining three percent is provided by various investments. Affiliates have no ownership or program control interests in C-SPAN. Landmark Communications, the licensee of two broadcast television stations, owns The Weather Channel. *See* http://cjr.org/tools/owners.

[595] *See* Appendix C, Table C-7.

[596] *2002 Report,* 17 FCC Rcd at 26999 Appendix C, Table C-7.

[597] *1994 Report,* 9 FCC Rcd at 7595 Appendix G, Table 7; *1998 Report,* 13 FCC Rcd at 24453 Appendix D, Table D-7.

[598] *See* Appendix C, Table C-4. *See also 2002 Report,* 17 FCC Rcd at 26992 ¶137.

include in this list programming that has been announced but is in various stages of development, which can lead to variations in the count from year-to-year. During 2003, several of the planned services listed in the 2002 report, such as College Sports Television and the Tennis Channel, launched. We first reported on planned programming services in 1995. At that time, there were 80 planned services.[599] Some of the 1995 planned services launched by the following year were Animal Planet and BET on Jazz.[600] In 1998, we reported that there were 65 planned programming services, a drop from 1995.[601]

2. Other Programming Issues

147. As in previous years, this year's *Notice* requested comment on a number of programming issues apart from vertical integration and the status of existing and planned programming services.[602] We sought comment about the effectiveness of our program access, program carriage, and channel occupancy rules that govern the relationships between cable operators and programming providers.[603] In addition, the *Notice* asked if these issues that are present in programming access also affect other, emerging services, like VOD. In this section, we also address issues raised in the comments relating to the carriage of local broadcast stations pursuant to must carry and retransmission consent. We also requested information on: programming issues, including local and regional channels, public education and governmental ("PEG") channels; compliance with the DBS public interest programming obligations; locally-originated programming, children's, news and community affairs programming, programming in languages other than English, packaging of programming; and programming costs.[604]

a. Regulatory Issues

148. ***Program Access and Carriage Rules.*** The Commission's rules concerning competitive access to cable programming 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.[605] 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 an MVPD. 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 other MVPDs. In addition, cable operators generally are prohibited from entering into exclusive distribution arrangements

[599] *1995 Report,* 11 FCC Rcd at 2203-2205 Appendix H, Tables 3 and 4.

[600] *1996 Report,* 13 FCC Rcd at 4509 Appendix G, Table 1.

[601] *1998 Report*, 13 FCC Rcd at 24380 ¶168.

[602] *Notice,* 18 FCC Rcd at 16045 ¶ 13.

[603] *Id.* at 16047 ¶ 18.

[604] *Id.* at 16046-47 ¶¶ 17-18.

[605] 47 U.S.C. § 548.

with vertically-integrated programming vendors. The Commission has concluded that the statutory access requirements apply only to satellite-delivered programming and not to terrestrially-delivered programming.[606]

149. MVPDs that compete with incumbent cable operators, and small cable operators, describe difficulties they have had gaining access to programming, which they consider "must-have," such as regional sports and news networks, as they have in previous years. These commenters state that without access to regional sports and news programming networks many of which are affiliated with incumbent cable operators, it is difficult to compete.[607] They claim that incumbents' ability to foreclose programming is due, in part, to the terrestrial-delivery exemption in the existing program access rules, alleging that some cable companies intentionally "migrate" programming to terrestrial distribution in order to avoid their programming access obligations.[608] They contend that consolidation and the clustering of cable systems within certain regions have exacerbated this problem[609] and are concerned that an increasing amount of programming will be denied them on the basis of the terrestrial-delivery exemption.[610] As evidence, BSPA cites the CEO of a fiberoptic network who stated that his network could be used to deliver programming terrestrially.[611] Commenters cite examples of terrestrially-delivered regional news and sports networks that they are unable to provide their subscribers, including Comcast Sports Net, the New England News Channel ("NECN"), and overflow sports programming distributed by Cablevision-owned networks.[612] In addition, they observe that an increasing amount of regional sports programming has been moved from broadcast television to non-broadcast networks and, as a result of being denied this programming due to the terrestrial-delivery exemption, they cannot provide this "critical" programming to their subscribers.[613]

150. Cable operators respond that Congress explicitly exempted terrestrial delivered programming from the program access rules.[614] In this regard, NCTA notes that the Commission

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[606] *See Implementation of the Cable Television Consumer Protection and Competition Act of 1992, Petition for Rulemaking of Ameritech New Media, Inc. Regarding Development of Competition and Diversity in Video Programming Distribution and Carriage,* 13 FCC Rcd 15822, 15856-7 ¶¶ 70-71 (1998) ("*Program Access Order*").

[607] RCN Comments at 7; RCN Reply Comments at 2-3; BSPA Comments at 17-18; ACA Comments at 3-4.

[608] BSPA Comments at 17-18; DirecTV Comments at 9-10; RCN Comments at 8-9.

[609] BSPA Comments at 18; RCN Comments at 10; Direct TV Comments at 10-11.

[610] *Id.* at 18.

[611] *Id.* (quoting Jerald L. Kent, CEO, Cequel III, a co-owner of Broadwave Communications Services).

[612] RCN Comments at 7-9. *See also* BSPA Comments at 17; DirecTV Comments at Exhibit D.

[613] BSPA Comments at 17-18.

[614] Comcast Reply Comments at 14; NCTA Reply Comments at 8-9. Under the Communications Act, the prohibition on exclusive contracts enacted as part of the program access provision in the 1992 Act was set to sunset on October 5, 2002, unless the Commission determined the rules were still necessary. On June 13, 2002, the Commission adopted a *Report and Order* extending the prohibition until October 5, 2007. In the *Report and Order*, the Commission decided that this prohibition continues to be necessary to preserve and protect competition and diversity in the distribution of video programming. In the same proceeding, the Commission concluded that (continued….)

previously found that a cable operator may choose terrestrial over satellite distribution as a legitimate business practice.[615] It explains that, since regional sports and news networks are intended to serve a limited geographic area, programmers choose terrestrial delivery designed to serve a small area, rather than satellite delivery designed to serve the entire U.S. Moreover, Comcast and NCTA state that no commenter has provided evidence showing that any programming network has ever been migrated from satellite to terrestrial delivery for the purpose of "evading" the program access rules.[616] Rather, they note that the three terrestrially-delivered networks which RCN and DirecTV have claimed in proceedings before the Commission were evasions have been determined not to be so by the Commission.[617]

151. In addition, a number of MVPDs that compete with incumbent cable operators and small cable operators are concerned about exclusive carriage agreements between incumbent cable operators, especially the large vertically-integrated MSOs, and unaffiliated programmers.[618] They assert that incumbent cable operators seek exclusive contracts with unaffiliated programmers, often leveraging their own vertical relationships with programmers to maintain barriers to entry by denying "must-have" programming to competitors. For example, RICA states that a number of its member small cable systems serving rural areas have been unable to obtain access to programming owned by Disney, Fox and others, including ESPN, TV Land, MSNBC, and Fox Sports Midwest.[619] According to BSPA, Everest Connections' Kansas City system has been denied access to University of Missouri basketball games because Mizzou Sports Properties, the rights holder, has an exclusive agreement with the incumbent cable operator, a Time Warner affiliate.[620] It also mentions an August 2003 meeting between Comcast, Cox, Time Warner, Adelphia, and Charter and Los Angeles County representatives in which the cable MSOs sought to have local county government programming made exclusive to their systems.[621]

152. In response, Comcast states that exclusive arrangements with unaffiliated programmers, such as Mizzou Sports Properties, are not covered by the program access rules.[622] Comcast and NCTA point out that cable operators face the same challenges in receiving access to programming carried exclusively by other MVPDs, such as DirecTV's carriage of the *NFL Sunday Ticket* which provides

(Continued from previous page)
the language of section 628(c) expressly applies to satellite programming, and that terrestrially-delivered programming is not covered. *Program Access Order,* 13 FCC Rcd at 15856-57 ¶¶ 70-71.

[615] NCTA Reply Comments at 10-11.

[616] Comcast Reply Comments at 14-16; NCTA Reply Comments at 9.

[617] Comcast Reply Comments at 14; NCTA Reply Comments at 9-10.

[618] BSPA Comments at 14-17; RICA Comments at 3; ACA Comments 3-4; RCN Comments at 11; DirecTV Comments at 17, Exhibit D (listing over 30 regional networks that are unavailable to non-cable operators, either due to terrestrial distribution or exclusive carriage agreements).

[619] RICA Comments at 4.

[620] BSPA Comments at 16. A complaint on this matter is pending, CSR-6094-P.

[621] BSPA Comments at 14-15.

[622] Comcast Reply Comments at 16-17. *See also* NCTA Reply Comments at 8.

valuable football programming.[623] Further, Comcast observes that BSPs could invest in developing their own exclusive programming now that they serve hundreds of thousands of subscribers.[624]

153. In the *Notice*, we asked if program access issues have arisen with respect to new services, such as VOD.[625] BSPA recommends that the Commission adopt a "technology neutral view of content access" so that no consumer is denied access to digital content.[626] BSPA and RCN urge the Commission to extend program access-types rules to all digitally distributed content stored at the cable headend.[627] BSPA and RCN seek regulation of VOD hardware, software, and content as well as HDTV content to ensure access.[628] To support its position, BSPA states that iN DEMAND, a company owned by Comcast, Time Warner, Cox, which is a dominant provider of VOD programming, has denied non-member/owners' access to its service.[629] In its reply, iN DEMAND notes that initially it had limited deployments, but that it currently has a VOD agreement with Knology and is negotiating with other non-member/owner companies.[630]

154. ***Must Carry and Retransmission Consent.*** 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.[631] Pursuant to the Satellite Home Viewer Improvement Act of 1999 ("SHVIA"), DBS operators may provide local-into-local broadcast television service.[632] Unlike cable operators that 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 one local television station ("carry-one, carry-all").[633] In both the cable and DBS contexts, commercial broadcasters may elect to be carried pursuant to must-carry status or retransmission consent.[634] Where a station elects must-carry it is

[623] NCTA Comments at 13; Comcast Reply Comments at 13.

[624] Comcast Reply Comments at 16.

[625] *Notice,* 18 FCC Rcd at 16047 ¶ 18.

[626] BSPA Comments at 18-22, 31-33.

[627] *Id.* at 27-31; RCN Comments at 10-11.

[628] RCN Comments at 10-11.

[629] BSPA Comments at 28-29.

[630] iN DEMAND Reply Comments at 1-2. *See also* Comcast Reply Comments at 19-20.

[631] 47 U.S.C. §§ 534(b), 535(b). *See also* 47 C.F.R. § 76.56.

[632] SHVIA was enacted as Title I of the Intellectual Property and Communications Reform Act of 1999 (relating to copyright licensing and carriage of broadcast signals by satellite carriers, codified in scattered sections of 17 and 47 U.S.C.), Pub.L. No. 106-113, 113 Stat. 1501, 1501A-526 to 1501A-545 (Nov. 29, 1999).

[633] 47 C.F. R. § 76.66.

[634] 47 C.F. R. § 76.64.

generally guaranteed carriage, but it is prohibited from receiving compensation for this carriage.[635] 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. In the pending *DTV Must-Carry Proceeding,* the Commission is considering issues relating to the carriage of digital television signals and whether to require dual carriage of analog and digital signals during the DTV transition.[636]

155. Some cable commenters claim that the retransmission negotiation process for broadcast carriage is being abused. They assert that, in return for retransmission consent for the carriage of network O&Os, they must agree to carry network-affiliated cable programming networks not only in the markets where the O&Os are located, but on all their cable systems.[637] In this regard, Cox observes that, since cable operators must pay for carriage of these affiliated programming networks, these agreements result in increased cable rates for consumers.[638] The Broadcast Networks respond that the retransmission process is working well with very few bargaining impasses and that they bargain in good faith. They indicate that they may legally seek carriage of additional channels or cash in return for retransmission consent and dismiss the cable companies' comments as efforts to secure better terms..[639] The Broadcast Networks further state that they offer cable operators multiple options, including cash payment per subscriber, in exchange for retransmission consent.[640] Cox, however, contends that broadcasters exercise market power that harms the public interest by requiring carriage of less-desired programming.[641] While Cox initially indicated that it was never formally offered a cash payment option by any of the Broadcast Network commenters, it subsequently provided a clarification indicating that it received a cash payment option for KCAL, the Los Angeles CBS affiliate.[642]

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[635] 47 C.F.R. § 76.60.

[636] *See DTV Must Carry Order,* fn. 448 *supra.*

[637] Cox Comments at 16-18; ACA Comments at 5-7; Coalition Comments at 1-2; OPASTCO Comments at 3.

[638] Cox Comments at 17-19.

[639] Broadcast Networks Reply Comments at 3-6.

[640] *Id.* at 2.

[641] Letter from To-Quyen Troung, Counsel to Cox Communications, to Marlene H. Dortch, Secretary, FCC (Oct. 14, 2003) at 2.

[642] Letter from To-Quyen Troung, Counsel to Cox Communications, to Marlene H. Dortch, Secretary, FCC (Nov. 24, 2003) at 1 (Cox refused to accept CBS' offer to pay $0.75 per subscriber per month for carriage of KCAL because it was concerned that the other seven retransmission consent stations it carried would make similar demands and Cox would have to raise its basic service rates by $5.25). *See also* Letter from John C. Quale, Counsel to the Broadcast Networks, to Marlene H. Dortch, Secretary, FCC (Dec. 23, 2003) (detailing options offered to Cox by the networks for retransmission consent); Letter from Susan L. Fox, Vice President, Government Relations, The Walt Disney Company (Dec. 23, 2003) (regarding Disney's willingness to offer a cash payment option to Cox).

156. NAB and NRTC argue that DBS operators should be required to carry local broadcast signals in all 210 DMAs.[643] NAB further suggests that DBS operators be required to carry broadcasters' HDTV signals and both their analog and digital signals during the digital transition.[644] DirecTV and SBCA state that there is no statutory basis for these requirements, the Commission has declined to require DBS operators to carry television broadcast stations' digital or HDTV signals, and such requirements would limit DBS operators' ability to use their spectrum capacity for diverse programming.[645] NAB counters that the satellite industry has historically claimed limited capacity, while continuing to increase the number of markets where local-into-local television service is provided.[646] In this regard, NAB and NRTC note that DirecTV recently committed to offer local-into-local service in all television markets by 2008, and perhaps as early as 2006.[647]

157. With respect to the carriage of digital television signals, Paxson argues that cable and satellite companies' must-carry obligations should be expanded to include multicast offerings.[648] Paxson states that it can only compete against cable and other MVPDs if cable must-carry obligations are expanded to include multiple streams of content (analog and digital) and HD signals.[649] NAB also argues that dual carriage of analog and digital signals is necessary for the digital transition.[650] Comcast responds that digital signal carriage issues should be addressed in the on-going *DTV Must-Carry Proceeding*.[651]

b. Sports Programming

158. Sports programming continues to be an important segment of programming for all MVPDs.[652] According to many commenters, local and regional programming holds high value for

[643] NRTC Comments at 5-7 (this requirement should be met by January 1, 2006); NAB Reply Comments at 1; NRTC Reply Comments at 1-4.

[644] NAB Reply Comments 1-2, 11.

[645] SBCA Comments at 13; DirecTV Comments at 9.

[646] NAB Reply Comments at 3-9.

[647] NAB Reply Comments at 4-5; NRTC Reply Comments at 2-3. *See also* DirecTV Reply Comments at 3-4 (citing Letter from William M. Wiltshire, Counsel for The News Corporation Limited, Garry M. Epstein and Richard E. Wiley, Counsel for General Motors Corporation and Hughes Electronics Corporation, to Marlene H. Dortch, Secretary, FCC, MB Docket No. 03-124, Sept. 22, 2003).

[648] Paxson Comments at 4-6.

[649] *Id.* at 5-8.

[650] NAB Reply Comments at 11.

[651] Comcast Reply Comments at 17-19 (noting that the Commission has tentatively concluded that multicast must carry should not be required). *See also DTV Must-Carry Order*, fn. 448 *supra.*

[652] *See, e.g.,* Comcast Comments at 27; RCN Reply Comments at 3.

subscribers.[653] Of the 84 regional cable channels identified this year, 27, or 33%, are sports channels.[654] In 1998, 29 of the 61 regional cable channels were regional sports networks.[655] The most widely distributed sports programming network, ESPN, which is owned by Disney, reaches almost 87 million television households through a variety of MVPD technologies. While ESPN dominates national sports programming, regional sports distribution is dominated by Fox, which owns or holds an ownership interest in 70% (19 of 27) of all regional sports networks.[656] These regional sports networks serve approximately 79 million subscribers.[657]

159. MVPDs that compete with incumbent cable operators, such as DBS operators and BSPs, assert that cable operators deny competitors access to vertically-integrated regional sports programming that is delivered terrestrially.[658] For example, RCN contends that it was initially denied access to Comcast's SportsNet in Philadelphia, and subsequently it obtained only a short-term agreement for carriage.[659] Comcast disputes this claim and states that Comcast SportsNet has been available to, and carried by, RCN since it was created, without interruption.[660] Moreover, BSPA notes that Congress recognized the importance of sports programming and alleges that cable operator exploitation of the terrestrial-delivery exemption exacerbates the problem of making certain sports programming available only over certain distribution platforms.[661] Cable interests respond that these allegations amount to a request for government mandated access to programming that Congress deliberately chose to exempt from the program access rules.[662]

160. In addition, BSPA states that incumbent cable operators enter into exclusive programming arrangements that deprive its members of access to regional sports networks.[663] For

[653] Comcast Comments at 27-28.

[654] *See* Appendix C, Table C-3.

[655] *See 1998 Report*, 13 FCC Rcd at 24380-81, 24439-41 ¶ 171, Appendix D, Table D-3.

[656] *See* Appendix C, Table C-3.

[657] *Application of General Motors Corporation and Hughes Electronics Corporation, Transferor, and the News Corporation Limited, Transferee, for Authority to Transfer Control*, MB Docket No. 03-124 (May 2, 2003), at 26.

[658] RCN Comments at 7-10; BSPA Comments at 17-18.

[659] RCN Comments at 7-8. RCN states that it hopes to finalize a long-term contract for this programming soon. *Id*.

[660] Comcast Reply Comments at 15 (citing Comcast Corporation and AT&T Corp., Reply to Comments and Petitions to Deny Applications for Consent To Transfer Control, MB Docket No. 02-70, May 21, 2002, at 101-102; Letter from James L. Casserly, Counsel to Comcast, to Marlene H. Dortch, Secretary, FCC, Sept. 10, 2002, at 1-2).

[661] BSPA Comments at 17-18. *See also* RCN Comments at 8-9.

[662] NCTA Reply Comment at 8; Comcast Reply Comment at 14-15.

[663] BSPA Comments at 14, 16 (citing Mizzou Sports Properties exclusive arrangement in Kansas City, *see* para. 151 *supra*).

example, RCN alleges that Comcast has entered into an exclusive arrangement with New England Sports Network ("NESN") to provide its HDTV sports programming, which RCN considers critical programming for it subscribers.[664] Comcast disputes this charge, stating that it was simply the first MVPD to negotiate a carriage agreement for NESN's HDTV programming in return for support for launch of this coverage.[665] In response, RCN claims that it was rebuffed when it first approached NESN to negotiate a carriage agreement, an expected response given previous arrangements that prevented RCN from acquiring programming,[666] although it acknowledges that it may now be able to negotiate an agreement for this programming.[667]

c. News Programming

161. Local news channels have been on cable since at least 1986, when Cablevision launched News 12 Long Island. This year, of the 84 regional programming networks identified, 37 or 44% are regional news networks.[668] In 1998, 25 of the 61 regional cable channels were regional news networks.[669] Unlike sports programming, regional and local news networks have a more diverse ownership. Some regional news networks are vertically integrated with cable MSOs, such as Time Warner's New York 1 News and Rhode Island News Channel, owned in part by Cox Communications.[670] Others are affiliated with local broadcasters or newspapers, including Allbritton's Newschannel 8 in the Washington, D.C., area, A.H. Belo Corporation's Texas Cable News serving Dallas, and Six News Now, owned by the Sarasota Herald-Tribune.

162. RCN and DirecTV comment that they have had difficulty obtaining access to some regional news programming.[671] For example, RCN states that Comcast refused to waive its exclusive rights to carry terrestrially-delivered New England News Channel ("NECN"), thereby denying RCN access to this important local programming.[672] Comcast counters that NECN was exempted from the

[664] RCN Reply Comments at 2.

[665] *See* Letter from James L. Casserly, Counsel to Comcast, to Marlene H. Dortch, Secretary, FCC (Oct. 8, 2003), at 1-2.

[666] *See* Letter from L. Elise Dieterich, Counsel to RCN, to Marlene H. Dortch, Secretary, FCC (Oct. 16, 2003).

[667] *Id*. *See also* Letter from Ryan G. Wallach, Counsel to Comcast, to Marlene H. Dortch, Secretary, FCC (Nov. 18, 2003) at 2 (citing attached declaration of Peter Plaehn, Vice President of Marketing, NESN, clarifying that Comcast does not have any exclusive rights that would prevent NESN from entering into an agreement with RCN).

[668] *See* Appendix C, Table C-3.

[669] *See 1998 Report*, 13 FCC Rcd at 24383, 24439-41 ¶ 176, Appendix D Table D-3.

[670] Radio and Television News Directors Association, at http://www.rtnda.or/resources/nonstopnews/directory.html (visited Oct. 6, 2003).

[671] RCN Comments at 8; DirecTV Comments at 17, Exhibit D.

[672] RCN Comments at 8. *See also* BSPA Comments at 17.

prohibition on exclusive contracts by the Commission based on a finding that its regional programming served the public interest.[673]

d. Other Programming

163. In the *Notice*, we sought information regarding public, educational and government ("PEG") channels and programming provided by DBS operators in compliance with the public interest programming obligations.[674] In addition, this year, we specifically requested comment on locally-originated programming, children's programming, local news, community affairs programming, and non-English language programming.[675]

164. ***PEG Programming.*** Local franchising authorities may request, as part of the franchising process, that operators devote a certain amount of channel capacity and equipment to PEG programming.[676] PEG channels are intended to provide community-specific information, such as bulletin boards for local activities for local activities, local civic meetings, and local governmental activities. In addition to PEG channels, some cable operators also are providing local and regional sports, weather, and news programming. There are over 5,000 PEG channels carried nationwide,[677] with Comcast reporting that it carries more than 2,400 PEG channels across the country and spends $100 million in direct support for PEG channels.[678] Cable operators do not have ownership interests in PEG access programming, although some franchise agreements require that they provide services, production facilities, and equipment for the production of local programming. PEG programming is not, therefore, considered vertically integrated.

165. ***DBS Public Interest Programming.*** DBS operators are required to reserve four percent of their channel capacity for "noncommercial programming of an educational or informational nature."[679] DirecTV states that it currently carries 11 channels pursuant to this requirement as well as

[673] Comcast Reply Comments at 15-16 (citing *New England Cable News*, 9 FCC Rcd 3231 (1994)).

[674] *Notice,* 18 FCC Rcd at 16046-7 ¶ 17.

[675] *Id.* at 16046 ¶ 14.

[676] 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).

[677] Telephone conversation with Bunnie Riedel, Executive Director, Alliance for Community Media (Oct. 27, 2003).

[678] Comcast Comments at 24. *See also* Cox Comments at 7.

[679] *See Implementation of Section 25 of the Cable Television and Consumer Protection Act of 1992, Direct Broadcast Satellite Public Interest Obligations*, 13 FCC Rcd 23254 (1998). On August 19, 2003, Word of God Fellowship, Inc. dba Daystar Television Network filed a Request for Section 403 Inquiry and for Declaratory Ruling regarding exclusive contracts for programming carried on DBS channels reserved pursuant to the DBS public interest obligations. *See Request For Comment On Petition Regarding DBS Public Interest Obligations And Private Contractual Arrangements*, 18 FCC Rcd 18689 (2003).

additional educational channels that it does not include as part of its compliance with the rules.[680] We previously reported that EchoStar carried 21 channels in compliance with this requirement and other educational channels.[681] DBS providers are charging some noncommercial programmers for carriage on their systems to the extent allowed by the Commission's rules.[682]

166. ***Locally-originated, Community-oriented, Children's and Non-English Programming.*** A number of commenters provide information regarding locally-produced, community-oriented, children's and non-English programming they offer consumers. This information is illustrative of the variety of programming offered to consumers.

167. In addition to the regional/local news and sports programming previously mentioned, cable operators provide a source of community-oriented programming through local origination channels that cover news, sports, weather, local politics, education, and cultural and ethnic activities since their earliest days.[683] A few examples are: Cox4, Baton Rouge, which highlights area schools; Insight's 24-hour educational access channel in Covington, Kentucky; Armstrong's Orrville, Ohio, system's coverage of local school events; and Comcast's CN8, which provides local news, discussions of public issues, and family entertainment in several states.[684] Comcast states that it produces local public affairs programming such as "Local Edition" and "Newsmakers," five-minute programs shown every half hour on the channel carrying CNN Headline News.[685] In addition, Time Warner reports that one of its cable systems is developing an on-demand local channel.[686]

168. Numerous cable and satellite operators report carrying programming specifically aimed at children. Among the programming networks with children's programming listed are: ABC Family Channel; Boomerang; Cartoon Network; Discovery Kids; Disney Channel (East & West); Hallmark Channel; Nickelodeon/Nick at Nite; Noggin/The "N"; PBS Kids; Toon Disney; and TV Land.[687]

169. Cable and DBS operators also offer a range of non-English and international programming. For example, DirecTV carries numerous Spanish and Chinese-language programming

[680] This programming includes C-SPAN, Trinity Broadcast Network (TBN), PBS You, Link TV, Eternal Word Television Network, Mari+Vaision, I Life, NASA-TV, RFD-TV, The Word, Daystar, and BYU-TV. DirecTV Comments at 16.

[681] *2002 Report*, 17 FCC Rcd at 26964 ¶ 151.

[682] Under the Commission's rules, a DBS provider may charge no more than 50% of the direct costs involved in making capacity available to carry a qualified noncommercial programmer counted in satisfaction of the set-aside rule. *See* 47 C.F.R. § 25.701(c)(5).

[683] NCTA Comments at 65-67, Appendix C.

[684] *Id. See also* Comcast Comments at 24 -25.

[685] Comcast Comments at 38.

[686] Time Warner Comments at 10.

[687] DirecTV Comments at 16; Cox Comments at 7-8; Comcast Comments at 24.

networks.[688] The Dish Network offers Arabic, South Asian, Polish, Greek Chinese, Russian and Korean-language packages in addition to several Spanish packages.[689] Comcast produces two specialty Spanish-language programming tiers in markets with large Spanish-speaking populations.[690] Cablevision has launched a 30-channel Hispanic digital tier (iO en Espanol) and Time Warner offers a tier of 15 Spanish-language networks (DTV en Espanol).[691] In New York City, Time Warner offers two local news channels, one of which is a Spanish-language service.[692] Cox offers a TeleLatina tier and international premium services, such as TV Asia and Washington Korean TV, to its digital customers.[693]

e. Programming Costs

170. The Commission's most recent report on cable industry prices ("*2002 Price Survey Report*") asked cable operators to describe factors that led to changes in their rates. Competitive and noncompetitive cable operators attributed 61.2% and 66.1%, respectively, of their rate increases to increases in programming costs.[694] GAO recently found that programming costs have risen on average by as much as 34% in the last three years. During the same time period, GAO states that sports programming costs have increased on average by 59%.[695]

171. Cable operators state that increases in programming costs reflect their investments in higher quality programming.[696] In particular, a major source of increased programming costs is sports programming attributable to competition among sports networks and rising players' salaries that lead to increased television rights fees.[697] For example, Cox reports that its programming costs increased an average of 12% last year, but some sports networks are seeking up to 35% annual price increases.[698] Cox further claims that sports programming is responsible for the price of cable service increasing more

[688] DirecTV Comments at 16; Cox Comments at 8, n.8. *See generally* SkyReport, *Niche Programming,* 2 THE BRIDGE (Sept. 2003) (describing non-English and other niche programming services).

[689] Dish Network, at http://www.dishnetwork.com/content/programming/international/index.shtml (visited Oct. 27, 2003).

[690] Comcast Comments at 23-24.

[691] NCTA Comments at 52.

[692] Time Warner Comments at 10.

[693] Cox Comments at 8.

[694] Inflation, channel additions, and system upgrades, were also said to account for a large portion of rate increases. *See 2002 Price Survey Report,* fn. 10 *supra,* 18 FCC Rcd at 13296 ¶ 34, Table 8.

[695] *See 2003 GAO Report,* fn 7 *supra,* at 4, 21-22.

[696] NCTA Comments at 35-36; Cox Comments at 20-21.

[697] NCTA Comments at 35-37, Appendix A (Wildman Study, *Assessing Quality-Adjusted Changes in the Real Price of Basic Cable Service*); Cox Comments at 20-22. *See also* SkyReport, *Sports Programming,* THE BRIDGE (Aug. 2003) at 3.

[698] Cox Comments at 20-21.

than three times the rate of inflation.[699] As a result, Cox is refusing to pay the 20% increase ESPN is demanding when their current contract expires in March 2004.[700] Currently Cox asserts that it pays $2.61 per subscriber per month for carriage of ESPN on its expanded basic tier, compared to an average of $2.55 per subscriber per month for the seven top-rated programming networks combined carried on that tier. Moreover, Cox seeks the right to place ESPN and other high priced programming on optional tiers.[701] ESPN counters that cable's rising rates are caused more by the industry's digital upgrades than by higher programming costs.[702]

172. Moreover, several commenters state that they face difficulties obtaining access to necessary content at reasonable rates, noting that the largest cable operators pay less, and can negotiate more favorable terms, than other MVPDs for programming.[703] In this regard, Qwest estimates that it pays approximately 20% more for programming than the incumbent cable operators with which it competes.[704] ACA similarly states that small cable operators pay more for satellite-delivered programming than the large MSO and are subject to costly terms and conditions for retransmission of local broadcast stations controlled by the networks and large affiliate groups.[705]

f. Packaging of Programming Services

173. In the *Notice*, we sought information regarding the packaging and marketing of programming and whether, and to what extent, distributors offer discrete programming choices, such as mini-tiers or a la carte services.[706] Generally, MVPDs continue to offer packages or tiers of service that include a large number of programming networks.[707] Bundling programming channels into packages allows greater penetration of individual channels which lowers the per subscriber price MVPDs pay to programmers and benefits new or niche channels through subscriber awareness that is necessary for the

[699] Jim Lovel, *Cox Takes on ESPN, Fox*, ATLANTA BUSINESS CHRONICLE, at http://atlanta.bizjournals.com/atlanta/stories/2003/11/03/story1.html (visited Nov. 7, 2003).

[700] Under its current contract ESPN has increased its price 20% each of the last four years, the maximum allowable rate.

[701] John M. Higgins, *War of Words Between Cox, ESPN Escalates*, BROADCASTING & CABLE, Oct. 27, 2003, at 50.

[702] Frank Ahrens, *ESPN to Cox: Back to You*, THE WASHINGTON POST, Oct. 23, 2003, at E1.

[703] Qwest Comments at 8-9; RICA Comments at 5; OPASTCO Comments at 2-3.

[704] Quest Comments at 9. Quest recognizes that programmers may charge new entrants and overbuilders higher prices on the basis of economies of scale, differences in delivery technologies and transmission costs, expected viewership and advertising revenues, and the small size of the new entrant's subscribership under section 628(c)(2)(B). *See also* Comcast Reply Comments at 17 (citing 47 C.F.R. § 76.1002(b), which permits programmers to offer volume discounts to their largest customers).

[705] ACA Comments at 2.

[706] *Notice*, 18 FCC Rcd at 16046 ¶ 15.

[707] *1998 Report*, 13 FCC Rcd at 24387 ¶ 187. *See also 2003 GAO Report* at 30-31.

survival of such new programming, especially when it is not associated with a "brand name" entity.[708] Commenters assert that an a la carte requirement would result in reduced choices and higher prices for consumers due to increased transaction costs and the synergies associated with selling advertising and promoting services.[709] For these reasons, cable operators and other MVPDs have chosen to market their services primarily as programming packages and several programming networks (*e.g.*, Bravo and Disney) have migrated from a la carte offerings to traditional programming packages.[710]

174. GAO recently analyzed the costs and benefits of a la carte offerings. It found that, while an a la carte system might provide greater consumer choice, it would impose additional costs on subscribers and alter the current economic structure of the cable industry.[711] Initially, many consumers would have to obtain additional equipment to unscramble the networks they are authorized to receive. Cable operators would lose advertising revenues because they are based on the number of potential viewers (*i.e.*, the number of subscribers to the tier of service the network is carried on). If advertising revenues decline, then licensing fees may rise to compensate. These increased fees could be passed on to consumers and result in higher cable rates. Factors, including the pricing of a la carte service, consumers' purchasing patterns, and whether certain niche services would cease to exist with a la carte service, make it difficult to ascertain whether consumers would be better or worse off with such an approach. GAO comments that perhaps a separate tier for sports programming would be viable because of its loyal customer base, but also observes that sports programmers are reluctant to agree to such tiers because they seek wide availability of their programming.

175. Some have suggested a la carte or mini-tier offerings could lower cable rates generally by allowing consumers to pay for sports and certain other expensive programming only if they choose to do so.[712] In this regard, ACA states that small cable operators would like to offer high-priced programming on an a la carte basis, but that network owners, such as Disney and Fox, currently require that their networks be carried on the expanded basic tier.[713] Recently, however, a number of larger cable operators announced plans to offer a few channels of sports programming on a separate tier. For example, Time Warner now offers a digital sports tier in New York and New Jersey that includes NBA TV, Tennis Channel, NBA TV, three Fox Sports Digital networks and Fuel for $3.95 a month. Similarly, Comcast has announced plans to begin a comparable sports tier in 2004.[714]

176. The most notable example of the development of a separate sports tier resulted from a dispute between Cablevision and the Yankee Entertainment and Sports Network ("YES"), a New York area sports network with rights to carry the New York Yankee baseball games and other sports

[708] DirecTV Comments at 13-14; A&E Comments at 8-9. These commenters note that premium, pay-per-view and some sports programming has historically been offered separately on a per-channel or per-program basis. *Id*.

[709] A&E Comments at 8, 10. *See also* DirecTV Comments at 13.

[710] A&E Comments at 10-11.

[711] *See 2003 GAO Report* at 5-6, 32-33.

[712] *See* SkyReport, *Sports Programming,* THE BRIDG, at 3.

[713] ACA Comments at 4-5. According to GAO this is a common practice. *See 2003 GAO Report* at 33-34.

[714] CABLEFAX DAILY, Oct. 28, 2003, at 1.

programming. Initially, YES sought carriage on the Cablevision's expanded basic tier at a cost of $2 per subscriber per month.[715] Cablevision declined to accept these terms and did not carry YES during the 2002 baseball season. Prior to the start of the 2003 baseball season, Cablevision and YES agreed to a one year agreement which allowed Cablevision to offer YES on a new regional sports tier that also included MSG Network and Fox Sports Net New York at $4.95 per month. Cablevision also offers subscribers each channel separately for $1.95 a month.[716]

C. Technical Issues

177. In 1994, most technical efforts were focused on the development and use of digital compression and modulation technologies. On June 17, 1994, high-power DBS service, DirecTV, began its operation as an all-digital technology, capable of providing hundreds of channels of services, whereas cable was still providing an average of less than 47 channels via the analog standard.[717] Also at that time, telephone companies were contemplating the use of digital compression technologies to provide ADSL data transport services over their wired networks.[718] The cable industry accelerated the upgrade of its wired networks so that it could continue to experiment with, and deploy such advanced and competitive services as voice, data transport (later known as Internet access services), and advanced video services such as video-on-demand ("VOD"). Cable operators began to launch trials and commercial deployments of advanced service offerings as systems increased their capacity to handle such services. For example, at the end of 1994, Time Warner launched a commercial trial of VOD service in its Orlando, Florida, system, the first such service. Time Warner's early entry into the VOD market, however, was short-lived and the operation was closed by mid-1997.[719] By the time of our *1998 Report*, VOD deployment was more or less abandoned by cable operators, and instead cable operators were beginning to offer digital video services, facilities-based high-speed Internet access, and facilities-based cable telephony, with plans for widespread deployment of these services as networks continued to be upgraded. Today, advanced services are still evolving. With digital compression technology now in widespread use, as well as many of the services operating on cable platforms such as cable telephony and high-speed Internet access services, cable operators and other MVPDs are once again implementing VOD and other emerging services such as interactive television.

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[715] Peter Grant, *Cable Firms Cheer Yankee Network's Pact*, THE WALL STREET JOURNAL, Mar. 21, 2003, at B2. *See also* Ken Kerschbaumer, *Cablevision Finally Says YES*, BROADCASTING & CABLE, Mar. 17, 2003, at 2.

[716] *Id.* Cablevision offers some alternative pricing for subscribers already receiving MSG and Fox Sports and some premium packages.

[717] Kagan World Media, *Channel Capacity Projections by Technology*, Marketing New Media, Sept. 16, 1996, at 1. Originally launched in 1991 as an analog service, medium-power DBS provider, Primestar, a DBS service owned and operated by a collective of cable operators, did not begin to use digital technology until July 31, 1994. Primestar service was acquired by DirecTV in 1998.

[718] *1994 Report*, 9 FCC Rcd at 7500-2 ¶ 112-115.

[719] Michael Grebb, *Time Warner Capitulates on VOD*, WIRED NEWS, May 1, 1997.

1. Cable Modems

178. Cable modems allow cable subscribers to access high-speed data services, over hybrid fiber-coaxial (HFC) cable plants.[720] At the time of our first *Report* in 1994, the Internet was still a nascent technology. Only five years later, the Internet was available via broadband, with approximately 300,000 cable modem subscribers achieving average data access speeds of between one and ten Mbps, with reported top speeds of 52 Mbps.[721] Cable modem deployment continues to increase, with manufacturers shipping nearly 1.9 million cable modems in North America during the second quarter of 2003.[722] By June 2003, there were approximately 13.4 million cable modem subscribers in the U.S.[723] At the time of our *1998 Report*, most subscribers to cable modem service leased the modem from an MSO. Today, approximately 70% of video subscribers taking high-speed Internet access services purchase their own modems.[724]

179. ***DOCSIS***. We continue to report on the progress of the CableLabs Certified Cable Modem Project (formerly known as Data Over Cable Service Interface Specification or DOCSIS). Although cable modems were not available for residential use at the time of our *1994 Report*, a group of cable operators, joined together in December 1996 to issue a Request for Proposal ("RPF") that resulted in the development of the DOCSIS standard.[725] DOCSIS defines interface requirements for cable modems and cable modem termination systems ("CMTS") used for high-speed data distribution. Originally only one among many proposed standards, DOCSIS emerged as the leading option for the cable modem standard in late 1997.[726] In March 1998, the International Telecommunications Union approved DOCSIS.[727] In June 1998, CableLabs hosted a series of Interoperability and Certification conclaves to initiate the certification of the DOCSIS

[720] As described above, cable modem service is primarily residential service, but may also include some small business service. *See* fn. 135 *supra. See also* para. 53 *supra.*

[721] *The Web Contains 7 Million Sites*, Pandia Search, at http://www.pandia.com/searchworld/2000-39-oclc-size.html (visited Nov. 17, 2003); *1998 Report*, 13 FCC Rcd at 24313 ¶ 52. These speeds represent download speeds. In the first several years of residential broadband Internet access use, return path (or upload) data transfer was often conducted over a telephone line at significantly lower data transfer speeds than the broadband downloads. *See 1998 Report*, 13 FCC Rcd at 24316 ¶ 55; *see also Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, 14 FCC Rcd at 2398 (1999).

[722] Kinetic Strategies, *Cable Modem Market Stats & Projections*, CABLE DATACOM NEWS, June 5, 2003, at http://cabledatacomnews.com (visited Sept. 23, 2003).

[723] Richard Bilotti, Benjamin Swinburne, Megan Lynch, *Broadband Update*, Morgan Stanley, July 7, 2003 at 16. *See also* NCTA Comments at 57.

[724] According to a Morgan Stanley report, an average of 68.4% of video subscribers to the top five MSOs purchased their modems as opposed to leasing them from the cable operator. Time Warner is not included in this average, since data was not available. Richard Bilotti, Benjamin Swinburne, Megan Lynch, *The Copernicus Theorem,* Morgan Stanley, July 2, 2003, at 37.

[725] *1998 Report*, 13 FCC Rcd at 24318-9 ¶ 57.

[726] *Id*.

[727] *Id*.

standard.[728] In general, DOCSIS certified modems are compatible with and inter-changeable across similarly certified DOCSIS equipped headends.

180. The first specification, DOCSIS 1.0, allows cable operators to deliver high-speed Internet services on a "best effort" basis simultaneously over the same plant as core video services.[729] To date, CableLabs has certified 234 DOCSIS 1.0 modems and 28 DOCSIS 1.0 CMTSs.[730] The next specification, DOCSIS 1.1, was designed to provide quality of service ("QoS") functionality allowing operators to offer such products as IP telephony and tiered services.[731] To date, CableLabs has certified 97 high-speed cable modems that comply with the DOCSIS 1.1 specification, and it has certified 25 DOCSIS 1.1 CMTSs.[732] In January 2002, CableLabs completed specifications for its latest standard, DOCSIS 2.0, which is designed to address issues concerning the upstream portion of the cable plant (the transmission from the consumer to the Internet), creating the standard for a network that has 30 Mbps capacity in both directions To date, CableLabs has certified 34 high-speed cable modems that comply with the DOCSIS 2.0 specification, and one DOCSIS 2.0 CMTS.[733] As of September 2003, 365 DOCSIS modems have received certification and 54 CMTSs have gained qualified status under DOCSIS. All DOCSIS updates are compatible with earlier versions of DOCSIS products.[734]

181. Most operators continue to improve their high-speed Internet access service. Comcast, for example, has recently increased its downstream speeds for residential customers from 1.5 Mbps to 3 Mbps in 14 markets, with more to follow.[735] RCN increased its 3 Mbps "MegaModem" service to 5 Mbps in

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[728] *Id*.

[729] "Best effort" is a term for a quality of service class with no specified parameters and with no assurances that the traffic will be delivered across the network to the target device. Newton's Telecom Dictionary, 17th Edition, at 88.

[730] *See* CableLabs, *Certification and Qualification Testing*, at http://www.cablemodem.com/certification/ (visited Oct 24, 2003); *see also* CableLabs, *Four More DOCSIS 2.0 Modems Gain CableLabs Certified Status* (press release), July 25, 2003.

[731] IP telephony (also called "voice-over-IP" or "VoIP") is currently being deployed by some cable operators, and is expected to become an important service offering. By 2004, industry analysts expect cable operators to begin offering tiered services, which will include lower priced options with slower speeds. Richard Bilotti, Benjamin Swinburne, Megan Lynch, *Broadband Update*, Morgan Stanley, July 7, 2003, at 3. QoS guarantees network bandwidth and availability for applications. Any real-time media needs to be given prioritized traffic management treatment in order to assure the best user-perceived quality. NCTA, *Glossary of Cable & Telecommunications Terms,* Cable Developments 2003, at 293.

[732] *See* CableLabs, *Certification and Qualification Testing*, at http://www.cablemodem.com/certification/ (visited Oct. 24, 2003); *see also* CableLabs, *Four More DOCSIS 2.0 Modems Gain CableLabs Certified Status* (press release), July 25, 2003.

[733] *See* CableLabs, *Certification and Qualification Testing*, at http://www.cablemodem.com/certification/ (visited Oct 24, 2003).

[734] CableLabs, *Four More DOCSIS 2.0 Modems Gain CableLabs Certified Status* (press release), July 25, 2003.

[735] Comcast Corp., *Comcast to Double Downstream Speeds for Comcast High-Speed Internet Customers* (press release), Oct. 2, 2003.

response to customer demands for more speed.[736] Several operators are adding voice services over the Internet access platform using Voice Over Internet Protocol (VoIP), such as Cablevision's Optimum Voice service.[737] Bright House, Cox, and Time Warner are conducting limited trials of this type of voice service and are expected to increase their deployments in the next year.[738]

182. ***PacketCable***. PacketCable, another CableLabs project, is the standard developed for delivering advanced, real-time multimedia services over two-way cable plant.[739] The PacketCable effort began in 1997 when a team comprised of CableLabs members identified the need for a multimedia architecture to support the delivery of advanced services over DOCSIS 1.1. cable modem architecture.[740] PacketCable enables a wide range of services, including IP telephony, multimedia conferencing, interactive gaming, and general multimedia applications.[741] In late 2001, CableLabs established the PacketCable test program to begin qualifying vendor equipment over the course of four certification waves in 2002.[742] As of April 2003, a total of nine PacketCable devices were certified or qualified in the CableLabs certification test.[743] Currently, PacketCable's IP telephony is the service being focused on by the cable community.

2. Navigation Devices

183. Section 629 of the Communications Act directed the Commission to adopt rules that would allow consumers to obtain "navigation devices," such as cable set-top boxes and other equipment, from commercial sources other than their cable providers.[744] In 1998, the Commission adopted rules that require MVPDs to unbundle security from other functions of the navigation device and, to make available

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[736] RCN Corp., *RCN Raises the Bar By Increasing Cable Modem Download Speeds to Up to 5 Mbps* (press release), Oct. 2, 2003.

[737] CSC Holdings, Inc., *Phone Services-Optimum Voice*, at http://www.optimumvoice.com/ (visited Oct. 28, 2003).

[738] Eric Hellweg, *An Investor's Guide to VOIP*, CNN MONEY, Oct. 20, 2003, at http://money.cnn.com/2003/10/20/ technology/techinvestor/hellweg/ (visited Oct. 28, 2003); Kinetic Strategies, Inc., *Volo Starts Cable VoIP Trial in Florida*, CABLEDATACOMNEWS.COM, Oct. 1, 2003, at http://www.cabledatacomnews.com/oct03/oct03-7.html (visited Oct. 28, 2003).

[739] Cable Labs, *PacketCable Home*, at http://www.packetcable.com (visited Oct. 3, 2003).

[740] Cable Labs, *Two CMS and Additional PaketCable Devices Get Certified/Qualified in Wave 25* (press release), Apr. 11, 2003.

[741] Cable Labs, *PacketCable Home*, at http://www.packetcable.com (visited Oct. 3, 2003).

[742] CableLabs, *PacketCable Qualification Process Ready for 2002* (press release), Nov. 6, 2002. CableLabs established the specifications in late 2000. *See* CableLabs, *Cablelabs Releases New Interim PacketCable Specifications* (press release), Nov. 28, 2000.

[743] Cable Labs, *Two CMS and Additional PaketCable Devices Get Certified/Qualified in Wave 25* (press release), Apr. 11, 2003.

[744] 47 U.S.C. § 549.

point-of-deployment modules ("PODs"), to separately perform the conditional access function.[745] Thus, an MVPD subscriber would be able to obtain a set-top box without the security features ("host device") from a retailer, and the MVPD would provide a card-sized POD module for security functions (also called a "CableCARD").[746]

184. In the *Second Report and Order* in the navigation devices proceeding, the Commission adopted technical, labeling and encoding rules to permit TV sets to be built with "plug-and-play" functionality for one-way digital cable services, which include typical cable programming services and premium channels.[747] "Plug and play" means consumers can plug their cable directly into their digital TV set without the need for a set-top box. At this time, consumers will still need a set-top box to receive two-way services, such as video on demand, pay-per-view, and cable operator-enhanced electronic programming guides. However, cable and consumer electronics industries continue to work on the development of an agreement for two-way "plug-and-play" receivers.[748] The Commission also initiated a *Second Further Notice of Proposed Rulemaking* to examine potential processes for approving new digital output and content protection technologies, including potential use of objective criteria. [749]

185. Prior to adoption of the *Second Report and Order,* through the OpenCable project, CableLabs developed hardware specifications for the POD module ("Cable-CARD"), as well as specifications for the software interface that a host device needs to accommodate the POD (known as the OpenCable Application Platform or "OCAP").[750] To begin development under the OpenCable project, manufacturers had to sign the POD-Host Licensing Agreement ("PHILA") in order to get access to the necessary technology to make PODs function in host devices.[751] Currently, there are 14 companies that signed the PHILA.[752] The companies that have signed include manufacturers of digital televisions and set-

[745] 47 C.F.R. §§ 76.1202 and 76.1204. *See Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices* 13 FCC Rcd 14775 (1998) *("First Navigation Report and Order*").

[746] The POD, or CableCARD requirement is intended to permit portability among set-top boxes, which will increase the market base and facilitate volume production. *First Navigation Report and Order*, 13 FCC Rcd at 14793-4 ¶ 49. *See also* Cable Labs, *Open Cable-OCAP*, at http://www.opencable.com/ocap.html.

[747] *Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices,* 18 FCC Rcd 20885 (2003) ("*Second Report and Order and FNPRM*").

[748] *Id.*

[749] *Id*.

[750] *See* CableLabs, *Open Cable Project Primer*, at http://www.opencable.com.primer/ (visited Oct. 3, 2003). CableLabs, *CableLabs Publishes OCAP Middleware Specifications* (press release), Jan. 3, 2002; *see also 2002 Report*, 17 FCC Rcd at 26970-1 ¶ 169. Specifications for OCAP 1.0, completed on December 21, 2001, provides for the downloading and execution of applications such as program guides and interactive content, to any OCAP-enabled devices by any cable system supporting OCAP. In May 2002, CableLabs released OCAP 2.0, which is designed to support additional interactive applications in consumer devices. Id.; CableLabs, *CableLabs Publishes OCAP 2.0 Middleware Specifications* (press release), May 6, 2002

[751] CableLabs, *Broadcom Corporation Signs CableLabs PHILA* (press release), Mar 31, 2003.

[752] *Id*.

top boxes, as well as other companies in the digital video industry.[753] Three suppliers of interoperable CableCARDS have been qualified by CableLabs.[754] Seven companies have submitted a total of 45 patents for assessment under the OCAP intellectual property rights agreement ("IPR").[755] In August 2003, following the completion of a wave of certification testing, CableLabs granted OpenCable certified status to Panasonic for four models of integrated DTV sets that connect directly to cable systems.[756] Now, both host devices and PODs are CableLabs certified.

186. Following the *Second Report and Order,* CableLabs released the DFAST Technology License Agreement for Unidirectional Digital Cable Products ("the DFAST License").[757] For manufacturers implementing "plug-and-play" products, the DFAST License replaces the PHILA. Initial devices must still be tested by a qualified test facility; however, subsequent models may be self-certified by the manufacturer.[758] The Consumer Electronics Association ("CEA") supports the Commission's *Second Report and Order and FNPRM*, and notes that "plug-and-play" will accelerate the sale of DTV-related consumer products..[759] In addition, CEA assets that timely implementation of a "Phase II" agreement for bi-directional services is necessary for the competitive supply of interactive digital cable-ready products that are fully interoperable with cable systems around the country.[760] The Consumer Electronics Retailers Coalition contends that beyond the Phase I issues covered in the *Second Report and Order* with regard to "plug and play," there must be a Phase II to provide for a truly competitive market for navigation devices in which all interactive features are made compatible or set-top boxes use specifications that are made public.[761] The Consumer Electronic Retailers Coalition also notes that despite the development of some retail products, no "PHILA" device is yet available at retail.[762]

3. Emerging Services

187. *Interactive Television ("ITV").* We continue to monitor development of ITV technologies and services. In broad terms, ITV services are services that support subscriber-initiated

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[753] *Id*.

[754] CableLabs, *CableLabs Awards CableCARD Qualification to NDS* (press release), Aug. 5, 2003.

[755] CableLabs, *CableLabs Joins Call for IPR Related to OCAP; Promotes Formation of Patent Pool* (press release), May 7, 2003.

[756] *Panasonic Notches Digital Milestone: Four Models of Integrated Digital Television Sets Achieve CableLabs OpenCable Certified Status* (press release), Aug. 14, 2003.

[757] CableLabs, *CableLabs Releases the DFAST Technology License Agreement for Plug and Play Devices* (press release), Oct. 20, 2003.

[758] *Report and Order and Second Further Notice of Proposed Rulemaking,* FCC 03-255, Sept. 10, 2003, at 38.

[759] CEA Comments at 9-10; CEA Reply Comments at 2.

[760] CEA Reply Comments at 2.

[761] CERC Comments at 3-4.

[762] *Id.* at 4.

choices or actions that are related to one or more video programming streams.[763] The Commission has noted that ITV was rapidly developing, thus making it difficult to define with specificity the precise universe of services that might be encompassed within the term. For purposes of discussion, the Commission instead attempted to identify the major technical resources or "building blocks" necessary for the provision of what it understood to be likely ITV services.[764] The identified components were: (1) a video transmission capacity associated with interactive content (*e.g.*, the digital video stream); (2) a two-way connection (*e.g.*, via the Internet); and (3) specialized customer premises equipment (*e.g.*, the interactive television set-top box).[765] For example, an interactive television service might be a "t-commerce" service, permitting consumers to electronically purchase merchandise related to the displayed video.[766] Although not requiring a return path, service offerings such as electronic program guides ("EPGs"), might also fit within the category.[767] A wide variety of services from data enhancements to interactive gaming may also be described as ITV services.[768]

188. At the time of our *1994 Report,* ITV services as described above were not in use. By the time of our *1998 Report*, cable, DBS and other MVPDs were offering such ITV services as advanced electronic program guides, but t-commerce, and many of the other anticipated interactive services remained under development. Today, cable MSOs and DBS operators continue to develop a variety of ITV services in order to increase subscribership, develop new streams of revenue, and reduce churn. The assortment of interactive and enhanced interactive television products currently being developed makes following ITV trends challenging.[769] One industry observer notes that while many have been focused on the growth of enhanced interactive television (t-commerce and play-along interactivity), video subscribers have been "interacting" with their televisions daily through such ITV services as program guides and such emerging services as VOD and PVRs, described later in this section.[770] Other industry observers note that Websites offering interactivity synchronized to broadcast content remains the leading approach to enhanced ITV

[763] *See Nondiscrimination in the Distribution of Interactive Television Services Over Cable*, 16 FCC Rcd 1321 (2001) *("ITV NOI")*. The Commission sought comment on whether rules are necessary to prevent anticompetitive behavior and to promote diversity and capital investments in the ITV market.

[764] *Id.* at 1323-28 ¶¶ 6-20.

[765] *Id.* at 1324-5 ¶¶ 10-13. *See also AOL Time Warner Order*, fn. 94 *supra,* 16 FCC Rcd at 6637-9 ¶¶ 218-226.

[766] *ITV NOI*, 16 FCC Rcd at 1323 ¶ 6.

[767] An EPG is an on-screen directory of programming. An interactive EPG (also known as an "IPG") allows users to sort and search programming, gives program descriptions, provides reminders of upcoming programming, and takes users to programming they select.

[768] Enhanced television services generally allow the viewer to obtain more information on certain programming, purchase products, permit the manipulation of the video image, or provide input on questions posed by the program distributor. With this type of technology, the subscriber accesses a graphic interface, overlay, or a screen that wraps around the displayed video signal(s), providing supplementary information related to the video display or a t-commerce opportunity.

[769] *Study Reveals Growth for iTV Advertising*, IMEDIA, Sept. 11, 2003.

[770] Ed Forman, *ITV Its Already A Part of Life in the US, and Only Cable Can Make the Most of It*, CABLE WORLD, Sept. 29, 2003.

services.[771] One study found that more than 30 networks, including all major broadcast and most major cable networks, now offer some form of enhanced programming.[772]

189. Interactive television standards remain under development.[773] Last year we reported that CableLabs has recommended that cable operators include the European Digital Video Broadcast-Multimedia Home Platform ("DVB-MHP") application program interface in the OCAP specification in order to support ITV software applications in the United States.[774] In July 2002, CableLabs hosted an interoperability event demonstrating support and incipient adoption of the OCAP middleware specification including the MHP standard.[775] In February 2003, the ITV Production Standards Initiative, led by GoldPocket, released version 1.1 of its "XML" specification for writing interactive television programs.[776]

190. On October 2, 2003, the Advanced Television Systems Committee ("ATSC") announced that it successfully harmonized its DTV Application Software Environment ("DASE") specification with CableLabs' OCAP specification creating the Advanced Common Application Platform ("ACAP"). ACAP is currently a candidate standard awaiting implementation and technical feedback. This new standard will provide content creators, broadcasters, cable operators and consumer electronics manufacturers with the technical details required to develop interoperable services and products across all platforms.[777]

191. ***Video-on-Demand ("VOD")***. VOD permits subscribers to instantly access video programming content on a program by program basis. VOD subscribers are able to pause, fast-forward, or rewind programming in the same manner as permitted by a traditional video recorder. VOD is an evolved form of pay-per-view where subscribers do not have to wait to view desired programming. VOD requires the cable operator to install high-capacity video servers in its head-end (central office), and requires a digital set top box in the subscriber's home.[778] At the time of our *1994 Report*, VOD was limited to a single trial of VOD service by Time Warner. This deployment was unsuccessful and service ended three years later. One industry observer estimates that over 50 million digital cable and DBS subscribers interact with their televisions daily through the use of VOD and PVRs, at an average of 100

[771] *Study Reveals Growth for iTV Advertising*, IMEDIA, Sept. 11, 2003.

[772] *Id*.

[773] Tim Halle, *Standards for Interactive Television: A Brief State of the Union*, ETV Cookbook, Mar. 27, 2003, at http://etvcookbook.org/reference/standards.html.

[774] *See 2002 Report*, 17 FCC Rcd at 26972 ¶ 171.

[775] CableLabs, *CableLabs Demonstrates Interoperability of ITV Applications* (press release), Aug 1, 2002.

[776] ITV Standards, *ITVProduction Standards Initiative Publishes Version 1.1 of Open XML Specification for Interactive Television* (press release), Feb. 10, 2003. Improvements to the specification include the delineation of timing as its own element instead of as an attribute of each of the content types. Other improvements include the addition of genre, sequence, and status as new attributes to extend the richness of the content types; changes to data types to increase flexibility; and clearer definition of hierarchy and grouping. *Id*. *See also* ITV Standards, at http://www.itvstandards.org/iTVPublic/overview.aspx.

[777] ATSC, *ATSC Published New Interactive "ACAP" Candidate Standard* (press release), Oct. 2, 2003.

[778] *See* paras. 44-45, 76 *supra* for discussions of VOD deployments.

interactions per subscriber household per day.[779] According to one analyst, there were about 6.5 million VOD-enabled digital households at year-end 2002 and, by year-end 2003, there will be as many as 12.8 million.[780] In addition, the same analyst notes that, as of year-end 2002, there were 700,000 subscription-VOD households, and that, by year-end 2003, there will be three million.

192. *Personal Video Recorders ("PVRs").* A PVR is a device connected to a television set, either embedded in a set-top box or as a stand-alone device, which uses a hard disk drive, software, and other technology to digitally process and record programming. PVR technology allows a consumer to pause, replay, rewind, and fast-forward television programs as well as skip past commercials. PVRs cannot play prerecorded videocassettes or DVDs, but can record pay-per-view signals or other content from digital platforms.[781] As many as 700,000 DBS homes were PVR enabled as of year-end 2002, and it is estimated that by year-end 2003, there will be 1.6 million DBS homes and almost one million cable homes that are PVR enabled.[782] As many as 500,000 "stand-alone" PVR have been deployed as of year-end 2002, and as many as 1.1 million will be deployed as of year-end 2003.[783]

IV. FOREIGN MARKETS

193. In the *Notice*, the Commission invited comment on developments in countries outside of the United States that might help to inform our understanding of video competition in the U.S. market.[784] Although none of the commenting parties responded to this invitation, we continue to believe that insights may be derived from such developments.

194. For example, the process whereby the television broadcasting system transitions from analog to digital transmissions is an important competitive issue both domestically and in Europe and has recently been successfully accomplished in the Berlin-Brandenburg television market in Germany. On August 4, 2003, analog transmission of terrestrial broadcast television service ceased in that market and was replaced with digital transmissions. It would appear that there may be potential lessons to be learned from this experience, although there are significant differences from the technical, economic, and regulatory situation in the United States as well.

195. On the transition date, terrestrial broadcasters in Berlin switched off their analog transmissions and commenced broadcasting solely in a digital form. Each of the stations involved, which had been broadcasting a single programming service, started transmitting a "bouquet" or multiplex of digital services. Both before and after the transition, all of the services involved were in standard

[779] Ed Forman, *ITV Its Already A Part of Life in the US, and Only Cable Can make the Most of It*, CABLE WORLD, Sept. 29, 2003

[780] Richard Bilotti, Benjamin Swinburne, Megan Lynch, and Jeremy Falk, *PVR and VOD: Video Real Estate-Buy vs. Lease*, Morgan Stanley, Aug. 10, 2003, at 3 and 6.

[781] *See* paras. 60, 76, 111 *supra* for additional discussions of PVRs.

[782] Richard Bilotti, Benjamin Swinburne, Megan Lynch, and Jeremy Falk, *PVR and VOD: Video Real Estate-Buy vs. Lease*, Morgan Stanley, Aug. 10, 2003, at 6.

[783] *Id*. at 9. "Standalone" PVRs are purchased directly by the consumer, and subscriptions are managed by independent companies such as TiVo or ReplayTV. *Id.*

[784] *Notice*, 18 FCC Rcd at 16056 ¶ 48.

definition format. Unlike the situation in the United States, no transmission or reception of high definition content was involved. After the transition, all off-air viewers required either a new integrated digital television receiver or a digital set-top box in order to receive service. Of the 1.8 million television households in the market, some 160,000 receive terrestrial off-air reception only, with the rest receiving cable or satellite service. Ninety thousand homes were estimated to receive off-air reception on a second or third receiver. In terms of viewers' perceptions, it appears that neither satellite nor cable television subscribers were significantly affected by the change because of the signals in question being reconverted to analog format prior to consumer reception.

196. Among the reasons attributed for the success of the conversion were the following: (1) a relatively small percentage of viewers obtaining service through direct off-air reception; (2) significant improvements in the quality and amount of service available to these viewers after the transition; (3) a robust digital transmission system facilitating indoor reception; (4) the availability of relatively low cost analog to digital set-top box converters; (5) set-top box subsidy mechanisms for disadvantaged portions of the population; (6) careful coordination between all of the commercial and governmental entities involved; and (7) an aggressive communications program to prepare and keep the public informed of the changes taking place. A portion of the population also appears to have welcomed the change as providing an alternative to becoming dependent solely on cable reception.[785]

V. ADMINISTRATIVE MATTERS

197. This *2003 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).

198. It is ORDERED that the Office of Legislative Affairs shall send copies of this *2003 Report* to the appropriate committees and subcommittees of the United States House of Representatives and the United States Senate.

199. It is FURTHER ORDERED that the proceeding in MB Docket No. 03-172 IS TERMINATED.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

[785] *See Berlin Goes Digital; The Switchover of Terrestrial Television From Analogue to Digital Transmission in Berlin-Brandenburg.* Project Report of the Medienanstalt-Berlin-Brandenburg, at http://www.MABB.de.

APPENDIX A

LIST OF COMMENTERS

Initial Comments

A&E Television Networks, Inc. and the Courtroom Television Network LLC ("A&E")
American Cable Association ("ACA")
BellSouth Corporation ("BellSouth")
Broadband Service Providers Association ("BSP")
Coalition of Small Video Operators ("Coalition")
Comcast Corporation ("Comcast")
Consumer Electronics Association ("CEA")
Consumer Electronics Retailers Coalition ("CERC")
Cox Communications, Inc. ("Cox")
DIRECTV, Inc. ("DirecTV")
National Cable Television Association ("NCTA")
National Rural Telecommunications Cooperative ("NRTC")
Paxson Communications Corporation ("Paxson")
Quest Communications International Inc. ("Qwest")
RCN Corporation ("RCN")
Rural Independent Competitive Alliance ("RICA")
Satellite Broadcasting and Communications Association ("SBCA")
Time Warner Cable ("Time Warner")
W.A.T.C.H. TV Company ("W.A.T.C.H. TV").

Reply Comments

Comcast Corporation ("Comcast")
Consumer Electronics Association ("CEA")
Consumer Federation of America Consumers Union, Center For Digital Democracy Common Cause, Center For The Creative Community, United Church of Christ, Office of Communications, INC., U.S. Prig, The Association of Independent Video and Filmmakers, The National Alliance For Media Arts and Culture, and The Media Access Project ("CFA")
DIRECTV, Inc. ("DirecTV")
Fox Entertainment Group, Inc. and Fox Television Stations, Inc.; National Broadcasting Company, Inc. and Telemundo Communications Group, Inc; Viacom; and the Walt Disney Company and The ABC Television Network ("Broadcast Networks")
iN DEMAND L.L.C. ("iN DEMAND")
National Association of Broadcasters ("NAB")
National Cable & Telecommunications Association ("NCTA")
National Rural Telecommunications Cooperative ("NRTC")
Organization for the Promotion and Advancement of Small Telecommunications Companies ("OPASTCO")
Paxson Communications Corporation ("Paxson")
RCN Corporation ("RCN")
SES Americom, Inc. ("SES")

APPENDIX B
TABLE B-1
Assessment of Competing Technologies[(i)]

Technology Used	Dec. 93	June 98	June 01	June 02	June 03
(1) TV Households	94,200,000	98,000,000	102,184,810	105,444,330	106,641,910
Percent Change	1.18%	1.03%	1.37%	3.19%	1.14%
(2) MVPD Households[(ii)]	60,283,000	76,634,200	87,830,074	89,890,641	94,150,000
Percent Change	4.79%	4.06%	4.60%	2.35%	4.74%
Percent of TV Households	63.99%	78.20%	86.42%	85.25%	88.29%
(3) Cable Subscribers	57,200,000	65,400,000	68,500,000	68,800,000	70,490,000
Percent Change	3.62%	1.95%	1.18%	0.04%	2.46%
Percent of MVPD Total	94.89.%	85.34%	77.99%	76.54%	74.87%
(4) MMDS Subscribers	397,000	1,000,000	700,000	490,000	200,000
Percent Change	22.91%	-9.09%	0.0%	-30.00%	-59.18%
Percent of MVPD Total	0.66%	1.30%	0.80%	0.55%	0.21%
(5) SMATV Subscribers	1,004,000	940,000	1,500,000	1,600,000	1,200,000
Percent Change	2.03%	-19.14%	0.0%	6.67%	-25.00%
Percent of MVPD Total	1.67%	1.23%	1.71%	1.78%	1.27%
(6) HSD Subscribers	1,612,000	2,028,200	1,000,074	700,641	502,191
Percent Change	57.58%	-7.15%	-32.28%	-29.94%	-28.32%
Percent of MVPD Total	2.67%	2.65%	1.14%	0.78%	0.53%
(7) DBS Subscribers	<70,000	7,200,000	16,070,000	18,240,000	20,360,000
Percent Change		42.66%	23.74%	13.66%	11.62%
Percent of MVPD Total	0.12%	9.40%	18.30%	20.29%	21.63%
(8) OVS Subscribers[(iii)]	0	66,000	60,000	60,000	60,000
Percent Change		2100.00%	0.0%	0.0%	0.0%
Percent of MVPD Total		0.09%	0.07%	0.07%	0.01%
(9) BSP Subscribers[(iv)]					1,400,000
Percent of MVPD Total					1.49%

Notes:

(i) Some numbers have been rounded.

(ii) The 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 given total can be seen as a reasonable estimate of the number of MVPD households.

(iii) The decline in OVS subscribers since 1998 reflects the conversion of portions of some OVS systems to franchised cable systems over the last three years.

(iv) Beginning this year, we will report broadband service provider ("BSP") Subscribers, but we are unable to provide a growth rate from previous years due to lack of data. This number includes some, if not all, OVS subscribers, and may double count some cable subscribers from newer cable overbuild systems. Beginning

next year, this figure will replace the OVS subscriber number.

Sources:

(1) Television households: 1994 from A.C. Nielsen Co. cited by Veronis, Suhler & Associates, *Homes Passed by Cable and Incidence of Subscription,* The Veronis, Suhler & Associates Communications Industry Forecast, July 1995, at 145; 1998 from Nielsen Media Research as cited in Broadcasting & Cable, June 29, 1998, at 70; and 2001 - 2003 from 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 (ii) above.

(3) Cable subscribers: 1993 from Paul Kagan Associates, Inc., *History of Cable and Pay-TV Subscribers and Revenues,* Cable TV Investor, June 30, 1995, at 5; 1998 from Paul Kagan Associates, Inc., *Paul Kagan's 10-Year Cable TV Industry Projections,* Cable TV Investor, August 10, 1998, at 4; 2001 from Kagan World Media, *Kagan's 10-Year Cable TV Industry Projections,* Broadband Cable Financial Databook 2001, July 2001, at 10; 2002 from Kagan World Media, *Kagan's 10-Year Cable TV Industry Projections,* Broadband Cable Financial Databook 2002, July 2002, at 10; and 2003 from NCTA Comments at 8.

(4) MMDS subscribers: 1993 from Paul Kagan Associates, Inc., *Wireless Cable Industry Projections, 1992-2002,* The 1995 Wireless Cable Databook, Jan. 1995, at 23; 1998 estimated by the FCC; 2001 from NCTA Comments for the *2001 Report* at 7; 2002 from NCTA Comments for the *2002 Report* at 12; and 2003 from NCTA Comments at 8.

(5) SMATV subscribers: 1993 from *Cable & Pay TV Census – December,* Marketing New Media, Dec. 19, 1994, at 4; 1998 from NCTA Comments for the *1998 Report* at 6; 2001 from NCTA Comments for the *2001 Report* at 9; 2002 from NCTA Comments for the *2002 Report* at 12; and 2003 from NCTA Comments at 8.

(6) HSD subscribers: 1993 from *Subscription Data from General Instrument* (Chart), SkyReport, Oct. 1994, at 21; 1998 from SkyReport.com, at http://www.skyreport.com/dth_us.htm; 2001 from SBCA Comments for the *2001 Report* Table 1 at 4; 2002 from SkyReport.com, at http:// www.skyreport.com/dth_us.htm; and 2003 from SBCA Comments at 4.

(7) DBS subscribers: 1993 from *Let the Games Begin,* SkyReport, May 1994, at 2; 1998 from Minal Damani and Jennifer E. Sharpe, *U.S. DBS Marketplace: 1998,* The Strategis Group, July, 1998 at 6; 2001 from SBCA Comments for the *2001 Report,* Table 1 at 4; 2002 from SkyReport.com, at http://www.skyreport.com/ dth_us.htm; and 2003 from SBCA Comments at 4.

(8) OVS subscribers: Estimated by the FCC.

(9) BSP subscribers: NCTA Comments at 8.

TABLE B-2
Number and Subscriber Size of Major Cable System Clusters
(Cumulative Figures)

Range of Clustered Subscribers (thousands)	1994*		1998		2001		2002	
	Clusters	Subscribers (millions)	Clusters	Subscribers (millions)	Clusters	Subscribers (millions)	Clusters	Subscribers (millions)
100-199	58	8.0	33	4.6	30	4.3	31	4.5
200-299	26	6.0	25	6.3	17	4.2	18	4.4
300-399	6	2.0	20	6.7	18	6.1	21	7.1
400-499	3	1.3	7	3.2	10	4.4	10	4.4
>500	4	2.8	21	19.6	32	33.3	29	31.0
Total	97	20.1	106	40.4	107	52.3	109	51.3

Sources:

Paul Kagan Associates, Inc., *Major Cable TV Systems/Clusters*, The Cable TV Financial Databook, 1995, at 38-39; 1999, at 46-48; 2001 from Kagan World Media, *Major Cable TV Systems/Clusters*, Broadband Cable Financial Databook 2002 at 38; and 2002 from Kagan World Media, *Major Cable TV Systems/Clusters*, Broadband Cable Financial Databook 2003, at 39.

* We did not report this information for 1993. 1994 is the first year we tracked these numbers.

TABLE B-3
2003 Concentration in the National Market for Purchase of Video Programming[1]

Rank	Company	**Percent of Subscribers[2]**
1	Comcast	22.69
2	DirecTV	12.32
3	Time Warner	11.62
4	EchoStar	9.35
Top 4		55.98
5	Charter	6.87
6	Cox	6.67
7	Adelphia	5.43
8	Cablevision	3.15
Top 8		78.10
9	Bright House	2.19
10	Mediacom	1.66
Top 10		81.95
Top 25		87.45
Top 50		89.29
	HHI	1031[3]

Notes:

(1) MSO subscriber totals as of June 2003, and reported in Top Cable System Operators as of June 2003, Kagan World Media, *Cable TV Investor,* Oct. 31, 2003, at 12-13. 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. For DirecTV and EchoStar subscribers, *see* Hughes Electronics Corp., *SEC Quarterly Report Form 10-Q Pursuant to Section 13 of 15(d) of the Securities Act of 1934 for the Quarterly Period Ended June 30, 2003 ("Hughes 2nd Quarter 2003 10-Q")*, at 37; EchoStar Communications Corp., *SEC Quarterly Report Form 10-Q Pursuant to Section 13 of 15(d) of the Securities Act of 1934 for the Quarterly Period Ended June 30, 2003*, at 20.

(2) The total number of MVPD subscribers used to calculate the HHI is 94,150,000 from Table B-1.

(3) The HHI is calculated on the basis of market shares for the top 62 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

Market Share	Percent of MVPD Subscribers				
	1993	1998	2001	2002	2003
Top Share	24.30	26.48	16.44	14.75	22.69
Top 2	36.90	42.62	30.79	29.04	35.01
Top 3	42.30	48.94	42.11	41.03	46.63
Top 4	47.20	54.63	51.64	50.48	55.98
Top 10	63.20	71.04	84.29	84.44	81.95
Top 25	83.10	80.99	89.70	90.26	87.45
Top 50	93.10	86.08	91.38	92.05	89.29
HHI	880	1096	905	884	1031

Sources:

Data for 1993 through 2002 were taken from *Reports, 1995-2002*. Data for 2003 are from Table B-3.

APPENDIX C
TABLE C-1
MSO Ownership in National Video Programming Services

Programming Service	Launch Date	MSO Ownership (%)
Action Max	Jun-98	Time Warner (100)
American Movie Classics (AMC)	Oct-84	Cablevision (60)
Animal Planet	Oct-96	Liberty Media (39.2), Cox (25)
@Max	May-01	Time Warner (100)
Black STARZ!	Feb-97	Liberty Media (100)
Canales ñ (6 digital channels)*	Aug-98	Liberty Media (90)
Cartoon Network	Oct-92	Time Warner (100)
Cinemax	Jun-98	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)
CNNfn	Dec-95	Time Warner (100)
Comedy Central	Apr-91	Time Warner (50)
Court TV	Jul-91	Liberty Media (50) Time Warner 50)
Discovery Channel	Jun-85	Liberty Media (50), Cox (25)
Discovery En Español	Oct-98	Liberty Media (50), Cox (25)
Discovery Health	Jul-98	Liberty Media (44.1), Cox (25)
Discovery HD Theatre	Jun-02	Liberty Media (50), Cox (25). Comcast (20)
Discovery Home & Leisure	Oct-96	Liberty Media (50), Cox (25)
Discovery Kids	Oct-96	Liberty Media (50), Cox (25)
Discovery Times (formerly Discovery Civilization)	Oct-96	Liberty Media (50), Cox (25)
Discovery Wings: The Aviation and Adventure Network	Jul-98	Liberty Media (50), Cox (25)
E! Entertainment	Jun-90	Comcast (50)
Encore	Apr-91	Liberty Media (100)

* Canales ñ, Liberty Media's digital package of Spanish-language channels, consists of

FoxSportsAmericas, CBS Telenoticias, CineLatino, BoxTejano, BoxExitos, and Canal 9.

Programming Service	Launch Date	MSO Ownership (%)
Encore Action	Sep-94	Liberty Media (100)
Encore Love Stories	Jul-94	Liberty Media (100)
Encore Mystery	Jul-94	Liberty Media (100)
Encore True Stories	Sep-94	Liberty Media (100)
Encore WAM! America's Youth Network	Sep-94	Liberty Media (100)
Encore Westerns	Jul-94	Liberty Media (100)
5StarMax	May-02	Time Warner (100)
Fox Sports World en Espanol	Feb-99	Liberty Media (10.6)
Fuse (formerly Much Music USA)	Jul-94	Cablevision (60)
Fuse On Demand	Jun-03	Cablevision (60)
G4 Video Gaming Network	Jun-02	Comcast (94)
Game Show Network	Dec-94	Liberty Media (50)
Golf Channel	Jan-95	Comcast (99)
Hallmark Channel	Sep-98	Liberty Media (32.5)
HBO (Home Box Office)	Nov-72	Time Warner (100)
HBO Latino	Nov-00	Time Warner (100)
HBO 2	Oct-98	Time Warner (100)
HBO Signature	Oct-98	Time Warner (100)
HBO Comedy	May-99	Time Warner (100)
HBO Family	Oct-98	Time Warner (100)
HBO Zone	May-99	Time Warner (100)
Health Network	Dec-93	Liberty Media (49), Cox (25)
Home Shopping Network	Jul-85	Liberty Media (20)
iN DEMAND (formerly Viewer's Choice) 35 multiplexed channels	Nov-85	Comcast (50), Time Warner (33), Cox (15)
Independent Film Channel	Sep-94	Cablevision (60)
International Channel	Jul-90	Liberty Media (90)
MoreMAX	Jun-98	Time Warner (100)
MoviePlex	Oct-94	Liberty Media (100)
Outdoor Life Network	Jul-95	Comcast (100)

Programming Service	Launch Date	MSO Ownership (%)
OuterMax	May-01	Time Warner (100)
Ovation: The Arts Network	Apr-96	Time Warner (4.2)
QVC	Nov-86	Liberty Media (98)
Science Channel (formerly Discovery Science Channel)	Oct-96	Liberty Media (50), Cox (25)
Sci-Fi Channel	Sept-92	Liberty Media (20)
Starz!	Mar-94	Liberty Media (100)
Starz! Cinema	May-99	Liberty Media (100)
Starz! Family	May-99	Liberty Media (100)
Starz! Theater	Mar-96	Liberty Media (100)
Style	Oct-98	Comcast (60)
TBS	Dec-76	Time Warner (100)
TLC (The Learning Channel)	Nov-80	Liberty Media (50), Cox (25)
Thriller Max	Jun-98	Time Warner (100)
TNT (Turner Network Television)	Oct-88	Time Warner (100)
Travel Channel	Feb-87	Liberty Media (50), Cox (25)
Turner Classic Movies	Apr-94	Time Warner (100)
USA Network	Apr-80	Liberty Media (20)
WE	Jan-97	Cablevision (60)
WMAX	May-01	Time Warner (100)

Sources:

NCTA, *Directory of Program Services*, Cable Developments 2003, at 43-174.
Liberty Media Corp., at http://www.libertymedia.com/our_affliliates/video_programming.htm.
iN DEMAND, at http://indemand.com/about/who.jsp.
CABLEFAX DAILY, April 9, 2003, at 1.
Kagan World Media, *Cable Networks*, Media Mergers & Acquisitions 2003, at 73-77.

TABLE C-2
National Video Programming Services
Not Affiliated With a Cable Operator

Programming Service	Launch Date
A&E (Arts & Entertainment)	Feb-84
ABC Family (formerly Fox Family Channel)	Apr-77
ACNTV (America's Collectibles Network)	Oct-93
America's Store	Sep-86
ANA Television Network	Dec-91
ART (Arab Radio & Television)	1999
BBC America	Mar-98
BET	Jan-80
BET Gospel	Jul-02
BET Hip Hop	Jul-02
BET Jazz: The Jazz Channel	Jan-96
Biography Channel	Nov-98
Black Belt TV: The Martial Arts Network	Jun-02
Bloomberg Television	Jan-95
B Mania	Nov-00
Bravo	Dec-80
Buzztime Entertainment	1984
Canal Sur	Aug-91
CCTV-4 (China Central Television)	1995
Celtic Vision	1995
Church Channel	Jan-02
Classic Arts Showcase	May-94
CMT (Country Music Television)	Mar-83
CNBC	Jul-89
CNBC World	Apr-89
College Entertainment Network	Jan-97
Crime Channel	Jul-96
C-SPAN*	Mar-79
C-SPAN2*	Jun-86
C-SPAN3*	Sep-97
CSTV (College Sports Television)	Apr-03
Deep Dish TV	Jan-86

Programming Service	Launch Date
Destiny Channel	Dec-98
Disney Channel	Apr-83
Do-It-Yourself Channel	Dec-94
Dream TV Network	Dec-94
Ecology Communications	Nov-94
ESPN	Sep-79
ESPN Classic Sports	May-95
ESPN2	Oct-93
ESPN EXTRA (formerly ESPN Now)	Jun-01
ESPN HD	Mar-03
ESPNEWS	Nov-96
EWTN: Global Catholic Network	Aug-81
Family Net	May-00
Filipino Channel (ABS-CBN)	Feb-98
Fine Living	Mar-02
Flix	Aug-92
Food Network	Nov-93
Fox Movie Channel	Nov-94
Fox News Channel	Oct-96
Fox Sports Digital Networks	Jun-01
Fox Sports World	Nov-97
FX	Jun-94
Fuel	Jul-03
Free Speech TV (FSTV)	Jun-95
Galavision	Oct-79
Gol TV	Unknown
Golden Eagle Broadcasting	Nov-98
Goodlife Television Network (formerly Nostalgia Channel)	Feb-85
Great American Country	Dec-95
HDNET	Sep-01
HDNET Movies	Jan-03
History Channel	Jan-95
History Channel International	Nov-98
Home & Garden Television	Dec-94
Horse Racing TV	Dec-02

Programming Service	Launch Date
Hot Choice	Jun-86
Hot Net	Mar-99
Hot Zone	Mar-99
HTV	Aug-95
Inspirational Life Television (I-LIFETV)	Jun-98
Inspirational Network (INSP)	Apr-90
Interactive Channel	Nov-93
JCTV	Nov-02
La Familia Network	May-02
Liberty Channel	Sep-01
Lifetime Movie Network	Jul-98
Lifetime Real Women	Aug-01
Lifetime Television	Feb-84
Locomotion Channel	Nov-96
MBC Network	Nov-99
MBC America (MUNHWA Broadcasting Corporation)	Unknown
Meadow Racing Network	Nov-84
MSNBC	Jul-96
MTV Español	Aug-98
MTV Hits	May-02
MTV Jams	May-02
MTV Latin America	Oct-93
MTV: Music Television	Aug-81
MTV 2	Dec-98
Mun2	Oct-01
My Pet TV	Sep-96
NASA Television	Jul-91
National Geographic Channel	Jan-01
National Jewish Television	May-81
N.B.A. TV	Nov-99
Newsworld International	Sep-94
NFL Network	Nov-03
Nickelodeon's TV Land	Apr-96
Nick 2	May-98

Programming Service	Launch Date
Nickelodeon Gas-Games & Sports Network	Mar-99
Nickelodeon/Nick at Nite	Apr-79
Nicktoons	Jan-99
Noah's World International	May-03
Noggin	Feb-99
Oasis TV	Sep-97
Outdoor Channel	Apr-93
Oxygen Media	Feb-00
Pax TV	Aug-98
Playboy TV	Nov-82
Pleasure Channel	Jun-99
Praise Television	Dec-96
Proto X	1997
Puma TV	1997
RAI International	1999
Russian Television Network of America	Aug-00
Rx Channel	May -03
Saigon Broadcasting Network	Feb-02
SCOLA	Aug-87
Shop at Home	Jun-86
Shop NBC	Oct-91
Short TV	Jan-99
Showtime	Jul-76
Showtime Beyond	Sep-99
Showtime Event Television (SET)	1979
Showtime Extreme	1998
Showtime Family Zone	Mar-01
Showtime Next	Mar-01
Showtime Showcase	Jul-01
Showtime Too	2001
Showtime Women	Mar-01
Skyview World Media	1992
S / Networks	May-03
Sorpressa	Mar-03

Programming Service	Launch Date
SoapNet	Jan-00
Speed Channel	Jan-96
Spice 1	May-89
Spice 2	Unknown
Spike TV (formerly the National Network)	Mar-83
Sportsman Channel	Apr-03
Sun TV	Aug-96
Sundance Channel	Feb-96
Sur	Aug-91
TBN (Trinity Broadcasting Network)	May-73
Tech TV	May-98
Telefutura	Jan-02
Telemundo	Jan-87
Telemundo Internacional	Mar-00
The Erotic Network (TeN)	Sep-98
TeN on Demand	Mar-99
TeN BLOX	Jan-03
TeN Blue	Jan-03
TeN Blue Plus	Jan-03
TeN Clips	May-00
TeN Max	Oct-02
Tennis Channel	May-03
Tenxsty	Feb-98
TFN (The Football Network)	Sep-03
TMC (The Movie Channel)	Dec-79
True Blue	Feb-98
Toon Disney	Apr-98
Totally Broadway TV	Jun-02
Totally Hollywood TV	Jun-02
TRIO	Sep-94
TV 5 – USA Inc.	Jan-98
TV Asia	Jul-91
TV Games Network	Jul-94
TV Japan	Jul-91

TVN Entertainment Corporation (33 digital pay-per-view channels)	Feb-98

Programming Service	Launch Date
TVN Direct	Jan-96
TV Guide Channel	Jan-88
TV Guide Interactive	Oct-96
UBC (Urban Broadcasting Company)	Apr-03
Univision	Sep-96
UVTV/KTLA	Mar-98
UVTV/WPIX	May-84
USA Network	Apr-80
VH1 (Music First)	Jan-85
VH1 (Classic)	May-00
VH1 Soul	Aug-98
VHI Country	Aug-98
VH1 Megahits	May-02
VH UNO	Nov-99
Video Rola	Jan-01
Vivid TV	Mar-99
Weather Channel	May-82
Weatherscan	Oct-99
WGN	Nov-78
Wisdom Television	Jul-97
Word Network	Feb-00
Worship Network	Sep-92
ZEE TV	1999
Zhon Tian Channel (formerly Power TV Zhon Tian Channel)	1995

* C-SPAN derives 97% 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.

Sources:
NCTA, *Directory of Cable Networks*, Cable Developments 2003, at 43-174.
SkyReports, *Sports Programming,* THE BRIDGE, Aug.2003, at 11-12.
Richard Sandomir, *3 Cable Systems Will Add N.B.A TV,* THE NEW YORK TIMES, Sept. 29, 2003.
Kagan World Media, *Up-And-Comers 2003,* Cable Program Investor, March 14, 2003, at 5.

TABLE C-3
Regional Video Programming Services

Programming Services	Launch Date	MSO Ownership (%)
Arabic Channel	Apr-91	
Arizona News Channel	Nov-96	Cox (50)
Bay News 9	Sep-97	Time Warner (100)
California Channel	Feb-91	
Casa Club TV	Jul-97	
Central Florida News 13 (CFN 13)	Oct-97	Time Warner (50)
ChicagoLand Television News (CLTV)	Jan-93	
CN8 – The Comcast Network	Oct-97	Comcast (100)
Comcast SportsNet	Oct-97	Comcast (78)
Comcast SportsNet Mid Atlantic	Apr-84	Comcast (100)
Comcast Sports South East	Apr-84	Comcast (72)
County Television Network San Diego	Jul-96	
Cox Sports Television	Oct-02	Cox (100)
Ecumenical Television Channel	1983	
Empire Sports Network	Dec-90	Adelphia (67) Comcast (33)
Florida's News Channel	Sep-98	
Fox Sports Net Arizona	Sep-96	Cablevision (45)
Fox Sports Net Bay Area	Apr-90	Cablevision (45)
Fox Sports Net Chicago	Jan-84	Cablevision (45)
Fox Sports Net Detroit	Sep-97	Cablevision (45)
Fox Sports Net Florida	1989	Cablevision (45)
Fox Sports Net Midwest	Sep-97	
Fox Sports Net New England	Jan-88	Cablevision (30), Comcast (50)
Fox Sports Net New York	1989	Cablevision (45)
Fox Sports Net North	Mar-89	
Fox Sports Net Northwest	Nov-88	
Fox Sports Net Ohio	Feb-89	Cablevision (45)
Fox Sports Net Pittsburgh	Apr-86	
Fox Sports Net Rocky Mountain	Nov-88	
Fox Sports Net South	Aug-90	
Fox Sports Net Southwest	Jan-83	
Fox Sports West	Oct-85	

Programming Services	Launch Date	MSO Ownership (%)
Fox Sports West 2	Jan-97	
Game Bank	Nov-95	
Gwinnet News & Entertainment Television	May-97	
Hip Hop Network	Jan-97	
International Television Broadcasting (ITV)	Apr-86	
Las Vegas One News	Apr-98	
Local News on Cable	Feb-97	Cox (50)
Madison Square Garden Network (MSG)	Oct-69	Cablevision (41.5)
MediaOne News	Dec-95	Liberty Media (100)
Michigan Government Television	Jul-96	
MSG Metro Guide	Aug-98	Cablevision (80)
MSG Metro Learning Channel	Aug-98	Cablevision (80)
MSG Metro Traffic and Weather	Aug-98	
Neighborhood News	Unknown	Cablevision (75)
New England Cable News	Mar-92	Comcast (50)
New England Sports Network (NESN)	Mar-84	
New York 1 News (NY1 News)	Sep-92	Time Warner
NY 1 Noticias	Jun-03	Time Warner
News 12 Connecticut	Jun-95	Cablevision (75)
News 12 Long Island	Dec-86	Cablevision (75)
News 12 New Jersey	Mar-96	Cablevision (75)
News 12 Bronx	Jun-97	Cablevision (75)
News 12 Westchester	Nov-95	Cablevision (75)
News 8 Austin	Sep-99	Time Warner
News Channel 5+	Sept-96	
News 14 Carolina	Jun-02	Time Warner
News Now 53	Jun-97	Cox (50)
News on One	Oct-97	Cox (50)
News Watch 15	Oct-99	Cox (50)
Newschannel 8	Oct-91	
NGTV (National Greek Television)	Dec-87	
Nippon Golden Network	Jan-82	
North West Cable News (NWCN)	Dec-95	
Ohio News Network	May-97	

Programming Services	Launch Date	MSO Ownership (%)
Orange County Newschannel (OCN)	Sep-90	
PASS Sports (Pro-Am Sports System)	Apr-84	
Pennsylvania Cable Network (PCN)	Sep-79	
Pittsburgh Cable News Channel (PCNC)	Jan-94	
Rarities Exchange	Dec-98	
Regional News Network (RNN)	Dec-95	
Rhode Island News Channel	Sep-98	Cox (50)
R News Rochester	Jul-95	Time Warner (?)
San Diego's News Channel 15	Jan-97	
Six News Now	Jul-95	
Sunshine Network	Mar-88	Liberty Media (34.5), Cox (6.3)
Texas Cable News	Jan-99	
Tri-State Media News (TSM News)	Apr-99	Comcast (100)
Turner South (STC)	Oct-99	Time Warner (100)
TV33	Dec-95	
Victory Sports One	Oct-03	
WSBK	Feb-88	
Yankee Entertainment Sports Network (YES)	Mar-02	

Sources:

NCTA, *Regional Cable Networks*, Cable Developments 2003, at 175-201.
Radio-Television News Directors Association & Foundation, at http://www.rtnda.org/resources/nonstopnews/directory.html (visited Sept. 11, 2003).
Cablevision, at http://www.cablevision.com/index.jhtml (visited Oct. 21, 2003).

TABLE C-4
Planned Programming Services

Programming Service	Planned Launch Date, If Announced
Africast Television Network	4Q03
America National Network	Oct-03
AMC's American Pop	TBA
Anti-Aging Network	4Q03
Applause	TBA
Auto Channel	Jul-04
Beauty Channel	TBA
BET World Music Beat	TBA
Bingo TV	Sep-04
Black Education Network	Sep-04
Black Entertainment Network	TBA
Black Women's Television	TBA
Boating Channel	TBA
BOB: Brief Original Broadcasts	Feb-04
Booknet	2003
Boxing Channel	2Q04
Caribbean Visions Television	Sep-04
Chop TV	TBA
Collectors Channel	TBA
Comcast SportsNet Chicago	Oct-04
CSN (Cable Science Network)	TBA
Diversity Network	4Q02
Documentary Channel	Dec-03
Election Channel	TBA
Employment Channel	Jul-04
ESPN Deportes	Jan-04
Fad TV (Fashion & Design Television)	4Q03
Fifth Avenue Channel	TBA
Fox Enhanced TV	TBA
Florida Channel	Jul-04
Gambling Channel	2004

Programming Service	Planned Launch Date, If Announced
GETV Program Network	$Q03
Global Village Network	TBA
Government Channel	TBA
Home Improvement Channel	TBA
Honey Vision	TBA
Ice Channel	1Q04
Investment TV	TBA
Local News Network	TBA
Martial Arts Action Network	4Q03
MEN (Maverick Entertainment Network)	1Q04
Moore TV Network	Sep-03
Moviewatch	2004
Native American Nations Program Network	Sep-03
Orb TV	TBA
Performance Showcase	TBA
Premiere Horse Network	TBA
Puppy Channel	4Q03
RadioTV Network	Mar-04
Real Estate Channel	Dec-03
Real Estate Network (TREN)	TBA
Reality Central	1Q04
Seminar TV Network (Seminar TV)	4Q03
Senior Citizens Television Network	4Q04
Si TV	Feb-04
Sundance Documentary Channel	TBA
The World Cinema Channel	TBA
Theater Channel	TBA
U.S. Military Television Network	Aug-03
World Cinema	TBA
Youth Sports Broadcasting Channel	TBA

Sources:

NCTA, *Planned Services*, Cable Developments 2003, at 207-225.
MultiChannel Ventures, at http://www.multichannelventures.com/about/html .
Email from Michael Gerrity, Chairman and CEO, MultiChannel Ventures, LLC, Sept. 24, 2003.
The Moviewatch Network, at http://www.moviewatch.com.
Si Tv, at http://www.sitv.com/Cox_and_Time_Warner_Warner_Say_Si_TV.htm Press Release (visited Sept. 23, 2003).
Senior Citizens Network ,at http://www.scntv/org (visited Oct. 28, 2003).

TABLE C-5
MSO Ownership in National Programming

Services[1]	Subs. (mil)	Liberty Media	Time Warner	Comcast	Cox	Cablevision Systems
Action Max	*[2]		100.0%			
AMC	83.9					60%
Animal Planet	81.4	39.2%			25.0%	
@Max	*		100.0%			
Black Starz!	*	100.0%				
Canales ñ (6 channels)	*	90.0%				
Cartoon Network	82.6		100.0%			
Cinemax	37.0		100.0%			
CNN	86.2		100.0%			
CNN Español	13.8		100.0%			
CNN Headline News	82.0		100.0%			
CNN International[3]	28.0		100.0%			
CNN fn	24.0		100.0%			
Court TV	75.3	50.0%	50.0%			
Discovery	86.5	50.0%			25.0%	
Discovery En Español	*	50.0%			25.0%	
Discovery Health	42.5	44.1%			25.0%	
Discovery HD Theatre	*	50.0%		20.0%	25.0%	
Discovery Home&Leisure	28.5	50.0%			25.0%	
Discovery Kids	30.0	50.0%			25.0%	
Discovery Times	28.5	50.0%			25.0%	
Discovery Wings	28.5	50.0%			25.0%	
E! Entertainment	80.4			50.0%		
Encore	20.0	100.0%				
Encore Action	*	100.0%				
Encore Love Stories	*	100.0%				
Encore Mystery	*	100.0%				
Encore True Stories	*	100.0%				
Encore WAM!	*	100.0%				

Services[1]	Subs. (mil)	Liberty Media	AOL Time Warner	Comcast	Cox	Cablevision Systems
Encore Westerns	*	100.0%				
5Star Max	*		100.0%			
Fox Sports en Espanol	5.0	10.6%				
Fuse	30.3					60.0%
Fuse On Demand	*					60.0%
G4 Video Gaming Ntwk	*			94.0%		
Game Show Network	50.5	50.0%				
Golf Channel	53.2			91.0%		
Hallmark Channel	51.3	32.5%				
HBO	38.0[4]		100.0%			
HBO Latino	*		100.0%			
HBO 2	*		100.0%			
HBO Signature	*		100.0%			
HBO Comedy	*		100.0%			
HBO Family	*		100.0%			
HBO Zone	*		100.0%			
Health Network	29.3	49.0%			25.0%	
HSN	80.0	20.0%				
iN DEMAND	28		33.0%	50.0%	15.0%	
Independent Film	26.2					60.0%
International Channel	12.5	90.0%				
More Max	37.0		100.0%			
Movie Plex	8.0	100.0%				
Outdoor Life	50.7			100.0%		
Outer Max	*		100.0%			
Ovation	6.2		4.2%			
QVC	83.4	98.0%				
Science Channel	30.0	50.0%			25.0%	
Sci-Fi	79.9	20.0%				
Starz!	13.5	100.0%				

Services[1]	Subs. (mil)	Liberty Media	AOL Time Warner	Comcast	Cox	Cablevision Systems
Starz! Cinema	*	100.0%				
Starz! Family	*	100.0%				
Starz! Theater	*	100.0%				
Style	29.0			60.0%		
TBS	87.7		100.0%			
TLC	84.8	50.0%			25.0%	
Thriller Max	37.0		100.0%			
TNT	86.2		100.0%			
Travel Channel	70.5	50.0%			25.0%	
TCM	63.9		100.0%			
USA	86.3	20.0%				
WE (formerly Romance)	51.2					60.0%
Wmax	*		100.0%			

Notes:

[1] In addition to cable, other MVPD services, such as wireless cable (MMDS), private cable (SMATV), satellite, including DBS and HSD or large dish service, broadcast television, and LPTV (low power television) may distribute these signals. Subscriber figures may include these non-cable services.

[2] Indicates that subscribership count is unknown or not available.

[3] CNN International subscribership of 28 million includes domestic US subscribers only. CNN International has 129 million subscribers outside the U.S.

[4] HBO subscriber numbers include HBO Latino, HBO Plus, HBO Signature, HBO Comedy, HBO Family, HBO Zone, and Cinemax, 5 Star Max, @ Max, MoreMax, ActionMax, Outer Max, Thriller Max and W Max.

Sources:

NCTA, *Directory of Cable Networks*, Cable Developments 2003, at 43-174.

Kagan World Media, *Cable Networks*, Media Mergers and Acquisitions 2003, at 73-80.

TABLE C-6
Top 20 Programming Services by Subscribership

Rank	Programming Network	Number of Subscribers (Millions)	MSO Ownership Interest in Network (%)
1	TBS	87.7	AOL Time Warner (100)
2	ESPN	86.7	
3	C –SPAN	86.6	
4	Discovery Channel	86.5	Liberty Media (49), Cox (24.6)
5	USA Network	86.3	Liberty Media (20)
6.	CNN	86.2	AOL Time Warner (100)
6	TNT	86.2	AOL Time Warner (100)
8	Lifetime Television	86.0	
8	Nickelodeon	86.0	
10	A&E	85.9	
11	Spike TV (formerly TNN)	85.8	
12	The Weather Channel	85.3	
13	MTV	84.9	
13	QVC	84.9	Liberty Media (43) Comcast (57)
15	ABC Family Channel	84.8	
16	TLC	84.7	Liberty Media (50), Cox (24.6)
17	ESPN2	84.5	
18	CNBC	84.2	
19	AMC	83.9	Cablevision (60)
20	VH1	83.7	AOL Time Warner (100)

Note:

In addition to cable, other MVPD services, such as wireless cable (MMDS), private cable (SMATV), satellite, including DBS and HSD or large dish service, broadcast television, and LPTV (low power television) may distribute these signals. Subscriber figures may include these non-cable services. C-SPAN derives 97% of its revenues from affiliate fees (*i.e.*, subscriber fees from MVPDs). The remaining three percent is provided by various investments.

Source:

NCTA, *Top 20 Cable Networks*, Cable Developments 2003, at 39-40.

TABLE C-7

Top 15 Programming Services by Prime Time Rating

Rank	Programming Service	MSO with Ownership Interest (%)
1	TNT	AOL Time Warner (100)
2	Lifetime Television	
3	Disney Channel	
4	Nickelodeon	
5	TBS	AOL Time Warner (100)
6	Cartoon Network	AOL Time Warner (100)
7	USA Network	Liberty Media (20)
8	A&E	
9	Fox News Channel	
10	Discovery Channel	Liberty Media (50), Cox (24.6)
11	MTV	
12	TLC	Liberty Media (50), Cox (24.6)
13	Spike (TNN)	
14	ESPN	
15	Sci-Fi Channel	Liberty Media (20)

Source:

Kagan World Media, *Day Part Ratings Averages, Prime Time (July)*, Cable Program Investor, Sept.12, 2003, at 16.

SEPARATE STATEMENT OF
MICHAEL K. POWELL

Re: Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming

What a difference a decade makes. At the close of 1993, the cable industry, holding a monopoly in nearly every local market, dominated the pay television landscape—serving nearly 95% of the market with mostly one-way analog cable systems capable of delivering thirty or so television channels. In hindsight, however, 1993 would prove to be a watershed year that marked the beginning of dramatic shifts in the communications industry that would unleash a decade of benefits to the American public arising from increased competition, investment, innovation, and diversity in the video delivery and programming markets.

The transformation started in earnest that year, as we oversaw the launch of the first high-power DBS service in the United States and over the course of the decade have seen DBS services compete to whittle away cable's former near monopoly status. Today, DBS has over 21% of the pay-television market and cable's 95% share in 1993 now stands at 75 percent.

Much like in the wireless and long-distance industries, the American public has been the primary beneficiary of the advancement of facilities-based competition in the television industry. Increased DBS competition to cable, the steady loss of market share, and Congress' broad deregulation of the cable industry allowed cable operators across the country to invest some $75 billion to upgrade their infrastructure into a two-way digital broadband platform. As a result, at the dawn of 2004, broadband Internet services, cable telephony services, including Internet telephony, high-definition television, personal video recorders and video on demand services are increasingly available to the public. This investment has, in turn, spurred further investment by other segments of the communications industry, most notably in the broadband Internet space as traditional telephone companies and traditional and emerging wireless providers throughout the country continue to invest in upgrading their infrastructure to compete in today's converging communications marketplace. Competition in the pay television market has had a domino effect of enhancing competition and innovation across the communications industry. In addition to these new services, competition is constraining and, at times, lowering prices (most notably in equipment costs) and forcing operators in the pay-television market to improve the quality of their service.

These benefits have been significant, but it may be that the greatest benefits stemming from the investments of DBS and cable operators over the last ten years has been the expanding diversity of programming, ideas and opinions that come across our television screens on a daily basis. Increased infrastructure investment has meant increased channel capacity and with it more diversity. The thirty channel systems of a decade ago are today cable and satellite systems offering literally hundreds of channels. It is unquestioned that this increased channel capacity has allowed the biggest of our nation's media companies to get bigger, but it is equally undeniable that it has also provided opportunities for new, independent cable networks and programmers—sparking intense competition in the video programming market as well.

Big and small media companies are bringing more program diversity to more Americans, serving our individual and diverse interests in abundance. Whether your interests lie in sports, history, homemaking, Hollywood, culture, technology, politics, minority programming, religion, the outdoors or countless other

categories, I believe that there is more on television today, from a greater variety of sources than at any time in history.

In addition, news, political and public discourse continues to expand on television. The last ten years has seen the rise of news networks such as BBC America, Bloomberg TV, the Fox News Channel and MSNBC as well as many others, serving, along with more established players, as outlets for opinions from across the political, social and economic spectrum. We live in a world where every debate amongst presidential candidates is now on television and where opposing viewpoints can be found making their case on the topics of the day -- from segment to segment on political program to program. And as our ability to find diverse programming and viewpoints on our television screens increases, so too does the amount of local and regional programming. Local cable news and sports programming continues to proliferate on cable and satellite television systems.

Over this past decade Americans have responded and taken advantage of the increased competition, investment, innovation and diversity in the pay-television and programming markets. More Americans pay for television today than they did a decade ago. Today, 85% of television households (94.1 million households) pay for television, as compared to 63% of TV households (60.3 million households) in 1993. As more diverse and higher quality programming has emerged on cable and satellite systems, more people are watching. For the second year in a row (and only the second time in history), cable programming networks collectively brought more viewers to their channels throughout the day than did the seven broadcast networks and in primetime, cable networks brought in a viewing share of over 50% of all television viewers (vs. 44.7% of the seven networks). The shift in viewing should come as no surprise as the quality of cable programming has also been recognized as award nominations and wins continue to reach new heights for cable programming.

The emergence of DBS as a competitive alternative to cable, however, was not the only innovation of 1993 to forever change the video marketplace. That year also produced the commercialization of the Internet that has not only fundamentally changed the life and course of many Americans, but that will have a tremendous impact on the video delivery and programming markets in the next decade. Largely non-existent a decade ago, today, we are beginning to see the possibilities that Internet video streaming can offer and as this Commission continues its push to bring universal, affordable and competitive broadband Internet access to every American, the use of the Internet to deliver even more competitive and diverse video offerings can and should be realized in the future. This past year, for instance, sports had a banner year in Internet video streaming as Major League Baseball made over 1,500 games available over the Internet. The WNBA, and several college programs including Texas Tech and the University of Connecticut's women's basketball team have begun webcasting their games over the last year. Video streaming of news, movies and other programming have also made great strides over the past year. The Internet and broadband platforms of tomorrow should continue to provide producers of programming with increasing opportunities to serve the individual and diverse interests of the American people.

Although the past decade in the markets for pay-television and programming have produced an explosion of benefits for the American public and the decade ahead looks even brighter, our work is far from done. Despite the highly competitive nature of this industry, we must continue to provide investment opportunities for new providers of video distribution and producers of new networks and programming. We must continue to allow the Internet's innovators to bring broadband and video streaming to the masses. And, I, along with my colleagues will continue to reach out to interested stakeholders to ensure that the Commission improves and updates it data collection mechanisms to better understand this changing, competitive and dynamic marketplace. The fact remains that the United States has the most competitive and diverse media marketplace the world has ever seen and we must continue to bring the

benefits of that competition and diversity to our citizenry.

Joint Statement of
Commissioners Michael J. Copps and Jonathan S. Adelstein,
Concurring

Re: Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming

Congress charged the Commission in Section 628(g) with reporting annually on "the status of competition in the market for the delivery of video programming." As we release this Tenth Report, we are concerned that these Reports are becoming mere recitations of the record we receive in response to our Notice of Inquiry, rather than an in-depth analysis of the status of competition.

Congress directed the FCC to focus on competition because it recognized the power of competition to give consumers more choices, lower prices, better services, and access to more sources of content. Yet, this Report fails to examine adequately the circumstances that distinguish those places where competition is occurring and those where it is not. It fails to evaluate barriers to greater competition. And it fails to consider sufficiently such important issues raised in the Notice as the availability of independently-produced programming, children's programming, locally-produced programming, and non-English programming. In sum, it simply fails to delve beneath the surface.

We took issue with our other Report on cable rates issued last July because the Commission conducted little analysis other than pointing out that cable rates are increasing, something most consumers already know all too well. We are concerned that we may be heading down the same road with this Report.

At a time of significant increases in cable rates year after year – 8.2 percent last year and 40 percent over the last five years, all significantly in excess of the rate of inflation -- Congress and American consumers deserve a better effort from the FCC.

In part, the fault lies with the limited data we received in response to our Notice. We urge the Commission to undertake a more pro-active and comprehensive information gathering effort for our next Report. This Report serves as the factual foundation for many Commission decisions as well as providing Congress with statutorily-mandated information that can inform the national policy debate.

None of our comments on this Report should take away from the investments that have been made by those that deliver video programming. Nor do they diminish the benefits American consumers receive as new services are deployed. But, as the government's expert agency, the Commission must do more to gather accurate and complete data as well as provide the information and analysis that Congress required.